



Robert Gutowski
General Manager of Operations

RECEIVED
AQD

JAN 08 2024

MACES FILE X MAERS _____

January 4, 2024

Ms. Lindsey Wells
EGLE – AQD
Cadillac District Office
120 West Chapin Street
Cadillac, Michigan 49601

RE: Violation Notice
SRN: A3900, Manistee County
Kohler Diesel Generator Engine Installation – Unpermitted Equipment

Dear Ms. Wells:

This letter is in response to the above-referenced Violation Notice dated December 18, 2023. The Violation Notice required Martin Marietta to submit a written response by January 8, 2024. This letter provides the requested information.

1. Explanation of the cause and duration of violation cited.

Martin Marietta Magnesia Specialties produces magnesium oxide and magnesium hydroxide by chemical reaction of two raw materials: dolime (dolomitic lime) and magnesium chloride-rich brine at the Manistee facility. As part of the process, several kilns and furnaces are used to heat treat a portfolio of magnesium oxide products. These high temperature kilns and furnaces require constant flow of cooling water to protect these assets including during electrical power outages.

A diesel-powered generator was installed to sustain cooling water flow in the event of electrical power outages. The cooling water pump, which is normally powered from the plant's electrical grid, can also be powered by the new diesel generator. A second water pump can also be powered by this generator to support numerous fire-suppression systems in the facility. The emergency back-up diesel engine powered generator has emissions unit designation, EU-LAKEPMPH-KOHLER-GEN.

Prior to installation of EU-LAKEPMPH-KOHLER-GEN, the plant relied upon EU-FIREPUMP-6CYL and EU-FIREPUMP-8CYL to serve these functions. These diesel engine driven pumps became outdated and repair parts were increasingly difficult to obtain. The new diesel generator is only intended to run in the event of power outages as the installed pumps are normally powered off the commercial electrical grid. A significant benefit of this project entailed the removal of all diesel fuel storage tanks, diesel engines in the

Ms. Lindsey Wells

January 4, 2024

Page 2

pumphouse directly above Manistee Lake, and all diesel fuel supply lines near or above the lake onto land distanced from the lake shore.

Kohler Generator, EU-LAKEPMPH-KOHLER-GEN, was installed in 2020 and was first run in 2021. Through calendar year 2023, the diesel engine has less than 20 hours of total runtime since installation. It was initially believed that this engine was an exempt unit since it was provided with a Certificate of Conformity from the USEPA as a Stationary Engine and therefore did not require a PTI. Attached is an EPA Certificate of Conformity with the Clean Air Act for the 2020 model year Mitsubishi diesel compression ignition (CI) engine family installed on the Kohler generator. This certificate came with the purchase of the Kohler generator. The certification is for a Stationary engine designation. The certificate states that the engine conforms to 40 CFR Part 60 applicable requirements for the stated model year. The second attachment is from the EPA website that shows the exhaust emissions standards for Nonroad CI Engines. A 2020 model year CI engine with Rated Power at 900 kW is required to meet NOX levels of 3.5 g/kW.hr, Tier 4 level. Martin Marietta's initial evaluation to determine if a PTI was required utilized the 3.5g/kW.hr NOX emissions factor. Potential-to-Emit calculation using this figure yielded results well below the Permit-to-Install (PTI) trigger of 40 tpy NOX and the conclusion was made that a PTI was not required. Calculation: $3.5 \text{ g/kW.hr} \times 900 \text{ kW} \times 8760 \text{ hrs/yr} / 908000 \text{ g/ton} = 30.39 \text{ tons per year of NOX}$.

2. Summary of the actions taken to correct the violation and the dates by which these actions will take place.

In late November and December 2023, a records review of the facility's Air Quality ROP was conducted by Environmental Quality Analyst, Lindsey Wells. During this review, the inspector concluded that Martin Marietta's determination that the generator, EU-LAKEPMPH-KOHLER-GEN, was exempt from permitting was not accurate. Based on this conclusion, Martin Marietta is submitting a PTI application for generator, EU-LAKEPMPH-KOHLER-GEN along with this response.

3. What steps are being taken to prevent a reoccurrence.

Martin Marietta will endeavor to partner with the Department of Environment, Great Lakes, and Energy, Air Quality Division, in reviewing exemption determinations for newly installed equipment moving forward to avoid any future violations of this nature.

As can clearly be demonstrated above, Martin Marietta Magnesia Specialties, LLC is very serious about fulfilling all ROP and new equipment permitting requirements. Martin Marietta trusts that the information provided in this letter and actions being taken to resolve this issue meets with EGLE-AQD requirements. Please let us know if any there are any questions or remaining concerns.

Sincerely,



Robert Gutowski

General Manager – Operations

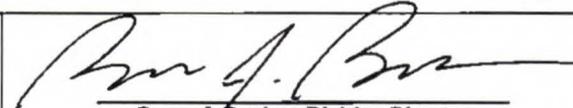


UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
2020 MODEL YEAR
CERTIFICATE OF CONFORMITY
WITH THE CLEAN AIR ACT

OFFICE OF TRANSPORTATION
AND AIR QUALITY
ANN ARBOR, MICHIGAN 48105

Certificate Issued To: **Mitsubishi Heavy Industries Engine & Turbocharger,
Ltd.**
(U.S. Manufacturer or Importer)
Certificate Number: **LMVXL33.9BBA-006**

Effective Date:
07/08/2019
Expiration Date:
12/31/2020


Byron J. Bunker, Division Director
Compliance Division

Issue Date:
07/08/2019
Revision Date:
N/A

Model Year: 2020
Manufacturer Type: Original Engine Manufacturer
Engine Family: LMVXL33.9BBA

Mobile/Stationary Indicator: Stationary
Emissions Power Category: 560<kW<=2237
Fuel Type: Diesel
After Treatment Devices: No After Treatment Devices Installed
Non-after Treatment Devices: Engine Design Modification

Pursuant to Section 111 and Section 213 of the Clean Air Act (42 U.S.C. sections 7411 and 7547) and 40 CFR Part 60, and subject to the terms and conditions prescribed in those provisions, this certificate of conformity is hereby issued with respect to the test engines which have been found to conform to applicable requirements and which represent the following engines, by engine family, more fully described in the documentation required by 40 CFR Part 60 and produced in the stated model year.

This certificate of conformity covers only those new compression-ignition engines which conform in all material respects to the design specifications that applied to those engines described in the documentation required by 40 CFR Part 60 and which are produced during the model year stated on this certificate of the said manufacturer, as defined in 40 CFR Part 60.

It is a term of this certificate that the manufacturer shall consent to all inspections described in 40 CFR 1068 and authorized in a warrant or court order. Failure to comply with the requirements of such a warrant or court order may lead to revocation or suspension of this certificate for reasons specified in 40 CFR Part 60. It is also a term of this certificate that this certificate may be revoked or suspended or rendered void *ab initio* for other reasons specified in 40 CFR Part 60.

This certificate does not cover engines sold, offered for sale, or introduced, or delivered for introduction, into commerce in the U.S. prior to the effective date of the certificate.

Nonroad Compression-Ignition Engines: Exhaust Emission Standards

	Rated Power (kW)	Tier	Model Year	NMHC (g/kW-hr)	NMHC + NOx (g/kW-hr)	NOx (g/kW-hr)	PM (g/kW-hr)	CO (g/kW-hr)	Smoke ^a (Percentage)	Useful Life (hours /years) ^b	Warranty Period (hours /years) ^b
Federal	kW < 8	1	2000-2004	-	10.5	-	1.0	8.0	20/15/50	3,000/5	1,500/2
		2	2005-2007	-	7.5	-	0.80	8.0			
		4	2008+	-	7.5	-	0.40 ^c	8.0			
	8 ≤ kW < 19	1	2000-2004	-	9.5	-	0.80	6.6		3,000/5	1,500/2
		2	2005-2007	-	7.5	-	0.80	6.6			
		4	2008+	-	7.5	-	0.40	6.6			
	19 ≤ kW < 37	1	1999-2003	-	9.5	-	0.80	5.5		5,000/7 ^d	3,000/5 ^e
		2	2004-2007	-	7.5	-	0.60	5.5			
		4	2008-2012	-	7.5	-	0.30	5.5			
			2013+	-	4.7	-	0.03	5.5			
	37 ≤ kW < 56	1	1998-2003	-	-	9.2	-	-		8,000/10	3,000/5
		2	2004-2007	-	7.5	-	0.40	5.0			
		3 ^f	2008-2011	-	4.7	-	0.40	5.0			
		4 (Option 1) ^g	2008-2012	-	4.7	-	0.30	5.0			
		4 (Option 2) ^g	2012	-	4.7	-	0.03	5.0			
		4	2013+	-	4.7	-	0.03	5.0			
	56 ≤ kW < 75	1	1998-2003	-	-	9.2	-	-		8,000/10	3,000/5
		2	2004-2007	-	7.5	-	0.40	5.0			
		3	2008-2011	-	4.7	-	0.40	5.0			
		4	2012-2013 ^h	-	4.7	-	0.02	5.0			
			2014+ ⁱ	0.19	-	0.40	0.02	5.0			
75 ≤ kW < 130	1	1997-2002	-	-	9.2	-	-	8,000/10	3,000/5		
	2	2003-2006	-	6.6	-	0.30	5.0				
	3	2007-2011	-	4.0	-	0.30	5.0				
	4	2012-2013 ^h	-	4.0	-	0.02	5.0				
		2014+	0.19	-	0.40	0.02	5.0				

Continued

	Rated Power (kW)	Tier	Model Year	NMHC (g/kW-hr)	NMHC + NOx (g/kW-hr)	NOx (g/kW-hr)	PM (g/kW-hr)	CO (g/kW-hr)	Smoke ^a (Percentage)	Useful Life (hours /years) ^b	Warranty Period (hours /years) ^b
Federal	130 ≤ kW < 225	1	1996-2002	1.3 ^l	-	9.2	0.54	11.4	20/15/50	8,000/10	3,000/5
		2	2003-2005	-	6.6	-	0.20	3.5			
		3	2006-2010	-	4.0	-	0.20	3.5			
		4	2011-2013 ^h	-	4.0	-	0.02	3.5			
			2014+ ⁱ	0.19	-	0.40	0.02	3.5			
	225 ≤ kW < 450	1	1996-2000	1.3 ^l	-	9.2	0.54	11.4			
		2	2001-2005	-	6.4	-	0.20	3.5			
		3	2006-2010	-	4.0	-	0.20	3.5			
		4	2011-2013 ^h	-	4.0	-	0.02	3.5			
			2014+ ⁱ	0.19	-	0.40	0.02	3.5			
	450 ≤ kW < 560	1	1996-2001	1.3 ^l	-	9.2	0.54	11.4			
		2	2002-2005	-	6.4	-	0.20	3.5			
		3	2006-2010	-	4.0	-	0.20	3.5			
		4	2011-2013 ^h	-	4.0	-	0.02	3.5			
			2014+ ⁱ	0.19	-	0.40	0.02	3.5			
	560 ≤ kW < 900	1	2000-2005	1.3 ^l	-	9.2	0.54	11.4			
		2	2006-2010	-	6.4	-	0.20	3.5			
		4	2011-2014	0.40	-	3.5	0.10	3.5			
			2015+ ⁱ	0.19	-	3.5 ^k	0.04 ^l	3.5			
	kW > 900	1	2000-2005	1.3 ^l	-	9.2	0.54	11.4			
2		2006-2010	-	6.4	-	0.20	3.5				
4		2011-2014	0.40	-	3.5 ^k	0.10	3.5				
		2015+ ⁱ	0.19	-	3.5 ^k	0.04 ^l	3.5				

Notes on following page.



Michigan Department of Environment, Great Lakes, and Energy - Air Quality Division

RENEWABLE OPERATING PERMIT APPLICATION C-001: CERTIFICATION

This information is required by Article II, Chapter 1, part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to provide this information may result in civil and/or criminal penalties. Please type or print clearly.

This form is completed and included as part of Renewable Operating Permit (ROP) initial and renewal applications, notifications of change, amendments, modifications, and additional information.

Form Type C-001	SRN A3900
-----------------	-----------

Stationary Source Name Martin Marietta Magnesia Specialties, LLC	
City Manistee	County Manistee

SUBMITTAL CERTIFICATION INFORMATION
1. Type of Submittal <i>Check only one box.</i> <input type="checkbox"/> Initial Application (Rule 210) <input checked="" type="checkbox"/> Notification / Administrative Amendment / Modification (Rules 215/216) <input type="checkbox"/> Renewal (Rule 210) Other, describe <input type="checkbox"/> on AI-001
2. If this ROP has more than one Section, list the Section(s) that this Certification applies to
3. Submittal Media <input type="checkbox"/> E-mail <input type="checkbox"/> FTP <input type="checkbox"/> Disk <input checked="" type="checkbox"/> Paper
4. Operator's Additional Information ID - Create an Additional Information (AI) ID that is used to provide supplemental information on AI-001 regarding a submittal. AI Response to Notice of Violation - Kohler Diesel Generator Engine Installation - Unpermitted Equipment

CONTACT INFORMATION	
Contact Name Robert Gutowski	Title General Manager
Phone number 231-723-1206	E-mail address bob.gutowski@martinmarietta.com

This form must be signed and dated by a Responsible Official.	
Responsible Official Name Robert Gutowski	Title General Manager - Operations
Mailing address 1800 Eastlake Road - P.O. Box 398	

City Manistee	State MI	ZIP Code 49660	County Manistee	Country USA
------------------	-------------	-------------------	--------------------	----------------

As a Responsible Official, I certify that, based on information and belief formed after reasonable inquiry, the statements and information in this submittal are true, accurate and complete.

Robert J. Gutierrez

1-5-2024

Signature of Responsible Official

Date

**RENEWABLE OPERATING PERMIT APPLICATION C-001
CERTIFICATION**

MACES
MAERS

This information is required by Article II, Chapter 1, part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to provide this information may result in civil and/or criminal penalties. Please type or print clearly.

This form is completed and included as part of Renewable Operating Permit (ROP) initial and renewal applications, notifications of change, amendments, modifications, and additional information.

Form Type C-001	SRN A3900
-----------------	-----------

Stationary Source Name Martin Marietta Magnesia Specialties, LLC	
City Manistee	County Manistee

SUBMITTAL CERTIFICATION INFORMATION	
1. Type of Submittal <i>Check only one box.</i> <input type="checkbox"/> Initial Application (Rule 210) <input checked="" type="checkbox"/> Notification / Administrative Amendment / Modification (Rules 215/216) <input type="checkbox"/> Renewal (Rule 210) Other, describe <input type="checkbox"/> on AI-001	
2. If this ROP has more than one Section, list the Section(s) that this Certification applies to	
3. Submittal Media <input type="checkbox"/> E-mail <input type="checkbox"/> FTP <input type="checkbox"/> Disk <input checked="" type="checkbox"/> Paper	
4. Operator's Additional Information ID - Create an Additional Information (AI) ID that is used to provide supplemental information on AI-001 regarding a submittal. AI Installation of Kohler Generator for emergency water supply at the Manistee Plant.	

CONTACT INFORMATION	
Contact Name Robert Gutowski	Title General Manager
Phone number 231-723-1206	E-mail address bob.gutowski@martinmarietta.com

This form must be signed and dated by a Responsible Official.	
Responsible Official Name Robert Gutowski	Title General Manager - Operations
Mailing address 1800 Eastlake Road - P.O. Box 398	

City Manistee	State MI	ZIP Code 49660	County Manistee	Country USA
------------------	-------------	-------------------	--------------------	----------------

As a Responsible Official, I certify that, based on information and belief formed after reasonable inquiry, the statements and information in this submittal are true, accurate and complete.

Robert J. Gutowski

1-5-2024

Signature of Responsible Official

Date



PERMIT TO INSTALL APPLICATION

For authority to install, construct, reconstruct, relocate, or modify process, fuel-burning or refuse burning equipment and/or control equipment. Permits to install are required by administrative rules pursuant to Section 5505 of 1994

FOR EGLE USE
APPLICATION NUMBER

Please type or print clearly. The "Application Instructions" and "Information Required for an Administratively Complete Permit to Install Application" are available on the Air Quality Division (AQD) Permit Web Page.

Please call the AQD at 517-899-6252. if you have not been contacted within 15 days of your application submittal.

1. FACILITY CODES: State Registration Number (SRN) and North American Industry Classification System (NAICS)
2. APPLICANT NAME: (Business License Name of Corporation, Partnership, Individual Owner, Government Agency)
3. APPLICANT ADDRESS: (Number and Street)
4. EQUIPMENT OR PROCESS LOCATION: (Number and Street - if different than Item 3)
5. GENERAL NATURE OF BUSINESS:
6. EQUIPMENT OR PROCESS DESCRIPTION: (A Description MUST Be Provided Here. Include Emission Unit IDs. Attach additional sheets if necessary; number and date each page of the submittal.)
7. REASON FOR APPLICATION: (Check all that apply.)
8. IF THE EQUIPMENT OR PROCESS THAT WILL BE COVERED BY THIS PERMIT TO INSTALL (PTI) IS CURRENTLY COVERED BY ANY ACTIVE PERMITS, LIST THE PTI NUMBER(S):
9. DOES THIS FACILITY HAVE AN EXISTING RENEWABLE OPERATING PERMIT (ROP)?
10. AUTHORIZED EMPLOYEE:
11. CONTACT: (If different than Authorized Employee. The person to contact with questions regarding this application)
12. IS THE CONTACT PERSON AUTHORIZED TO NEGOTIATE THE TERMS AND CONDITIONS OF THE PERMIT TO INSTALL?
FOR EGLE USE ONLY - DO NOT WRITE BELOW
DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203:
DATE PERMIT TO INSTALL APPROVED:
DATE APPLICATION / PTI VOIDED:
DATE APPLICATION DENIED:

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES AND ENERGY
PERMIT TO INSTALL APPLICATION INSTRUCTIONS

INFORMATION

A permit to install is required to install, construct, reconstruct, relocate, or modify any process or process equipment, including control equipment pertaining thereto, which may emit an air contaminant (R 336.1201). A process is an action, operation, or a series of actions or operations at a source that emits or has the potential to emit an air contaminant. Process equipment is all equipment, devices, and auxiliary components, including air pollution control equipment, stacks, and other emission points, used in a process. An emission unit is any part of a stationary source that emits or has the potential to emit an air contaminant. Air pollution control equipment is any method, process, or equipment that removes, reduces, or renders less noxious air contaminants discharged into the atmosphere. An application may be submitted for one or more interrelated processes at a source.

ADDITIONAL REQUIREMENTS

An administratively complete application must include reasonable responses to all requests for information on the application form and in these instructions. Additional detailed information may be attached to the application form and must be submitted in duplicate. In addition to the general information requested on the application form, the following information must be included for the application to be considered administratively complete:

- A. **Process Description** - In addition to the general process description which must be included in Item 6 on the application form, attach a written description in appropriate detail of each process covered by this application. State the size and type along with the make and model (if known) of the proposed process equipment, including any air pollution control equipment. Create a unique descriptive identifier (Emission Unit ID) for each emission unit. Specify the proposed operating schedule of the process equipment in hours per day, days per week, and weeks per year. Provide details of the type and feed rate of each material used in or produced by the process, in pounds per hour or similar measure. Describe any fuels and associated firing devices used in the process. Describe any waste generated by the process or equipment and methods of disposal or treatment. Applications for complex or multiple processes should also include a block diagram showing the flow of materials and intermediate and final products.
- B. **Regulatory Discussion** - Describe all federal, state, or local air pollution control regulations which you believe are applicable to the proposed process or process equipment. Include a discussion of how you believe the proposed process or process equipment complies with these regulations.
- C. **Control Technology Analysis** - Describe how the air contaminant emissions from the proposed process equipment will be controlled or otherwise minimized. Provide sufficient control method detail to show the extent and efficiency of any air pollution control devices. Air pollution control includes pollution prevention or other methods which result in reduced emissions from the process.
- D. **Emissions Summary and Calculations** - Explain clearly and in appropriate detail the nature, quantity (both controlled and uncontrolled), concentration, particle size, pressure, temperature, etc. of all air contaminants, including all toxic air contaminants, that are reasonably anticipated to be discharged to the atmosphere due to the operation of the source. Summarize these emissions calculations in tabular form for all equipment covered by the application and for each stack/vent.
- E. **Stack/Vent Parameters** - For each stack or vent related to the proposed process equipment provide the following information (including ranges if appropriate): the minimum height above the ground, maximum internal diameter or dimensions, discharge orientation (e.g., vertical, horizontal), maximum exhaust volume flow rate in cubic feet per minute (indicate actual or standard), maximum exhaust gas temperature, a description of any rain protection device, and location of any stack testing ports.
- F. **Site Description and Process Equipment Location Drawings** - Submit legible scale drawings which show a plan view of the owner's property to the boundary lines. Locate and identify the proposed equipment. Locate and identify all adjacent properties, include outline and height of all structures within 150 feet of proposed equipment and show any fence lines. Locate and identify all stacks/vents or other emission points related to the proposed process equipment and indicate the distance to the nearest property line. Indicate the scale of the plan and north direction on the drawing.

Additional information beyond that identified above may be required to complete the technical review of any individual application. Further information or clarification concerning permits to install, including the document "Information Required for an Administratively Complete Application," can be obtained from the address listed below, the Internet, or by calling 517-899-6252.

ADDITIONAL REQUIREMENTS FOR USE OF ELECTRONIC APPLICATION

The electronic version of the Permit to Install Application is a WORD template. This template may be downloaded and completed electronically. The department is **not** accepting electronic submittal of the application. Create three (3) paper copies of the application. Mail three (3) copies of this application along with two (2) copies of any plans, specifications, or drawings required by the above instructions to the address below. The application must include the original signature of an authorized employee of the applicant certifying the truth of the information in the application. Applicant should retain a copy of the application.

US Post:

Michigan Department of Environment, Great Lakes, and Energy, Air Quality Division – Permit Section
P.O. BOX 30260 Lansing, MI 48909-7760

For Priority/Express Mail:

Michigan Department of Environment, Great Lakes, and Energy, Air Quality Division – Permit Section
Constitution Hall, 2nd Floor South
525 W Allegan Street, Lansing, MI 48933-1502

Project Background

Martin Marietta Magnesia Specialties produces magnesium oxide and magnesium hydroxide by chemical reaction of two raw materials: dolime (dolomitic lime) and magnesium chloride-rich brine at the Manistee facility. As part of the process, several kilns and furnaces are used to heat treat a portfolio of magnesium oxide products. These high temperature kilns and furnaces require constant flow of cooling water to protect these assets including during electrical power outages.

A diesel-powered generator was installed to sustain cooling water flow in the event of electrical power outages. The cooling water pump, which is normally powered from the plant's electrical grid, can also be powered by the new diesel generator. A second water pump can also be powered by this generator to support numerous fire-suppression systems in the facility. The emergency back-up diesel power generator has emissions unit designation, EU-LAKEPMPH-KOHLER-GEN.

Prior to installation of EU-LAKEPMPH-KOHLER-GEN, the plant relied upon EU-FIREPUMP-6CYL and EU-FIREPUMP-8CYL to serve these functions. These diesel engine driven pumps became outdated and repair parts were increasingly difficult to obtain. The new diesel generator is only intended to run in the event of power outages as the installed pumps are normally powered off the commercial electrical grid. A significant benefit of this project entailed the removal of all diesel fuel storage tanks, diesel engines in the pumphouse directly above Manistee Lake, and all diesel fuel supply lines near or above the lake onto land distanced from the lake shore.

Kohler Generator, EU-LAKEPMPH-KOHLER-GEN, was installed in 2020 and was first run in 2021. Through calendar year 2023, the diesel engine has less than 20 hours of total runtime since installation. It was initially believed that this engine was an exempt unit since it was provided with a Certificate of Conformity from the USEPA as a Stationary Engine and therefore did not require a PTI. The certificate states that the engine conforms to 40 CFR Part 60 applicable requirements for the stated model year. The second attachment is from the EPA website that shows the exhaust emissions standards for Nonroad CI Engines. A 2020 model year CI engine with Rated Power at 900 kW is required to meet NOX levels of 3.5 g/kW.hr, Tier 4 level. Martin Marietta's initial evaluation to determine if a PTI was required utilized the 3.5g/kW.hr NOX emissions factor. Potential-to-Emit calculation using this figure yielded results well below the Permit-to-Install (PTI) trigger of 40 tpy NOX and the conclusion was made that a PTI was not required. Calculation: $3.5 \text{ g/kW.hr} \times 900 \text{ kW} \times 8760 \text{ hrs/yr} / 908000 \text{ g/ton} = 30.39 \text{ tons per year of NOX}$.

In late November and December 2023, a records review of the facility's Air Quality ROP was conducted by Environmental Quality Analyst, Lindsey Wells. During this review, the inspector determined that Martin Marietta's determination that the generator was exempt from permitting was not accurate. Based on this conclusion, Martin Marietta is submitting this PTI application for generator, EU-LAKEPMPH-KOHLER-GEN, that was installed in 2020.

Process Description

Martin Marietta installed a new emergency diesel generator designated EU-LAKEPMPH-KOHLER-GEN.

A Kohler Model: 750REOZMD diesel generator was chosen for this application. The power rating is 900kWh or 1207bhp for this unit. It has a Mitsubishi S12A2-Y2PTAW-2 Model Engine which is a 4-Cycle Turbocharged Diesel Engine with 2071 cu. in. of displacement. It has a max heat input of 7.89mmBtu/hr with #2 Diesel fuel. The plant uses Dyed Ultra Low Sulfur #2 Diesel Fuel with maximum sulfur content of 15ppm.

This emergency back-up generator will only be operated when power is lost and for maintenance and testing to insure readiness. Running the generator for maintenance activities and testing for readiness shall be limited to less than 100 hours per year.

Martin Marietta has decommissioned both EU-FIREPUMP-6CYL and EU-FIREPUMP-8CYL now that EU-LAKEPMPH-KOHLER-GEN is installed and functional.

Regulatory Discussion

The plant PLC network will monitor when the generator operates and an operator will be required to select whether the run time was for maintenance or emergency purposes. The annual maintenance runtime shall be less than 100 hours. Martin Marietta may also have the option to operate the generator for up to 50 hours in non-emergency situations. The sum of non-emergency and maintenance runtime shall not exceed 100 hours annually.

Control Technology Analysis

If we base emissions on the 100 hours of runtime maximum per year and the specifications from the manufacturer, the realistic emissions are in the following table.

Criteria Pollutant	g/kWh	TPY
HC	0.56	0.06
Nox	5.36	0.53
CO	0.6	0.06
PM	0.17	0.02

Emissions Summary and Calculations

Based on the specifications for this engine, all emissions are low enough to be exempt except NOx for this engine. With a 5.36 g/kWh listed, that calculates out to 45 tpy vs a 40 tpy max requirement in the exempt handbook. With the maintenance operating limitation of 100 hours per year, emissions would equate to only ~0.5tpy of NOx other than emergency situations. Actual usage is expected to be much lower than this.

Based on the manufacturer's emission data, the following table has been calculated for criteria pollutants.

Criteria Pollutant	g/kWh	TPY
HC	0.56	4.87
NOx	5.36	46.58
CO	0.6	5.21
PM	0.17	1.48

Operating Data

Maximum maintenance or non-emergency operating hours per year = 100 hours (no more than 50 hours non-emergency).

Stack / Vent Parameters

Building height, ft	Stack height, ft	Stack Dia, in	Airflow, ACFM	Exhaust Temp, °F
10.8	11.5	12	7344	883