

DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION  
ACTIVITY REPORT: Scheduled Inspection

A404338307

|                                       |                               |                           |
|---------------------------------------|-------------------------------|---------------------------|
| FACILITY: Dow Corning - Midland Plant |                               | SRN / ID: A4043           |
| LOCATION: 3901 S Saginaw Rd, MIDLAND  |                               | DISTRICT: Saginaw Bay     |
| CITY: MIDLAND                         |                               | COUNTY: MIDLAND           |
| CONTACT: Kayla Peacock,               |                               | ACTIVITY DATE: 01/10/2017 |
| STAFF: Kathy Brewer                   | COMPLIANCE STATUS: Compliance |                           |
| SUBJECT: FG-MACT-ZZZZ-EMERGENCY-RICE  |                               | SOURCE CLASS: MEGASITE    |
| RESOLVED COMPLAINTS:                  |                               |                           |

Dow Corning Contact: Kayla Peacock,

The current ROP conditions contain the following description:

Each existing emergency stationary reciprocating internal combustion engines (RICE) as identified within 40 CFR, Part 63, Subpart ZZZZ, 63.6590(a)(1), and is exempt from the requirements of Rule 201 pursuant to Rules 282(b) or 285(g)

Per site utilities staff the facility does not have non emergency engines currently installed.

None of the engines exhaust to a pollution control devices.

Information reviewed during the inspection indicated that the FG-MACT-ZZZZ-EMERGENCY RICE emission units were in compliance with the requirements contained in the ROP and 40 CFR Part 63 Subpart ZZZZ except for keeping separate records of each engine operating hour type. All engine hours during the period reviewed operated less than 100 hours annually. One engine was operated for 53.25 hours in 2016, including testing/maintenance and emergency hours. A Notice of Violation will not be sent as the site was able to demonstrate compliance with the operating hours limits and/or the engine operated for over 50 hours total has been dismantled.

The compliance inspection included a review of maintenance activity, tour of the on site engines and/or records review for the following engines:

| Emission Unit  | Description  | CI or SI | Horsepower                      | Engine Year |
|--|--|----------|---------------------------------|-------------|
| EU101-01   | Emergency diesel generator.<br>FORMER EU101-01 replaced w/diesel generator | CI       | 476 BHP<br>(300 kw/MMBTu 2.81). | April 2016  |
| EU123-01:<br>(replaced EU123-03 & 123-04, 60 HP diesel generators) | Lift station pump diesel Generator (315 BHP/200Kw/MMBtu 2.17               | CI       | 315 BHP<br>(200Kw/MMBtu 2.17)   | June 2016   |
| 123-03   | FORMER lift station pump generator removed in 2016                         | CI       | 60 BHP<br>(DISMANTLED)          | <2005       |
| 123-04   | FORMER lift station pump generator removed in 2016                         | CI       | 60 BHP<br>(DISMANTLED)          | <2005       |
| EU2404-02  | 340 HPCummins Fire Pump (2000 Cummins)                                     | CI       | 340 BHP                         | 1989        |

|           |  |    |         |   |
|-----------|--|----|---------|---|
| EU2404-03 | 269 HP Detroit Diesel Fire Pump (2000 Detroit) | CI | 269 BHP | 1967<br>(based on record prints – no date on plate) |
| EU2404-04 | 208 HP Cummins Fire Pump (3000 Cummins)        | CI | 208 BHP | 1994  |
| EU4701-01 | 300 HP Cummins Fire Pump (2500 Cummins)        | CI | 300 BHP | 1999  |

Each engines manufacture plate was viewed during the inspection or a photo of the plate was provided

The current ROP conditions list the following engines (emission units) as included in FG-MACT-ZZZZ-EMERGENCY RICE: EU101-01, EU123-03, EU123-04, EU2404-02, EU2404-03, EU2404-04, EU4701-01.

EU101-01 was replaced by a 476 HP engine in 2016. Engines EU123-03 and EU123-04 were dismantled in 2016, and EU123-01 (315 HP) installed in 2016.

**ATTACHMENTS**

- Hours engine operation
- Predictive maintenance for EU101-01 and 123-01 engines
- Completed maintenance work orders for EU2404-02, EU2404-03, EU2404-04, EU4701-01

**FILE REVIEW**

- 40 CFR Part 63 Subpart ZZZZ and associated guidance
- On site engine operating and maintenance records

The facility will be removing the list of emission units in the flexible group ROP conditions and maintain a list of engines subject to 40 CFR Part 63 Subpart ZZZZ for the site which can be provided upon requested by the permitting authority. As part of the ROP reissuance process, the FG description is planned to be changed to the following:

Each existing or new compression ignition emergency stationary reciprocating internal combustion engines (RICE) located at a major source of HAP emissions as identified within 40 CFR, Part 63, Subpart ZZZZ, 63.6590(a)(1), less than or equal to 500 brake hp and is exempt from the requirements of Rule 201 pursuant to Rules 282(b) or 285(g).

**EMISSION LIMITS**

There were no emission limits in the ROP conditions. The engines must comply with the work practices requirements in 40 CFR Part 63 Subpart ZZZZ.

**MATERIAL LIMITS**

There were no material limits in the ROP conditions. The engines must comply with the work practices requirements in 40 CFR Part 63 Subpart ZZZZ.

**PROCESS/OPERATIONAL RESTRICTIONS**

The permit requires that the RICE engines are operated and maintained in a manner consistent with practices to minimize air emissions. For existing emergency RICE < 500 HP the facility is required to inspect all hoses and belts, and perform an oil and filter change once every 500 hours or annually, whichever comes first. And, inspect the air cleaner every 1000 hours or annually, whichever comes first. The following information was obtained from on site maintenance records.

| Emission Unit | Description | HP | Air cleaner inspection date | Hours operated | Oil Change date | Hose /belt inspection |
|---------------|-------------|----|-----------------------------|----------------|-----------------|-----------------------|
|---------------|-------------|----|-----------------------------|----------------|-----------------|-----------------------|

| Emission Unit   | Description  | HP  | Air cleaner inspection date                      | Hours operated | Oil Change date                                  | Hose /belt inspection                            |
|---|--|-----|--|----------------|--|--|
| EU101-01  | 35 HP Emergency Generator (LPG Cummins)                      | 476 | Installed April 2016. Will be conducted annually | 18.75          | Installed April 2016. Will be conducted annually | Installed April 2016. Will be conducted annually |
| EU123-01: (replaced EU123-03 & 123-04, 60 HP diesel generators) | Lift station pump diesel Generator (315 BHP/200Kw/MMBtu 2.17 | 315 | Installed June 2016. Will be conducted annually  | 22.75          | Installed June 2016. Will be conducted annually  | Installed June 2016. Will be conducted annually  |
| 123-03  | B Diesel FORMER lift station pump generator removed in 2016  | 60  | Dismantled May 2016                              | dismantled     | Dismantled May 2016                              | Dismantled May 2016                              |
| 123-04  | C Diesel FORMER lift station pump generator removed in 2016  | 60  | Dismantled May 2016                              | dismantled     | Dismantled May 2016                              | Dismantled May 2016                              |
| EU2404-02   | Cummins Fire Pump (2000 Cummins)                             | 340 | 3/29/2016  | 32.25          | 3/29/2016  | 3/29/2016  |
| EU2404-03   | Detroit Diesel Fire Pump (2000 Detroit)                      | 269 | 3/15/2016  | 17             | 3/15/2016  | 3/15/2016  |
| EU2404-04   | Cummins Fire Pump (3000 Cummins)                             | 208 | 10/19/2016                                       | 15.5           | 10/19/2016                                       | 10/20/2016                                       |
| EU4701-01   | Cummins Fire Pump (2500 Cummins)                             | 300 | 10/18/2016                                       | 17.7           | 10/18/2016                                       | 10/18/2016                                       |

Attached are work orders showing completed tasks. Also attached are the new engines predictive maintenance task listing for the upcoming year that has the required maintenance scheduled.

The facility does not use an oil analysis program in lieu of an oil change practice.

The permit limits the hours that an emergency engine can operate for to 100 hours total, including maintenance/readiness tests, 50 of which can be in non-emergency mode. Some engines have 30 minute weekly engine operation testing and a 30 minute monthly engine loading operation procedure. The process control system tracks the operating hours electronically. On site records review found the following engine hour's operation information.

| Emission Unit                | Description                             | HP      | Emergency Hours ran | Non emergency hours including maintenance (100 limit, <50 non emergency or testing) |
|------------------------------|---|---------|---------------------|---|
| EU101-01                     | Emergency Generator (LPG Cummins)       | 476 BHP | 0                   | 18.75   |
| EU123-01: (replaced EU123-03 | Lift station pump diesel Generator (315 | 315 BHP | 4                   | 18.75   |

| Emission Unit                      | Description   | HP  | Emergency Hours ran | Non emergency hours including maintenance (100 limit, <50 non emergency or testing) |
|------------------------------------|---|-----|---------------------|---|
| & 123-04, 60 HP diesel generators) | BHP/200Kw/MMBtu 2.17  |     |                     |   |
| 123-03                             | B Diesel FORMER lift station pump generator removed in 2016 | 60  |                     | 26.75 total (emergency & testing hours not tracked separately)                      |
| 123-04                             | C Diesel FORMER lift station pump generator removed in 2016 | 60  |                     | 53.25 Total (emergency & testing hours not tracked separately)                      |
| EU2404-02                          | Cummins Fire Pump (2000 Cummins)                            | 340 |                     | 32.25 Total   |
| EU2404-03                          | Detroit Diesel Fire Pump (2000 Detroit)                     | 269 |                     | 17 total  |
| EU2404-04                          | Cummins Fire Pump (3000 Cummins)                            | 208 |                     | 15.5 Total  |
| EU4701-01                          | 300 HP Cummins Fire Pump (2500 Cummins)                     | 300 |                     | 17.7 Total  |

The ROP conditions require separate tracking for emergency and non emergency operating hours. The site tracks total hours for several engines. For any engines that are subject to 40 CFR Part 63 Subpart ZZZZ, and are operated for more than 50 hours annually, the facility will need to track nonemergency hours and emergency hours.

EU101-01 and EU123-01 will comply with RICE MACT ZZZZ by following NSPS IIII. EU123-02 and EU123-04 were compliant with NSPS IIII.

The following language should be added to the ROP Process/Operational conditions during the next renewal:

An affected source that meets any of the criteria in paragraphs §63.6590(c)(1) through (7) must meet the requirements of this part by meeting the requirements of 40 CFR Part 60, Subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part. (40 CFR 63.6590(c))

**DESIGN/EQUIPMENT PARAMETERS**

The permit requires that each existing emergency stationary RICE is equipped with a non-resettable hour meter. During the inspection the following engine operating hours were recorded from the hour meters on each engine:

| Emission Unit | Description  | Metered hours (Jan 10, 2017) |
|---------------|--|------------------------------|
| EU101-01      | Emergency diesel generator (476 BHP/300Kw/ MMBtu 2.81) | 35.3                         |

| Emission Unit | Description  | Metered hours<br>(Jan 10, 2017)   |
|---------------|--|---|
| EU123-01      | Lift station pump diesel Generator (315 BHP/200Kw/MMBtu 2.17 | 36.9  |
| 123-03        | FORMER lift station pump generator removed in 2016           | NA (generator dismantled)   |
| 123-04        | FORMER lift station pump generator removed in 2016           | NA (generator dismantled)   |
| EU2404-02     | 340 HPCummins Fire Pump (2000 Cummins)                       | 976.5   |
| EU2404-03     | 269 HP Detroit Diesel Fire Pump (2000 Detroit)               | 380<br>(engine hour tachometer has been replaced since initial installment in 1967) |
| EU2404-04     | 208 HP Cummins Fire Pump (3000 Cummins)                      | 487   |
| EU4701-01     | 300 HP Cummins Fire Pump (2500 Cummins)                      | 477   |

The EU2404-02 is operated in response to demand. EU2404-03 is started if EU2404-02 cannot meet demand, and EU2404-04 is started if additional demand.

The facility has a maintenance plan that is based on the manufactures maintenance and operations recommendations.

**TESTING/SAMPLING**

The site does not conduct an oil analysis program. Compliance is demonstrated by conducting and recording required maintenance.

**MONITORING/RECORDKEEPING**

Information reviewed during the inspection indicated that the FG-MACT-ZZZZ-EMERGENCY RICE emission units required monitoring and records were maintained in compliance with the requirements contained in the ROP and 40 CFR Part 63 Subpart ZZZZ except for keeping separate records of each engine operating hour type.

All engine hour records during the period reviewed operated less than 100 hours annually. EU123-04 engine was operated for 53.25 hours in 2016, including testing/maintenance and emergency hours. EU123-04 was dismantled in May 2016. A Notice of Violation will not be sent as the site was able to demonstrate compliance with the operating hours limits and/or the engine operated for over 50 hours total has been dismantled.

**STACK/VENT RESTRICTIONS**

There were no stack or vent identifications or restrictions in the ROP conditions. The engines must comply with the work practices requirements in 40 CFR Part 63 Subpart ZZZZ.

NAME 

DATE 1/18/17

SUPERVISOR 