PERMIT REVIEW SUMMARY

Permit Writer: Megan Rupp Date: June 24, 2020

Company Name: Kohler Company, Hattiesburg Engine Plant #1

Facility Location: 182 John Merl Tatum Industrial Drive

Hattiesburg, MS

Source Number: 0800-00092

County: Forrest

FACILITY DESCRIPTION

Kohler Company, Hattiesburg Engine Plant #1 (Kohler) is an existing internal combustion engine machining plant located in Hattiesburg, Mississippi. Operations fall under SIC code 3519 and NAICS code 333618. Kohler’s emission sources include standby generators, industrial part washers, and an evaporator.

Standby Generators (Emission Point AA-001)

Two (2) 2935 HP diesel-fired compression ignition RICE operating as standby generators, manufactured in 1998. The engines are equipped with oxidation catalysts to reduce CO emissions. To stay below major Title V source threshold for NOx, Kohler has proposed limiting the combined hours of operation of both engines to 3,000 hours per year.

Industrial Part Washer Systems (Emission Point AA-004)

Thirteen (13) part washer systems; four (4) with natural gas-fired burners, and nine (9) with electric burners. The rust preventative used in Stage 3 in some of the part washer systems contains VOCs.

Evaporator (Emission Point AA-005)

One (1) Evaporator with a 0.75 MMBtu/hr natural gas-fired burner. The evaporator is used to evaporate wastewater from the metal working fluids, part washer detergents, and rust prevent solutions. The waste solutions from the machining centers and parts washers are sent to the evaporator where the water is driven off and the solution concentrated. The concentrated solution is sent off site as used oil to a recycler.

PERMIT ACTION DESCRIPTION

On May 2, 2019, Kohler Company was issued a permit to construct (Ref. No. 0800-00117) for a new engine assembly and testing operations facility at 95 W L Runnels Industrial Drive Number 600 in Hattiesburg, MS – Hattiesburg Engine Plant Number 2. Kohler Company has relocated the engine assembly and testing operations from this existing facility to the Runnels location. The following equipment has been removed from the Hattiesburg Engine Plant, and has therefore been removed from this permit:

* Twin Assembly Production Engine Testing Line (Emission Point AA-002, EPN-63) – ten (10) test stands and two (2) audit stands with a testing capacity up to 27 HP.
* Flex Line Production Engine Testing Line (Emission Point AA-002, EPN-32) – twelve (12) test stands and two (2) audit stands with a testing capacity up to 36 HP.
* Reliability Testing (Emission Point AA-002, EPN-22) – eight (8) test stands with a testing capacity up to 27 hp.
* Gasoline dispensing facilities, including two above-ground storage tanks (1500 gallons and 3000 gallons) which have been decommissioned and will no longer be used.
* One (1) 4,000-gallon and one (1) 10,000-gallon oil storage tanks which have been decommissioned and will no longer be used.

EMISSION SUMMARY

Below is a table summarizing the facility’s maximum (8760 operating hours per year) emissions in tons per year:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | PM | PM10 | PM2.5 | SO2 | NOx | CO | VOC | Total HAPs |
| AA-001  (standby generators) | 11.4 | 9.31 | 9.31 | 0.25 | 523 | 41.7 | 4.41 | 0.13 |
| AA-002  (part washers) | 0.10 | 0.01 | 0.01 | 0.01 | 1.31 | 1.10 | 1.48 | 0.025 |
| AA-003  (evaporator) | 0.025 | 0.002 | 0.001 | 0.002 | 0.329 | 0.276 | 15.1 | 0.006 |
| Facility-Wide Total | 11.5 | 9.32 | 9.32 | 0.26 | 524 | 43.0 | 21.0 | 0.16 |
| Title V Major Source Avoidance Limitations  (AA-001 only) | — | — | — | — | 89.3 | — | — | — |

To stay below the Title V threshold for NOx, Kohler has proposed limiting the combined hours of operation of the standby generator engines (AA-001) to 3,000 hours per year. This limit on operating hours will restrict NOx emissions from the standby generators to 89.3 tons per year and effectively serves as a federally enforceable Title V avoidance limit.

APPLICABLE/PROPOSED PERMIT LIMITATIONS

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Emission**  **Point(s)** | **Pollutant(s) /**  **Parameter(s)** | **Applicable Requirement(s)** | **Limitation(s) / Standard(s)** | **Monitoring Requirement(s)** |
| AA-001 | Operating Hours | 11 Miss. Admin. Code Pt. 2, R. 2.2.B.(10).  (Title V Source Avoidance Limit) | 3,000 combined hours per year for both engines | Monitor and record the operating hours for the engines, and calculate 12-month rolling totals |
| AA-001 | PM | 11 Miss Admin. Code Pt. 2, R. 1.3.D(1)(b). | E = 0.8808\*I-0.1667 | No monitoring is proposed for PM for these engines |
| CO | 40 CFR 63.6603(a) and Table 2d.3; Subpart ZZZZ | 23 ppmvd at 15 percent O2; or  Reduce CO emissions by ≥ 70% | Performance testing conducted every 8760 hours or every 3 years, whichever comes first  Install, operate, and maintain a CPMS to continuously monitor the catalyst inlet temperature |
| AA-002  AA-003 | PM | 11 Miss. Admin. Code Pt. 2, R. 1.3.D.(1)(a). | 0.6 Pounds / MMBTU per Hour | These fuel burning sources utilize natural gas; therefore, the margin of compliance for these standards are expected to be significant so no monitoring is proposed |
| AA-002  AA-003 | SO2 | 11 Miss. Admin. Code Pt. 2, R. 1.4.(1). | 4.8 Pounds / MMBTU Heat Input |

NSPS APPLICABILITY

**40 CFR Part 60, Subpart IIII** – *New Source Performance Standards for Stationary Compression Ignition Internal Combustion Engines*

Subpart IIII is applicable to owners and operators of stationary CI ICE that commence construction after July 11, 2005, where the stationary CI ICE are manufactured after April 1, 2006 and are not fire pump engines. The standby generator engines (Emission Point AA-001) were manufactured in 1998; therefore, Subpart IIII is not applicable.

MACT APPLICABILITY

Kohler’s potential Hazardous Air Pollutant emissions are below the Title V thresholds of 25 tons per year for total HAPs and 10 tons per year for single HAPs. Therefore, Kohler is considered an area source of HAPs.

**40 CFR Part 63, Subpart ZZZZ** – *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*

Subpart ZZZZ is applicable to owners and operators of stationary RICE at major or area sources of HAP emission, except if the stationary RICE is being tested at a stationary RICE test cell/stand. The standby generator engines (Emission Point AA-001) are stationary RICE at an area source of HAPs; therefore Subpart ZZZZ applies.

**PUBLIC PARTICIPATION**

The 30-day public notice period began on July 1, 2020, with the publication of a notice in the Hattiesburg American and ends July 31, 2020.

**RECOMMENDATION**

The staff has preliminarily decided to recommend issuance of the permit to the Mississippi Environmental Quality Permit Board as shown in the draft permit. However, the staff recommendation to the Board will be made only after a thorough consideration of all public comments.