

Please note that this is the original application for the Resource Recovery Plant subject to this permit modification application. This application is being provided for context as more recent modifications to this permit have not required submission of all of the AQM forms.



**DNREC – Air Quality Management Section
Application to Construct, Operate, or Modify
Stationary Sources**

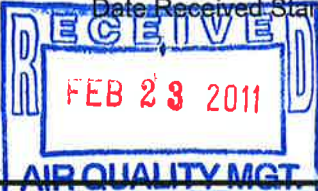
Form AQM-1
Page 1 of 4

Administrative Information

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All Application Forms Should Be Mailed To:
Air Quality Management
156 South State Street
Dover, Delaware 19901

All Checks Should Be Made Payable To:
State of Delaware

<u>For Department Use Only</u>	
<p>Date Received Stamp</p> 	<p>Assigned Permit Number</p>

<u>Company and Site Information</u>	
1.	Company Name: Mountaire Farms of Delaware, Inc.
2.	Company Mailing Address: P.O. Box 1320 City: Millsboro State: DE Zip Code: 19966
3.	Site Name: Millsboro Complex
4.	Site Mailing Address: 29106 John J. Williams Highway, Route 24 East <i>(if different from above)</i> City: Millsboro State: DE Zip Code: 19966
5.	Physical Location of Site: <i>(if different from above)</i> City: State: Zip Code:
6.	Air Quality Management Facility ID Number: 1000500004
7.	Site NAICS Code): 311615, 311119, 11234 <i>(list all that apply)</i>
8.	Site SIC Code: : 2015, 2048, 0254 <i>(list all that apply)</i>
9.	Site Location Coordinates: 38°35'48"N 75°15'44"W
10.	Is the Facility New or Existing? <input type="checkbox"/> NEW <input checked="" type="checkbox"/> EXISTING
<i>If the Facility is an Existing Facility, Complete the Rest of Question 10. If Not, Proceed to Question 11.</i>	
10.1.	Does the Facility Have Active Air Permits? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO



**DNREC – Air Quality Management Section
Application to Construct, Operate, or Modify
Stationary Sources**

Form AQM-1
Page 2 of 4

Company and Site Information

11. Is this Application For a New Source or Modification of an Existing Source?

- New Source
 Modification of Existing Source
 Other (Specify):

If the application is for the modification of an existing source, complete the rest of Question 11. If not, proceed to Question 12.

11.1. Does the Source Have an Active Air Permit? YES NO

If the source has an active air permit, complete the rest of Question 11. If not, proceed to Question 12.

11.2. Permit Number of Existing Source:

12. Status of Source Being Applied For: Natural Minor Source Synthetic Minor Source Major Source

13. Facility Status: Natural Minor Facility Synthetic Minor Facility Major Facility

If the source is a Major Source, complete the rest of Question 13. If not, proceed to Question 14.

13.1. Responsible Official Name: **Paul Downes**

13.2. Responsible Official Title: **President**

Contact Information

14. Name of Owner or Facility Manager: **John Wren**

15. Title of Owner or Facility Manager: **Director of Engineering & Environmental Services**

16. Permit Contact Name: **Beth Sise**

17. Permit Contact Title: **Environmental Manager**

18. Permit Contact Telephone Number: **(302) 934-3094**

19. Permit Contact Fax Number: **(302) 934-3081**

20. Permit Contact E-Mail Address: **bsise@mountaire.com**

Proposed Operating Schedule

21. Proposed Operating Schedule: **24 hours/day 7 days/week 52 weeks/year**

21.1. Is There Any Additional Information Regarding the Operating Schedule? YES NO

If YES, complete the rest of Question 21. If NO, proceed to Question 22.

21.2. Describe the Additional Information:



**DNREC – Air Quality Management Section
Application to Construct, Operate, or Modify
Stationary Sources**

Coastal Zone Information	
22.	Is the Facility Located in the Coastal Zone? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
<i>If the facility is located in the Coastal Zone complete the rest of Question 22. If not, proceed to Question 23.</i>	
22.1.	Is a Coastal Zone Permit Required for Construction or Operation of the Source Being Applied for? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Attach a copy of the Coastal Zone Determination if it has not been previously submitted	
<i>If a Coastal Zone Permit is required complete the rest of Question 22. If not, proceed to Question 23.</i>	
22.2.	Has a Coastal Zone Permit Been Issued? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Attach a copy of the Coastal Zone Permit if it has not been previously submitted	

Local Zoning Information	
23.	Parcel Zoning: HI-1 ; Heavy Industrial
Attach Proof of Local Zoning if it has not been previously submitted	

Application Information	
24.	Is the Appropriate Application Fee Attached? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
25.	Is the Advertising Fee Attached? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Attach the appropriate fees. Note that your Application will not be considered complete if the appropriate fees are not included.	
<i>If the Facility is a New Facility complete Question 26. If not, proceed to Question 27.</i>	
26.	Is a Copy of the Applicant Background Information Questionnaire on Record at the Department? <input type="checkbox"/> YES <input type="checkbox"/> NO
<i>If NO, complete the rest of Question 26. If YES, process to Question 27.</i>	
26.1	Is a Copy of the Applicant Background Information Questionnaire Attached? <input type="checkbox"/> YES <input type="checkbox"/> NO
Attach a copy of the Applicant Background Information Questionnaire if applicable.	
27.	Check Which Application Forms are Attached:
<input checked="" type="checkbox"/> AQM-1	<input type="checkbox"/> AQM-3.4
<input checked="" type="checkbox"/> AQM-2	<input type="checkbox"/> AQM-3.5
<input checked="" type="checkbox"/> AQM-3.1	<input type="checkbox"/> AQM-3.6
<input type="checkbox"/> AQM-3.2	<input type="checkbox"/> AQM-3.7
<input type="checkbox"/> AQM-3.3	<input type="checkbox"/> AQM-3.8
<input type="checkbox"/> AQM-3.9	<input type="checkbox"/> AQM-3.10
<input type="checkbox"/> AQM-3.11	<input type="checkbox"/> AQM-3.12
<input type="checkbox"/> AQM-3.13	<input type="checkbox"/> AQM-3.14
<input type="checkbox"/> AQM-3.15	<input checked="" type="checkbox"/> AQM-4.1
<input checked="" type="checkbox"/> AQM-4.4	<input type="checkbox"/> AQM-4.2
<input type="checkbox"/> AQM-4.5	<input type="checkbox"/> AQM-4.3
<input type="checkbox"/> AQM-4.6	<input type="checkbox"/> AQM-4.8
<input type="checkbox"/> AQM-4.7	<input checked="" type="checkbox"/> AQM-5
<input type="checkbox"/> AQM-4.9	<input type="checkbox"/> AQM-4.10
<input type="checkbox"/> AQM-4.11	<input type="checkbox"/> AQM-4.12
<input type="checkbox"/> AQM-6	
28.	Check Which Documents are Attached:
<input type="checkbox"/> Coastal Zone Determination	<input type="checkbox"/> Claim of Confidentiality
<input type="checkbox"/> Coastal Zone Permit	<input checked="" type="checkbox"/> Manufacturer Specification(s)
<input type="checkbox"/> Proof of Local Zoning	<input type="checkbox"/> Material Safety Data Sheets (MSDSs)
<input checked="" type="checkbox"/> Application Fee	<input checked="" type="checkbox"/> Supporting Calculations
<input checked="" type="checkbox"/> Advertising Fee	<input checked="" type="checkbox"/> Other (Specify): See Attachment 1
<input type="checkbox"/> Applicant Background Information Questionnaire	



**DNREC – Air Quality Management Section
Application to Construct, Operate, or Modify
Stationary Sources**

<u>Confidentiality Information</u>	
29. Do You Consider Any of the Information Submitted With this Application Confidential?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
If a Claim of Confidentiality is made it MUST meet the requirements of Section 6 of DNREC's Freedom of Information ("FOIA") Regulation at the time the Application is submitted.	

<u>Signature Block</u>		
<p>I, the undersigned, hereby certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all of its attachments as to the truth, accuracy, and completeness of this information. I certify based on information and belief formed after reasonable inquiry, the statements and information in this document are true, accurate, and complete. By signing this form, I certify that I have not changed, altered, or deleted any portions of this application. I acknowledge that I cannot commence construction, alteration, modification or initiate operation until I receive written approval (i.e. permit, registration, or exemption letter) from the Department. I acknowledge that I may be required to perform testing of the equipment to receive construction or operation approval, and that if I do not receive approval to construct or operate that I may appeal the decision.</p>		
<table style="width: 100%; border: none;"> <tr> <td style="width: 60%; border: none;"> <p>Paul Downes _____ Owner or Authorized Agent</p> <p><i>Paul Downes</i> _____ Signature of Owner or Authorized Agent</p> </td> <td style="width: 40%; border: none; vertical-align: bottom; text-align: right;"> <p><u>2/18/11</u> Date</p> </td> </tr> </table>	<p>Paul Downes _____ Owner or Authorized Agent</p> <p><i>Paul Downes</i> _____ Signature of Owner or Authorized Agent</p>	<p><u>2/18/11</u> Date</p>
<p>Paul Downes _____ Owner or Authorized Agent</p> <p><i>Paul Downes</i> _____ Signature of Owner or Authorized Agent</p>	<p><u>2/18/11</u> Date</p>	

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Dover, Delaware 19901**

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AQM-2

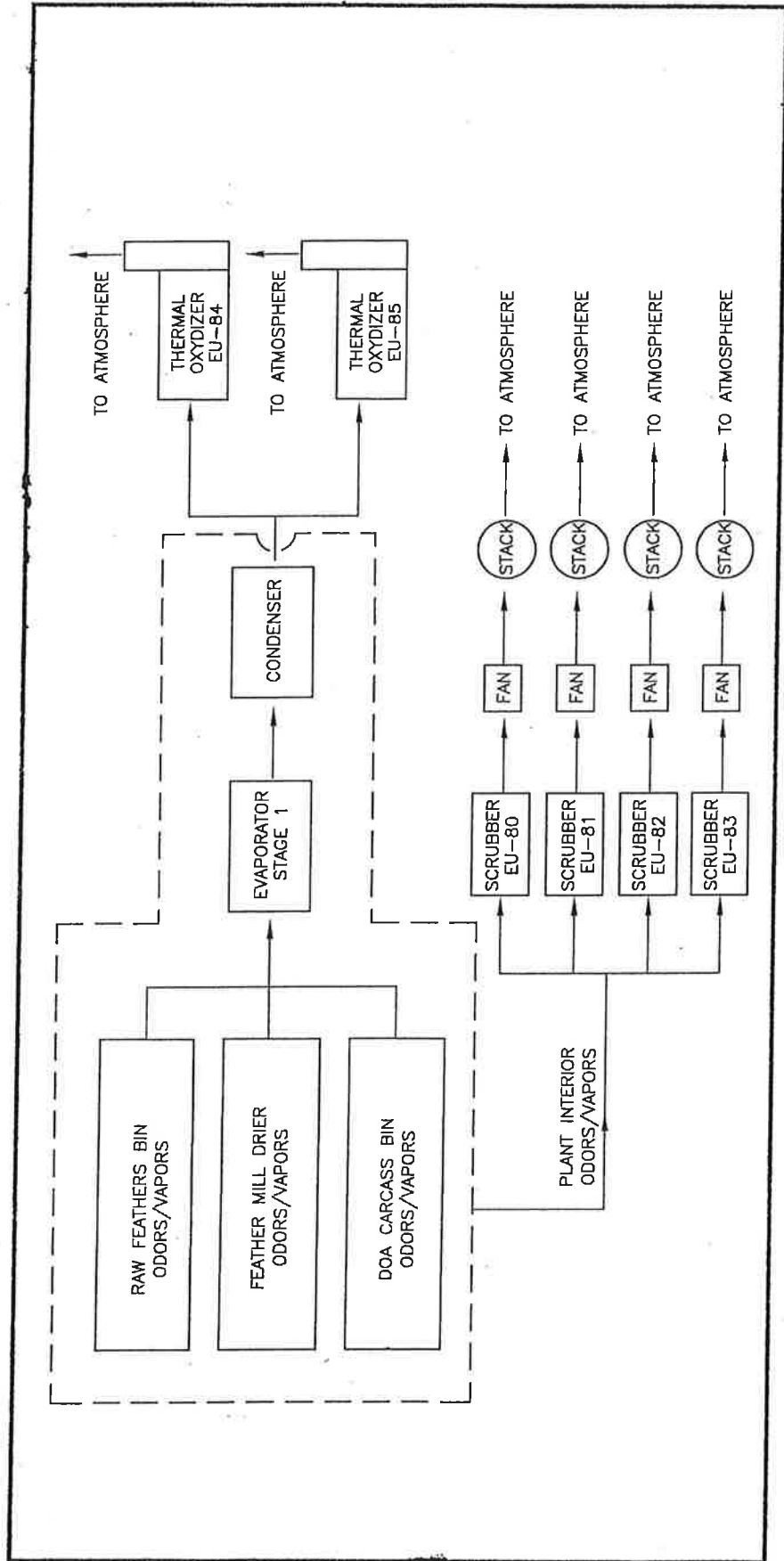


**DNREC – Air Quality Management Section
Application to Construct, Operate, or Modify
Stationary Sources**

Form AQM-2
Page 1 of 1

Process Flow Diagram

Sketch the Process Flow Diagram for the equipment or process being applied for. Include each emission unit and control device (even existing emission units that will not be modified by this application). You may identify each emission unit with a simple shape. Label each emission unit and control device with a unique identifier. Show the relationship between each emission unit and/or control device by drawing arrows between them to indicate the flow of air pollutants. List which application forms are included for each emission unit or control device below the shape representing each emission unit or control device. See <http://www.delaware.gov/reg2/default.htm> for example Process Flow Diagrams for common processes. If you already have a Process Flow Diagram for the equipment or process being applied for, you may attach it to the application instead of using this form.



AQM-3.1



**DNREC – Air Quality Management Section
Application to Construct, Operate, or Modify
Stationary Sources**

Generic Process Equipment Application
If you are using this form electronically, press F1 at any time for help

<u>General Information</u>	
1.	Facility Name: Millsboro Complex
2.	Equipment ID Number: Scrubbers: EU-80, EU-81, EU-82, EU-83 and Thermal Oxidizers EU-84 and EU-85
3.	Provide a brief description of Equipment or Process: Resource recovery plant
4.	Manufacturer: Scrubbers and oxidizers are by Haarslev, Inc.
5.	Model: Scrubbers EU-80 thru EU-82 are model AS-100, while scrubber EU-83 is model AS-40. Oxidizers are both model TRO-25
6.	Serial Number: NA

<u>Raw Material Information</u>			
7. Raw Materials Used in Process			
If there are more than four Raw Materials used, attach additional copies of this page as needed.			
<u>Raw Material Used</u>	<u>CAS Number</u>	<u>Usage Rate (include units)</u>	<u>MSDS Attached?</u>
7.1. Poultry Processing Byproducts	NA	33.371 (tons/hr)	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
7.2.			<input type="checkbox"/> YES <input type="checkbox"/> NO
7.3.			<input type="checkbox"/> YES <input type="checkbox"/> NO
7.4.			<input type="checkbox"/> YES <input type="checkbox"/> NO
Attach a copy of all calculations made to support the data in the table above. Attach a Material Safety Data Sheet (MSDS) for <u>each</u> Raw Material used.			SEE ATTACHMENT 2

<u>Products Produced Information</u>			
8. Products Produced			
If there are more than four Products Produced, attach additional copies of this page as needed.			
<u>Product Produced</u>	<u>CAS Number</u>	<u>Production Rate (include units)</u>	<u>MSDS Attached?</u>
8.1. Animal Feed Ingredients	NA	8.945 (tons/hr)	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
8.2.			<input type="checkbox"/> YES <input type="checkbox"/> NO
8.3.			<input type="checkbox"/> YES <input type="checkbox"/> NO
8.4.			<input type="checkbox"/> YES <input type="checkbox"/> NO
Attach a copy of all calculations made to support the data in the table above. Attach a Material Safety Data Sheet (MSDS) for <u>each</u> Product Produced.			SEE ATTACHMENT 3



**DNREC – Air Quality Management Section
Application to Construct, Operate, or Modify
Stationary Sources**

<u>Byproducts Generated Information</u>				
9. Byproducts Generated				
If there are more than four Byproducts Generated, attach additional copies of this page as needed.				
	Byproduct Generated	CAS Number	Generation Rate (include units)	MSDS Attached?
9.1.	Particulate Matter	NA	0.164 (tons/year)	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
9.2.	PM-10	NA	0.14 (tons/year)	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
9.3.	Ammonia	7441-41-7	0.08 (tons/year)	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
9.4.	Hydrogen Sulfide	7783-06-4	0.011 (tons/year)	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
Attach a copy of all calculations made to support the data in the table above. Attach a Material Safety Data Sheet (MSDS) for <u>each</u> Byproduct Generated.			SEE ATTACHMENT 2	

<u>General Information</u>	
10.	Manufacturer's Rated Capacity or Maximum Throughput of Equipment or Process: Each oxidizer has a capacity of 14,715 ACFM; There are a total of 4 scrubbers, with three identical scrubbers each with the capacity of 100,000 CFM and one scrubber with the capacity of 40,000 CFM.
11.	Describe Important Manufacturer Specifications and/or Operating Parameters for Equipment or Process: See Attachment 4 and Attachment 5
Attach the Manufacturer's Specification Sheet(s) for the equipment or process.	

<u>Control Device Information</u>	
12.	Is an Air Pollution Control Device Used? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
If an Air Pollution Control Device is used, complete the rest of Question 12. If not, proceed to Question 13.	
12.1.	Is Knockout Used? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
If YES, complete Form AQM-4.11 and attach it to this application.	
12.2.	Is a Settling Chamber Used? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
If YES, complete Form AQM-4.10 and attach it to this application.	
12.3.	Is an Inertial or Cyclone Collector Used? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
If YES, complete Form AQM-4.5 and attach it to this application.	
12.4.	Is a Fabric Collector or Baghouse Used? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
If YES, complete Form AQM-4.6 and attach it to this application.	
12.5.	Is a Venturi Scrubber Used? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
If YES, complete Form AQM-4.8 and attach it to this application.	
12.6.	Is an Electrostatic Precipitator Used? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
If YES, complete Form AQM-4.7 and attach it to this application.	



**DNREC – Air Quality Management Section
Application to Construct, Operate, or Modify
Stationary Sources**

<u>Byproducts Generated Information</u>				
9. Byproducts Generated				
If there are more than four Byproducts Generated, attach additional copies of this page as needed.				
	<u>Byproduct Generated</u>	<u>CAS Number</u>	<u>Generation Rate (include units)</u>	<u>MSDS Attached?</u>
9.1.	SOx	NA	0.003 (tons/year)	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
9.2.	NOx	NA	10 (tons/year)	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
9.3.	CO	NA	0.033 (tons/year)	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
9.4.	VOC	NA	0.029 (tons/year)	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
Attach a copy of all calculations made to support the data in the table above. Attach a Material Safety Data Sheet (MSDS) for each Byproduct Generated. SEE ATTACHMENT 2				

<u>General Information</u>	
10.	Manufacturer's Rated Capacity or Maximum Throughput of Equipment or Process:
11.	Describe Important Manufacturer Specifications and/or Operating Parameters for Equipment or Process:
Attach the Manufacturer's Specification Sheet(s) for the equipment or process.	

<u>Control Device Information</u>	
12.	Is an Air Pollution Control Device Used? <input type="checkbox"/> YES <input type="checkbox"/> NO
If an Air Pollution Control Device is used, complete the rest of Question 12. If not, proceed to Question 13.	
12.1.	Is Knockout Used? <input type="checkbox"/> YES <input type="checkbox"/> NO
If YES, complete Form AQM-4.11 and attach it to this application.	
12.2.	Is a Settling Chamber Used? <input type="checkbox"/> YES <input type="checkbox"/> NO
If YES, complete Form AQM-4.10 and attach it to this application.	
12.3.	Is an Inertial or Cyclone Collector Used? <input type="checkbox"/> YES <input type="checkbox"/> NO
If YES, complete Form AQM-4.5 and attach it to this application.	
12.4.	Is a Fabric Collector or Baghouse Used? <input type="checkbox"/> YES <input type="checkbox"/> NO
If YES, complete Form AQM-4.6 and attach it to this application.	
12.5.	Is a Venturi Scrubber Used? <input type="checkbox"/> YES <input type="checkbox"/> NO
If YES, complete Form AQM-4.8 and attach it to this application.	
12.6.	Is an Electrostatic Precipitator Used? <input type="checkbox"/> YES <input type="checkbox"/> NO
If YES, complete Form AQM-4.7 and attach it to this application.	



**DNREC – Air Quality Management Section
Application to Construct, Operate, or Modify
Stationary Sources**

Form AQM-3.1
Page 4 of 7

<u>Control Device Information</u>	
12.7. Is Adsorption Equipment Used?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
If YES, complete Form AQM-4.2 and attach it to this application.	
12.8. Is a Scrubber Used?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
If YES, complete Form AQM-4.4 and attach it to this application.	
12.9. Is an Incinerator, Afterburner or Oxidizer Used?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
If YES, complete Form AQM-4.1 and attach it to this application.	
12.10. Is a Flare Used?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
If YES, complete Form AQM-4.3 and attach it to this application.	
12.11. Is Any Other Control Device Used?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
If YES, attach a copy of the control device Manufacturer's Specification Sheet(s).	
If any other control device is used, complete the rest of Question 12. If not, proceed to Question 13.	
12.12. Describe Control Device:	
12.13. Pollutants Controlled: <input type="checkbox"/> VOCs <input type="checkbox"/> HAPs <input type="checkbox"/> PM <input type="checkbox"/> PM ₁₀ <input type="checkbox"/> PM _{2.5} <input type="checkbox"/> NO _x <input type="checkbox"/> SO _x <input type="checkbox"/> Metals <input type="checkbox"/> Other (Specify):	
12.14. Control Device Manufacturer:	
12.15. Control Device Model:	
12.16. Control Device Serial Number:	
12.17. Control Device Design Capacity:	
12.18. Control Device Removal or Destruction Efficiency:	

<u>Stack Information</u>	
13. How Does the Process Equipment Vent: (check all that apply)	<input type="checkbox"/> Directly to the Atmosphere <input checked="" type="checkbox"/> Through a Control Device Covered by Forms AQM-4.1 through 4.12 <input type="checkbox"/> Through Another Control Device Described on This Form
If any of the process equipment vents directly to the atmosphere or through another control device described on this form, proceed to Question 14. If the process equipment vents through a control device, provide the stack parameters on the control device form and proceed to Question 18.	
14. Number of Air Contaminant Emission Points:	6 (4 scrubbers and 2 oxidizers)
If there are more than three Emission Points, attach additional copies of this page as needed.	
For the first Emission Point	
15. Emission Point Name:	Thermal Oxidizer stacks EU-84 and EU-85
15.1. Stack Height Above Grade:	39 feet
15.2. Stack Exit Diameter:	3.6 feet (Provide Stack Dimensions If Rectangular Stack)
15.3. Is a Stack Cap Present?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
15.4. Stack Configuration:	<input checked="" type="checkbox"/> Vertical <input type="checkbox"/> Horizontal <input type="checkbox"/> Downward-Venting



**DNREC – Air Quality Management Section
Application to Construct, Operate, or Modify
Stationary Sources**

Form AQM-3.1
Page 5 of 7

<u>Stack Information</u>	
<i>(check all that apply)</i> <input type="checkbox"/> Other (Specify):	
15.5. Stack Exit Gas Temperature:	219 °F
15.6. Stack Exit Gas Flow Rate:	20,911 ACFM
15.7. Distance to Nearest Property Line:	1300 feet
15.8. Describe Nearest Obstruction:	Silo located northwest of stack
15.9. Height of Nearest Obstruction:	56 feet
15.10. Distance to Nearest Obstruction:	400 feet
15.11. Are Stack Sampling Ports Provided?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
<i>For the second Emission Point. If there is no second Emission Point, proceed to Question 18.</i>	
16. Emission Point Name:	Scrubber stack EU-80, EU-81 and EU-82 (These 3 scrubbers are identical and are located next to each other)
16.1. Stack Height Above Grade:	50 feet
16.2. Stack Exit Diameter:	5.28' x 4.04' feet <i>(Provide Stack Dimensions If Rectangular Stack)</i>
16.3. Is a Stack Cap Present?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
16.4. Stack Configuration:	<input checked="" type="checkbox"/> Vertical <input type="checkbox"/> Horizontal <input type="checkbox"/> Downward-Venting <i>(check all that apply)</i> <input type="checkbox"/> Other (Specify):
16.5. Stack Exit Gas Temperature:	80 °F
16.6. Stack Exit Gas Flow Rate:	100,000 (at each stack) ACFM
16.7. Distance to Nearest Property Line:	1300 feet
16.8. Describe Nearest Obstruction:	Silo located northwest of stack
16.9. Height of Nearest Obstruction:	56 feet
16.10. Distance to Nearest Obstruction:	400 feet
16.11. Are Stack Sampling Ports Provided?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
<i>For the third Emission Point. If there is no third Emission Point, proceed to Question 18.</i>	
17. Emission Point Name:	Scrubber stack EU-83
17.1. Stack Height Above Grade:	45 feet
17.2. Stack Exit Diameter:	3.6' x 2.61' feet <i>(Provide Stack Dimensions If Rectangular Stack)</i>
17.3. Is a Stack Cap Present?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
17.4. Stack Configuration:	<input checked="" type="checkbox"/> Vertical <input type="checkbox"/> Horizontal <input type="checkbox"/> Downward-Venting <i>(check all that apply)</i> <input type="checkbox"/> Other (Specify):
17.5. Stack Exit Gas Temperature:	80 °F
17.6. Stack Exit Gas Flow Rate:	40,000 ACFM
17.7. Distance to Nearest Property Line:	1300 feet
17.8. Describe Nearest Obstruction:	Silo located northwest of stack
17.9. Height of Nearest Obstruction:	56 feet



DNREC – Air Quality Management Section
Application to Construct, Operate, or Modify
Stationary Sources

Form AQM-3.1
 Page 6 of 7

Stack Information	
17.10. Distance to Nearest Obstruction: 400 feet	
17.11. Are Stack Sampling Ports Provided?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

Monitoring Information	
18. Will Emissions Data be Recorded by a Continuous Emission Monitoring System?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
If Yes, attach a copy of the Continuous Emission Monitoring System Manufacturer's Specification Sheets	
<i>If YES, complete the rest of Question 18. If NO, proceed to Question 19.</i>	
18.1. Pollutants Monitored:	<input type="checkbox"/> VOCs <input type="checkbox"/> HAPs <input type="checkbox"/> PM <input type="checkbox"/> PM ₁₀ <input type="checkbox"/> PM _{2.5} <input type="checkbox"/> NO _x <input type="checkbox"/> SO _x <input type="checkbox"/> Metals <input type="checkbox"/> Other (Specify):
18.2. Describe the Continuous Emission Monitoring System:	
18.3. Manufacturer:	
18.4. Model:	
18.5. Serial Number:	
18.6. Will Multiple Emission Units Be Monitored at the Same Point?	<input type="checkbox"/> YES <input type="checkbox"/> NO
<i>If YES, complete the rest of Question 18. If NO, proceed to Question 19.</i>	
18.7. Emission Units Monitored:	
18.8. Will More Than One Emission Unit be Emitting From the Combined Point At Any Time?	<input type="checkbox"/> YES <input type="checkbox"/> NO
<i>If YES, complete the rest of Question 18. If NO, proceed to Question 19.</i>	
18.9. Emission Units Emitting Simultaneously:	

Monitoring and Alarm Information				
19. Are There Any Alarms You Would Like the Department to Consider When Drafting the Permit?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
<i>If YES, complete the rest of Question 19. If NO, proceed to Question 20.</i>				
19.1. Describe the System Alarm(s):				
If there are more than five alarms, attach additional copies of this page as needed.				
	Operating Parameter Monitored	Describe Alarm Trigger	Monitoring Device or Alarm Type	Does the Alarm Initiate an Automated Response?
19.1.1.			<input type="checkbox"/> Visual <input type="checkbox"/> Auditory <input type="checkbox"/> Automatic (Remote Monitoring) <input type="checkbox"/> Other	<input type="checkbox"/> NO <input type="checkbox"/> YES Describe:
19.1.2.			<input type="checkbox"/> Visual <input type="checkbox"/> Auditory <input type="checkbox"/> Automatic (Remote Monitoring) <input type="checkbox"/> Other	<input type="checkbox"/> NO <input type="checkbox"/> YES Describe:



DNREC – Air Quality Management Section
Application to Construct, Operate, or Modify
Stationary Sources

Monitoring and Alarm Information			
19.1.3.			<input type="checkbox"/> Visual <input type="checkbox"/> Auditory <input type="checkbox"/> Automatic (Remote Monitoring) <input type="checkbox"/> Other
			<input type="checkbox"/> NO <input type="checkbox"/> YES Describe:
19.1.4.			<input type="checkbox"/> Visual <input type="checkbox"/> Auditory <input type="checkbox"/> Automatic (Remote Monitoring) <input type="checkbox"/> Other
			<input type="checkbox"/> NO <input type="checkbox"/> YES Describe:
19.1.5.			<input type="checkbox"/> Visual <input type="checkbox"/> Auditory <input type="checkbox"/> Automatic (Remote Monitoring) <input type="checkbox"/> Other
			<input type="checkbox"/> NO <input type="checkbox"/> YES Describe:

Emissions Information	
20. Do You Plan to Take Any <u>Emission Limitations</u> to Avoid Major Source Status, Minor New Source Review, MACT, NSPS, etc.?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
<i>If YES, complete the rest of Question 20. If NO, proceed to Question 21.</i>	
20.1. Describe Any Proposed Emission Limitations:	

Operating Information	
21. Do You Plan to Take Any <u>Operating Limitations</u> to Avoid Major Source Status, Minor New Source Review, MACT, NSPS, etc.?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
<i>If YES, complete the rest of Question 21. If NO, proceed to Question 22.</i>	
21.1. Describe Any Proposed Operating Limitations:	

Additional Information	
22. Is There Any Additional Information Pertinent to this Application?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
<i>If YES, complete the rest of Question 22.</i>	
22.1. Describe:	

AQM-4.1

APC-2011/0080-C
2011/0081-C



DNREC – Air Quality Management Section
Application to Construct, Operate, or Modify
Stationary Sources

Form AQM-4.1
Page 1 of 6

Incinerator, Afterburner, and Oxidizer Application
If you are using this form electronically, press F1 at any time for help

<u>General Information</u>	
1.	Facility Name: Millsboro Complex
2.	Equipment ID Number: EU-84 and EU-85
3.	Type: <input type="checkbox"/> Incinerator <input type="checkbox"/> Catalytic Oxidizer <input type="checkbox"/> Afterburner <input type="checkbox"/> Regenerative Thermal Oxidizer <input checked="" type="checkbox"/> Thermal Oxidizer <input type="checkbox"/> Other (Specify):
4.	Manufacturer: Haarslev Industries, Inc.
5.	Model: TRO-25
6.	Serial Number: NA
Attach the Manufacturer's Specification Sheet SEE ATTACHMENT 4	

<u>Contaminant Information</u>					
7. Percent of Each Contaminant in the Waste Gas, Heating Value, and Destruction Efficiency					
If more than five Contaminants are present, attach additional copies of this page as needed.					
	<u>Contaminant Name</u>	<u>Contaminant CAS Number</u>	<u>Percent of Waste Gas</u>	<u>Heating Value</u>	<u>Destruction Efficiency</u>
7.1.	VOC	NA	4.1 %	NA BTUs	NA %
7.2.	PM-10	NA	15.1 %	NA BTUs	99.9 %
7.3.	PM	NA	15.1 %	NA BTUs	99.9 %
7.4.	Hydrogen Sulfide H2S	7783-06-4	1.0 %	NA BTUs	99.9 %
7.5.	Ammonia NH3	7441-41-7	7.4 %	NA BTUs	99.9 %

<u>Combustion Chamber Information</u>	
8.	Combustion Chamber Length: 31.2 feet
9.	Combustion Chamber Cross-Sectional Area: 187.3 square feet
10.	Combustion Chamber Volume: 1,349 cubic feet
11.	Combustion Chamber Operating Temperature: 1742 F

<u>Gas Stream Information</u>	
12.	Maximum Inlet Volumetric Gas Flow Rate: 14,715 acfm at 122 F
13.	Maximum Outlet Volumetric Gas Flow Rate: 20,911 acfm at 219 F
14.	Residence Time: 1 to 1.65 seconds



**DNREC – Air Quality Management Section
Application to Construct, Operate, or Modify
Stationary Sources**

Form AQM-4.1
Page 2 of 6

Incinerator, Afterburner, and Oxidizer Application
If you are using this form electronically, press F1 at any time for help

<u>General Information</u>	
1.	Facility Name: Millsboro Complex
2.	Equipment ID Number: EU-84 and EU-85
3.	Type: <input type="checkbox"/> Incinerator <input type="checkbox"/> Catalytic Oxidizer <input type="checkbox"/> Afterburner <input type="checkbox"/> Regenerative Thermal Oxidizer <input checked="" type="checkbox"/> Thermal Oxidizer <input type="checkbox"/> Other (Specify):
4.	Manufacturer: Haarslev Industries, Inc.
5.	Model: TRO-25
6.	Serial Number: NA
Attach the Manufacturer's Specification Sheet SEE ATTACHMENT 4	

<u>Contaminant Information</u>					
7. Percent of Each Contaminant in the Waste Gas, Heating Value, and Destruction Efficiency					
If more than five Contaminants are present, attach additional copies of this page as needed.					
	<u>Contaminant Name</u>	<u>Contaminant CAS Number</u>	<u>Percent of Waste Gas</u>	<u>Heating Value</u>	<u>Destruction Efficiency</u>
7.1.	SOx	NA	0.4 %	NA BTUs	NA %
7.2.	NOx	NA	67.1 %	NA BTUs	NA %
7.3.	CO	NA	4.7 %	NA BTUs	NA %
7.4.			%	BTUs	%
7.5.			%	BTUs	%

<u>Combustion Chamber Information</u>	
8.	Combustion Chamber Length: feet
9.	Combustion Chamber Cross-Sectional Area: square feet
10.	Combustion Chamber Volume: cubic feet
11.	Combustion Chamber Operating Temperature: °F

<u>Gas Stream Information</u>		
12.	Maximum Inlet Volumetric Gas Flow Rate:	acfm at °F
13.	Maximum Outlet Volumetric Gas Flow Rate:	acfm at °F
14.	Residence Time:	minutes



**DNREC – Air Quality Management Section
Application to Construct, Operate, or Modify
Stationary Sources**

Form AQM-4.1
Page 3 of 6

Gas Stream Information

15. Describe Design Features to Ensure Proper Mixing: **Fumes and odors from the process are pulled by fans through piping that is connected to the thermal oxidizers. Mixing is provided by the fans.**
16. Describe the Gas Preheating Equipment: **Gases emitted by the process are heated, as they include process steam vapors, however they are not preheated by the thermal oxidizers.**

Burner Information

17. Burner Manufacturer: **Ray**
18. Burner Model: **100**
19. Burner Serial Number: **NA**
20. Fuel Used: Natural Gas No. 6 Fuel Oil
 No. 2 Fuel Oil (Diesel) Other (Specify):
21. Number of Burners: **1 per oxidizer**
22. Design Heat Input to Each Burner: **1.7 million BTU/hr**
23. Total Combined Heat Input: **1.7(per oxidizer) million BTU/hr**
24. Maximum Heat Input Capacity of Each Burner: **1.88 million BTU/hr**

Regenerative Thermal Oxidizer Information

Complete Question 25 if the equipment is a Regenerative Thermal Oxidizer. If it is not, proceed to Question 26.

25. Describe the Process Heat Recovery System: **The Regenerative Thermal Oxidizer (RTO) system consists of three canisters filled with a ceramic material which recovers heat energy from the oxidation process. A combustion chamber interconnects the three vertical canisters. Flow control valves, located in each canister, direct contaminated and treated air from one canister to another. Cooking vapours and/or process air are fed into the combustion chamber via one of the canisters to permit their oxidization into less harmful, odor-free components. By managing the flows of untreated/treated air at high temperature through the canisters on their way to the stack, energy is transferred to the ceramic media to heat it. The valves change the flows of gases so that incoming untreated air passes through a hot canister and is preheated on its way to the combustion chamber.**

Catalytic Oxidizer Information

Complete Questions 26 through 36 if the equipment is a Catalytic Oxidizer. If it is not, proceed to Question 37.

26. Catalyst Used: **NA**
27. Design Life of Catalyst: **Hours**
28. Design Temperature Rise Across Catalyst Bed: **F**
29. Maximum Operating Temperature of Catalyst: **F**
30. Catalyst Bed Height: **feet**
31. Catalyst Bed Diameter or Width: **feet**



DNREC – Air Quality Management Section
Application to Construct, Operate, or Modify
Stationary Sources

Monitoring and Alarm Information				
	Monitored			
38.1.1.			<input type="checkbox"/> Visual <input type="checkbox"/> Auditory <input type="checkbox"/> Automatic (Remote Monitoring) <input type="checkbox"/> Other	<input type="checkbox"/> NO <input type="checkbox"/> YES Describe:
38.1.2.			<input type="checkbox"/> Visual <input type="checkbox"/> Auditory <input type="checkbox"/> Automatic (Remote Monitoring) <input type="checkbox"/> Other	<input type="checkbox"/> NO <input type="checkbox"/> YES Describe:
38.1.3.			<input type="checkbox"/> Visual <input type="checkbox"/> Auditory <input type="checkbox"/> Automatic (Remote Monitoring) <input type="checkbox"/> Other	<input type="checkbox"/> NO <input type="checkbox"/> YES Describe:
38.1.4.			<input type="checkbox"/> Visual <input type="checkbox"/> Auditory <input type="checkbox"/> Automatic (Remote Monitoring) <input type="checkbox"/> Other	<input type="checkbox"/> NO <input type="checkbox"/> YES Describe:
38.1.5.			<input type="checkbox"/> Visual <input type="checkbox"/> Auditory <input type="checkbox"/> Automatic (Remote Monitoring) <input type="checkbox"/> Other	<input type="checkbox"/> NO <input type="checkbox"/> YES Describe:

Additional Information	
39.	Is There Any Additional Information Pertinent to this Application? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO If YES, complete the rest of Question 39.



**DNREC – Air Quality Management Section
Application to Construct, Operate, or Modify
Stationary Sources**

Form AQM-4.1
Page 6 of 6

Additional Information

39.1. Describe:

AQM-4.4



DNREC – Air Quality Management Section
Application to Construct, Operate, or Modify
Stationary Sources

Form AQM-4.4
 Page 1 of 6

Scrubber Application

(See Form AQM-4.8 for Venturi Scrubbers)

If you are using this form electronically, press F1 at any time for help

<u>General Information</u>	
1.	Facility Name: Millsboro Complex
2.	Equipment ID Number: EU-80, EU-81, EU-82
3.	Manufacturer: Haarslev, Inc.
4.	Model: AS-100
5.	Serial Number: NA
Attach the Manufacturer's Specification Sheet for the scrubber and any Removal Efficiency calculations.	

SEE ATTACHMENT 5

<u>Contaminant Information</u>					
6. Concentration of Each Contaminant in the Waste Gas, Vapor Pressure, Solubility in the Scrubbing Liquor, and Removal Efficiency					
If more than five Contaminants are present, attach additional copies of this page as needed.					
Contaminant	CAS Number	Concentration in Waste Gas	Vapor Pressure	Solubility in Scrubbing Liquor	Removal Efficiency
6.1. PM-10	NA	36 % by Weight	Unknown atm at °F	<input type="checkbox"/> Insoluble <input checked="" type="checkbox"/> Slightly Soluble <input type="checkbox"/> Highly Soluble <input type="checkbox"/> Miscible <input type="checkbox"/> Not Applicable	90 (from manufacturer specs) %
6.2. PM	NA	64 % by Weight	Unknown atm at °F	<input type="checkbox"/> Insoluble <input checked="" type="checkbox"/> Slightly Soluble <input type="checkbox"/> Highly Soluble <input type="checkbox"/> Miscible <input type="checkbox"/> Not Applicable	90 (from manufacturer specs) %
6.3. Hydrogen Sulfide (H2S)	7783-06-4	32 % by Weight	Unknown atm at °F	<input type="checkbox"/> Insoluble <input type="checkbox"/> Slightly Soluble <input checked="" type="checkbox"/> Highly Soluble <input type="checkbox"/> Miscible <input type="checkbox"/> Not Applicable	99 (from manufacturer specs) %
6.4. Ammonia (NH3)	7441-41-7	4 % by Weight	Unknown atm at °F	<input type="checkbox"/> Insoluble <input type="checkbox"/> Slightly Soluble <input checked="" type="checkbox"/> Highly Soluble <input type="checkbox"/> Miscible <input type="checkbox"/> Not Applicable	95 (from



**DNREC – Air Quality Management Section
Application to Construct, Operate, or Modify
Stationary Sources**

Form AQM-4.4
Page 2 of 6

Contaminant Information					
					manufacturer
					specs) %
6.5.		% by Weight	atm at °F	<input type="checkbox"/> Insoluble <input type="checkbox"/> Slightly Soluble <input type="checkbox"/> Highly Soluble <input type="checkbox"/> Miscible <input type="checkbox"/> Not Applicable	%

Gas Stream Information	
7.	Maximum Inlet Volumetric Gas Flow Rate: 100,000 acfm at 90 °F
8.	Maximum Outlet Volumetric Gas Flow Rate: 100,000 acfm at 80 °F
9.	Pressure Drop Across Scrubber: 5 inches water

Scrubbing Liquor Information		
10. Scrubbing Liquor Components		
If more than five Components are present, attach additional copies of this page as needed.		
<u>Scrubbing Liquor Component</u>	<u>CAS Number</u>	<u>Concentration</u>
10.1. Water	7732-18-5	98 % by Weight
10.2. Sodium hydroxide	1310-73-2	1 % by Weight
10.3. Sodium hypochlorite	7681-52-9	1 % by Weight
10.4.		% by Weight
10.5.		% by Weight
11. Scrubbing Liquor Flow Rate: 1000 gallons/minute		
12. pH Operating Range: 8 - 9		
13. Is the Scrubbing Liquor Recirculated? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		
14. Is There More Than One Operating Scenario for the Scrubber? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		



**DNREC – Air Quality Management Section
Application to Construct, Operate, or Modify
Stationary Sources**

Form AQM-4.4
Page 3 of 6

Scrubbing Liquor Information

If YES, Complete the rest of Question 14. If NO, proceed to Question 15.

14.1. Alternate Operating Scenario Scrubbing Liquor Flow Rate: **gallons/minute**

14.2. Alternate Operating Scenario pH Operating Range:

14.3. Is the Scrubbing Liquor Recirculated in the Alternate Operating Scenario? YES NO

15. Describe How Spent Scrubbing Liquor is Treated or Disposed Of: **Continuous drain to wastewater treatment plant for treatment**

Operational Information

16. Scrubber Type: Spray Tower Ionizing Fluidized Bed Scrubber
 Packed Bed Tray Tower Other (Specify):

17. Scrubber Height: **26.75 feet**

18. Scrubber Inside Diameter: **13 feet**

19. Does the Scrubber Use Packing? YES NO

If YES, complete the rest of Question 19. If NO, proceed to Question 20.

19.1. Packing Type: Berl Saddle Pall Ring
 Intalox Saddle Tellerette
 Raschig Ring Marbles
 Lessig Ring Other (Specify):

19.2. Packing Size: **3 inch**

19.3. Packing Material: **Polyethelene**

19.4. Height of Packing: **8 feet**

20. Does the Scrubber Use Trays, Plates, or Baffles? YES NO

If YES, complete the rest of Question 20. If NO, proceed to Question 21.

20.1. Type of Impactor/Impingement: Trays Baffles
 Plates Other (Specify):

20.2. Type of Perforation: Holes Adjustable Trays
 Bubble Caps Other (Specify):
 Movable Discs

20.3. Spacing Between Trays, Plates, or Baffles: **inches**

21. Configuration: Counter-Current
 Co-Current
 Other (Specify):

22. Will a Mist Eliminator Be Installed? YES NO



**DNREC – Air Quality Management Section
Application to Construct, Operate, or Modify
Stationary Sources**

Form AQM-4.4
Page 4 of 6

Operational Information

If YES, complete the rest of Question 22. If NO, proceed to Question 23.

22.1. Describe the Mist Eliminator: **Chevron blade**

Stack Information

23. Emission Point Name: **EU-80, EU-81, EU-82 (Information below is for each stack. Stacks EU-80 thru EU-82 are identical.)**

23.1. Stack Height Above Grade: **50 feet**

23.2. Stack Exit Diameter: **5.28' x 4.04' feet**
(Provide Stack Dimensions If Rectangular Stack)

23.3. Is a Stack Cap Present? YES NO

23.4. Stack Configuration: Vertical Horizontal Downward-Venting
(check all that apply) Other (Specify):

23.5. Stack Exit Gas Temperature: **80 °F**

23.6. Stack Exit Gas Flow Rate: **100,000 ACFM**

23.7. Distance to Nearest Property Line: **1300 feet**

23.8. Describe Nearest Obstruction: **Silo located northwest of the stack**

23.9. Height of Nearest Obstruction: **56 feet**

23.10. Distance to Nearest Obstruction: **400 feet**

23.11. Are Stack Sampling Ports Provided? YES NO

Monitoring and Alarm Information

24. Are There Any Alarms You Would Like the Department to Consider When Drafting the Permit? YES NO

If YES, complete the rest of Question 24. If NO, proceed to Question 25.

24.1. Describe the System Alarm(s):

If there are more than five alarms, attach additional copies of this page as needed.



DNREC – Air Quality Management Section
Application to Construct, Operate, or Modify
Stationary Sources

Monitoring and Alarm Information				
	Operating Parameter Monitored	Describe Alarm Trigger	Monitoring Device or Alarm Type	Does the Alarm Initiate an Automated Response?
24.1.1.			<input type="checkbox"/> Visual <input type="checkbox"/> Auditory <input type="checkbox"/> Automatic (Remote Monitoring) <input type="checkbox"/> Other	<input type="checkbox"/> NO <input type="checkbox"/> YES Describe:
24.1.2.			<input type="checkbox"/> Visual <input type="checkbox"/> Auditory <input type="checkbox"/> Automatic (Remote Monitoring) <input type="checkbox"/> Other	<input type="checkbox"/> NO <input type="checkbox"/> YES Describe:
24.1.3.			<input type="checkbox"/> Visual <input type="checkbox"/> Auditory <input type="checkbox"/> Automatic (Remote Monitoring) <input type="checkbox"/> Other	<input type="checkbox"/> NO <input type="checkbox"/> YES Describe:
24.1.4.			<input type="checkbox"/> Visual <input type="checkbox"/> Auditory <input type="checkbox"/> Automatic (Remote Monitoring) <input type="checkbox"/> Other	<input type="checkbox"/> NO <input type="checkbox"/> YES Describe:
24.1.5.			<input type="checkbox"/> Visual <input type="checkbox"/> Auditory <input type="checkbox"/> Automatic (Remote Monitoring) <input type="checkbox"/> Other	<input type="checkbox"/> NO <input type="checkbox"/> YES Describe:

Additional Information	
25.	Is There Any Additional Information Pertinent to this Application? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
<i>If YES, complete the rest of Question 25.</i>	



**DNREC – Air Quality Management Section
Application to Construct, Operate, or Modify
Stationary Sources**

Form AQM-4.4
Page 6 of 6

Additional Information

25.1. Describe:



DNREC – Air Quality Management Section
Application to Construct, Operate, or Modify
Stationary Sources

Form AQM-4.4
 Page 1 of 6

Scrubber Application

(See Form AQM-4.8 for Venturi Scrubbers)

If you are using this form electronically, press F1 at any time for help

<u>General Information</u>	
1.	Facility Name: Millsboro Complex
2.	Equipment ID Number: EU-83
3.	Manufacturer: Haarslev, Inc.
4.	Model: AS-40
5.	Serial Number: NA
Attach the Manufacturer's Specification Sheet for the scrubber and any Removal Efficiency calculations.	

SEE ATTACHMENT 5

<u>Contaminant Information</u>					
6. Concentration of Each Contaminant in the Waste Gas, Vapor Pressure, Solubility in the Scrubbing Liquor, and Removal Efficiency					
If more than five Contaminants are present, attach additional copies of this page as needed.					
<u>Contaminant</u>	<u>CAS Number</u>	<u>Concentration in Waste Gas</u>	<u>Vapor Pressure</u>	<u>Solubility in Scrubbing Liquor</u>	<u>Removal Efficiency</u>
6.1. PM-10	NA	36 % by Weight	Unknown atm at °F	<input type="checkbox"/> Insoluble <input checked="" type="checkbox"/> Slightly Soluble <input type="checkbox"/> Highly Soluble <input type="checkbox"/> Miscible <input type="checkbox"/> Not Applicable	90 (from manufacturer specs) %
6.2. PM	NA	64 % by Weight	Unknown atm at °F	<input type="checkbox"/> Insoluble <input checked="" type="checkbox"/> Slightly Soluble <input type="checkbox"/> Highly Soluble <input type="checkbox"/> Miscible <input type="checkbox"/> Not Applicable	90 (from manufacturer specs) %
6.3. Hydrogen Sulfide (H2S)	7783-06-4	32 % by Weight	Unknown atm at °F	<input type="checkbox"/> Insoluble <input type="checkbox"/> Slightly Soluble <input checked="" type="checkbox"/> Highly Soluble <input type="checkbox"/> Miscible <input type="checkbox"/> Not Applicable	99 (from manufacturer specs) %
6.4. Ammonia (NH3)	7441-41-7	4 % by Weight	Unknown	<input type="checkbox"/> Insoluble <input type="checkbox"/> Slightly Soluble <input checked="" type="checkbox"/> Highly Soluble <input type="checkbox"/> Miscible <input type="checkbox"/> Not Applicable	95 (from



**DNREC – Air Quality Management Section
Application to Construct, Operate, or Modify
Stationary Sources**

Form AQM-4.4
Page 2 of 6

Contaminant Information					
			atm at °F		manufacturer specs) %
6.5.		% by Weight	atm at °F	<input type="checkbox"/> Insoluble <input type="checkbox"/> Slightly Soluble <input type="checkbox"/> Highly Soluble <input type="checkbox"/> Miscible <input type="checkbox"/> Not Applicable	%

Gas Stream Information	
7.	Maximum Inlet Volumetric Gas Flow Rate: 40,000 acfm at 90 °F
8.	Maximum Outlet Volumetric Gas Flow Rate: 40,000 acfm at 80 °F
9.	Pressure Drop Across Scrubber: 5 inches water

Scrubbing Liquor Information		
10. Scrubbing Liquor Components		
If more than five Components are present, attach additional copies of this page as needed.		
<u>Scrubbing Liquor Component</u>	<u>CAS Number</u>	<u>Concentration</u>
10.1. Water	7732-18-5	98 % by Weight
10.2. Sodium hydroxide	1310-73-2	1 % by Weight
10.3. Sodium hypochlorite	7681-52-9	1 % by Weight
10.4.		% by Weight
10.5.		% by Weight
11. Scrubbing Liquor Flow Rate: 400 gallons/minute		
12. pH Operating Range: 8 - 9		
13. Is the Scrubbing Liquor Recirculated? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		
14. Is There More Than One Operating Scenario for the Scrubber? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		



**DNREC – Air Quality Management Section
Application to Construct, Operate, or Modify
Stationary Sources**

<u>Scrubbing Liquor Information</u>	
<i>If YES, Complete the rest of Question 14. If NO, proceed to Question 15.</i>	
14.1. Alternate Operating Scenario Scrubbing Liquor Flow Rate:	gallons/minute
14.2. Alternate Operating Scenario pH Operating Range:	
14.3. Is the Scrubbing Liquor Recirculated in the Alternate Operating Scenario? <input type="checkbox"/> YES <input type="checkbox"/> NO	
15. Describe How Spent Scrubbing Liquor is Treated or Disposed Of: Continuous drain to wastewater treatment plant for treatment	

<u>Operational Information</u>	
16. Scrubber Type:	<input type="checkbox"/> Spray Tower <input type="checkbox"/> Ionizing <input type="checkbox"/> Fluidized Bed Scrubber <input checked="" type="checkbox"/> Packed Bed <input type="checkbox"/> Tray Tower <input type="checkbox"/> Other (Specify):
17. Scrubber Height:	23.25 feet
18. Scrubber Inside Diameter:	10 feet
19. Does the Scrubber Use Packing? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
<i>If YES, complete the rest of Question 19. If NO, proceed to Question 20.</i>	
19.1. Packing Type:	<input type="checkbox"/> Berl Saddle <input checked="" type="checkbox"/> Pall Ring <input type="checkbox"/> Intalox Saddle <input type="checkbox"/> Tellerette <input type="checkbox"/> Raschig Ring <input type="checkbox"/> Marbles <input type="checkbox"/> Lessig Ring <input type="checkbox"/> Other (Specify):
19.2. Packing Size:	3 inch
19.3. Packing Material:	polythelene
19.4. Height of Packing:	8 feet
20. Does the Scrubber Use Trays, Plates, or Baffles? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
<i>If YES, complete the rest of Question 20. If NO, proceed to Question 21.</i>	
20.1. Type of Impactor/Impingement:	<input type="checkbox"/> Trays <input type="checkbox"/> Baffles <input type="checkbox"/> Plates <input type="checkbox"/> Other (Specify):
20.2. Type of Perforation:	<input type="checkbox"/> Holes <input type="checkbox"/> Adjustable Trays <input type="checkbox"/> Bubble Caps <input type="checkbox"/> Other (Specify): <input type="checkbox"/> Movable Discs
20.3. Spacing Between Trays, Plates, or Baffles:	inches
21. Configuration:	<input checked="" type="checkbox"/> Counter-Current <input type="checkbox"/> Co-Current <input type="checkbox"/> Other (Specify):
22. Will a Mist Eliminator Be Installed? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	



**DNREC – Air Quality Management Section
Application to Construct, Operate, or Modify
Stationary Sources**

Monitoring and Alarm Information				
24.1.1.			<input type="checkbox"/> Visual <input type="checkbox"/> Auditory <input type="checkbox"/> Automatic (Remote Monitoring) <input type="checkbox"/> Other	<input type="checkbox"/> NO <input type="checkbox"/> YES Describe:
24.1.2.			<input type="checkbox"/> Visual <input type="checkbox"/> Auditory <input type="checkbox"/> Automatic (Remote Monitoring) <input type="checkbox"/> Other	<input type="checkbox"/> NO <input type="checkbox"/> YES Describe:
24.1.3.			<input type="checkbox"/> Visual <input type="checkbox"/> Auditory <input type="checkbox"/> Automatic (Remote Monitoring) <input type="checkbox"/> Other	<input type="checkbox"/> NO <input type="checkbox"/> YES Describe:
24.1.4.			<input type="checkbox"/> Visual <input type="checkbox"/> Auditory <input type="checkbox"/> Automatic (Remote Monitoring) <input type="checkbox"/> Other	<input type="checkbox"/> NO <input type="checkbox"/> YES Describe:
24.1.5.			<input type="checkbox"/> Visual <input type="checkbox"/> Auditory <input type="checkbox"/> Automatic (Remote Monitoring) <input type="checkbox"/> Other	<input type="checkbox"/> NO <input type="checkbox"/> YES Describe:

Additional Information	
25.	Is There Any Additional Information Pertinent to this Application? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
<i>If YES, complete the rest of Question 25.</i>	



**DNREC – Air Quality Management Section
Application to Construct, Operate, or Modify
Stationary Sources**

Form AQM-4.4
Page 6 of 6

Additional Information

25.1. Describe:

A large rectangular box with a black border, intended for providing additional information. The box is currently empty.

AQM-5



**DNREC – Air Quality Management Section
Application to Construct, Operate, or Modify
Stationary Sources)**

Emissions Information Application

If you are using this form electronically, press F1 at any time for help

<u>Process Information</u>	
1.	Number of Individual Pieces of Process Equipment in Process: 15
2.	Number of Individual Control Devices in Process: 6 (Four scrubbers and two thermal oxidizers)

<u>Emissions Information for First Emission Point/Stack</u>	
3.	Emission Point Name: EU-84 and EU-85 (Two identical oxidizers, each with their own stack)
4.	Equipment ID Number for all Process Equipment and Control Devices Venting Through Emission Point/Stack: Thermal Oxidizers EU-84 and EU-85
5.	Pollutant Emissions

If more than 18 pollutants are emitted at this Emission Point/Stack, attach additional copies of this page as needed.

Pollutant Name (Specify VOCs and HAPs Individually in 5.10 through 5.18)	CAS Number (Not required for 5.1 through 5.9)	Maximum Uncontrolled Emission Rate at Design Capacity	Maximum Controlled Emission Rate at Design Capacity	Annual Potential to Emit (PTE)	Expected Annual Emissions
5.1. Particulate Matter (PM)	NA	20.34 lbs/hour	0.020 lbs/hour	52.87 tons/year	0.053 tons/year
5.2. PM ₁₀	NA	12.66 lbs/hour	0.020 lbs/hour	32.92 tons/year	0.053 tons/year
5.3. PM _{2.5}		lbs/hour	lbs/hour	tons/year	tons/year
5.4. Sulfur Oxides (SO _x)	NA	0 lbs/hour	0.001 lbs/hour	0 tons/year	0.002 tons/year
5.5. Nitrogen Oxides (NO _x)	NA	0 lbs/hour	1.917 lbs/hour	0 tons/year	4.99 tons/year
5.6. Carbon Monoxide (CO)	NA	0 lbs/hour	0.006 lbs/hour	0 tons/year	0.02 tons/year
5.7. Lead		lbs/hour	lbs/hour	tons/year	tons/year
5.8. Total Volatile Organic Compounds (VOCs)	NA	0 lbs/hour	0.006 lbs/hour	0 tons/year	0.01 tons/year



**DNREC – Air Quality Management Section
Application to Construct, Operate, or Modify
Stationary Sources)**

<u>Emissions Information for First Emission Point/Stack</u>					
Total Hazardous Air Pollutants (HAPs)		lbs/hour	lbs/hour	tons/year	tons/year
5.9.					
5.10.	Ammonia (NH3)	7441-41-7	10.00 lbs/hour	0.010 lbs/hour	26.00 tons/year
5.11.	Hydrogen Sulfide (H2S)	7783-06-4	1.33 lbs/hour	0.001 lbs/hour	3.47 tons/year
5.12.			lbs/hour	lbs/hour	tons/year
5.13.			lbs/hour	lbs/hour	tons/year
5.14.			lbs/hour	lbs/hour	tons/year
5.15.			lbs/hour	lbs/hour	tons/year
5.16.			lbs/hour	lbs/hour	tons/year
5.17.			lbs/hour	lbs/hour	tons/year
5.18.			lbs/hour	lbs/hour	tons/year
6. Provide Any Additional Information Necessary to Understanding the Emission Rates Provided Above: See calculations on Attachment -2					
Attach the Basis of Determination or Calculations for each Emission Rate provided above.					

<u>Emissions Information for Second Emission Point/Stack</u>				
7. Emission Point Name: EU-83				
8. Equipment ID Number for all Process Equipment and Control Devices Venting Through Emission Point/Stack: Scrubber model AS-40				
9. Pollutant Emissions				
If more than 18 pollutants are emitted at this Emission Point/Stack, attach additional copies of this page as needed.				
Pollutant Name (Specify VOCs and HAPs individually in 9.10 through 9.18)	CAS Number (Not required for 9.1 through 9.9)	Maximum Uncontrolled Emission Rate at Design Capacity	Annual Potential to Emit (PTE)	Expected Annual Emissions



**DNREC – Air Quality Management Section
Application to Construct, Operate, or Modify
Stationary Sources)**

Emissions Information for Second Emission Point/Stack						
9.1.	Particulate Matter (PM)	0.003 lbs/hour	0.0026 lbs/hour	0.012 tons/year	0.007 tons/year	
9.2.	PM ₁₀	0.002 lbs/hour	0.0016 lbs/hour	0.008 tons/year	0.004 tons/year	
9.3.	PM _{2.5}	lbs/hour	lbs/hour	tons/year	tons/year	
9.4.	Sulfur Oxides (SO _x)	lbs/hour	lbs/hour	tons/year	tons/year	
9.5.	Nitrogen Oxides (NO _x)	lbs/hour	lbs/hour	tons/year	tons/year	
9.6.	Carbon Monoxide (CO)	lbs/hour	lbs/hour	tons/year	tons/year	
9.7.	Lead	lbs/hour	lbs/hour	tons/year	tons/year	
9.8.	Total Volatile Organic Compounds (VOCs)	lbs/hour	lbs/hour	tons/year	tons/year	
9.9.	Total Hazardous Air Pollutants (HAPs)	lbs/hour	lbs/hour	tons/year	tons/year	
9.10.	Ammonia (NH ₃)	7441-41-7	0.001 lbs/hour	0.006 tons/year	0.0034 tons/year	
9.11.	Hydrogen Sulfide (H ₂ S)	7783-06-4	0.0002 lbs/hour	0.001 tons/year	0.0005 tons/year	
9.12.			lbs/hour	tons/year	tons/year	
9.13.			lbs/hour	tons/year	tons/year	
9.14.			lbs/hour	tons/year	tons/year	
9.15.			lbs/hour	tons/year	tons/year	
9.16.			lbs/hour	tons/year	tons/year	
9.17.			lbs/hour	tons/year	tons/year	
9.18.			lbs/hour	tons/year	tons/year	
10.	Provide Any Additional Information Necessary to Understanding the Emission Rates Provided Above: See calculations on Attachment -4					



**DNREC – Air Quality Management Section
Application to Construct, Operate, or Modify
Stationary Sources)**

Emissions Information for Second Emission Point/Stack

Attach the Basis of Determination or Calculations for each Emission Rate provided above.

Emissions Information for Third Emission Point/Stack

11. Emission Point Name: **EU-80, EU-81, EU-82 (Three identical scrubbers, each with a stack)**

12. Equipment ID Number for all Process Equipment and Control Devices Venting Through Emission Point/Stack: **Three identical scrubbers, model No. AS-100**

13. Pollutant Emissions

If more than 18 pollutants are emitted at this Emission Point/Stack, attach additional copies of this page as needed.

Pollutant Name (Specify VOCs and HAPs individually in 13.10 through 13.18)	CAS Number (Not required for 13.1 through 13.9)	Maximum Uncontrolled Emission Rate at Design Capacity	Maximum Controlled Emission Rate at Design Capacity	Annual Potential to Emit (PTE)	Expected Annual Emissions
13.1. Particulate Matter (PM)	NA	0.007 lbs/hour	0.007 lbs/hour	0.0311 tons/year	0.0171 tons/year
13.2. PM ₁₀	NA	0.004 lbs/hour	0.004 lbs/hour	0.0194 tons/year	0.0106 tons/year
13.3. PM _{2.5}		lbs/hour	lbs/hour	tons/year	tons/year
13.4. Sulfur Oxides (SO _x)		lbs/hour	lbs/hour	tons/year	tons/year
13.5. Nitrogen Oxides (NO _x)		lbs/hour	lbs/hour	tons/year	tons/year
13.6. Carbon Monoxide (CO)		lbs/hour	lbs/hour	tons/year	tons/year
13.7. Lead		lbs/hour	lbs/hour	tons/year	tons/year
13.8. Total Volatile Organic Compounds (VOCs)		lbs/hour	lbs/hour	tons/year	tons/year
13.9. Total Hazardous Air Pollutants (HAPs)		lbs/hour	lbs/hour	tons/year	tons/year
13.10. Ammonia (NH ₃)	7441-41-7	0.003 lbs/hour	0.003 lbs/hour	0.015 tons/year	0.0085 tons/year
13.11. Hydrogen Sulfide (H ₂ S)	7783-06-4	0.0005 lbs/hour	0.0004 lbs/hour	0.002 tons/year	0.001 tons/year



**DNREC – Air Quality Management Section
Application to Construct, Operate, or Modify
Stationary Sources)**

<u>Emissions Information for Third Emission Point/Stack</u>				
	lbs/hour	lbs/hour	tons/year	tons/year
13.12.				
13.13.	lbs/hour	lbs/hour	tons/year	tons/year
13.14.	lbs/hour	lbs/hour	tons/year	tons/year
13.15.	lbs/hour	lbs/hour	tons/year	tons/year
13.16.	lbs/hour	lbs/hour	tons/year	tons/year
13.17.	lbs/hour	lbs/hour	tons/year	tons/year
13.18.	lbs/hour	lbs/hour	tons/year	tons/year
14. Provide Any Additional Information Necessary to Understanding the Emission Rates Provided Above: Data above represents emissions from each stack. See calculations on Attachment -4				
Attach the Basis of Determination or Calculations for each Emission Rate provided above.				

<u>Emissions Information for Fourth Emission Point/Stack</u>					
	CAS Number (Not required for 17.1 through 17.9)	Maximum Uncontrolled Emission Rate at Design Capacity	Maximum Controlled Emission Rate at Design Capacity	Annual Potential to Emit (PTE)	Expected Annual Emissions
15. Emission Point Name:	NA				
16. Equipment ID Number for all Process Equipment and Control Devices Venting Through Emission Point/Stack:					
17. Pollutant Emissions					
If more than 18 pollutants are emitted at this Emission Point/Stack, attach additional copies of this page as needed.					
Pollutant Name (Specify VOCs and HAPs individually in 17.10 through 17.18)		lbs/hour	lbs/hour	tons/year	tons/year
17.1. Particulate Matter (PM)					
17.2. PM ₁₀		lbs/hour	lbs/hour	tons/year	tons/year
17.3. PM _{2.5}		lbs/hour	lbs/hour	tons/year	tons/year



**DNREC – Air Quality Management Section
Application to Construct, Operate, or Modify
Stationary Sources)**

Emissions Information for Fourth Emission Point/Stack				
		lbs/hour	lbs/hour	tons/year
17.4.	Sulfur Oxides (SO _x)			tons/year
17.5.	Nitrogen Oxides (NO _x)			tons/year
17.6.	Carbon Monoxide (CO)			tons/year
17.7.	Volatile Organic Compounds (VOCs)			tons/year
17.8.	Lead			tons/year
17.9.				tons/year
17.10.				tons/year
17.11.				tons/year
17.12.				tons/year
17.13.				tons/year
17.14.				tons/year
17.15.				tons/year
17.16.				tons/year
17.17.				tons/year
17.18.				tons/year
18.	Provide Any Additional Information Necessary to Understanding the Emission Rates Provided Above:			
Attach the Basis of Determination or Calculations for each Emission Rate provided above.				
If there are more than four Emission Points/Stacks, attach additional copies of this form as needed.				

Overall Process Emissions



**DNREC – Air Quality Management Section
Application to Construct, Operate, or Modify
Stationary Sources)**

Overall Process Emissions						
19. Pollutant Emissions						
If more than 18 pollutants are emitted from this Process, attach additional copies of this page as needed.						
Pollutant Name (Specify VOCs and HAPs Individually in 19.10 through 19.18)	CAS Number (Not required for 19.1 through 19.9)	Maximum Uncontrolled Emission Rate at Design Capacity	Maximum Controlled Emission Rate at Design Capacity	Annual Potential to Emit (PTE)	Expected Annual Emissions	
19.1. Particulate Matter (PM)	NA	40.71 lbs/hour	0.063 lbs/hour	105.9 tons/year	0.164 tons/year	
19.2. PM ₁₀	NA	25.35 lbs/hour	0.055 lbs/hour	65.9 tons/year	0.14 tons/year	
19.3. PM _{2.5}		lbs/hour	lbs/hour	tons/year	tons/year	
19.4. Sulfur Oxides (SO _x)	NA	0 lbs/hour	0.001 lbs/hour	0 tons/year	0.003 tons/year	
19.5. Nitrogen Oxides (NO _x)	NA	0 lbs/hour	3.835 lbs/hour	0 tons/year	10 tons/year	
19.6. Carbon Monoxide (CO)	NA	0 lbs/hour	0.013 lbs/hour	0 tons/year	0.033 tons/year	
19.7. Lead		lbs/hour	lbs/hour	tons/year	tons/year	
19.8. Total Volatile Organic Compounds (VOCs)	NA	0 lbs/hour	0.011 lbs/hour	0 tons/year	0.029 tons/year	
19.9. Total Hazardous Air Pollutants (HAPs)		lbs/hour	lbs/hour	tons/year	tons/year	
19.10. Ammonia (NH ₃)	7441-41-7	20.02 lbs/hour	0.031 lbs/hour	52.06 tons/year	0.08 tons/year	
19.11. Hydrogen Sulfide (H ₂ S)	7783-06-4	2.67 lbs/hour	0.004 lbs/hour	6.94 tons/year	0.011 tons/year	
19.12.		lbs/hour	lbs/hour	tons/year	tons/year	
19.13.		lbs/hour	lbs/hour	tons/year	tons/year	
19.14.		lbs/hour	lbs/hour	tons/year	tons/year	
19.15.		lbs/hour	lbs/hour	tons/year	tons/year	
19.16.		lbs/hour	lbs/hour	tons/year	tons/year	
19.17		lbs/hour	lbs/hour	tons/year	tons/year	



**DNREC – Air Quality Management Section
Application to Construct, Operate, or Modify
Stationary Sources)**

Form AQM-5
Page 8 of 9

<u>Overall Process Emissions</u>			
19.18.	lbs/hour	lbs/hour	tons/year
20.	Provide Any Additional Information Necessary to Understanding the Emission Rates Provided Above: See calculations on Attachment -4		
Attach the Basis of Determination or Calculations for each Emission Rate provided above.			

<u>Minor New Source Review Information</u>
21. Does the Process Have the Potential to Emit More Than Five Tons Per Year of Any Pollutant? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
22. Is the Source New or Existing? <input checked="" type="checkbox"/> NEW <input type="checkbox"/> EXISTING See Question 11 of AQM-1
If the Process has the Potential to Emit more than five tons per year of any pollutant, and is a New Source, a Control Technology Analysis pursuant to Regulation No. 1125 Section 4 must be conducted and attached to this application.

<u>Additional Information</u>
23. Is There Any Additional Information Pertinent to this Application? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO If YES, complete the rest of Question 23.



**DNREC – Air Quality Management Section
Application to Construct, Operate, or Modify
Stationary Sources)**

Form AQM-5
Page 9 of 9

23.1. Describe: