

Inspection Date	07-11-13
CO Stack Test Report Due Date	08-21-13
Arrival Time/Departure Time	12:00 PM – 2:00 PM
Facility Contact	Jeff Smith, Lead Environmental Scientist
Phone Number	Office 561-682-2516, Cell 561-248-2451

Observations: I arrived at facility at 12:00 noon and witnessed Test Run#3 on EU002. A spot check of the VE observed was <20%. I did not witness any unusual conditions during test run#3. I determined everything was running smoothly. Maintenance records and fuel records reported no deviations.

Emission Units For This Facility		
EU ID Code	Status	Description
002	Regulated	One 587 brake horse-power (BHP) pump engine (RICE). This emissions unit is a six cylinder Fairbanks-Morse Model 38D8-1/8 diesel engine/pump combination. (Serial No. 38D8970332DS6RM)
003	Regulated	One 1,535-BHP pump engine (RICE). This emissions unit is a ten cylinder Fairbanks-Morse Model 38D8-1/8 diesel engine/pump combination. (Serial No. 38D8970284DS10RM)
004	Regulated	One 1,535-BHP pump engine (RICE). This emissions unit is a ten cylinder Fairbanks-Morse Model 38D8-1/8 diesel engine/pump combination. (Serial No. 38D8970283DS10RM)
005	Regulated	One 587-BHP pump engine (RICE). This emissions unit is a six cylinder Fairbanks-Morse Model 38D8-1/8 diesel engine/pump combination. (Serial No. 38D8970070DS6RM)
006	Regulated	Two 900-BHP Cummins Onan emergency generators (Serial No. H990959809 and H990959811)
007	Insignificant	Four 12,848-gallons above storage tanks (ASTs) Four 300-gallons above ground day tanks for the main engines and Two 105-gallons above ground tanks (one for each generator).

{Permitting Note: The Emissions Unit No. 001 is divided into different emissions units by Permit No. 0990550-007-AC. The components of Emissions Unit No. 001 are rearranged into five separate Emissions Units. The two Fairbanks-Morse (Model No. 3D8-1/8) 1,535-BHP pumps are identified as Emissions Unit No. 003 and 004, two Fairbanks-Morse (Model No. 3D8-1/8) 587-BHP pumps are identified as Emissions Units No. 002 and 005, and two 900-BHP Cummins emergency power generators are identified as Emissions Unit No. 006.}

	Ok	Not OK	NA
Facility –Wide Conditions –			
Objectionable odor	X		
General VOC emissions standard	X		
General VE Standard	X		
Unconfined particular matter standard.	X		
Reports:			
Statement of Compliance by March 1?	X		
Annual Operations Report by May/April 1?	X		
Annual Emissions Fee by March 1?	X		
Prevention of accidental release notification – CFR 68	X		

EU ID No	STATUS	BRIEF DESCRIPTION
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005	Regulated	One 587-BHP pump engine (RICE). This emissions unit is a six cylinder Fairbanks-Morse Model 38D8-1/8 diesel engine/pump combination. (Serial No. 38D8970070DS6RM)

	<u>Ok</u>	<u>Not OK</u>	<u>NA</u>
Operating Restrictions			
Annual Fuel Consumption: The permittee shall comply with the Annual Fuel Consumption requirement specified in the Section II. Facility-Wide General Condition No. II.A.12. of this permit. Fuel limit is 1,101,406 gallons of fuel oil per rolling 12 months. [III.A.1] Comment: Fuel Usage was 158653 gals 12 month rolling total.	X		
Fuels: The permittee is authorized to use only diesel fuel that meets the following requirements of 40 CFR 80.510(b). (1) Maximum Sulfur content of 15 ppm. (2) Cetane index or aromatic content, as follows: (i) A minimum cetane index of 40; or (ii) A maximum aromatic content of 35 volume percent. [III.A.2] Comment: 7-11-13, ULSF analysis was 6 to 7 ppm.	X		
Compliance Date: The permittee shall comply with the applicable regulations, emission limitations and operating limitations of 40 CFR Part 63 Subpart ZZZZ no <u>later than Nov 3, 2013.</u> (within 180 days of compliance date) [III.A.3]	X		
Hours of Operation: The permittee is authorized to operate the emissions units continuously without prior authorization from the Permitting Authority in accordance with Conditions III.A.1 of this permit. [III.A.4]	X		
Operating Limitation: The permittee shall meet the following operating limitations: (a) Maintain the catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at <u>normal operating conditions</u> pressure drop across the catalyst that was measured during the initial performance test; and Maintain the temperature of the engine's exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F. [III.A.5] Comment: I observed on EU002 Run#3 the Catalyst Inlet Temperature was 580F. Picture is attached. Run#3: Eng#1, Temp was ~580 deg., DH was fluctuating at 1 to 2.	X		
Emissions Limitations and Standards			
Emission Limitations: The permittee shall meet the following requirements, except during periods of startup: [40 CFR 63.6603(a)] (a) Limit concentration of Carbon Monoxide (CO) in the exhaust to 23 ppmvd at 15% Oxygen (O2); or (b) Reduce CO emissions by 70% percent or more [III.A.6]	X		

	Ok	Not OK	NA
Comment: During the visit on 07/11/2013 I witnessed the CO stack test for EU002, Pump Eng#1, Run#3 observed preliminary CO reduction of 91%.			
Testing and Initial Compliance Requirements			
Installation of Control Technology: The permittee shall install diesel oxidation catalyst (DOC) equipments at remaining of the 1,535-BHP and 587-BHP engines exhausts to <u>reduce the CO emissions to 23 ppmv @ 15% O₂ or by 70% or more as required by 40 CFR 63 Subpart ZZZZ</u> . The proposed DOC units are Quick-Lid Catalytic Converter, manufactured by DCL International, Inc. [III.A.10]	X		
Initial Performance Test: The permittee shall conduct the initial performance test as specified in the table below within 180 days after the compliance date [III.A.7]	X		
i. Measure the O ₂ at the inlet and outlet of the control device; and (1) Portable CO and O ₂ analyzer (a) Using ASTM D6522-00 (2005) ^a (incorporated by reference, see §63.14). Measurements to determine O ₂ must be made at the same time as the measurements for CO concentration. [III.A.7]	X		
ii. Measure the CO at the inlet and the outlet of the control device (1) Portable CO and O ₂ analyzer (a) Using ASTM D6522-00 (2005) ^{ab} (incorporated by reference, see §63.14) or Method 10 of 40 CFR appendix A. The CO concentration must be at 15 percent O ₂ , dry basis. [III.A.7]	X		
Comment: 7-11-13, O₂ was consistently at 13.8% on all 3 test runs for EU002 so far all 3 runs.			
Initial Compliance Demonstration: The permittee, complying with the requirement to reduce CO emissions and using oxidation catalyst, shall demonstrate the initial compliance as specified below: When complying with CO reduction efficiency and using oxidation catalyst and using a CPMS. (a) The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and (b) The permittee installed a CPMS to continuously monitor catalyst inlet temperature Comment: 7-11-13, Observed DCL Catalyst Inlet Temp was ~580F on Eu002 Run#3 (c) The permittee recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test Comment: 7-11-13, Observed DH 1- 2", EU002 Run#3	X		
During the initial performance test, the permittee shall establish each operating limitation as specified in the Specific Condition <u>III.A.5</u> of this permit. <<Pressure Drop>> Comment: 07/11/13, The initial performance test is being done now. These limits will be reported in the compliance test reports	X		
Subsequent Performance Test: The permittee shall conduct subsequent performance tests as specified in Specific Condition <u>III.A.7 (b)</u> every 8,760 hours or 3 years, whichever comes first. [III.A.8] Comment: 07/11/13, The initial test is being conducted.			X
Performance Test Procedure: The permittee must conduct three separate test runs for each performance test required in this permit. Each test run must last at least 1 hour. [III.A.9]	X		
(1) The Permittee must use Equation 1 of this section to determine compliance with the percent reduction requirement[40 CFR 63.6620(e)](1) & (2)]: $\frac{C_i - C_o}{C_i} \times 100 = R \quad (\text{Eq. 1})$ Where: C _i = concentration of carbon monoxide (CO) at the control device inlet, C _o = concentration of CO at the control device outlet, and	X		

	<u>Ok</u>	<u>Not OK</u>	<u>NA</u>
$R =$ percent reduction of CO emissions [III.A.9]			
The Permittee must normalize the carbon monoxide (CO) concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen, or an equivalent percent carbon dioxide (CO ₂). [III.A.9] Comment: 07/11/13, This will be available on test report.	X		
Initial performance Test Report: The engine percent load during a performance test must be determined by documenting the calculations, assumptions, and measurement devices used to measure or estimate the percent load in a specific application. A written report of the average percent load determination must be included in the notification of compliance status. The following information must be included in the written report: (1) the engine model number, (2) the engine manufacturer, (3) the year of purchase, (4) the manufacturer's site-rated brake horsepower, (5) the ambient temperature, pressure, and humidity during the performance test, and (6) All assumptions that were made to estimate or calculate percent load during the performance test must be clearly explained. (7) If measurement devices such as flow meters, kilowatt meters, beta analyzers, stain gauges, etc. are used, the model number of the measurement device, and an estimate of its accurate in percentage of true value must be provided. [III.A.9] Comment: 07/11/13, This report will be submitted within 45 days.	X		
Continuous compliance requirements			
Continuous Compliance Demonstration: The owner or operator must demonstrate continuous compliance with each emission limitation, operating limitation and other requirements specified in Tables 2b and Table 2d of 40 CFR 63 Subpart ZZZZ (Conditions III.A.4 and III.A.5) by the following methods: (a) Conducting the performance tests every 8,760 hours or 3 years, whichever comes first, for CO to demonstrate that the required CO, percent reduction is achieved or that emissions remain at or below the CO concentration limit; and (b) Collecting the catalyst inlet temperature data according to 40 CFR 63.6625(b); and (c) Reducing these data to 4-hour rolling averages; and (d) Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and (e) Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test. Comment: 07/11/13, Only the preliminary parameters are available. This will be available on test reports.			X
Crankcase Ventilation System: The permittee that owns or operates an existing non-emergency, non-black start CI engine greater than or equal to 300 HP that is not equipped with a closed crankcase ventilation system, must comply with either paragraph (a) or paragraph (b) of this specific condition. The permittee shall follow the manufacturer's specified maintenance requirements for operating and maintaining the open or closed crankcase ventilation systems and replacing the crankcase filters, or can request the Administrator to approve different maintenance requirements that are as protective as manufacturer requirements. [40 CFR 63.6625 (g)] (a) Install a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere, or (b) Install an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates, and metals. [III.A.11]	X		
Operation Requirements: The permittee shall minimize the engine's time spent at idle during startup and	X		

	Ok	Not OK	NA
minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards are applicable, other than startup. [III.A.12] Comment: 07/11/13, Pump Engines usually take 15 minutes to warm-up and shut down as per Jeff Smith.			
At all times the permittee shall operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the permittee to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [III.A.20] Comment: 07/11/13, A preventive maintenance plan is already being used for all engines.	X		
Notification Requirements			
Notification of Performance Tests: The permittee shall notify the PBCHD in writing of the intent to conduct a performance test at least 60 calendar days before the performance test is initially scheduled to begin to allow the PBCHD, upon request, to review and approve the site-specific test plan and to have an observer present during the test.[III.A.22] Comment: 07/11/13, This is highly dependent whether they can pump water. The decision to turn on pump engines come from operations control center WPB.	X		
Performance Test Results: The Notification of Compliance Status, including the performance test results, shall be mailed before the close of business on the 60th day following the completion of the relevant compliance demonstration activities (such as initial performance test or any subsequent required performance test). Notifications may be combined as long as the due date requirement for each notification is met. [III.A.24] Comment: 07/11/13, This will be available on test report.	X		
Reporting And Recordkeeping Requirements			
<u>Record Keeping Requirements:</u> <u>For monthly fuel consumption monitoring (the rolling 12-month total does not exceed 880,000 gallons):</u> . [III.A.25(a)] Comment: 7-11-13, 12 month rolling total July 2012 to June 2013 was 158653 gas. 12 mo. rolling total.			X
Maintain the following records. (a) A copy of each notification and report submitted to comply with the emission and operating limitations, including all documentation supporting any Initial Notification or Notification of Compliance Status. (b) Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment. (c) Records of performance tests and performance evaluations. (d) Records of all required maintenance performed on the air pollution control and monitoring equipment. (e) Records of actions taken during periods of malfunction to minimize emissions in accordance with Specific Condition III.A.20, including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. The permittee must keep records required in Table 6 of the Subpart ZZZZ (see Appendix ZZZZ) to show continuous compliance with each emission or operating limitations that applies. [III.A.26] Comment: 07/11/13, This is being established upon initial performance test.			X
<u>Semi- Annual Report:</u> The Permittee shall submit Semiannual Compliance Report, as required in Table 7 of Appendix ZZZZ, containing the following information:			X

	<u>Ok</u>	<u>Not OK</u>	<u>NA</u>
(a) If there are no deviations from any emission limitations or operating limitations that apply to the emissions units, a statement that there were no deviations from the emission limitations or operating limitations during the reporting period. (b) If the emissions units had a deviation from any emission limitation or operating limitation during the reporting period, the report shall contain following information: (1) Company name and address. (2) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report. (3) Date of report and beginning and ending dates of the reporting period. (4) The total operating time of the stationary RICE at which the deviation occurred during the reporting period. (5) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken. (c) If the emissions unit had a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by the permittee during a malfunction of an affected source to minimize emissions in accordance with 40 CFR 63.6605(b), including actions taken to correct a malfunction. [III.A.27] Comment: 07/11/13, This is being established upon initial performance test.			
1st Semi Annual Report. The first Compliance report must cover the period beginning on the compliance date as specified in Specific Condition III.A.3 and ending on June 30 or December 31, whichever date is the first date following the end of the first calendar half after the compliance date. [III.A.28] Comment: 07/11/13, This is being established upon initial performance test.			X
The first Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first calendar half after the compliance date as specified in Specific Condition [III.A.28] For semiannual Compliance reports, each subsequent Compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. [III.A.28] Comment: 07/11/13, This is being established upon initial performance test.			X
For semiannual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period. [III.A.28] Comment: 07/11/13, This is being established upon initial performance test.			X

EU ID	Status	Description
006	Regulated	Two 900-BHP Cummins Onan emergency generators (Serial No. H990959809 and H990959811)

Two (2) Onan Generator Sets each rated for 750 kVA. Each generator is powered by a 900 BHP Cummins engine firing ultra-low sulfur distillate oil.

	Ok	Not OK	NA
Operating Restrictions			
Compliance Date: The permittee shall comply with the applicable emission limitations and operating limitations of 40 CFR Part 63 Subpart ZZZZ no later than May 3, 2013. [III.B.1]	X		
Emissions Limitations and Standards			
Emission Limitations: The permittee shall meet the following requirement, except during periods of startup: (a) Change oil and filter every 500 hours of operation or annually, whichever comes first; (b) Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; and (c) Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. [III.B.2]	X		
Comment: 7-11-13, Maintenance Logs on clip boards on generator(s) or at operations room.			
Monitoring, Installation, Collection, Operation and Maintenance Requirements			
The permittee shall develop a maintenance plan which shall provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. [40 CFR 63.6625(e)] [III.B.4]	X		
The permittee shall install a non-resettable hour meter if one is not already installed. [III.B.5]	X		
The permittee shall minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup as specified in the Specific Condition III.B.2 of this permit.. [III.B.6]	X		
Comment: 7-11-13, The generators take 15 minutes to warm-up and shut down as per Jeff Smith.			
Continuous Compliance			
(a) There is no time limit on the use of emergency stationary RICE in emergency situations. (b) The permittee may operate the emergency stationary RICE for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. The permittee may petition the PBCHD for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the permittee maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency RICE beyond 100 hours per year. (c) The permittee may operate the emergency stationary RICE up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. [III.B.9]	X		

	Ok	Not OK	NA
Reporting And Recordkeeping Requirements			
(a) Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment. [40 CFR 63.6655(a)(2)] (b) Records of all required maintenance performed on the air pollution control and monitoring equipment. [40 CFR 63.6655(a)(4)] Records of actions taken during periods of malfunction to minimize emissions in accordance with Specific Condition III.B.10, including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [III.B.11] <i>Comment: 07/11/13, This has been already is being established as part of their maintenance plan..</i>	X		
The permittee shall keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. [III.B.13]	X		