



west virginia department of environmental protection

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ENGINEERING EVALUATION / FACT SHEET

BACKGROUND INFORMATION

Application No.: R13-1244F
Plant ID No.: 063-00001
Applicant: Goodrich Corporation
Facility Name: Union
Location: Union, Monroe County
NAICS Code: 336413
Application Type: Modification
Received Date: December 19, 2016
Engineer Assigned: Mike Egnor
Fee Amount: \$4,500.00
Date Received: March 3, 2017
Complete Date: April 7, 2017
Due Date: July 6, 2017
Applicant Ad Date: December 22, 2016
Newspaper: *The West Virginia Daily News*
UTM's: Easting: 541.607 km Northing: 4,163.836 km Zone: 17
Description: The addition of an emergency diesel fired 172 horsepower fire pump engine (113S) built prior to April 1, 2006 and installed around 1992. The removal of No. 2 fuel oil as a standby fuel source from the existing boiler (75S). The boiler capacity has been reduced from 16.4 MMBTU/hr to 9.8 MMBTU/hr. This will result in the removal of the applicability of 40 CFR 60, Subpart Dc.
The result of this modification will change the PTE of emissions at this facility as follows, - 5.88 TPY NO_x, +1.01 TPY CO, -21.96 TPY SO₂, - 0.77 TPY of VOC's, - 0.68 TPY of PM, and + 0.04 TPY of Total HAPs.

INTRODUCTION

On December 19, 2016 Goodrich Corporation submitted a Modification for the proposed revisions to a natural gas fired boiler (75S) and a diesel fuel fire pump (113S).

On April 14, 2017, Optima submitted an affidavit of publication indicating that the required legal notice was run in the Charleston Gazette on December 22, 2016, initiating the 30-day public notice period. Optima also submitted the application fee of

\$4,500 on December 20, 2016 and March 3, 2017 to meet the requirements associated with the Application for Modification Permit.

DESCRIPTION OF PROCESS

The facility manufactures aircraft deicing components. These include pneumatic and electrically heated components. Processes on site include manufacture of rubber components, parts, and etching.

Natural Gas Fired Boiler:

The facility uses a natural gas fired boiler to provide process steam for manufacturing processes. Process steam uses include curing of rubber components and heating of process tanks.

The boiler's ability to burn No. 2 fuel oil as a standby fuel has been eliminated. The boiler was listed in current permit at 16.4 mmBTU/hr, 400 hp capacity. The boiler has been modified to natural gas fired only and has been reduced to a maximum input capacity of 9.757 mmBTU/hr. Boiler current output is rated at 8 mmBTU/hr, 239 hp capacity. The boiler is no longer subject to 40 CFR 60, Subpart Dc.

Diesel Fuel Fire Pump:

The facility has a Cummins, Model NH220-IF, Serial No. 10205767, diesel fuel fire pump. Engine capacity is rated at 172 hp at facility elevation. The pump provides water for the emergency fire loop system from an adjacent pond. The system is tested monthly to insure readiness in event of emergency. The engine was built prior to April 1, 2006 and installed around 1992. It had not previously been permitted.

SITE INSPECTION

The most recent inspection of this facility was performed by James Jarrett on September 24, 2014. The facility was found to not be operating in compliance and a notice of violation was given on May 15, 2015. The notice of violation closure document was sent on March 13, 2017.

ESTIMATE OF EMISSIONS BY REVIEWING ENGINEER

Boiler 75S

Boiler (75S) had a 16.4 mmBTU/hr capacity and the ability to burn natural gas or #2 fuel oil. The boiler has had its capacity reduced to 9.757 mmBTU/hr and the ability to burn #2 fuel oil removed. Emissions calculated for the previous PTE and proposed PTE come from Emission factors from Section 1.4, Natural Gas Combustion of AP-42.

Emergency diesel fired 172 horsepower fire pump engine (113S)

The engine (113S) is rated at 200 horsepower. However, due to elevation adjustments, it is at 172 horsepower capacity. Emissions calculated for this engine are based of 100

hours per year of usage, and emission factors come from AP-42, Volume I, Fifth Edition, Section 3.3, Gasoline and Diesel Industrial Engines.

Emissions Summary

The proposed changes addressed in permit application R13-1244F shall result in the affected emission points undergoing emission additions/reductions as shown in the following Table 1 - Emissions Summary.

Table 1 – Emissions Summary

Pollutant	Boiler (75S) 16.4 mmBTU/hr #2 fuel Oil	Boiler (75S) 9.757 mmBTU/hr Natural Gas	Emergency Fire Pump Engine (172 hp) ¹	Total change in emissions
	TPY	TPY	TPY	TPY
NOx	10.34	4.19	0.29	- 5.86
CO	2.58	3.52	0.07	1.01
SO2	22.01	0.03	0.02	- 21.96
VOC	0.10	0.23	0.03	- 0.77
PM/PM10	1.03	0.32	0.03	- 0.68
Total HAPs	0.04	0.08	< 0.01	0.04

1 – Based on a maximum operating time of 100 hours per year.

REGULATORY APPLICABILITY

The following State and Federal regulations were considered for applicability to the subject facility:

The following regulations apply to this production unit: West Virginia Regulation 2 and US EPA Standards of performance for new stationary sources.

RULE 2 - CONTROL OF PARTICULATE MATTER FROM COMBUSTION OF FUEL IN INDIRECT HEAT EXCHANGES

The Boiler (75S) once had the ability to burn natural gas and #2 fuel oil. Condition 4.1.5 limited the emission of smoke and/or particulate matter greater than 10% opacity. It also required visible emission requirements using Method 9. As the ability to burn #2 fuel oil has been removed, the boiler can only use natural gas as a fuel source. Natural gas is a clean burning fuel, therefore compliance with the opacity limit will be shown by the natural gas recordkeeping requirement given in Condition 4.3.6. The Method 9 requirement in Condition 4.1.5 has been removed. Conditions 4.2.2, 4.3.10, and 4.4.3 have been changed to “Reserved”. Appendix B has been removed.

40CFR60 SUBPART Dc – STANDARDS OF PERFORMANCE FOR SMALL INDUSTRIAL-COMMERCIAL-INSTITUTIONAL STEAM GENERATING UNITS

Boiler (75S) was previously rated at 400 hp, 16.4 MMBTU/hr and was subject to this Subpart. It has been modified to burn only natural gas, and the boiler capacity has

been reduced to 239 hp, 9.757 MMBTU/hr. Therefore, it is no longer subject to this Subpart. The applicable requirements have been removed from this permit. These include 4.1.9, 4.3.7, 4.3.8, 4.3.9, 4.4.2, and 4.5.1.

40CFR60 SUBPART ZZZZ – NESHAPS FOR STATIONARY RICE

The facility has an emergency fire 172 hp diesel fuel pump (113S). The facility is an area source of HAPs. The pump was built in 1972 and installed around 1992. The requirements for a <500 hp CI emergency engine include:

40CFR§60.6603(a) and Table 2(d)(4) – This requires maintenance requirements for the engine.

40CFR§60.6604(b) – This requires the engine to use nonroad diesel fuel.

40CFR§60.6625(e), (f), (h), and (i) – These requirements include operating the engine in a manner consistent with good air pollution control practices, installing a non-resettable hour meter, minimizing the engine's time spent at idle during startup and startup time, and the option of utilizing an oil analysis program to extend the oil change requirements.

40CFR§60.6605 – These requirements for the engine include requiring the Backup diesel fire pump to be in compliance with its applicable requirements at all times, and to maintain the engine in a manner consistent with safety and good air pollution control practices.

40CFR§60.6640 – The requirements for the engine include requiring the Backup diesel fire pump to operate and maintain the engine according to manufacturer's operation and maintenance instructions, report each instance where the operating limitation were not met, and provided time limitations and exceptions of usage.

40CFR§60.6655 – The requirements for the engine include requiring recordkeeping for reports submitted, malfunctions, maintenance, continuous compliance, and hours of operation.

40CFR§60.6650(h) – The requirements for the engine include annual reporting requirements. The information required in the reports is specified in the Condition.

RACT

45CSR21-40.3.c requires RACT analysis on a case by case basis for those VOC emissions greater than 6 pph which are constructed, modified, or begin operation after the date 45CSR 21 becomes effective. The proposed changes to R13-1244F do not include an increase of VOC's greater than 6 pph.

TOXICITY OF CRITERIA REGULATED POLLUTANTS

There are no new pollutants emitted as a result of this modification.

MONITORING OF OPERATIONS

The Backup diesel fire pump engine (113S) is required to install a non-resettable hour meter to show fuel usage.

Changes to R13-1244F include:

1. Updated the Permit Number to R13-1244F.
2. Changed the contact information in Condition 3.5.3.
3. Edited Condition 4.1.3 to reflect the reduced heat input and removed the ability to use #2 fuel oil.
4. Edited Condition 4.1.5 to remove opacity monitoring. Added a note to Condition 4.3.6 that compliance with Condition 4.1.5 will be met with the natural gas recordkeeping requirement in that Condition. Conditions 4.2.2, 4.3.10, and 4.4.3 have been changed to "Reserved". Appendix B has been removed.
5. Removed 40CFR60, Subpart Dc requirements. Changed Conditions 4.1.9, 4.3.7, 4.3.8, 4.3.9, 4.4.2 and 4.5.1 to "Reserved".
6. Added "R13-1244E" and "R13-1244F" to Condition 2.4.1.
7. Updated the page numbers.
8. Revised the Equipment Table.
9. Added Condition 4.1.11 to require maintenance to the Backup diesel fire pump (113S).
10. Added Condition 4.1.12 to require the Backup diesel fire pump to use nonroad diesel fuel.
11. Added Condition 4.1.13 to require the Backup diesel fire pump to be used in a manner consistent with good air pollution control practices, installing a non-resettable hour meter, minimizing time spent at idle and startup time, and the option of extending the oil change requirement given in Condition 4.1.11(a).
12. Added Condition 4.1.14 to require the Backup diesel fire pump to be in compliance with its applicable requirements at all times, and to maintain the engine in a manner consistent with safety and good air pollution control practices.

13. Added Condition 4.1.15 to require the Backup diesel fire pump to operate and maintain the engine according to manufacturer's operation and maintenance instructions, report each instance where the operating limitation were not met, and provided time limitations and exceptions of usage.
14. Added Condition 4.3.11 to require recordkeeping for reports submitted, malfunctions, maintenance, continuous compliance, and hours of operation.
15. Added Condition 4.4.4 to require annual reporting requirements. The information required in the reports is specified in the Condition.

RECOMMENDATION TO DIRECTOR

Permit application, R13-1244F, submitted by Goodrich Corporation, for the modification of the production facility located at the Union Facility in Union, Mercer County, WV, has been reviewed and determined to meet all applicable requirements, and is therefore, recommended for approval.

Mike Egnor
Engineer

Date