



July 12, 2017

Ms. Chris Chan, Senior Manager HSE
NuStar Energy LP Company
9280 West Stockton Blvd, #220
Elk Grove, CA 95758

Subject: Final Air Discharge Permit for Storage and Handling of Ethanol

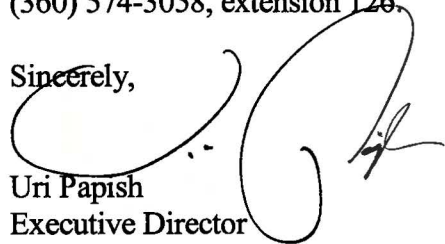
Dear Ms. Chan:

The public comment period for the preliminary determination to issue Air Discharge Permit 17-3223 (ADP 17-3223) in response to ADP Application CL-2084 has concluded. The Southwest Clean Air Agency (SWCAA) received comment and testimony from the public during the comment period. Those comments have been resolved as described in Section 14 of the Technical Support Document for ADP 17-3223. The comments did not result in significant changes to the preliminary determination. Therefore, a final determination to issue ADP 17-3223 has been made pursuant to Section 400-110(4) of SWCAA's General Regulations for Air Pollution Sources. Electronic copies of ADP 17-3223 and the associated Technical Support Document are available for public review in the permit section of SWCAA's internet home page (<http://www.swcleanair.org/permits/adpfinal.asp>). Original copies are enclosed for your files.

This Air Discharge Permit may be appealed directly to the Pollution Control Hearings Board (PCHB) at P.O. Box 40903, Olympia, Washington 98504-0903 within 30 days of receipt as provided in RCW 43.21B.

If you have any comments, or desire additional information, please contact me or Wess Safford at (360) 574-3058, extension 126.

Sincerely,



Uri Papish
Executive Director

UP:wls
Attachment

cc: Aaron Flett, Terminal Manager
NuStar Terminals Service, Inc.
2565 NW Harborside Dr.
Vancouver, WA 98660



SOUTHWEST CLEAN AIR AGENCY

**AIR DISCHARGE PERMIT
17-3223**

Final Date: July 12, 2017

Facility Names: NuStar Terminals Service Inc.
NuStar Terminals Operations Partnership L.P.

Physical Locations: 2565 NW Harborside Drive, Vancouver, WA 98660 and
5420 Fruit Valley Road, Vancouver, WA 98660

SWCAA ID: 460 / 270

REVIEWED BY:


Paul T. Mairose, Chief Engineer



APPROVED BY:

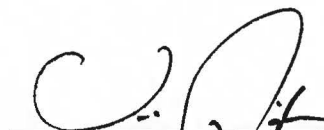

Uri Papish, Executive Director

TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
1. Equipment/Activity Identification	1
2. Approval Conditions	2
2.1 Emission Limits	2
2.2 Operating Limits and Requirements	4
2.3 Monitoring and Recordkeeping Requirements	6
2.4 Emission Monitoring and Testing Requirements	8
2.5 Reporting Requirements	8
3. General Provisions	10
Appendix A Emission Testing Requirements Johnston Boiler	
Appendix B Emission Monitoring Requirements Johnston Boiler	
Appendix C Emission Testing Requirements Vapor Combustion Units	
Appendix D Railcar Leak Check Requirements	

1. Equipment/Activity Identification

ID No.	Generating Equipment/Activity	# of Units	Control Measure/Equipment	# of Units
1	Main Methanol Railcar Loading Rack	1	Submerged Fill, Vapor Capture and Combustion Main VCU (John Zink / ZCS-1-4-20-X-1/6)	1
2	Main Marine Loading Rack	1	Submerged Fill, Vapor Capture and Combustion, Marine Ethanol VCU (John Zink / ZCM-8-35-X-3/8-3/8-X)	1
3	Main Truck/Railcar Loading Racks	5	Submerged Fill	N/A
4	Main Boiler (Johnston, 16.8 MMBtu/hr)	1	Low Emission Burner / FGR	N/A
5	Main 12001 Storage Tank	1	Internal Floating Roof (Mechanical Shoe)	N/A
6	Main 301 Storage Tank	1	None	N/A
7	Main Miscellaneous Storage Tanks	48	None	N/A
8	Annex Truck Loading Rack	1	Submerged Fill, Vapor Capture and Combustion Annex VCU (John Zink model ZCS-1-4-20-X-1/6)	1
9	Annex 12002 Storage Tank	1	Internal Floating Roof (Mechanical Shoe)	N/A
10	Annex 5501 Storage Tank	1	None	N/A
11	Annex 5502 Storage Tank	1	None	N/A
12	Annex 5503 Storage Tank	1	External Floating Roof (Mechanical Shoe / Rim Seal)	1
13	Annex 5504 Storage Tank	1	External Floating Roof (Mechanical Shoe / Rim Seal)	1
14	Annex 5505 Storage Tank	1	External Floating Roof (Mechanical Shoe / Rim Seal)	1
15	Annex 4001 Storage Tank	1	External Floating Roof (Mechanical Shoe / Rim Seal)	1
16	Annex 101 Storage Tank	1	Internal Floating Roof (Mechanical Shoe)	N/A
17	Annex 6 Storage Tank	1	None	N/A
18	Annex Miscellaneous Storage Tanks	6	None	N/A

2. Approval Conditions

The following tables detail the specific requirements of this permit. In addition to the requirements listed below, equipment at this facility may be subject to other federal, state, and local regulations. The permit requirement number is identified in the left hand column. The text of the permit requirement is contained in the middle column. The emission unit, equipment, or activity to which the permit requirement applies is listed in the right hand column.

This Permit supersedes Air Discharge Permit 07-2710R3 in its entirety.

2.1 Emission Limits

No.	Emission Limits	Equipment/ Activity																						
1.	<p>Combined emissions from operation of the Main and Annex terminals shall not exceed:</p> <table border="0"> <thead> <tr> <th data-bbox="233 632 354 663"><u>Pollutant</u></th> <th data-bbox="542 632 737 663"><u>Emission Limit</u></th> </tr> </thead> <tbody> <tr> <td data-bbox="233 667 293 699">NO_x</td> <td data-bbox="574 667 699 699">15.10 tpy</td> </tr> <tr> <td data-bbox="233 703 277 735">CO</td> <td data-bbox="574 703 699 735">13.33 tpy</td> </tr> <tr> <td data-bbox="233 739 305 770">VOC</td> <td data-bbox="574 739 699 770">21.50 tpy</td> </tr> <tr> <td data-bbox="233 774 358 806">PM/PM₁₀</td> <td data-bbox="574 774 699 806">0.74 tpy</td> </tr> <tr> <td data-bbox="233 810 293 842">SO₂</td> <td data-bbox="574 810 699 842">0.07 tpy</td> </tr> <tr> <td data-bbox="233 846 461 877">HAPs (combined)</td> <td data-bbox="574 846 699 877">10.90 tpy</td> </tr> <tr> <td data-bbox="233 882 342 913">Benzene</td> <td data-bbox="574 882 699 913">6.2 lb/yr</td> </tr> <tr> <td data-bbox="233 917 354 949">Methanol</td> <td data-bbox="574 917 699 949">3.81 tpy</td> </tr> <tr> <td data-bbox="233 953 461 984">Perchloroethylene</td> <td data-bbox="574 953 699 984">0.30 tpy</td> </tr> <tr> <td data-bbox="233 989 505 1020">1,1,1-Trichloroethane</td> <td data-bbox="574 989 699 1020">5.97 tpy</td> </tr> </tbody> </table> <p>Emissions shall be determined based on the methodology outlined in Section 6 of the Technical Support Document for this Permit.</p>	<u>Pollutant</u>	<u>Emission Limit</u>	NO _x	15.10 tpy	CO	13.33 tpy	VOC	21.50 tpy	PM/PM ₁₀	0.74 tpy	SO ₂	0.07 tpy	HAPs (combined)	10.90 tpy	Benzene	6.2 lb/yr	Methanol	3.81 tpy	Perchloroethylene	0.30 tpy	1,1,1-Trichloroethane	5.97 tpy	1-18
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2.	Emissions of toxic air pollutants (TAPs) to the atmosphere, except those listed in Condition #1 above, shall not exceed the individual respective Small Quantity Emission Rate for each TAP as provided in WAC 173-460 [effective 8/21/98] nor the VOC limit in Condition #1 above. Emissions shall be determined based on the methodology outlined in Section 6 of the Technical Support Document for this Permit.	1-18																						
3.	VOC emissions from fugitive equipment component leaks shall not exceed 0.80 tpy. Emissions shall be determined based on the methodology outlined in Section 6 of the Technical Support Document for this Permit.	1-18																						
4.	Visible emissions shall not exceed zero percent opacity for more than 3 minutes in any one hour period as determined by a Certified Observer certified in accordance with SWCAA Method 9 (See Appendix A of SWCAA 400).	1-18																						

No.	Emission Limits	Equipment/ Activity												
5.	<p>Emissions from the Main VCU and Annex VCU shall not exceed the following:</p> <table border="0"> <thead> <tr> <th data-bbox="233 258 354 289"><u>Pollutant</u></th> <th data-bbox="521 258 721 289"><u>Emission Limit</u></th> </tr> </thead> <tbody> <tr> <td data-bbox="233 296 298 327">NO_x</td> <td data-bbox="521 296 812 363">6.77 tpy (combined) 0.033 lb/1000 gal each</td> </tr> <tr> <td data-bbox="233 369 282 401">CO</td> <td data-bbox="521 369 781 436">6.20 tpy (combined) 0.03 lb/1000 gal each</td> </tr> <tr> <td data-bbox="233 443 306 474">VOC</td> <td data-bbox="521 443 826 510">1.94 tpy (combined) 0.0113 lb/1000 gal each</td> </tr> </tbody> </table> <p>Emissions shall be determined based on the methodology outlined in Section 6 of the Technical Support Document for this Permit.</p>	<u>Pollutant</u>	<u>Emission Limit</u>	NO _x	6.77 tpy (combined) 0.033 lb/1000 gal each	CO	6.20 tpy (combined) 0.03 lb/1000 gal each	VOC	1.94 tpy (combined) 0.0113 lb/1000 gal each	1, 8				
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VOC	1.94 tpy (combined) 0.0113 lb/1000 gal each													
6.	<p>Emissions from the Marine Ethanol VCU shall not exceed the following:</p> <table border="0"> <thead> <tr> <th data-bbox="233 674 354 705"><u>Pollutant</u></th> <th data-bbox="521 674 721 705"><u>Emission Limit</u></th> </tr> </thead> <tbody> <tr> <td data-bbox="233 711 298 743">NO_x</td> <td data-bbox="521 711 862 743">6.73 tpy, 0.033 lb/1000 gal</td> </tr> <tr> <td data-bbox="233 749 282 781">CO</td> <td data-bbox="521 749 846 781">6.12 tpy, 0.03 lb/1000 gal</td> </tr> <tr> <td data-bbox="233 787 306 819">VOC</td> <td data-bbox="521 787 862 819">2.46 tpy, 0.012 lb/1000 gal</td> </tr> </tbody> </table> <p>Emissions shall be determined based on the methodology outlined in Section 6 of the Technical Support Document for this Permit.</p>	<u>Pollutant</u>	<u>Emission Limit</u>	NO _x	6.73 tpy, 0.033 lb/1000 gal	CO	6.12 tpy, 0.03 lb/1000 gal	VOC	2.46 tpy, 0.012 lb/1000 gal	2				
<u>Pollutant</u>	<u>Emission Limit</u>													
NO _x	6.73 tpy, 0.033 lb/1000 gal													
CO	6.12 tpy, 0.03 lb/1000 gal													
VOC	2.46 tpy, 0.012 lb/1000 gal													
7.	<p>Combined uncaptured emissions from loadout operations shall not exceed the following:</p> <table border="0"> <thead> <tr> <th data-bbox="233 978 354 1010"><u>Pollutant</u></th> <th data-bbox="521 978 721 1010"><u>Emission Limit</u></th> </tr> </thead> <tbody> <tr> <td data-bbox="233 1016 315 1047">VOCs</td> <td data-bbox="521 1016 675 1047">7.73 tpy</td> </tr> <tr> <td data-bbox="233 1054 358 1085">Methanol</td> <td data-bbox="521 1054 675 1085">1.27 tpy</td> </tr> <tr> <td data-bbox="233 1092 334 1123">Ethanol</td> <td data-bbox="521 1092 675 1123">1.11 tpy</td> </tr> <tr> <td data-bbox="233 1129 464 1161">Perchloroethylene</td> <td data-bbox="521 1129 675 1161">0.10 tpy</td> </tr> <tr> <td data-bbox="233 1167 513 1199">1,1,1-Trichloroethane</td> <td data-bbox="521 1167 675 1199">2.20 tpy</td> </tr> </tbody> </table> <p>Emissions shall be determined based on the methodology outlined in Section 6 of the Technical Support Document for this Permit</p>	<u>Pollutant</u>	<u>Emission Limit</u>	VOCs	7.73 tpy	Methanol	1.27 tpy	Ethanol	1.11 tpy	Perchloroethylene	0.10 tpy	1,1,1-Trichloroethane	2.20 tpy	1-3, 8
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8.	<p>The Main and Annex VCUs shall reduce the mass emission rate of incoming volatile organic compounds by a minimum of 98% (1-hr avg) when operating at the maximum production rate. Compliance with this requirement shall be demonstrated via emission testing.</p>	1, 8												
9.	<p>The Marine Ethanol VCU shall reduce the mass emission rate of incoming volatile organic compounds by a minimum of 98% (1-hr avg) when operating at the maximum production rate. Compliance with this requirement shall be demonstrated via emission testing.</p>	2												
10.	<p>Combined emissions from storage tank operation shall not exceed the following:</p> <table border="0"> <thead> <tr> <th data-bbox="233 1629 354 1661"><u>Pollutant</u></th> <th data-bbox="521 1629 721 1661"><u>Emission Limit</u></th> </tr> </thead> <tbody> <tr> <td data-bbox="233 1667 315 1698">VOCs</td> <td data-bbox="521 1667 675 1698">8.44 tpy</td> </tr> <tr> <td data-bbox="233 1705 358 1736">Methanol</td> <td data-bbox="521 1705 675 1736">2.40 tpy</td> </tr> <tr> <td data-bbox="233 1743 334 1774">Ethanol</td> <td data-bbox="521 1743 675 1774">0.70 tpy</td> </tr> <tr> <td data-bbox="233 1780 464 1812">Perchloroethylene</td> <td data-bbox="521 1780 675 1812">0.18 tpy</td> </tr> </tbody> </table> <p>Emissions shall be determined based on the methodology outlined in Section 6 of the Technical Support Document for this Permit.</p>	<u>Pollutant</u>	<u>Emission Limit</u>	VOCs	8.44 tpy	Methanol	2.40 tpy	Ethanol	0.70 tpy	Perchloroethylene	0.18 tpy	5-7, 9-18		
<u>Pollutant</u>	<u>Emission Limit</u>													
VOCs	8.44 tpy													
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Ethanol	0.70 tpy													
Perchloroethylene	0.18 tpy													

No.	Emission Limits	Equipment/ Activity								
11.	Combined methanol emissions from non-floating roof tanks shall not exceed 1.46 tpy. Emissions shall be determined based on the methodology outlined in Section 6 of the Technical Support Document for this Permit.	6-7, 10-11, 16-18								
12.	<p>Emissions from the Johnston boiler shall not exceed the following:</p> <table border="0" data-bbox="235 380 998 527"> <thead> <tr> <th data-bbox="235 380 349 415"><u>Pollutant</u></th> <th data-bbox="521 380 719 415"><u>Emission Limit</u></th> </tr> </thead> <tbody> <tr> <td data-bbox="235 415 349 451">NO_x</td> <td data-bbox="521 415 998 451">2.72 tpy, 30 ppmv @ 3% O₂, 1-hr avg</td> </tr> <tr> <td data-bbox="235 451 349 487">CO</td> <td data-bbox="521 451 998 487">2.02 tpy, 40 ppmv @ 3% O₂, 1-hr avg</td> </tr> <tr> <td data-bbox="235 487 349 527">PM₁₀ (total)</td> <td data-bbox="521 487 998 527">0.74 tpy</td> </tr> </tbody> </table> <p>Emissions of NO_x and CO shall be calculated using data from the most recent emission test and actual fuel consumption. Emissions of all other pollutants shall be calculated using emission factors from Section 6 of the Technical Support Document for this Permit.</p>	<u>Pollutant</u>	<u>Emission Limit</u>	NO _x	2.72 tpy, 30 ppmv @ 3% O ₂ , 1-hr avg	CO	2.02 tpy, 40 ppmv @ 3% O ₂ , 1-hr avg	PM ₁₀ (total)	0.74 tpy	4
<u>Pollutant</u>	<u>Emission Limit</u>									
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CO	2.02 tpy, 40 ppmv @ 3% O ₂ , 1-hr avg									
PM ₁₀ (total)	0.74 tpy									

2.2 Operating Limits and Requirements

No.	Operating Limits and Requirements	Equipment/ Activity
13.	Reasonable precautions shall be taken at all times to prevent and minimize fugitive emissions from plant operations.	Facilitywide
14.	Operations that cause or contribute to a nuisance odor shall use recognized good practice and procedures to reduce these odors to a reasonable minimum.	Facilitywide
15.	Each pollution control device shall be operated whenever the processing equipment served by that control device is in operation with the exception of product loadout where only the loading of methanol or ethanol is to be controlled. Control devices shall be operated and maintained in accordance with the manufacturer's specifications. Furthermore, control devices shall be operated in a manner that minimizes emissions.	1-18
16.	Emission units identified in this Permit shall be maintained and operated in total and continuous conformity with the conditions identified in this Permit. SWCAA reserves the right to take any and all appropriate action to maintain the conditions of this Permit, including directing the facility to cease operations until corrective action can be completed.	1-18
17.	Exhaust stacks on each emission unit shall be discharged vertically above the roof level of the building or enclosure in which the particular emission unit is housed. Any device that obstructs or prevents vertical discharge is prohibited.	1-18
18.	All product loading shall cease if visible liquid leaks are detected.	1-18

No.	Operating Limits and Requirements	Equipment/ Activity										
19.	<p>When any tank storing or last storing methanol or ethanol is degassed, the vapor space of the tank shall be vented to a control device that is consistent with the requirements of BACT and approved in advance by SWCAA. Prior to degassing, the Permittee shall submit a Best Available Control Technology (BACT) analysis to SWCAA as detailed in Condition #58. SWCAA will issue a letter to the Permittee establishing emission control standards and limits in response to the Permittee's BACT analysis. The Permittee shall comply with the limitations established in SWCAA's letter.</p> <p>The vapor space of the tank shall be vented to the approved control device until the volatile organic concentration within the tank is reduced to less than 5,000 parts per million, measured as methane, for at least one hour after degassing operations have ceased</p>	5-7, 9-18										
20.	Loadout shall be performed using only submerged or bottom loading.	1-3, 8										
21.	<p>Loadout throughput shall not exceed the following:</p> <table border="0" data-bbox="240 726 862 905"> <thead> <tr> <th><u>Product</u></th> <th><u>Throughput Limit</u></th> </tr> </thead> <tbody> <tr> <td>Methanol</td> <td>340,004,560 gal/yr</td> </tr> <tr> <td>Ethanol</td> <td>408,000,000 gal/yr</td> </tr> <tr> <td>Perchloroethylene</td> <td>489,280 gal/yr</td> </tr> <tr> <td>1,1,1-Trichloroethane</td> <td>1,566,080 gal/yr</td> </tr> </tbody> </table>	<u>Product</u>	<u>Throughput Limit</u>	Methanol	340,004,560 gal/yr	Ethanol	408,000,000 gal/yr	Perchloroethylene	489,280 gal/yr	1,1,1-Trichloroethane	1,566,080 gal/yr	1-3, 8
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22.	The reaction chamber temperature of the Main VCU and Annex VCU shall not be less than 900°F or more than 1800°F when in use with loading operations.	1-2, 8										
23.	The reaction chamber temperature of the Marine Ethanol VCU shall not be less than 400°F or more than 1800°F when in use with loading operations.	1-2, 8										
24.	Displaced headspace vapors from the loading of methanol or ethanol into trucks and/or railcars shall be routed to a vapor combustion system at all times during active loading operations.	1, 8										
25.	Methanol and ethanol shall only be loaded into railcars that have a valid vapor tightness certification within the preceding 10 years using DOT approved methods.	1										
26.	Each railcar loaded with methanol or ethanol shall be vapor tightness tested after each filling in accordance with Appendix D of this Permit.	1										
27.	Displaced headspace vapors from the loading of ethanol into marine tank vessels shall be routed to a vapor combustion system at all times during active loading operations.	2										
28.	Methanol shall not be loaded into marine tank vessels.	2										
29.	Marine tank vessel loading shall only be performed in marine tank vessels with a valid vapor tightness certification within the preceding 12-month using the vapor tightness test in 40 CFR 63.565(c) and documentation in 40 CFR 63.567(i). Vessels that do not have a valid vapor tightness certification may demonstrate "no detectable emissions" using EPA Method 21 or other methods approved in writing by SWCAA.	2										
30.	Methanol and ethanol shall only be loaded into tanker trucks that have a valid vapor tightness certification within the preceding 12-months using EPA method 27 or other methods approved in writing by SWCAA.	8										

No.	Operating Limits and Requirements	Equipment/ Activity
31.	No more than two loading arms at the Annex Terminal may be dedicated for loading methanol and/or ethanol into trucks.	8
32.	The Johnston boiler shall only be fired on natural gas.	4
33.	Corrective action shall be taken within three (3) days of emission monitoring completion if results indicate emissions from the Johnston boiler in excess of applicable emission concentration limits. Corrective action includes, but is not limited to, maintenance activity and retesting with a reference method pursuant to Appendix A of this Permit. Corrective action shall be pursued until emission concentrations are demonstrated to be in compliance with applicable emission limits.	4

2.3 Monitoring and Recordkeeping Requirements

No.	Monitoring and Recordkeeping Requirements	Equipment/ Activity
34.	Each record required by this Permit shall include the date, time and the name of the person making the record entry. If a control device or process is not operating during a specific time period, a record shall be made to that effect.	1-18
35.	All records required by this Permit shall be maintained in a form readily available for inspection by SWCAA representatives for a minimum period of five years.	1-18
36.	Excess emissions and upset conditions shall be recorded for each occurrence.	1-18
37.	The reaction chamber temperature of the Main VCU shall be continuously monitored and electronically recorded when in use. Reaction chamber temperature shall be manually recorded once per loading operation. The manually recorded temperature shall be a representative temperature, and shall not occur during the first two or last two minutes of each load.	1
38.	The reaction chamber temperature of the Marine VCU shall be continuously monitored and electronically recorded when in use. Reaction chamber temperature shall be manually recorded once per loading operation. The manually recorded temperature shall be a representative temperature, and shall not occur during the first two or last two minutes of each load.	2
39.	The reaction chamber temperature of the Annex VCU shall be continuously monitored and electronically recorded when in use. Reaction chamber temperature shall be manually recorded once per loading operation. For any loading event occurring outside normal business hours, a manual temperature record may be made the next business day based on the electronic log. The manually recorded temperature shall be a representative temperature, and shall not occur during the first two or last two minutes of each load.	8
40.	A visual inspection shall be performed every two hours during marine tank vessel loading and offloading. The inspection shall verify that there are no visible signs, odors or sounds indicating a product leak. Inspection shall include all piping and equipment associated with product movement at the terminals and the marine dock.	2

No.	Monitoring and Recordkeeping Requirements	Equipment/ Activity
41.	<p>Marine tank vessel transfer operations shall monitor and record the following:</p> <ul style="list-style-type: none"> (a) Location of each product transfer event; (b) Date of arrival and departure of each marine tank vessel participating in a transfer event; (c) The name, registry and legal owner of each marine tank vessel participating in a transfer event; (d) The date of the most recent vapor tightness certification for each marine tank vessel loaded with ethanol or methanol; (e) The prior cargo carried by each marine tank vessel participating in a transfer event. If the marine tank vessel has been gas freed, then the prior cargo can be recorded as gas freed; (f) The type and amount of product loaded and hours of loading into each marine tank vessel; (g) The results of visual inspections performed during each product transfer event, recorded every two hours; and (h) A description of any identified gaseous or liquid leak, the date and time of leak detection, leak repair action taken and screening level after completion of the leak repair. 	2
42.	<p>Railcar and tanker truck loading operations shall be monitored and recorded as follows:</p> <ul style="list-style-type: none"> (a) The type and amount of product loaded into each tanker or railcar shall be recorded for each occurrence (b) The date of the most recent vapor tightness certification shall be recorded for each tanker truck or railcar loaded with ethanol or methanol; (c) The railcar vapor leak check parameters shall be recorded as specified in Appendix D of this Permit; (d) The description of any gaseous or liquid leak, including "bad ordered" railcar and tanker trucks, date and time of leak detection, leak repair action taken and screening level/vapor tightness testing after completion of the leak repair shall be recorded for each occurrence. 	1, 3, 8
43.	Dimensions of the storage tanks and analyses showing capacities shall be kept readily accessible at the facility.	5-7, 9-18
44.	A visual inspection of the internal floating roof and seals shall be performed prior to the initial filling of each tank. Any holes, tears or other openings or defects shall be repaired prior to filling of the tank as required by 40 CFR 60.113b(a)(1). A record of each visual inspection shall be maintained.	5, 9
45.	A visual inspection of the internal floating roof and seals shall be performed at least once every 12 months no later than the end of the month of September. Any determination of leaks shall be repaired as required by 40 CFR 60.113b(a)(2). A record of each visual inspection shall be maintained.	5, 9
46.	A visual inspection of the internal floating roof, seals and gaskets shall be performed each time the tank is emptied and degassed, and at least once every ten years, no later than the end of the month of September. Any holes, tears or other openings or defects shall be repaired prior to refilling of the tank as required by 40 CFR 60.113b(a)(4). A record of each visual inspection shall be maintained.	5, 9

No.	Monitoring and Recordkeeping Requirements	Equipment/ Activity
47.	A visual inspection of the externally visible seals and fittings shall be performed monthly for each tank. A record of each visual inspection shall be maintained.	5-7, 9-18
48.	Operation of the Johnston boiler shall be monitored and recorded as follows: (a) Type and quantity of fuel consumed recorded monthly; and (b) Maintenance and repair activities recorded for each occurrence.	4

2.4 Emission Monitoring and Testing Requirements

No.	Emission Monitoring and Testing Requirements	Equipment/ Activity
49.	The permittee shall emission test the Johnston boiler as described in Appendix A of this Permit.	4
50.	The permittee shall emission monitor the Johnston boiler as described in Appendix B of this Permit.	4
51.	The permittee shall emission test the Main and Annex VCU's as described in Appendix C of this Permit.	1, 8
52.	The permittee shall emission test the Marine VCU as described in Appendix C of this Permit.	2

2.5 Reporting Requirements

No.	Reporting Requirements	Equipment/ Activity
53.	Excess emissions shall be reported to SWCAA as follows: <ul style="list-style-type: none"> • As soon as possible, but no later than 12 hours after discovery for emissions that represent a potential threat to human health or safety; • As soon as possible, but no later than 48 hours after discovery for emissions which the permittee wishes to claim as unavoidable pursuant to SWCAA 400-107(1); and • No later than 30 days after the end of the month of discovery for all other excess emissions. 	1-18
54.	Upset conditions shall be reported to SWCAA as soon as possible after discovery. Upsets include but are not limited to any tanker truck or railcar which has been "bad ordered" and partially or completely filled but then offloaded onsite due to a mechanical or other problem with the railcar or tanker truck which may indicate a possible non-vapor tight railcar or tanker truck. The permittee may provide notification to SWCAA via telephone. A message may be left on the answering machine for upset conditions that occur outside of normal business hours.	1-18
55.	An annual emissions inventory report shall be submitted in accordance with SWCAA 400-105(1). In addition to the emissions information required under SWCAA 400-105(1), each annual report shall include an estimate of annual emission quantities for each TAP compound listed in the Technical Support Document for this Permit.	1-18

No.	Reporting Requirements	Equipment/ Activity
56.	<p>Operational information for facility activities shall be reported to SWCAA on a semi-annual basis by September 15 and March 15 for the preceding six month period of January through June and July through December, respectively. The report shall contain the following:</p> <ul style="list-style-type: none"> (a) Emissions of criteria air pollutants, volatile organic compounds, and toxic air pollutants (TAPs); (b) Throughput of products at the barge loading dock, truck and rail loading racks, and each bulk storage tank; and (c) Natural gas consumption in the Johnston boiler. 	1-18
57.	<p>The permittee shall notify SWCAA at least seven days in advance of the throughput of any new material, which results in the emission of toxic or hazardous air pollutants not listed in section 6 of the Technical Support Document for this Permit or the storage of any material not previously stored or listed in Section 4 of the Technical Support Document for this Permit. A written report shall be submitted with the following:</p> <ul style="list-style-type: none"> (a) A description of the proposed change(s) in materials with an MSDS for each new material, (b) The date the change(s) is (are) to be made, (c) The change(s) in emissions of VOCs, HAPs and TAPs occurring as a result of the change, (d) The type of tank the new material will be stored in and whether loadout of the new material will be controlled by a vapor combustion system, and (e) A summary of any applicable requirement(s) that would apply as a result of the change(s). <p>If the proposed emission rate of a new TAP exceeds the applicable SQER and/or other emission limits established by this Permit or otherwise circumvents an applicable requirement, New Source Review will be required prior to making the proposed change.</p>	1-18

No.	Reporting Requirements	Equipment/ Activity
58.	<p>The permittee shall submit a written report to SWCAA at least 30 days prior to routine degassing of a storage tank storing, or last storing, methanol or ethanol. The report shall contain the following:</p> <ul style="list-style-type: none"> (a) A top-down Best Available Control Technology (BACT) analysis; (b) Estimated controlled and uncontrolled emissions from degassing; (c) Estimated date of start of degassing procedure; and (d) Appropriate operating parameters for the control device to be utilized. <p>If emissions from degassing exceed the emission limits established by this Permit or otherwise circumvent an applicable requirement, New Source Review will be required prior to making the proposed change.</p> <p>When degassing must be performed on an emergency basis, the permittee shall notify SWCAA as soon as possible prior to commencing degassing. The notification shall contain the following:</p> <ul style="list-style-type: none"> (e) Identification of the tank(s) to be degassed; (f) The location of the tank(s) to be degassed; (g) Identification of the liquid stored, or last stored, in the affected tank(s); (h) A description of the emergency; and (i) The time and date degassing will commence. 	1-18
59.	Emergency storage of material in storage tanks Main 1190 or Annex 101 shall be reported to SWCAA as soon as possible but no later than two business days after placement of materials in the tank.	7, 16
60.	All roof landings in floating roof tanks shall be reported to SWCAA via telephone within 24-hours of the landing.	5, 9, 12-15
61.	SWCAA shall be notified in writing at least 30 days prior to the filling or re-filling of each tank as required by 40 CFR 60.113b(a)(5).	5, 9
62.	Emission test results shall be reported to SWCAA in writing and in electronic format within 45 days of test completion unless a written extension is approved by SWCAA in advance.	1-2, 4, 8
63.	Emission monitoring results shall be reported to SWCAA in writing within 15 days of completion unless a written extension is approved by SWCAA in advance.	4
64.	Initial start-up of the Marine VCU shall be reported to SWCAA via letter within 10 days of occurrence.	2

3. General Provisions

No.	General Provisions
A.	<p>For the purpose of ensuring compliance with this Permit, duly authorized representatives of the Southwest Clean Air Agency shall be permitted access to the permittee's premises and the facilities being constructed, owned, operated and/or maintained by the permittee for the purpose of inspecting said facilities. These inspections are required to determine the status of compliance with this Permit and applicable regulations and to perform or require such tests as may be deemed necessary.</p>

No.	General Provisions
B.	The provisions, terms and conditions of this Permit shall be deemed to bind the permittee, its officers, directors, agents, servants, employees, successors and assigns, and all persons, firms, and corporations acting under or for the permittee.
C.	The requirements of this Permit shall survive any transfer of ownership of the source or any portion thereof.
D.	This Permit shall be posted conspicuously at or be readily available near the source.
E.	This Permit shall be invalid if construction/installation has not commenced within eighteen months from date of issuance.
F.	This Permit does not supersede requirements of other Agencies with jurisdiction and further, this Permit does not relieve the permittee of any requirements of any other governmental Agency. In addition to this Permit, the permittee may be required to obtain permits or approvals from other agencies with jurisdiction.
G.	Compliance with the terms of this Permit does not relieve the permittee from the responsibility of compliance with SWCAA General Regulations for Air Pollution Sources, previously issued Regulatory Orders, RCW 70.94, Title 173 WAC or any other applicable emission control requirements, nor from the resulting liabilities and/or legal remedies for failure to comply.
H.	If any provision of this Permit is held to be invalid, all unaffected provisions of the Permit shall remain in effect and be enforceable.
I.	No change in this Permit shall be made or be effective except as may be specifically set forth by written order of the Southwest Clean Air Agency upon written application by the permittee for the relief sought.
J.	The Southwest Clean Air Agency may, in accordance with RCW 70.94 impose such conditions as are reasonably necessary to assure the maintenance of compliance with the terms of this Permit, the Washington Clean Air Act, and the applicable rules and regulations adopted under the Washington Clean Air Act.

Air Discharge Permit 17-3223 - Appendix A
Emission Testing Requirements
Johnston Boiler

1. Introduction:

The purpose of this testing is to quantify emissions from the Johnston boiler and demonstrate compliance with the requirements of this Permit and applicable air quality regulations.

2. Testing Requirements:

- a. **Test plan.** A comprehensive test plan shall be submitted to SWCAA for review and approval at least 10 business days prior to each test. SWCAA personnel shall be informed at least five business days prior to testing so that a representative may be present during testing.
- b. **Testing schedule.** Testing shall be conducted at the boiler exhaust stack no later than January 2014 and every five (5) years thereafter, no later than the end of the month of January.
- c. **Test runs/Reference test methods.** A minimum of three (3) test runs shall be performed for each constituent listed below to ensure the data are representative. Compliance shall be demonstrated by averaging the results of the individual sampling runs. The sampling methods identified below shall be used unless alternate methods and/or schedule are approved in writing by SWCAA in advance of the emission testing.

<u>Constituent</u>	<u>Reference Test Method</u>	<u>Minimum Test Run Duration</u>
Flow rate, temperature	EPA Methods 1 and 2	N/A
O ₂ , CO ₂ content	EPA Method 3 or 3A	60 minutes
Moisture content	EPA Method 4	60 minutes
NO _x	EPA Method 7E	60 minutes
CO	EPA Method 10	60 minutes

3. Source Operation:

- a. **Source operations.** Source operations during the emissions test must be representative of maximum intended operating conditions.
- b. **Record of production parameters.** Production related parameters and equipment operating conditions shall be recorded during emissions testing to correlate operating conditions with emissions. All recorded production parameters shall be documented in the test results report. Recorded parameters shall, at a minimum, include:
 - 1. Boiler fuel consumption rate (MMBtu/hr) or natural gas flow rate (scf/hr),
 - 2. Process startups and shutdowns, and
 - 3. Plant adjustments.

Air Discharge Permit 17-3223 - Appendix A
Emission Testing Requirements
Johnston Boiler

4. Reporting Requirements:

- a. A final emission test report (both hardcopy and electronic) shall be prepared and submitted to SWCAA within 45 calendar days of test completion and, at a minimum, shall contain the following information:
 - (1) Description of the source including manufacturer, model number and design capacity of the equipment, and the location of the sample ports or test locations,
 - (2) Time and date of the test and identification and qualifications of the personnel involved,
 - (3) Summary of results, reported in units and averaging periods consistent with the application emissions standard or unit,
 - (4) Summary of control system or equipment operating conditions,
 - (5) Summary of production related parameters,
 - (6) A description of the test methods or procedures used including all field data, quality assurance/quality control procedures and documentation,
 - (7) A description of the analytical procedures used including all laboratory data, quality assurance/quality control procedures and documentation,
 - (8) Copies of field data and example calculations,
 - (9) Chain of custody information,
 - (10) Calibration documentation,
 - (11) Discussion of any abnormalities associated with the results, and
 - (12) A statement signed by the senior management official of the testing firm certifying the validity of the source test report.

- b. All test results shall be corrected to 3% oxygen.

Air Discharge Permit 17-3223 - Appendix B
Emission Monitoring Requirements
Johnston Boiler

1. Introduction:

- a. The purpose of periodically monitoring the boiler exhaust is to minimize emissions and provide a reasonable assurance that the boiler is operating properly.
- b. Periodic monitoring may be conducted with an electrochemical cell combustion analyzer, analyzers used for reference method testing, or other analyzers pre-approved by SWCAA.

2. Monitoring Procedure:

- a. Monitoring of boiler exhaust gases to determine emission concentrations of the following constituents shall be conducted no later than January 2010 and every 12 months thereafter, no later than the end of the month of January unless the boiler has not operated in the past 12 months or emission testing has been performed within the previous 12 months:

Constituents to be Measured

Carbon Monoxide (CO)

Nitrogen Oxides (NO_x)

Oxygen (O₂)

- b. Source operation during testing must be representative of maximum intended operating conditions during that year.
- c. Records kept during boiler monitoring shall at a minimum include the following:
 1. Boiler fuel consumption rate (MMBtu/hr) or natural gas flow rate (scf/hr),
 2. Process startups and shutdowns, and
 3. Plant adjustments.
- d. Alternative testing methodologies must be pre-approved by SWCAA.

3. Minimum Quality Assurance/Quality Control Measures:

- a. The analyzer(s) response to span gas of a known concentration shall be determined before and after testing. No more than 12 hours may elapse between span gas response checks. The results of the analyzer response shall not be valid if the pre and post response check results vary by more than 10% of the known span gas value.
- b. The CO and NO_x span gas concentrations shall be no less than 50% and no more than 200% of the emission concentration corresponding to the permitted emission limit. Ambient air may be used to zero the CO and NO_x cells/analyzer(s) and span the oxygen cell/analyzer.

Air Discharge Permit 17-3223 - Appendix B
Emission Monitoring Requirements
Johnston Boiler

3. Minimum Quality Assurance/Quality Control Measures (con't):

- c. Sampling shall consist of at least 1 test consisting of at least 5 minutes of data collection following a "ramp-up phase." The "ramp-up phase" ends when analyzer readings have stabilized (less than 5% per minute change in emission concentration). Emission concentrations shall be recorded at least once every 30 seconds during the data collection phase. All test data collected following the ramp-up phase(s) shall be reported to SWCAA. A sample data sheet is attached for reference.

4. Reporting:

- a. All monitoring results shall be recorded at the facility and reported to SWCAA in writing within 15 calendar days of completion. The following information shall be included in the report:
 - (1) Time and date of the performance monitoring;
 - (2) Identification of the personnel involved;
 - (3) A summary of results, reported in units consistent with the applicable emission standard or limit;
 - (4) A summary of equipment operating conditions including a) boiler fuel consumption rate (MMBtu/hr) or natural gas flow rate (scf/hr), b) process startups and shutdowns, and c) plant adjustments;
 - (5) A description of the evaluation methods or procedures used including all field data, quality assurance/quality control procedures and documentation; and
 - (6) Analyzer response check documentation.

- b. Reported monitoring results shall be corrected to 3% O₂ in the exhaust gas and corrected for the analyzer response to zero and span gas.

Air Discharge Permit 17-3223 - Appendix C
Emission Testing Requirements
Vapor Combustion Units

1. Introduction:

- a. **Purpose.** The purpose of this testing is to quantify emissions from each vapor combustor and demonstrate compliance with the requirements of this Permit and applicable air quality regulations.

2. Monitoring Procedure:

- a. **Test plan.** A comprehensive test plan shall be submitted to SWCAA for review and approval at least 10 business days prior to each test. SWCAA personnel shall be informed at least five business days prior to testing so that a representative may be present during testing.
- b. **Testing schedule.** Testing of the Main and Annex VCUs shall be conducted no later than the end of January 2014 and every 5 years thereafter, no later than the end of January of the year in which testing is due. Initial testing of the Marine VCU shall be conducted no later than 90 days after commencement of regular operation. Subsequent testing of the Marine VCU shall be conducted every 5 years thereafter, no later than the end of the month in which the initial testing is performed.
- c. **Test runs.** A minimum of three (3) test runs shall be performed at the combustion unit inlet and outlet for each constituent listed below to ensure the data are representative. For truck or railcar loading, each test run shall consist of one railcar or one truck loading. For marine vessel loading, each test run shall be a minimum of 1-hr in length. Compliance shall be demonstrated by averaging the results of the individual sampling runs.
- d. **Reference test methods.** The sampling methods identified below shall be used unless alternate methods and/or schedule are approved in writing by SWCAA in advance of the emission testing.

<u>Constituent</u>	<u>Reference Test Method</u>
Flow rate, temperature	EPA Methods 1 and 2
O ₂ , CO ₂ content	EPA Method 3 or 3A
Moisture content	EPA Method 4
NO _x (outlet only)	EPA Method 7E
CO (outlet only)	EPA Method 10
VOC (inlet and outlet)	EPA Method 25A*

* If testing for methanol operations, the instrument must be spanned with a methanol calibration gas to determine a response factor for the instrument. Linearity checks may be conducted with propane or methane calibration gases.

3. Source Operation:

- a. **Source operations.** Source operations during the emissions test must be representative of maximum intended operating conditions.
- b. **Record of production parameters.** Production related parameters and equipment operating conditions shall be recorded during emissions testing to correlate operating conditions with emissions. Recorded parameters shall, at a minimum, include the following:
1. Product transfer rate;
 2. Flare temperature; and
 3. Startup/shutdown events.

Air Discharge Permit 17-3223 - Appendix C
Emission Testing Requirements
Vapor Combustion Units

4. Reporting Requirements:

- a. **Test Result Units.** Results shall be reported in units of ppmv, lb/hr, and lb/1000 gallons of product loaded.

- b. **Test Report.** A final emission test report (both hardcopy and electronic) shall be prepared and submitted to SWCAA within 45 calendar days of test completion and, at a minimum, shall contain the following information:
 - (1) Description of the source including manufacturer, model number and design capacity of the equipment, and the location of the sample ports or test locations,
 - (2) Time and date of the test and identification and qualifications of the personnel involved,
 - (3) Summary of results, reported in units and averaging periods consistent with the application emissions standard or unit,
 - (4) Summary of control system or equipment operating conditions,
 - (5) Summary of production related parameters,
 - (6) A description of the test methods or procedures used including all field data, quality assurance/quality control procedures and documentation,
 - (7) A description of the analytical procedures used including all laboratory data, quality assurance/quality control procedures and documentation,
 - (8) Copies of field data and example calculations,
 - (9) Chain of custody information,
 - (10) Calibration documentation,
 - (11) Discussion of any abnormalities associated with the results, and
 - (12) A statement signed by the senior management official of the testing firm certifying the validity of the source test report.

- c. **Test Result Correction.** All test results shall be corrected to 18% oxygen.

Air Discharge Permit 17-3223 - Appendix D
Railcar Leak Check Requirements

1. Vapor Tightness Check:

After loading railcars with methanol the following activities shall be performed to ensure that the railcars are vapor tight:

- a. **Pressure Test.** Each railcar shall be determined to maintain a pressure of at least 1" water column. Nitrogen may be added to ensure that at least 1" water column pressure is observed and maintained for at least three minutes.
- b. **LEL Test.** A handheld unit shall be used to measure the lower explosive limit (LEL) on all railcar appurtenances, including hatches, pressure relief valves, and any other potential leak points, while the railcar is under positive pressure after loading. A leak shall be present if >0% LEL is measured
- c. **Bubble Test.** A bubble test shall be performed on all railcar appurtenances, including hatches, pressure relief valves, and any other potential leak points, while the railcar is under positive pressure after loading.
- d. **Leak Repair.** Any railcar which has been determined to have a leak (e.g., not maintaining pressure, >0% LEL, visible bubbles or a visible leak) shall be repaired until no detectible leaks or the railcar shall be unloaded.
- e. **Test Records.** Records of initial and final pressures, lower explosive limit and bubble test results shall be documented for each railcar loaded.