

Division of Air Quality Permit Application Submittal

Please find attached a permit application for :

[Company Name; Facility Location]

- DAQ Facility ID (for existing facilities only):
- Current 45CSR13 and 45CSR30 (Title V) permits associated with this process (for existing facilities only):

• Type of NSR Application (check all that apply):

- Construction
- Modification
- Class I Administrative Update
- Class II Administrative Update
- Relocation
- Temporary
- Permit Determination

• Type of 45CSR30 (TITLE V) Application:

- Title V Initial
- Title V Renewal
- Administrative Amendment**
- Minor Modification**
- Significant Modification**
- Off Permit Change

****If the box above is checked, include the Title V revision information as ATTACHMENT S to the combined NSR/Title V application.**

• Payment Type:

- Credit Card (Instructions to pay by credit card will be sent in the Application Status email.)
- Check (Make checks payable to: WVDEP – Division of Air Quality)

Mail checks to:
WVDEP – DAQ – Permitting
Attn: NSR Permitting Secretary
601 57th Street, SE
Charleston, WV 25304

Please wait until DAQ emails you the Facility ID Number and Permit Application Number. Please add these identifiers to your check or cover letter with your check.

• If the permit writer has any questions, please contact (all that apply):

- Responsible Official/Authorized Representative

- Name:
- Email:
- Phone Number:

- Company Contact

- Name:
- Email:
- Phone Number:

- Consultant

- Name:
- Email:
- Phone Number:



BY ELECTRONIC DELIVERY

DEPAirQualityPermitting@wv.gov

Nov 26, 2024

Ms. Laura M. Crowder
Director, Division of Air Quality
West Virginia Department of Environmental Protection
601 57th Street
Charleston, West Virginia 25304

RE: Virginia Electric and Power Company (Dominion Energy)
Mt. Storm Power Station (DAQ Air Facility ID No. 023-00003)
Title V Permit Significant Modification Application

Dear Ms. Crowder:

Virginia Electric and Power Company DBA Dominion Energy is requesting a significant modification to incorporate the provisions of General Permit G60-D116 into the Title V operating permit for Mt. Storm Power Station. General Permit G60-D116 authorized the construction of seven (7) emergency engines on site. The first engine from the general permit was installed and commenced operation on January 11, 2024. This application is being submitted within 12 months of the commencement of operations. The appropriate pages of the Title V Revision Form and its attachments are enclosed in accordance with the WV DEP instructions.

If you have any questions about this submittal, please contact Bryan Nichols at (803) 605-5665 or via email at bryan.t.nichols@dominionenergy.com.

Sincerely,

A handwritten signature in black ink, appearing to read "Todd M. Alonzo".

Todd M. Alonzo
Manager, Environmental – Corporate Air Programs

cc: **(CERTIFIED MAIL)**

Director, Air Enforcement Division
Office of Enforcement and Compliance Assurance
U.S. Environmental Protection Agency
Ariel Rios Building [2242A]
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

Regional Administrator
U.S. EPA Region III
1600 John F. Kennedy Boulevard
Philadelphia, PA 19103

Director
Virginia Department of Environmental Quality
629 East Main Street
P.O. Box 10009
Richmond, VA 23240-0009

Director, Division of Air Quality
Department of Environmental Protection
601 57th Street SE
Charleston, WV 25304

Bureau Chief
Environmental Protection Bureau
New York Attorney General's Office
28 Liberty Street
New York, New York 10005

Administrator
Air and Environmental Quality Compliance and Enforcement
P.O. Box 422
401 East State Street, Floor 4
Trenton, NJ 08625

Section Chief
Environmental Enforcement
Division of Law
P.O. Box 093
25 Market Street, 7th Floor
Trenton, NJ 08625

Department Head
Environmental Protection Department Connecticut Attorney General's Office
55 Elm Street
Hartford, CT 06106

Dominion Energy
Vice President – Fossil and Hydro
5000 Dominion Boulevard
Glenn Allen, VA 23060



WEST VIRGINIA DEPARTMENT OF
ENVIRONMENTAL PROTECTION
DIVISION OF AIR QUALITY

601 57th Street, SE
Charleston, WV 25304
(304) 926-0475
www.dep.wv.gov/daq

TITLE V PERMIT REVISION APPLICATION

PLEASE CHECK TYPE OF TITLE V PERMIT REVISION:

- ADMINISTRATIVE AMENDMENT
- MINOR MODIFICATION
- SIGNIFICANT MODIFICATION
- OFF-PERMIT CHANGE
- OPERATIONAL FLEXIBILITY [502(B)(10) CHANGES]
- REOPENING

TITLE V PERMIT NUMBER:

R30- 02300003-2021

WHEN DID OR WHEN WILL THE CHANGES OCCUR?

MM/DD/YYYY : 01/11/2024

SIC CODES: PRIMARY: 4911 SECONDARY:

Refer to "Title V Revision Guidance" (Appendix A, "Title V Permit Revision Flowchart"), for type of revision, and to Section 7 of this Application for Application Completeness and Ability to Operate information

Section 1: General Information

a. Name of Applicant (As registered with the WV Secretary of State's Office):

Virginia Electric and Power Company

b. Facility Name or Location:

Mt. Storm Power Station

b. Contact Information

Responsible Official: Jason S. Williams

Title: Director, PG Station III

Street or P.O. Box: 436 Dominion Blvd.

City: Mt. Storm

State: WV

Zip: 26739

Telephone Number: (804) 441 - 3133

Fax Number: () -

E-mail: jason.s.williams@dominionenergy.com

Environmental Contact: Kristin Edwards

Title: Environmental Manager

Street or P.O. Box: 436 Dominion Blvd.

City: Mt. Storm

State: WV

Zip: 26739

Telephone Number: (304) 259 - 4402

Fax Number: () -

E-mail: kristin.d.edwards@dominionenergy.com

Application Preparer: Bryan Nichols

Title: Environmental Specialist

Company: Dominion Energy, Inc.

Street or P.O. Box: 220 Operation Way, MC OSC 1A

City: Cayce

State: SC

Zip: 29033

Telephone Number: (803) 605 - 5665

Fax Number: () -

E-mail: bryan.t.nichols@dominionenergy.com

Person to contact if we have questions regarding this Application: Bryan Nichols

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

Section 2: Revision Information

a. Description of Changes Associated with this Permit Revision
Provide a general description of changes to the facility. Mt. Storm Power Station installed six (6) new engines on site: - Installed one (1) new diesel-fired emergency generator (ID: LP-EG-1) at the leachate ponds - Installed four (4) new propane-fired emergency generators (ID: SW-EG-8, 9, 10, and 11) in the station switchyard to replace the existing propane-fired emergency generators (ID: SW-EG-1, 2, and 3) - Installed one (1) new diesel-fired fire pump (ID: MTST-00-FP-ENG-1) to replace the existing diesel-fired fire pump (ID: MTST-00-FP-ENG-1) Mt Storm Power Station has permitted but not yet installed: - One (1) new diesel-fired emergency generator (ID: LV-EG-1) at the low volume waste system ponds
b. Business Confidentiality Claims Does this application include confidential information (per 45CSR31)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, identify each segment of information on each page that is submitted as confidential, and provide justification for each segment claimed confidential, including the criteria under 45CSR§31-4.1, and in accordance with the DAQ's "PRECAUTIONARY NOTICE-CLAIMS OF CONFIDENTIALITY" guidance as ATTACHMENT A .
c. Provide a Plot Plan(s) if new emission points were added since latest revision, e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the new/modified stationary source(s) is located as ATTACHMENT B . For instructions, refer to "Plot Plan - Guidelines" .
d. Provide a detailed Process Flow Diagram(s) if new emission points were added since latest revision, showing each new/modified process or emissions unit as ATTACHMENT C . Process Flow Diagrams should show all emission units, control equipment, emission points, and their relationships.
e. Emission Units Table Fill out the Emission Units Table for new and/or modified equipment and provide it as ATTACHMENT D .
f. Emission Units Form(s) For each new and/or modified emission unit(s) with applicable requirement(s) listed in the Emission Units Table , fill out and provide an Emission Unit Form(s) as ATTACHMENT E . Are you in compliance with all facility-wide applicable requirements? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No For each new and/or modified emission unit not in compliance with an applicable requirement, fill out a Schedule of Compliance Form as ATTACHMENT F .
g. Control Devices For each new and/or modified control device listed in the Emission Units Table , fill out and provide an Air Pollution Control Device Form(s) as ATTACHMENT G . For any control device that is required on an emission unit in order to meet a standard or limitation for which the potential pre-control device emissions of an applicable regulated air pollutant is greater than or equal to the Part 70 Major Source Threshold level, refer to the Compliance Assurance Monitoring (CAM) Form(s) for CAM applicability. If applicable, please check appropriate box in Section 3(a) below, fill out and provide these forms for each Pollutant Specific Emission Unit (PSEU) as ATTACHMENT H .
<i>All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.</i>

Section 3: New Applicable Requirements

a. New Applicable Requirements Summary	
Mark all applicable requirements associated with the changes involved with this permit revision:	
<input type="checkbox"/> SIP	<input type="checkbox"/> FIP
<input type="checkbox"/> Minor source NSR (45CSR13)	<input type="checkbox"/> PSD (45CSR14)
<input type="checkbox"/> NESHAP (45CSR34)	<input type="checkbox"/> Nonattainment NSR (45CSR19)
<input checked="" type="checkbox"/> Section 111 NSPS (Subpart(s) <u>IIII and JJJJ</u>)	<input checked="" type="checkbox"/> Section 112(d) MACT standards (Subpart(s) <u>zzzz</u>)
<input type="checkbox"/> Section 112(g) Case-by-case MACT	<input type="checkbox"/> 112(r) RMP
<input type="checkbox"/> Section 112(i) Early reduction of HAP	<input type="checkbox"/> Consumer/commercial prod. reqts., section 183(e)
<input type="checkbox"/> Section 129 Standards/Reqts.	<input type="checkbox"/> Stratospheric ozone (Title VI)
<input type="checkbox"/> Tank vessel reqt., section 183(f)	<input type="checkbox"/> Emissions cap 45CSR§30-2.6.1
<input type="checkbox"/> NAAQS, increments or visibility (temp. sources)	<input type="checkbox"/> 45CSR27 State enforceable only rule
<input type="checkbox"/> 45CSR4 State enforceable only rule	<input type="checkbox"/> Acid Rain (Title IV, 45CSR33)
<input type="checkbox"/> Emissions Trading and Banking (45CSR28)	<input type="checkbox"/> Compliance Assurance Monitoring (40CFR64)
<input type="checkbox"/> CAIR NO _x Annual Trading Program (45CSR39)	<input type="checkbox"/> CAIR NO _x Ozone Season Trading Program (45CSR26)
<input type="checkbox"/> CAIR SO ₂ Trading Program (45CSR41)	

b. Non Applicability Determinations
List all requirements, which the source has determined not applicable to this permit revision and for which a permit shield is requested. The listing shall also include the rule citation and a rationale for the determination.
N/A
<input checked="" type="checkbox"/> Permit Shield Requested (not applicable to Minor Modifications, Off-Permit Changes, or for Operational Flexibility)
<i>All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.</i>

c. Suggested Title V Draft Permit Language

Provide **Suggested Title V Draft Permit language** for the proposed Title V Permit revision (including all applicable requirements associated with the permit revision and any associated monitoring /recordkeeping/reporting requirements), OR attach a marked up pages of current Title V Permit as **ATTACHMENT I**. Please include appropriate citations (Permit or Consent Order number, condition number and/or rule citation (e. g. 45CSR§7-4.1)) for those requirements being added / revised.

Suggested edits to the Title V for the new engine are included as Attachment I

d. Active NSR Permits/Permit Determinations/Consent Orders Associated With This Permit Revision

Permit or Consent Order Number	Date of Issuance (MM/DD/YYYY)	Permit/Consent Order Condition Number
G60-D116	12/06/2023	(shown in Attachment I)

e. Inactive NSR Permits/Obsolete Permit or Consent Orders Conditions Associated With This Revision

Permit Number	Date of Issuance (MM/DD/YYYY)	Permit/Consent Order Condition Number

Section 4: Change in Potential Emissions

Pollutant	Change in Potential Emissions (+ or -), TPY	For Off-Permit Changes: Provide Total Aggregated Emissions Increase Since Last Permit/Modification
NOx	0.34	
CO	-0.46	
VOC	0.33	
PM10	0.22	
SO2	0.22	

Provide **Supporting Emission Calculations/Estimations** as **ATTACHMENT J**.

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

Section 5: Certification of Information

a. Certification For Use Of Minor Modification Procedures (Required Only for Minor Modification Requests)

<i>Note:</i>	<i>This certification must be signed by a responsible official. Applications without a signed certification will be returned as incomplete. The criteria for allowing the use of Minor Modification Procedures are as follows:</i>
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- i. Proposed changes do not violate any applicable requirement;
- ii. Proposed changes do not involve significant changes to existing monitoring, reporting, or recordkeeping requirements in the permit;
- iii. Proposed changes do not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination for temporary sources of ambient air quality impacts, or a visibility increment analysis;
- iv. Proposed changes do not seek to establish or change a permit term or condition for which there is no underlying applicable requirement and which permit or condition has been used to avoid an applicable requirement to which the source would otherwise be subject (synthetic minor). Such terms and conditions include, but are not limited to a federally enforceable emissions cap used to avoid classification as a modification under any provision of Title I or any alternative emissions limit approved pursuant to regulations promulgated under § 112(j)(5) of the Clean Air Act;
- v. Proposed changes do not involve preconstruction review under Title I of the Clean Air Act or 45CSR14 and 45CSR19;
- vi. Proposed changes are not required under any rule of the Director to be processed as a significant modification;

Notwithstanding subparagraph 45CSR§30-6.5.a.1.A. (items i through vi above), minor permit modification procedures may be used for permit modifications involving the use of economic incentives, marketable permits, emissions trading, and other similar approaches, to the extent that such minor permit modification procedures are explicitly provided for in rules of the Director which are approved by the U.S. EPA as a part of the State Implementation Plan under the Clean Air Act, or which may be otherwise provided for in the Title V operating permit issued under 45CSR30.

Pursuant to 45CSR§30-6.5.a.2.C., the proposed modification contained herein meets the criteria for use of Minor permit modification procedures as set forth in Section 45CSR§30-6.5.a.1.A. The use of Minor permit modification procedures are hereby requested for processing of this application.

(Signed):		Date:	/	/	/
	<i>(Please use blue ink)</i>		<i>(Please use blue ink)</i>		
Named (typed):		Title:			

**b. Certification of Truth, Accuracy and Completeness and Certification of Compliance
(Required For All Revision Requests)**

Note: *This Certification must be signed by a responsible official. Applications without a signed certification will be returned as incomplete.*

Certification of Truth, Accuracy and Completeness

I certify that I am a responsible official (as defined at 45CSR§30-2.38) and am accordingly authorized to make this submission on behalf of the owners or operators of the source described in this document and its attachments. I certify under penalty of law that I have personally examined and am familiar with the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine and/or imprisonment.

Compliance Certification

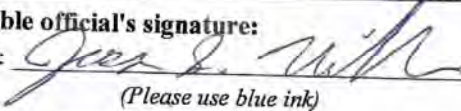
Except for requirements identified in the Title V Application for which compliance is not achieved, I, the undersigned hereby certify that, based on information and belief formed after reasonable inquiry, all air contaminant sources identified in this application are in compliance with all applicable requirements.

Responsible official (type or print)

Name: **Jason S. Williams**

Title: **Director, PG Station III**

Responsible official's signature:

Signature: 
(Please use blue ink)

Signature Date: 11-25-2024
(Please use blue ink)

Section 6: Attachments

Note: Please check all applicable attachments included with this permit application:

- | | |
|-------------------------------------|--|
| <input type="checkbox"/> | ATTACHMENT A: Business Confidentiality Claims |
| <input checked="" type="checkbox"/> | ATTACHMENT B: Plot Plan(s) |
| <input checked="" type="checkbox"/> | ATTACHMENT C: Process Flow Diagram(s) |
| <input type="checkbox"/> | ATTACHMENT D: Emission Units Table |
| <input type="checkbox"/> | ATTACHMENT E: Emission Unit Form(s) |
| <input type="checkbox"/> | ATTACHMENT F: Schedule of Compliance Form(s) |
| <input type="checkbox"/> | ATTACHMENT G: Air Pollution Control Device Form(s) |
| <input type="checkbox"/> | ATTACHMENT H: Compliance Assurance Monitoring Form(s) |
| <input type="checkbox"/> | ATTACHMENT I: Suggested Title V Draft Permit Language |
| <input type="checkbox"/> | ATTACHMENT J: Supporting Emission Calculations/Estimations |

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

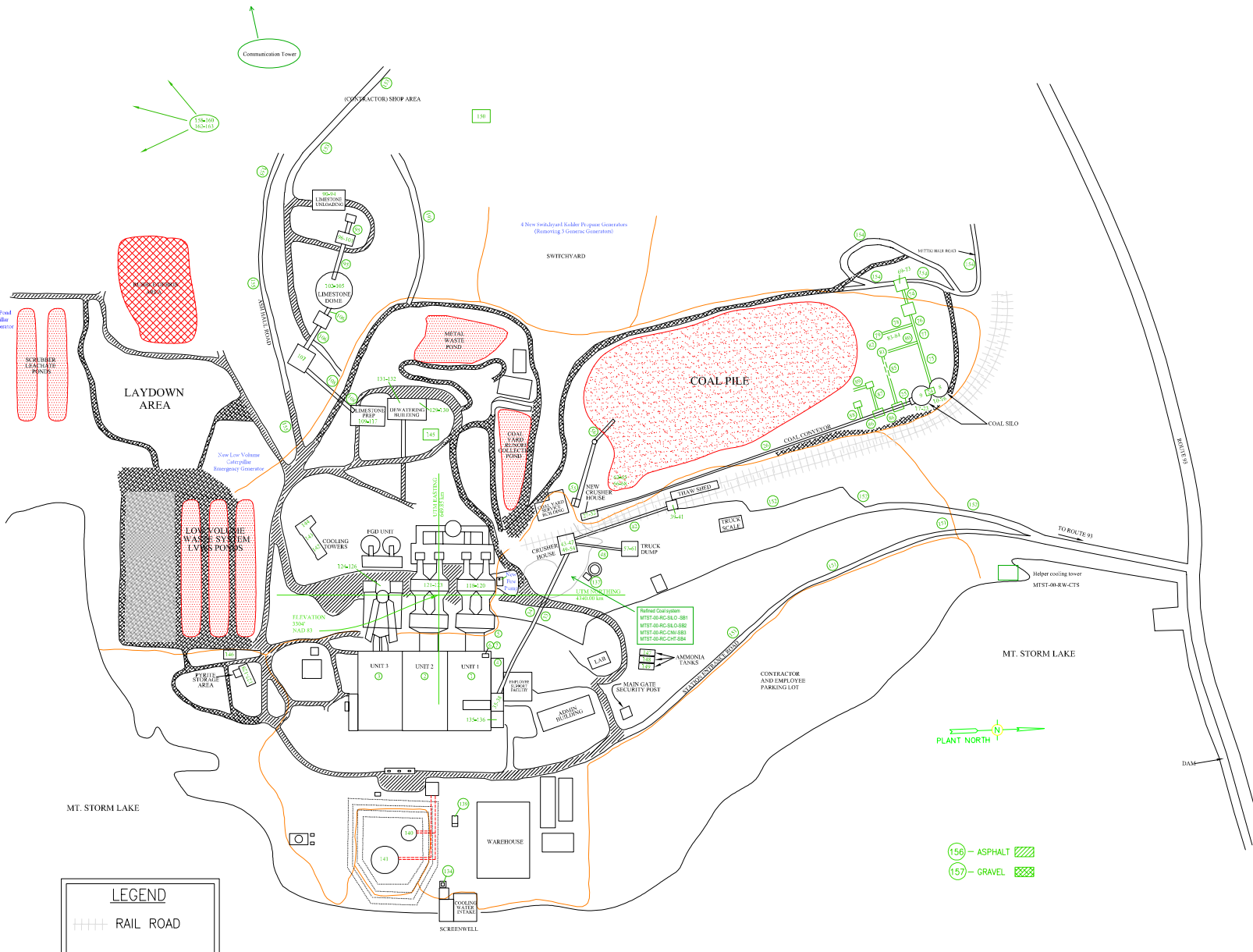
Section 7: Application Completeness and Ability to Operate information for different types of Title V Permit revisions

(Refer to "Title V Revision Guidance" for more information)

Type of Revision	Application/Notification Requirements	Ability to Operate
Administrative Amendment	<input type="checkbox"/> Description of change <input type="checkbox"/> Supplemental information (rationale) <input type="checkbox"/> Certification of application and compliance (Section 5(b))	Upon submittal of the application
Minor Modification	<input type="checkbox"/> Description of change <input type="checkbox"/> Associated change in emissions <input type="checkbox"/> Sample Calculations/estimations for determining emissions <input type="checkbox"/> List of new applicable requirements associated with changes <input type="checkbox"/> List of R13/R14 permits associated with the changes <input type="checkbox"/> Suggested draft permit language <input type="checkbox"/> Certification for use of Minor Modification (Section 5(a)) <input type="checkbox"/> Certification of application and compliance (Section 5(b)) No Permit Shield	After seven (7) days from the submittal of the application, or upon issuance of the R13/R14 permit (if any), whichever is later
Significant Modification	<input checked="" type="checkbox"/> Description of change <input checked="" type="checkbox"/> Associated change in emissions <input checked="" type="checkbox"/> Sample Calculations/estimations for determining emissions <input checked="" type="checkbox"/> List of R13/R14 permits associated with the changes <input checked="" type="checkbox"/> List of new applicable requirements associated with changes <input checked="" type="checkbox"/> Request for permit shield <input checked="" type="checkbox"/> Updated drawings, plot plans, process flow diagrams, etc. <input checked="" type="checkbox"/> Certification of application and compliance (Section 5(b))	Upon issuance of the modified Title V permit (if changes either conflict with, or are prohibited by existing Title V Permit terms/conditions), OR upon obtaining of proper R13/R14 Permit for first 12 months (if changes neither conflict with, nor are prohibited by existing Title V Permit terms/conditions)
Off-Permit Changes	<input type="checkbox"/> Notification/application to DAQ and U.S.E.P.A. within 2 business days of the change <input type="checkbox"/> Description of the change <input type="checkbox"/> The date on which the change will occur or has occurred <input type="checkbox"/> Pollutants and amounts emitted <input type="checkbox"/> Sample Calculations/estimations for determining emissions <input type="checkbox"/> Any new applicable requirements that will apply to changes <input type="checkbox"/> Certification of application and compliance (Section 5(b)) No Permit Shield	After two (2) days from the submittal of the application
Operational Flexibility	<input type="checkbox"/> Notification/application submitted to DAQ and U.S.E.P.A. in advance (7 days prior to making changes) <input type="checkbox"/> Description of the change <input type="checkbox"/> The date on which the change is to occur <input type="checkbox"/> Permit terms and conditions affected by the change <input type="checkbox"/> Certification of application and compliance (Section 5(b)) No Permit Shield	After seven (7) days from the submittal of the application/notification to DAQ and EPA
Reopening	<input type="checkbox"/> Description of change <input type="checkbox"/> List of new applicable requirements associated with changes <input type="checkbox"/> Suggested draft permit language <input type="checkbox"/> Certification of application and compliance (Section 5(b))	Ability to operate is not reflected by the changes

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

ATTACHMENT B
PLOT PLAN



LEGEND	
====	RAIL ROAD

FACILITY SITE PLAN



Line Number	Revision	Description
1		Issue 1
2		Issue 2
3		Issue 3
4		Issue 4
5		Issue 5
6		Issue 6
7		Issue 7
8		Issue 8
9		Issue 9
10		Issue 10
11		Issue 11
12		Issue 12
13		Issue 13
14		Issue 14
15		Issue 15
16		Issue 16
17		Issue 17
18		Issue 18
19		Issue 19
20		Issue 20
21		Issue 21
22		Issue 22
23		Issue 23
24		Issue 24
25		Issue 25
26		Issue 26
27		Issue 27
28		Issue 28
29		Issue 29
30		Issue 30
31		Issue 31
32		Issue 32
33		Issue 33
34		Issue 34
35		Issue 35
36		Issue 36
37		Issue 37
38		Issue 38
39		Issue 39
40		Issue 40
41		Issue 41
42		Issue 42
43		Issue 43
44		Issue 44
45		Issue 45
46		Issue 46
47		Issue 47
48		Issue 48
49		Issue 49
50		Issue 50
51		Issue 51
52		Issue 52
53		Issue 53
54		Issue 54
55		Issue 55
56		Issue 56
57		Issue 57
58		Issue 58
59		Issue 59
60		Issue 60
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64		Issue 64
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84		Issue 84
85		Issue 85
86		Issue 86
87		Issue 87
88		Issue 88
89		Issue 89
90		Issue 90
91		Issue 91
92		Issue 92
93		Issue 93
94		Issue 94
95		Issue 95
96		Issue 96
97		Issue 97
98		Issue 98
99		Issue 99
100		Issue 100

CONTROLLED DRAWING
 ANY CHANGES MADE TO THIS SYSTEM SHALL BE DOCUMENTED AS NOTED IN FOSIL AND HYDRO CONTROLS MANUAL SECTION 6.3.

DOMINION GENERATION

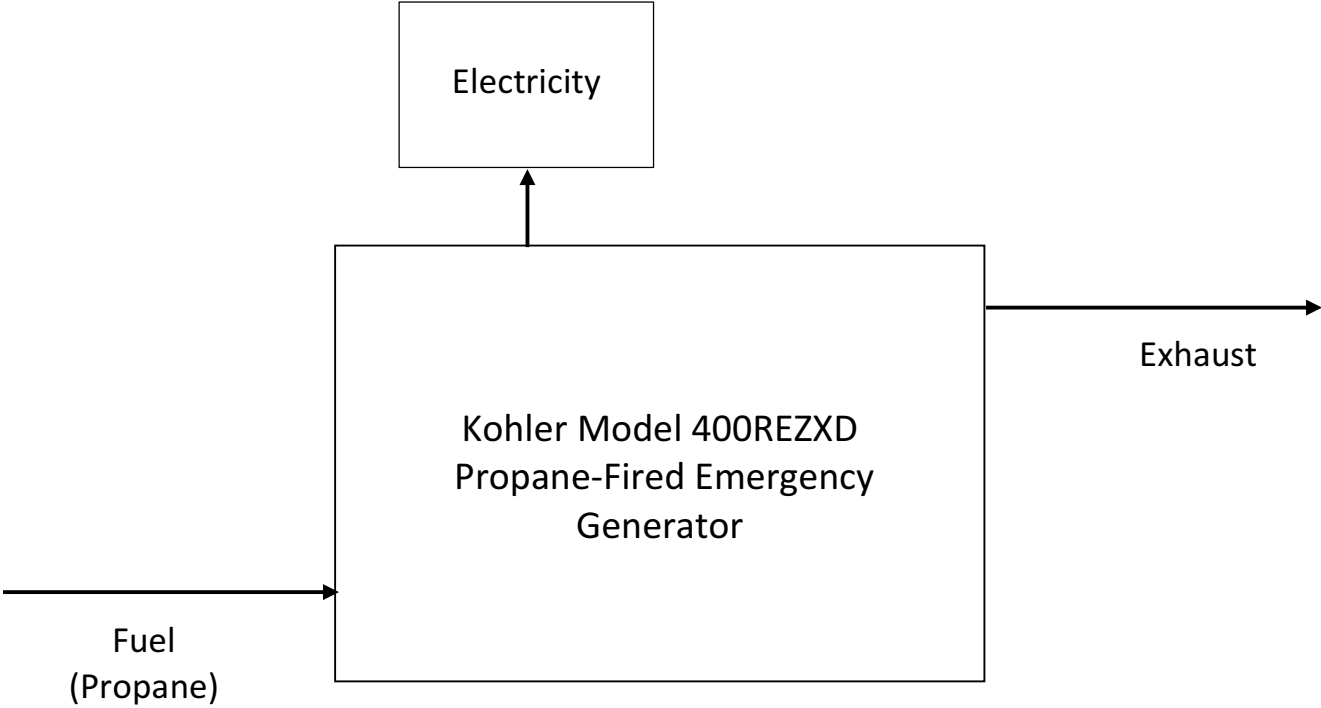
TITLE V RENEWAL APPLICATION
 PLOT PLAN
 MOUNT STORM POWER STATION

DRAWING NO. **MS-0-SP-STA-700** REV. **0**

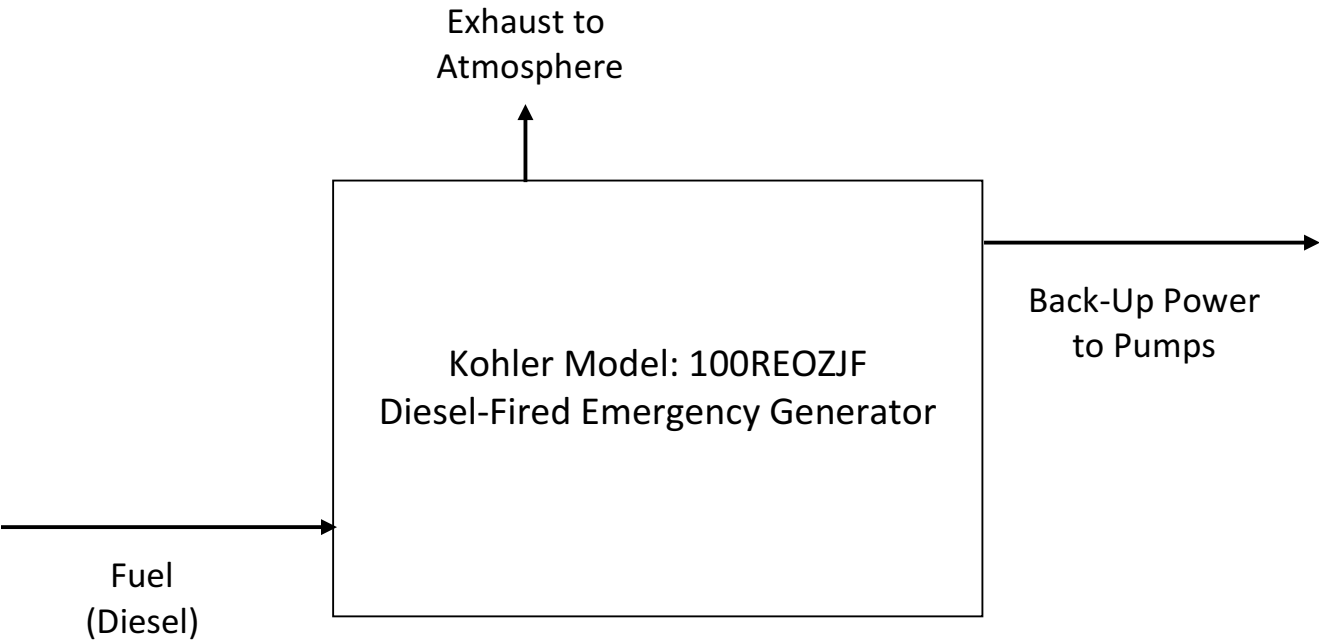
0	ORIGINAL ISSUE PER ENVIRONMENTAL ENGINEERING										
	02-16	NO	EAW	ENV	PRO	DES	ELEC	MECH	ARCH	EM	AC
REV	DATE	ISSN	CHKD	CHKD	CHKD	CHKD	CHKD	CHKD	CHKD	CHKD	CHKD
02-16	NO	EAW	ENV	PRO	DES	ELEC	MECH	ARCH	EM	AC	0

ATTACHMENT C
PROCESS FLOW DIAGRAM

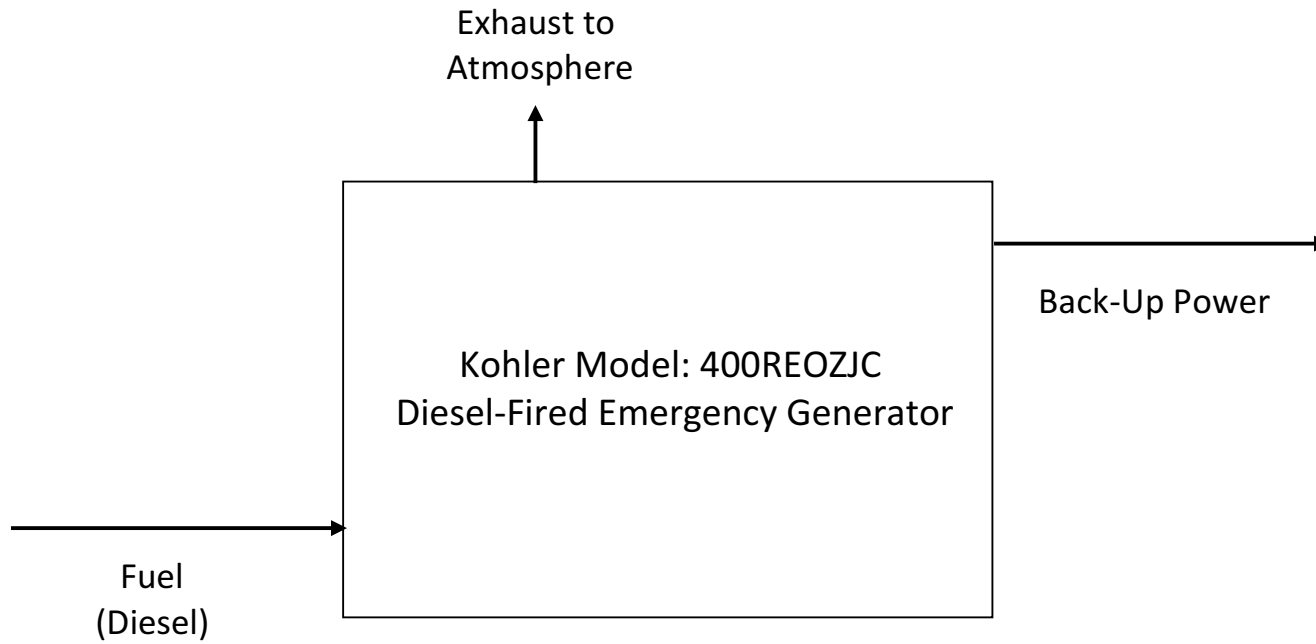
Mt. Storm Power Station
Process Flow Diagram
4 x Propane-Fired Emergency Generators at Switchyard



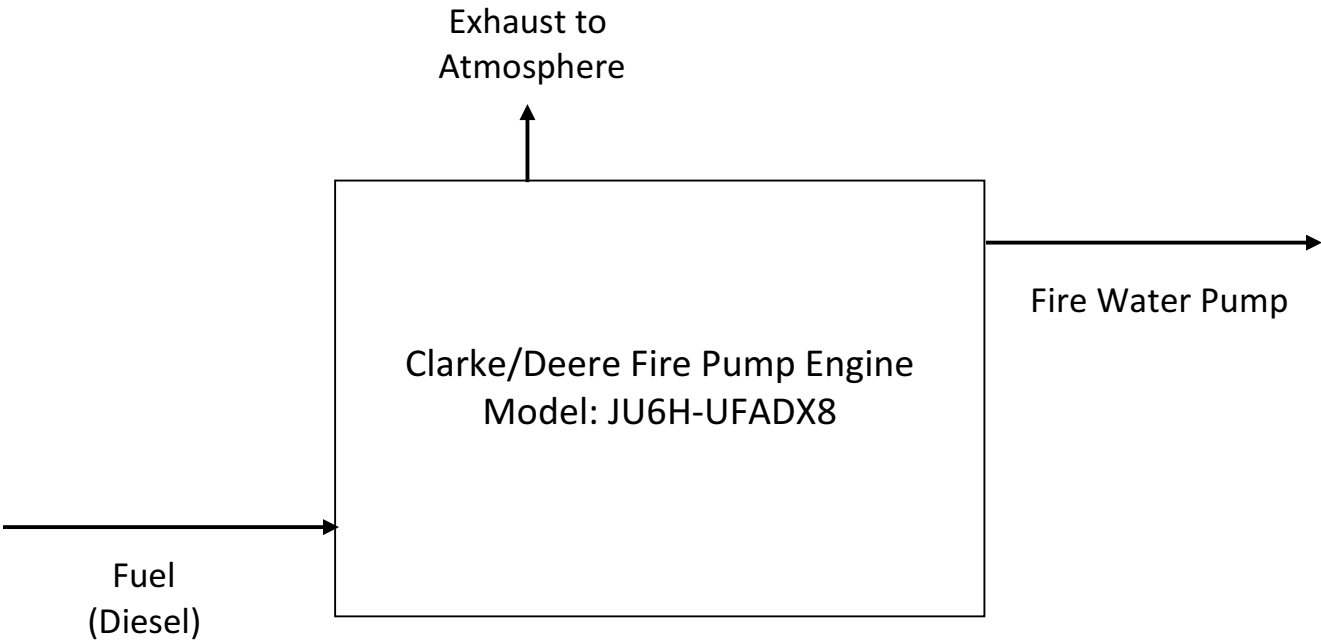
Mt. Storm Power Station
Process Flow Diagram
Leachate Pond Pumps Diesel-Fired Emergency Generator



Mt. Storm Power Station
Process Flow Diagram
Low Volume Diesel-Fired Emergency Generator



Mt. Storm Power Station
Process Flow Diagram
Diesel-Fired Fire Pump Engine



ATTACHMENT D
EMISSION UNITS TABLE

ATTACHMENT D - Title V Equipment Table
(includes all emission units at the facility except those designated as
insignificant activities in Section 4, Item 24 of the General Forms)

Emission Unit ID ¹	Emission Point ID ¹	Emission Unit Description	Year Installed/Modified	Design Capacity	Control Device ¹
SW-EG-8	MS90	Kohler Model 400REZXD	2024	472 bhp/1800 rpm	N/A
SW-EG-9	MS91	Kohler Model 400REZXD	2024	472 bhp/1800 rpm	N/A
SW-EG-10	MS92	Kohler Model 400REZXD	2024	472 bhp/1800 rpm	N/A
SW-EG-11	MS93	Kohler Model 400REZXD	2024	472 bhp/1800 rpm	N/A
LP-EG-1	MS94	Caterpillar Model D100 GC	2024	161 bhp/1800 rpm	N/A
LV-EG-1	MS95	Kohler Model 400REOZJC	2025	617 bhp/1800 rpm	N/A
MTST-00-FP-ENG-1	MS59	Clark/John Deere JU6H-UFADX8	2024	305 bhp / 1760 rpm	N/A

¹For 45CSR13 permitted sources, the numbering system used for the emission points, control devices, and emission units should be consistent with the numbering system used in the 45CSR13 permit. For grandfathered sources, the numbering system should be consistent with registrations or emissions inventory previously submitted to DAQ. For emission points, control devices, and emissions units which have not been previously labeled, use the following 45CSR13 numbering system: 1S, 2S, 3S,... or other appropriate description for emission units; 1C, 2C, 3C,... or other appropriate designation for control devices; 1E, 2E, 3E, ... or other appropriate designation for emission points.

ATTACHMENT E
EMISSION UNIT FORMS

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number: SW-EG-8	Emission unit name: MS90	List any control devices associated with this emission unit: N/A
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Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

New emission unit is a propane-fired 4-stroke rich-burn spark ignition certified emergency generator installed to replace three (3) existing Generac generators (IDs: SW-EG-1, 2, and 3) located in the station switchyard.

Manufacturer: Kohler	Model number: 400REZXD	Serial number: NA
Construction date: 2024	Installation date: 2024	Modification date(s): NA

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
472 bhp @ 1,800 rpm

Maximum Hourly Throughput: 3,856 cu. ft./hr	Maximum Annual Throughput: 1,928,000 cf. ft./yr	Maximum Operating Schedule: 500 hrs/yr
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired
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Maximum design heat input and/or maximum horsepower rating: 472 bhp @ 1,800 rpm	Type and Btu/hr rating of burners:
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List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Propane fired at a maximum of 3,856 cu. ft./hr and 1,928,000 cf. ft./yr

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Propane	0.6 lbs/10 ⁶ cu. ft.	NA	2,500 BTU/cu. ft.

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.26	0.066
Nitrogen Oxides (NO _x)	0.02	0.006
Lead (Pb)	NA	NA
Particulate Matter (PM _{2.5})	0.19	0.047
Particulate Matter (PM ₁₀)	0.19	0.047
Total Particulate Matter (TSP)	0.19	0.047
Sulfur Dioxide (SO ₂)	0.01	0.001
Volatile Organic Compounds (VOC)	0.04	0.010
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Formaldehyde	0.198	0.049
Benzene	0.015	0.004
Toluene	0.005	0.001
Total HAPs	0.313	0.078
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>Potential emissions as reflected in General Permit G60-D116 were calculated using manufacturer specifications and AP-42 emissions factors.</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or **construction permit** with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See Attachment I – applicable requirements included in suggested draft Title V permit language.



Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (*Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.*)

See Attachment I – monitoring/testing/recordkeeping/reporting requirements included in suggested draft Title V permit language.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number: SW-EG-9	Emission unit name: MS91	List any control devices associated with this emission unit: N/A
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Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

New emission unit is a propane-fired 4-stroke rich-burn spark ignition certified emergency generator installed to replace three (3) existing Generac generators (IDs: SW-EG-1, 2, and 3) located in the station switchyard.

Manufacturer: Kohler	Model number: 400REZXD	Serial number: NA
Construction date: 2024	Installation date: 2024	Modification date(s): NA

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
472 bhp @ 1,800 rpm

Maximum Hourly Throughput: 3,856 cu. ft./hr	Maximum Annual Throughput: 1,928,000 cf. ft./yr	Maximum Operating Schedule: 500 hrs/yr
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired
Maximum design heat input and/or maximum horsepower rating: 472 bhp @ 1,800 rpm	Type and Btu/hr rating of burners:

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Propane fired at a maximum of 3,856 cu. ft./hr and 1,928,000 cf. ft./yr

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Propane	0.6 lbs/10 ⁶ cu. ft.	NA	2,500 BTU/cu. ft.

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.26	0.066
Nitrogen Oxides (NO _x)	0.02	0.006
Lead (Pb)	NA	NA
Particulate Matter (PM _{2.5})	0.19	0.047
Particulate Matter (PM ₁₀)	0.19	0.047
Total Particulate Matter (TSP)	0.19	0.047
Sulfur Dioxide (SO ₂)	0.01	0.001
Volatile Organic Compounds (VOC)	0.04	0.010
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Formaldehyde	0.198	0.049
Benzene	0.015	0.004
Toluene	0.005	0.001
Total HAPs	0.313	0.078
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>Potential emissions as reflected in General Permit G60-D116 were calculated using manufacturer specifications and AP-42 emissions factors.</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or **construction permit** with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See Attachment I – applicable requirements included in suggested draft Title V permit language.



Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (*Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.*)

See Attachment I – monitoring/testing/recordkeeping/reporting requirements included in suggested draft Title V permit language.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description			
Emission unit ID number: SW-EG-10	Emission unit name: MS92	List any control devices associated with this emission unit: N/A	
<p>Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)</p> <p>New emission unit is a propane-fired 4-stroke rich-burn spark ignition certified emergency generator installed to replace three (3) existing Generac generators (IDs: SW-EG-1, 2, and 3) located in the station switchyard.</p>			
Manufacturer: Kohler	Model number: 400REZXD	Serial number: NA	
Construction date: 2024	Installation date: 2024	Modification date(s): NA	
Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp): 472 bhp @ 1,800 rpm			
Maximum Hourly Throughput: 3,856 cu. ft./hr	Maximum Annual Throughput: 1,928,000 cf. ft./yr	Maximum Operating Schedule: 500 hrs/yr	
Fuel Usage Data (fill out all applicable fields)			
Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired	
Maximum design heat input and/or maximum horsepower rating: 472 bhp @ 1,800 rpm		Type and Btu/hr rating of burners:	
<p>List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.</p> <p>Propane fired at a maximum of 3,856 cu. ft./hr and 1,928,000 cf. ft./yr</p>			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Propane	0.6 lbs/10 ⁶ cu. ft.	NA	2,500 BTU/cu. ft.

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.26	0.066
Nitrogen Oxides (NO _x)	0.02	0.006
Lead (Pb)	NA	NA
Particulate Matter (PM _{2.5})	0.19	0.047
Particulate Matter (PM ₁₀)	0.19	0.047
Total Particulate Matter (TSP)	0.19	0.047
Sulfur Dioxide (SO ₂)	0.01	0.001
Volatile Organic Compounds (VOC)	0.04	0.010
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Formaldehyde	0.198	0.049
Benzene	0.015	0.004
Toluene	0.005	0.001
Total HAPs	0.313	0.078
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>Potential emissions as reflected in General Permit G60-D116 were calculated using manufacturer specifications and AP-42 emissions factors.</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or **construction permit** with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See Attachment I – applicable requirements included in suggested draft Title V permit language.



Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (*Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.*)

See Attachment I – monitoring/testing/recordkeeping/reporting requirements included in suggested draft Title V permit language.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description			
Emission unit ID number: SW-EG-11	Emission unit name: MS93	List any control devices associated with this emission unit: N/A	
<p>Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)</p> <p>New emission unit is a propane-fired 4-stroke rich-burn spark ignition certified emergency generator installed to replace three (3) existing Generac generators (IDs: SW-EG-1, 2, and 3) located in the station switchyard.</p>			
Manufacturer: Kohler	Model number: 400REZXD	Serial number: NA	
Construction date: 2024	Installation date: 2024	Modification date(s): NA	
Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp): 472 bhp @ 1,800 rpm			
Maximum Hourly Throughput: 3,856 cu. ft./hr	Maximum Annual Throughput: 1,928,000 cf. ft./yr	Maximum Operating Schedule: 500 hrs/yr	
Fuel Usage Data (fill out all applicable fields)			
Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired	
Maximum design heat input and/or maximum horsepower rating: 472 bhp @ 1,800 rpm		Type and Btu/hr rating of burners:	
<p>List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.</p> <p>Propane fired at a maximum of 3,856 cu. ft./hr and 1,928,000 cf. ft./yr</p>			
Describe each fuel expected to be used during the term of the permit.			
Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Propane	0.6 lbs/10 ⁶ cu. ft.	NA	2,500 BTU/cu. ft.

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.26	0.066
Nitrogen Oxides (NO _x)	0.02	0.006
Lead (Pb)	NA	NA
Particulate Matter (PM _{2.5})	0.19	0.047
Particulate Matter (PM ₁₀)	0.19	0.047
Total Particulate Matter (TSP)	0.19	0.047
Sulfur Dioxide (SO ₂)	0.01	0.001
Volatile Organic Compounds (VOC)	0.04	0.010
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Formaldehyde	0.198	0.049
Benzene	0.015	0.004
Toluene	0.005	0.001
Total HAPs	0.313	0.078
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>Potential emissions as reflected in General Permit G60-D116 were calculated using manufacturer specifications and AP-42 emissions factors.</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or **construction permit** with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See Attachment I – applicable requirements included in suggested draft Title V permit language.



Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See Attachment I – monitoring/testing/recordkeeping/reporting requirements included in suggested draft Title V permit language.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number: LP-EG-1	Emission unit name: MS94	List any control devices associated with this emission unit: N/A
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Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

New emission unit is a diesel-fired compression ignition certified emergency generator installed at the station leachate ponds.

Manufacturer: Caterpillar	Model number: D100 GC	Serial number: NA
Construction date: 2024	Installation date: 2024	Modification date(s): NA

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
161 bhp @ 1,800 rpm

Maximum Hourly Throughput: 7.4 gal/hr	Maximum Annual Throughput: 3,700 gal/yr	Maximum Operating Schedule: 500 hrs/yr
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired
--	---

Maximum design heat input and/or maximum horsepower rating: 161 bhp @ 1,800 rpm	Type and Btu/hr rating of burners:
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List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Diesel fired at a maximum of 7.4 gal/hr and 3,700 gal/yr

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Diesel	15 ppm	NA	0.137 MMBtu/gal

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	1.32	0.331
Nitrogen Oxides (NO _x)	1.06	0.265
Lead (Pb)	NA	NA
Particulate Matter (PM _{2.5})	0.08	0.020
Particulate Matter (PM ₁₀)	0.08	0.020
Total Particulate Matter (TSP)	0.08	0.020
Sulfur Dioxide (SO ₂)	0.29	0.074
Volatile Organic Compounds (VOC)	1.06	0.265
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Formaldehyde	0.001	0.000
Benzene	0.001	0.000
Toluene	0.000	0.000
Total HAPs	0.004	0.001
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>Potential emissions as reflected in General Permit G60-D116 were calculated using manufacturer specifications and AP-42 emissions factors.</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or **construction permit** with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See Attachment I – applicable requirements included in suggested draft Title V permit language.



Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (*Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.*)

See Attachment I – monitoring/testing/recordkeeping/reporting requirements included in suggested draft Title V permit language.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number: LV-EG-1	Emission unit name: MS95	List any control devices associated with this emission unit: N/A
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Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

New emission unit is a diesel-fired compression ignition certified emergency generator that will be installed at the station low volume waste system ponds.

Manufacturer: Kohler	Model number: 400REOZJC	Serial number: NA
Construction date: 2025	Installation date: 2025	Modification date(s): NA

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
617 bhp @ 1,800 rpm

Maximum Hourly Throughput: 30.6 gal/hr	Maximum Annual Throughput: 15,300 gal/yr	Maximum Operating Schedule: 500 hrs/yr
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired
--	---

Maximum design heat input and/or maximum horsepower rating: 617 bhp @ 1,800 rpm	Type and Btu/hr rating of burners:
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List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Diesel fired at a maximum of 30.6 gal/hr and 15,300 gal/yr

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Diesel	15 ppm	NA	0.137 MMBtu/gal

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.61	0.15
Nitrogen Oxides (NO _x)	3.36	0.84
Lead (Pb)	NA	NA
Particulate Matter (PM _{2.5})	0.10	0.025
Particulate Matter (PM ₁₀)	0.10	0.025
Total Particulate Matter (TSP)	0.10	0.025
Sulfur Dioxide (SO ₂)	0.001	0.000
Volatile Organic Compounds (VOC)	0.11	0.028
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Formaldehyde	0.000	0.000
Benzene	0.003	0.001
Toluene	0.001	0.000
Total HAPs	0.006	0.002
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>Potential emissions as reflected in General Permit G60-D116 were calculated using manufacturer specifications and AP-42 emissions factors.</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or **construction permit** with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See Attachment I – applicable requirements included in suggested draft Title V permit language.



Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (*Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.*)

See Attachment I – monitoring/testing/recordkeeping/reporting requirements included in suggested draft Title V permit language.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number: MTST-00-FP-ENG-1	Emission unit name: MS59	List any control devices associated with this emission unit: N/A
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Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

New emission unit is a diesel-fired compression ignition certified emergency fire pump that is replacing an existing fire pump (ID: MTST-00-FP-ENG-1) in the same location.

Manufacturer: Clark/John Deere	Model number: JU6H-UFADX8	Serial number: NA
Construction date: 2024	Installation date: 2024	Modification date(s): NA

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
305 bhp @ 1,760 rpm

Maximum Hourly Throughput: 14.6 gal/hr	Maximum Annual Throughput: 7,300 gal/yr	Maximum Operating Schedule: 500 hrs/yr
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired
--	---

Maximum design heat input and/or maximum horsepower rating: 305 bhp @ 1,760 rpm	Type and Btu/hr rating of burners:
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List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Diesel fired at a maximum of 14.6 gal/hr and 7,300 gal/yr

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Diesel	15 ppm	NA	0.137 MMBtu/gal

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.30	0.075
Nitrogen Oxides (NO _x)	1.66	0.415
Lead (Pb)	NA	NA
Particulate Matter (PM _{2.5})	0.05	0.013
Particulate Matter (PM ₁₀)	0.05	0.013
Total Particulate Matter (TSP)	0.05	0.013
Sulfur Dioxide (SO ₂)	0.58	0.145
Volatile Organic Compounds (VOC)	0.06	0.014
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Formaldehyde	0.002	0.001
Benzene	0.002	0.000
Toluene	0.001	0.000
Total HAPs	0.008	0.002
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<p>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</p> <p>Potential emissions as reflected in General Permit G60-D116 were calculated using manufacturer specifications and AP-42 emissions factors.</p>		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or **construction permit** with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See Attachment I – applicable requirements included in suggested draft Title V permit language.



Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (*Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.*)

See Attachment I – monitoring/testing/recordkeeping/reporting requirements included in suggested draft Title V permit language.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT I
SUGGESTED DRAFT TITLE V PERMIT LANGUAGE

1.0 Emission Units and Active R13, R14, and R19 Permits

1.1 Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed/Modified	Design Capacity ¹	Control Device ²
Boiler & Associated Equipment					
MTST-01-BLR-STG-1	MS1/2 (MS1/2e)	Unit 1 Boiler – (Combustion Engineering Model No. CCRRDP 60)	1965/2009	6199 mmBtu/hr	ESP, FGDS, LNB, SCR
MTST-02-BLR-STG-1	MS1/2 (MS1/2e)	Unit 2 Boiler – (Combustion Engineering Model No. CCRRDP 60)	1966/2009	6199 mmBtu/hr	ESP, FGDS, LNB, SCR
MTST-03-BLR-STG-1	MS3 (MS3e)	Unit 3 Boiler – (Combustion Engineering Model No. CCRD 66)	1973	5824 mmBtu/hr	ESP, FGDS, LNB, SCR
MTST-00-AB-STG-1	MS4 (MS4e)	Auxiliary Boiler – (Babcock & Wilcox Serial No. FM2943)	1984	150 mmBtu/hr	N
Emergency Generators					
MTST-C1-CTG-T-1	MS5	Combustion Turbine – (Pratt & Whitney Aircraft Division Model FT-4)	1967	215.3 mmBtu/hr 16080/21440 bhp Summer / bhp Winter	N
MTST-00-EG-DG-1A	MS6	Emergency Diesel Generator 1A	1963	4.38 mmBtu/hr; 536 bhp	N
MTST-00-EG-DG-1B	MS6	Emergency Diesel Generator 1B	1963	4.38 mmBtu/hr; 536 bhp	N
Communication Tower	MS79	Propane-fuel emergency generator at Communication Tower	2022	103bhp	N
LP-EG-1	MS94	Emergency Diesel Generator (Caterpillar Model D100 GC)	2024	161 bhp	N
LV-EG-1	MS95	Emergency Diesel Generator (Kohler Model 400REOZJC)	2025	617 bhp	N
SW-EG-1	MS80	Propane-fuel emergency generator (Generac-Power System MG150)	2014	224hp	N
SW-EG-2	MS81	Propane-fuel emergency generator (Generac-Power System MG150)	2014	224hp	N
SW-EG-3	MS82	Propane-fuel emergency generator (Generac-Power System MG150)	2014	224hp	N
SW-EG-4	MS83	Propane-fuel emergency generator (Kohler 150REZGC)	2014	227hp	N

¹ Rated Design Capacity (The Size/Rated capacity is provided for informational purposes only, and is not an applicable requirement)

² Control Device/Control System abbreviations: ESP = Electrostatic Precipitators, FGDS = Flue Gas Desulfurization Scrubber Absorber, LNB = Low NOx Burners, SCR = Selective Catalytic Reduction, FE = Full enclosure, ME = Mist eliminators, P = Paved, PE = Partial Enclosure, PWT = Pressurized Water Truck, BH = Baghouse(s), DC = Dust Collector(s), MC = Moisture Content, UG = Under Ground, WB = Windbreaks, WS = Water Spray, N = None, ST = Stacking Tube

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed/Modified	Design Capacity ¹	Control Device ²
SW-EG-5	MS84	Propane-fuel emergency generator (Kohler 150REZGC)	2014	227hp	N
SW-EG-6	MS87	Propane-fuel emergency generator (Kohler 150REZGC)	2015	227hp	N
SW-EG-7	MS88	Propane-fuel emergency generator (Kohler 150REZGC)	2015	227hp	N
SW-EG-8	MS90	Propane-fuel emergency generator (Kohler 400REZXD)	2024	472 bhp	N
SW-EG-9	MS91	Propane-fuel emergency generator (Kohler 400REZXD)	2024	472 bhp	N
SW-EG-10	MS92	Propane-fuel emergency generator (Kohler 400REZXD)	2024	472 bhp	N
SW-EG-11	MS93	Propane-fuel emergency generator (Kohler 400REZXD)	2024	472 bhp	N
Fuel Handling Equipment					
MTST-00-CS-CYS-1	MS7	Coal Silo # 1 (Transfer Point DP7 to feeders)	1972	10,000 Tons	FE
MTST-00-CS-CYS-2	MS7	Coal Silo # 2 (Transfer Point DP7 to feeders)	1972	10,000 Tons	FE
MTST-00-CS-FDR-VB1	MS7	Feeder From Silo #1 to Conveyor MTST-00-CS-CNV-P1 (Transfer Point DP8)	1996	400 TPH	FE
MTST-00-CS-FDR-N1	MS7	Feeder From Silo #1 to Conveyor MTST-00-CS-CNV-P1 (Transfer Point DP8)	1996	400 TPH	FE
MTST-00-CS-FDR-N2	MS7	Feeder From Silo #1 to Conveyor MTST-00-CS-CNV-P1 (Transfer Point DP8)	1996	400 TPH	FE
MTST-00-CS-FDR-VB2	MS7	Feeder From Silo #1 to Conveyor MTST-00-CS-CNV-P1 (Transfer Point DP8)	1996	400 TPH	FE
MTST-00-CS-FDR-N3	MS7	Feeder From Silo #1 to Conveyor MTST-00-CS-CNV-P1 (Transfer Point DP8)	1996	400 TPH	FE
MTST-00-CS-FDR-N4	MS7	Feeder From Silo #1 to Conveyor MTST-00-CS-CNV-P1 (Transfer Point DP8)	1996	400 TPH	FE
MTST-00-CS-FDR-VB3	MS7	Feeder From Silo #1 to Conveyor MTST-00-CS-CNV-P1 (Transfer Point DP8)	1996	400 TPH	FE
MTST-00-CS-FDR-VB4	MS7	Feeder From Silo #2 to Conveyor MTST-00-CS-CNV-P1 (Transfer Point DP8)	1996	400 TPH	FE
MTST-00-CS-FDR-N5	MS7	Feeder From Silo #2 to Conveyor MTST-00-CS-CNV-P1 (Transfer Point DP8)	1996	400 TPH	FE
MTST-00-CS-FDR-N6	MS7	Feeder From Silo #2 to Conveyor MTST-00-CS-CNV-P1 (Transfer Point DP8)	1996	400 TPH	FE
MTST-00-CS-FDR-VB5	MS7	Feeder From Silo #2 to Conveyor MTST-00-CS-CNV-P1 (Transfer Point DP8)	1996	400 TPH	FE
MTST-00-CS-FDR-N7	MS7	Feeder From Silo #2 to Conveyor MTST-00-CS-CNV-P1 (Transfer Point DP8)	1996	400 TPH	FE
MTST-00-CS-FDR-N8	MS7	Feeder From Silo #2 to Conveyor MTST-00-CS-CNV-P1 (Transfer Point DP8)	1996	400 TPH	FE

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed/Modified	Design Capacity ¹	Control Device ²
MTST-00-SWD-M-FL-1A	MS57	Vacuum Filter to De-watering Building MTST-00-BLD-DW-1	2001	27 TPH	FE / MC
MTST-00-SWD-M-FL-1B	MS57	Vacuum Filter to De-watering Building MTST-00-BLD-DW-1	2001	27 TPH	FE / MC
MTST-03-SWD-M-FL-1A	MS58	Vacuum Filter to De-watering Building MTST-00-BLD-DW-1	1994	27 TPH	FE / MC
MTST-03-SWD-M-FL-1B	MS58	Vacuum Filter to De-watering Building MTST-00-BLD-DW-1	1994	27 TPH	FE / MC
Miscellaneous Other					
MTST-00-FP-ENG-1	MS59	Diesel Fire Pump Clarke/John Deere JU6H-UFADX8	2024	305 bhp	N
MTST-00-FP-ENG-3	MS60	Diesel Fire Pump Clarke/John Deere JX6HUFADKO-S	2018	526 bhp	N
MTST-00-LO-TK-3	MS61	Clean Oil Tank (Turbine Lube Oil)	1964	16,000 Gal.	FE
MTST-00-LO-TK-4	MS62	Dirty Oil Tank (Turbine Lube Oil)	1964	16,000 Gal.	FE
MTST-00-FO-TK-4	MS63	Jet Fuel Oil Tank for Combustion Turbine	1992	105,000 Gal.	N
MTST-00-FO-TK-6G	MS65	Gasoline Tank-Unleaded	1995	5000 Gal.	FE
MTST-00-IO-TK-1A	MS66	Fuel Oil Tank 1A (#2 fuel oil)	1964	504,501 Gal.	N
MTST-00-IO-TK-1B	MS67	Fuel Oil Tank 1B (#2 fuel oil)	1973	1,541,526 Gal.	N
1-CC-E-1A, 1-CC-E-1B, 1-CC-E-1C	MS68	Cooling Tower (3 stacks)	1964	NA	ME
2-CC-E-1A, 2-CC-E-1B, 2-CC-E-1C	MS69	Cooling Tower (3 stacks)	1964	NA	ME
3-CC-E-1A, 3-CC-E-1B	MS70	Cooling Tower (2 stacks)	1973	NA	ME
MTST-00-RW-CTS	MS86	Helper Cooling Tower (2 stacks)	2011	NA	ME
MTST-03-OAS-TK-1C	MS71	Acid Tank – Organic for Scrubber	1993	43,183 Gal.	N
MTST-00-BLD-LTB-1	MS72	Lime Silo for Water Treatment Settling Pond	1973	4000 cu. ft.	BH
MTST-00-AMS-TK-1	MS73	Anhydrous Ammonia Tank	2001	45,000 Gal.	Deluge systems are used to suppress inadvertent NH3
MTST-00-AMS-TK-2	MS74	Anhydrous Ammonia Tank	2001	45,000 Gal	

1.2. Active R13, R14, and R19 Permits

The underlying authority for any conditions from R13, R14, and/or R19 permits contained in this operating permit is cited using the original permit number (e.g. R13-1234). The current applicable version of such permit(s) is listed below.

Permit Number	Date of Issuance
R13-0656A	December 14, 2015
R13-1660D	May 13, 2003
R13-1661/R14-10	August 12, 1994
R13-2034F	September 7, 2023
R13-2735	December 13, 2007
G60-D056C	January 31, 2020
G60-D110	December 20, 2021
G60-D116	December 6, 2023

8.0 Emergency Generators and Fire Pumps [emission point ID(s): *MS59, MS60, MS79 - MS84, MS87, MS88, MS90-MS95*]

8.1. Limitations and Standards

8.1.1. Emission Limitations

a. Pursuant to the General Permit registration *G60-D056, G60-D110, and G60-D116*:

Emission Unit	Pollutant	Maximum Hourly Emissions (lb/hr)	⁽¹⁾ Maximum Annual Emissions (tpy)
MTST-00-FP-ENG-1 (Diesel-fueled Fire Pump Engine, 305 Hp)	Nitrogen Oxides (NO _x)	1.66	0.42
	Carbon Monoxide (CO)	0.30	0.08
	Volatile Organic Compounds (VOC)	0.06	0.01
	PM ₁₀	0.04	0.01
MTST-00-FP-ENG-3 (Diesel-fueled Fire Pump Engine, 526 Hp)	NO _x	3.05	0.76
	CO	0.46	0.12
	VOC	0.12	0.03
	PM ₁₀	0.05	0.01
Communication (New Generator Engine, 103 Hp)	NO _x	1.14	0.28
	CO	5.16	1.29
	VOC	0.27	0.07
LP-EG-1	NO _x	1.06	0.27
	CO	1.32	0.33
	VOC	1.06	0.27
LV-EG-1	NO _x	3.36	0.84
	CO	0.61	0.15
	VOC	0.11	0.03
SW-EG-1	NO _x +HC	0.99	0.25
	CO	1.62	0.41
SW-EG-2	NO _x +HC	0.99	0.25
	CO	1.62	0.41
SW-EG-3	NO _x +HC (Hydrocarbon)	0.99	0.25
	CO	1.62	0.41
SW-EG-4	NO _x + HC	0.08	0.02
	CO	0.46	0.12
SW-EG-5	NO _x + HC	0.08	0.02
	CO	0.46	0.12

SW-EG-8	NO _x	0.19	0.01
	CO	0.26	0.07
	VOC	0.04	0.01
SW-EG-9	NO _x	0.19	0.01
	CO	0.26	0.07
	VOC	0.04	0.01
SW-EG-10	NO _x	0.19	0.01
	CO	0.26	0.07
	VOC	0.04	0.01
SW-EG-11	NO _x	0.19	0.01
	CO	0.26	0.07
	VOC	0.04	0.01

(1) Based on operating each engine a maximum of 500 hours per year

b. Pursuant to 40 CFR 60 Subpart IIII

Emission Unit	Pollutant	g/kw-hr
MTST-00-FP-ENG-1	NMHC +NO _x	4.0
MTST-00-FP-ENG-3	PM	0.20

[45CSR13, G60-D056, G60-D110, and G60-D116 General Permit Registrations, Emission Limitations; and G60- D condition 5.1.2., 45CSR 16, 40 CFR §60.4205(c), Table 4 to 40 CFR 60 Subpart IIII,] (MTST-00- FP-ENG-1, MTST-00-FP-ENG-3, Communication Tower, LP-EG-1, LV-EG-1, SW-EG-1, SW-EG-2, SW-EG-3, SW-EG- 4, SW-EG-5, SW-EG-8, SW-EG-9, SW-EG-10, and SW-EG-11)

8.1.2. *Maximum Hourly Limitation.* The maximum hours of operation for any registered emergency generator listed in the General Permit Registration application shall not exceed 500 hours per year. Compliance with the Maximum Yearly Hourly Operation Limitation shall be determined using a twelve-month rolling total. A twelve-month rolling total shall mean the sum of the hours of operation at any given time during the previous twelve consecutive calendar months.

[45CSR13, G60-D056, G60-D110, and G60-D116 General Permit Registrations and G60-D, condition 5.1.3.] (MTST-00-FP-ENG-1, MTST-00-FP-ENG-3, Communication Tower, LP-EG-1, LV-EG-1, SW-EG-1, SW-EG-2, SW-EG-3, SW-EG-4, SW-EG-5, SW-EG-8, SW-EG-9, SW-EG-10, and SW-EG-11)

8.1.3. Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) manufactured on or after the applicable date in §60.4230(a)(4) (i.e., January 1, 2009) that are rich burn engines that use LPG must comply with the emission standards in §60.4231(c) (i.e., 3.8 g/kw-hr of HC+ NO_x, 6.5 g/kw-hr of CO for SW-EG-4 through SW-EG-11 and 13.4 g/kw-hr of HC+ NO_x, 519 g/kw-hr of CO for Communication Tower) for their stationary SI ICE.

[45CSR16; 40 CFR §60.4233(c)] (SW-EG-1, SW-EG-2, SW-EG-3, SW-EG-4, SW-EG-5, SW-EG-6, SW-EG-7, SW-EG-8, SW-EG-9, SW-EG-10, SW-EG-11, and Communication Tower)

- 8.1.4. Owners and operators of stationary SI ICE must operate and maintain stationary SI ICE that achieve the emission standards as required in §60.4233 over the entire life of the engine.
[45CSR16; 40 CFR §60.4234] (~~SW-EG-1, SW-EG-2, SW-EG-3, SW-EG-4, SW-EG-5, SW-EG-6, SW-EG-7, SW-EG-8, SW-EG-9, SW-EG-10, SW-EG-11, and Communication Tower~~)
- 8.1.5. If the emergency stationary SI internal combustion engine that is greater than or equal to 130 HP and less than 500 HP that was built on or after January 1, 2011, does not meet the standards applicable to non-emergency engines, the owner or operator must install a non-resettable hour meter. If you are an owner or operator of an emergency stationary SI internal combustion engine that is less than 130 HP, was built on or after July 1, 2008, and does not meet the standards applicable to non-emergency engines, you must install a non-resettable hour meter upon startup of your emergency engine.
[45CSR16; 40 CFR §§60.4237(b) and (c)] (~~SW-EG-1, SW-EG-2, SW-EG-3, SW-EG-4, SW-EG-5, SW-EG-6, SW-EG-7, SW-EG-8, SW-EG-9, SW-EG-10, SW-EG-11, and Communication Tower~~)
- 8.1.6. You must operate the emergency stationary ICE according to the requirements in paragraphs (1) through (3) of this condition. In order for the engine to be considered an emergency stationary ICE under 40 CFR 60 Subpart JJJJ, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in(1) through (3) of this condition, is prohibited. If you do not operate the engine according to the requirements in paragraphs (1) through (3) of this condition, the engine will not be considered an emergency engine under 40 CFR 60 Subpart JJJJ and must meet all requirements for non-emergency engines.
- (1) There is no time limit on the use of emergency stationary ICE in emergency situations.
 - (2) You may operate your emergency stationary ICE for the purposes specified in (2)(i) of this condition for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by (3) of this condition counts as part of the 100 hours per calendar year.
 - (i) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.
 - (3) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in section (2) of this condition. Except as provided in paragraph (3)(i) of this condition, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.
 - (i) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:
 - (A) The engine is dispatched by the local balancing authority or local transmission and distribution

system operator;

- (B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.
- (C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.
- (D) The power is provided only to the facility itself or to support the local transmission and distribution system.
- (E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

[45CSR16; 40 CFR §§60.4243(d)(1), (d)(2)(i), (d)(3) (~~SW-EG-1, SW-EG-2, SW-EG-3, SW-EG-4, SW-EG-5, SW-EG-6, SW-EG-7, SW-EG-8, SW-EG-9, SW-EG-10, SW-EG-11, and Communication Tower~~)

- 8.1.7. It is expected that air-to-fuel ratio controllers will be used with the operation of three-way catalysts/non-selective catalytic reduction. The AFR controller must be maintained and operated appropriately in order to ensure proper operation of the engine and control device to minimize emissions at all times.

[45CSR16; 40 CFR §60.4243(g)] (~~SW-EG-1, SW-EG-2, SW-EG-3~~, SW-EG-4, SW-EG-5, SW-EG-6, SW-EG-7, **SW-EG-8, SW-EG-9, SW-EG-10, and SW-EG-11)**

- 8.1.8. The applicable emergency generator(s) shall be operated and maintained as follows:

a. In accordance with the manufacturer's recommendations and specifications or in accordance with a site specific maintenance plan; and,

b. In a manner consistent with good operating practices.

[45CSR13, G60-D056, G60-D110, and G60-D116 General Permit Registrations and G60-D, condition 5.1.4.] (MTST-00-FP-ENG-1, MTST-00-FP-ENG-3, Communication Tower, LP-EG-1, LV-EG-1, ~~SW-EG-1, SW-EG-2, SW-EG-3~~, SW-EG-4, SW-EG-5, SW-EG-8, SW-EG-9, SW-EG-10, and SW-EG-11)

- 8.1.9. The registrant shall comply with all applicable NSPS for Stationary Compression Ignition Internal Combustion Engines specified in 40 Part 60, Subpart IIII, Stationary Spark Ignition Internal Combustion Engines specified in 40 CFR Part 60, Subpart JJJJ , and/or the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines specified in 40 CFR Part 63, Subpart ZZZZ.

[45CSR13, G60-D056, G60-D110, and G60-D116 General Permit Registrations and G60-D, condition 5.1.6.] (MTST-00-FP-ENG-1, MTST-00-FP-ENG-3, Communication Tower, LP-EG-1, LV-EG-1, ~~SW-EG-1, SW-EG-2, SW-EG-3~~, SW-EG-4, SW-EG-5, SW-EG-8, SW-EG-9, SW-EG-10, and SW-EG-11)

- 8.1.10. The emission limitations specified in section 8.1.1 shall apply at all times except during periods of start-up and shut-down provided that the duration of these periods does not exceed 30 minutes per occurrence. The registrant shall operate the engine in a manner consistent with good air pollution control practices for minimizing emissions at all times, including periods of start-up and shut-down. The emissions from start-up and shut-down shall be included in the twelve (12) month rolling total of emissions. The registrant shall comply with all applicable start-up and shut-down requirements in accordance with 40 CFR Part 60, Subparts IIII, JJJJ and 40 CFR Part 63, Subpart ZZZZ.

[45CSR13, G60-D056, G60-D110, and G60-D116 General Permit Registrations and G60-D, condition 5.1.7.] (MTST-00-FP-ENG-1, MTST-00-FP-ENG-3, Communication Tower, LP-EG-1, LV-EG-1, ~~SW-EG-1, SW-EG-2, SW-EG-3~~, SW-EG-4, SW-EG-5, SW-EG-8, SW-EG-9, SW-EG-10, and SW-EG-11)

- 8.1.11. Diesel fire pump MTST-00-FP-ENG-1 and emergency generators LP-EG-1, LV-EG-1, ~~SW-EG-1, SW-EG-2, SW-EG-3~~, SW-EG-4, SW-EG-5, SW-EG6, SW-EG7, SW-EG-8, SW-EG-9, SW-EG-10, SW-EG-11, and Communication Tower must meet the requirements of 40 CFR 63 Subpart ZZZZ by meeting the requirements of 40 CFR 60 Subpart IIII, for compression ignition engines or 40 CFR 60 Subpart JJJJ, for spark ignition engines .

[45CSR13, G60-D056, G60-D110, and G60-D116 General Permit Registrations and G60-D, conditions 4.1.2.g. and 5.1.6.; 45CSR34; 40 CFR §§63.6590(c) and (c)(6)] (MTST-00-FP-ENG-1, LP-EG-1, LV-EG-1, ~~SW-EG-1, SW-EG-2, SW-EG-3~~, SW-EG-4, SW-EG-5, SW-EG6, SW-EG7, SW-EG-8, SW-EG-9, SW-EG-10, SW-EG-11, and Communication Tower)

- 8.1.12. The diesel fire pumps MTST-00-FP-ENG-1 and MTST-00-FP-ENG-3 and CI engines LP-EG-1 and LV-EG-1 are subject to following requirements:

(f) If you own or operate an emergency stationary ICE, you must operate the emergency stationary ICE

according to the requirements in paragraphs (f)(1) through (3) of this section. In order for the engine to be considered an emergency stationary ICE under 40 CFR Subpart IIII, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (3) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (3) of this section, the engine will not be considered an emergency engine under 40 CFR Subpart IIII and must meet all requirements for non-emergency engines.

- (1) There is no time limit on the use of emergency stationary ICE in emergency situations.
- (2) You may operate your emergency stationary ICE for any combination of the purposes specified in paragraph (f)(2)(i) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (f)(3) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).
 - (i) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.
- (3) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section.

[45CSR13, G60-D056 and G60-D116 General Permit Registration and G60-D, conditions 4.1.2.e. and 5.1.6.; 45CSR16; 40 CFR. §§60.4211(f), (f)(1), (f)(2), (f)(2)(i) and (f)(3)] (MTST-00-FP-ENG-1, MTST-00-FP-ENG-3, LP-EG-1, and LV-EG-1)

- 8.1.13. Owners and operators of stationary CI ICE must operate and maintain stationary CI ICE that achieve the emission standards as required in 40 CFR §60.4205 over the entire life of the engine.
[45CSR13, G60-D056 and G60-D116 General Permit Registration and G60-D, conditions 4.1.2.e. and 5.1.6., 45CSR16; 40 CFR §60.4206] (MTST-00-FP-ENG-1, MTST-00-FP-ENG-3, LP-EG-1, and LV-EG-1)
- 8.1.14. Beginning October 1, 2010, owners and operators of stationary CI ICE subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted.
[45CSR13, G60-D056 and G60-D116 General Permit Registration and G60-D, conditions 4.1.2.e. and 5.1.6., 45CSR16; 40 CFR §60.4207(b)] (MTST-00-FP-ENG-1, MTST-00-FP-ENG-3, LP-EG-1, and LV-EG-1)
- 8.1.15. If you are an owner or operator and must comply with the emission standards specified in 40 CFR Subpart IIII, you must do all of the following, except as permitted under 40 CFR §60.4211(g):
 - a. Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions;
 - b. Change only those emission-related settings that are permitted by the manufacturer; and

- c. Meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to you.

[45CSR13, G60-D056 and G60-D116 General Permit Registration and G60-D, conditions 4.1.2.e. and 5.1.6., 45CSR16; 40 CFR §60.4211(a)] (MTST-00-FP-ENG-1, MTST-00-FP-ENG-3, LP-EG-1, and LV-EG-1)

- 8.1.16. The emergency fire pump engines MTST-00-FP-ENG-1 and MTST-00-FP-ENG-3 and CI engines LP-EG-1 and LV-EG-1 must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in 40 CFR §60.4211(g).

[45CSR13, G60-D056 and G60-D116 General Permit Registration and G60-D, conditions 4.1.2.e. and 5.1.6., 45CSR16; 40 CFR §60.4211(c)] (MTST-00-FP-ENG-1, MTST-00-FP-ENG-3, LP-EG-1, and LV-EG-1)

- 8.1.17. If you do not install, configure, operate, and maintain your engine and control device according to the manufacturer's emission-related written instructions, or you change emission-related settings in a way that is not permitted by the manufacturer, you must demonstrate compliance as follows:

- a. If you are an owner or operator of a stationary CI internal combustion engine greater than or equal to 100 HP and less than or equal to 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer. **(MTST-00-FP-ENG-1 and LP-EG-1)**

- b. If you are an owner or operator of a stationary CI internal combustion engine greater than 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer. You must conduct subsequent performance testing every 8,760 hours of engine operation or 3 years, whichever comes first, thereafter, to demonstrate compliance with the applicable emission standards. **(MTST-00-FP-ENG-3 and LV-EG-1)**

[45CSR13, G60-D056 and G60-D116 General Permit Registration and G60-D, conditions 4.1.2.e. and 5.1.6., 45CSR16; 40 CFR §§60.4211(g), (g)(2) and (g)(3)] (MTST-00-FP-ENG-1, MTST-00-FP-ENG-3, LP-EG-1, and LV-EG-1)

8.2. Monitoring Requirements

- 8.2.1. *Reserved.*

8.3. Testing Requirements

- 8.3.1. The registrant shall comply with all applicable testing requirements under NSPS for Stationary Compression Ignition Internal Combustion Engines specified in 40 CFR Part 60, Subpart IIII, Stationary Spark Ignition Internal Combustion Engines specified in 40 CFR Part 60, Subpart JJJJ, and/or the National Emission

Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines specified in 40 CFR Part 63, Subpart ZZZZ.

[45CSR13, G60-D056, G60-D110, and G60-D116 General Permit Registrations and G60-D, condition 5.4.1.] (MTST-00-FP-ENG-1, MTST-00-FP-ENG-3, Communication Tower, LP-EG-1, LV-EG-1, ~~SW-EG-1, SW-EG-2, SW-EG-3~~, SW-EG-4, SW-EG-5, SW-EG-8, SW-EG-9, SW-EG-10, and SW-EG-11)

8.4. Recordkeeping Requirements

8.4.1. You must meet one of the requirements specified in (1) and (2) of this condition.

- (1) If you operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, you must keep records of conducted maintenance to demonstrate compliance, but no performance testing is required if you are an owner or operator. You must also meet the requirements as specified in 40 CFR part 1068, subparts A through D, as they apply to you. If you adjust engine settings according to and consistent with the manufacturer's instructions, your stationary SI internal combustion engine will not be considered out of compliance.
- (2) If you do not operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, your engine will be considered a non-certified engine, and you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test within 1 year of engine startup to demonstrate compliance.

[45CSR16; 40 CFR §§60.4243(a)(1) and (a)(2)(ii)] (~~SW-EG-1, SW-EG-2, SW-EG-3~~, SW-EG-4, SW-EG-5, SW-EG-6, SW-EG-7, SW-EG-8, SW-EG-9, SW-EG-10, SW-EG-11, and Communication Tower)

8.4.2. Owners and operators of all stationary SI ICE must keep records of the following information.

- (1) All notifications submitted to comply with this subpart and all documentation supporting any notification.
- (2) Maintenance conducted on the engine.
- (3) If the stationary SI internal combustion engine is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR parts 1048, 1054, and 1060, as applicable.
- (4) If the stationary SI internal combustion engine is not a certified engine or is a certified engine operating in a noncertified manner and subject to §60.4243(a)(2), documentation that the engine meets the emission standards.

[45CSR16; 40 CFR §60.4245(a)] (~~SW-EG-1, SW-EG-2, SW-EG-3~~, SW-EG-4, SW-EG-5, SW-EG-6, SW-EG-7, SW-EG-8, SW-EG-9, SW-EG-10, SW-EG-11, and Communication Tower)

8.4.3. For all stationary SI emergency ICE greater than or equal to 130 HP and less than 500 HP manufactured on or after July 1, 2011 that do not meet the standards applicable to non-emergency engines, the owner or operator must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. For all stationary SI emergency ICE greater than 25 HP and less than 130 HP manufactured on or after July 1, 2008, that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency

- operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation.
[45CSR16; 40 CFR §60.4245(b)] (~~SW-EG-1, SW-EG-2, SW-EG-3~~, SW-EG-4, SW-EG-5, SW-EG-6, SW-EG-7, ~~SW-EG-8, SW-EG-9, SW-EG-10, SW-EG-11~~, and Communication Tower)
- 8.4.4. To demonstrate compliance with general permit condition 8.1.2., the registrant shall maintain records of the hours of operation of the emergency generator(s) on a monthly basis.
[45CSR13, G60-D056, G60-D110, and G60-D116 General Permit Registrations and G60-D, condition 5.3.1.] (MTST-00-FP-ENG-1, MTST-00-FP-ENG-3, Communication Tower, LP-EG-1, LV-EG-1, ~~SW-EG-1, SW-EG-2, SW-EG-3~~, SW-EG-4, SW-EG-5, SW-EG-8, SW-EG-9, SW-EG-10, and SW-EG-11)
- 8.4.5. To demonstrate compliance with general permit condition 8.1.8., the registrant shall maintain records of the maintenance performed on each emergency generator.
[45CSR13, G60-D056, G60-D110, and G60-D116 General Permit Registrations and G60-D, condition 5.3.2.] (MTST-00-FP-ENG-1, MTST-00-FP-ENG-3, Communication Tower, LP-EG-1, LV-EG-1, ~~SW-EG-1, SW-EG-2, SW-EG-3~~, SW-EG-4, SW-EG-5, SW-EG-8, SW-EG-9, SW-EG-10, and SW-EG-11)
- 8.4.6. The registrant shall comply with all applicable recordkeeping requirements under NSPS for Stationary Compression Ignition Internal Combustion Engines specified in 40 CFR Part 60, Subpart IIII, Stationary Spark Ignition Internal Combustion Engines specified in 40 CFR Part 60, Subpart JJJJ, and/or the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines specified in 40 CFR Part 63, Subpart ZZZZ.
[45CSR13, G60-D056, G60-D110, and G60-D116 General Permit Registrations and G60-D, condition 5.3.4.] (MTST-00-FP-ENG-1, MTST-00-FP-ENG-3, Communication Tower, LP-EG-1, LV-EG-1, ~~SW-EG-1, SW-EG-2, SW-EG-3~~, SW-EG-4, SW-EG-5, SW-EG-8, SW-EG-9, SW-EG-10, and SW-EG-11)
- 8.4.7. **Retention of records.** The registrant shall maintain records of all information (including monitoring data, support information, reports, and notifications) required by this permit recorded in a form suitable and readily available for expeditious inspection and review. Support information includes all calibration and maintenance records. The files shall be maintained for at least five (5) years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. Said records shall be maintained on site or in a readily accessible off-site location maintained by the registrant for a period of five (5) years. Said records shall be readily available to the Secretary of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Secretary shall be certified by a responsible official. Where appropriate, the registrant may maintain records electronically.
[45CSR13, G60-D056, G60-D110, and G60-D116 General Permit Registrations and G60-D, conditions 3.5.1 and 5.3.5.] (MTST-00-FP-ENG-1, MTST-00-FP-ENG-3, Communication Tower, LP-EG-1, LV-EG-1, ~~SW-EG-1, SW-EG-2, SW-EG-3~~, SW-EG-4, SW-EG-5, SW-EG-8, SW-EG-9, SW-EG-10, and SW-EG-11)

8.5. Reporting Requirements

- 8.5.1. If you own or operate an emergency stationary SI ICE and/or an emergency stationary CI ICE with a maximum engine power more than 100 HP that operates for the purposes specified in 40 CFR §60.4243(d)(3)(i), and/or 40 CFR §60.4211(f)(3)(i), as applicable, you must submit an annual report according to the following.
- (1) The report must contain the following information:

- (i) Company name and address where the engine is located.
 - (ii) Date of the report and beginning and ending dates of the reporting period.
 - (iii) Engine site rating and model year.
 - (iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.
 - (vii) Hours spent for operation for the purposes specified in 40 CFR §60.4243(d)(3)(i) and/or 40 CFR §60.4211(f)(3)(i), as applicable, including the date, start time, and end time for engine operation for the purposes specified in 40 CFR §60.4243(d)(3)(i) and/or 40 CFR §60.4211(f)(3)(i). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.
- (2) Annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.
- (3) The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to 40 CFR 60 Subpart IIII and/or Subpart JJJJ is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in 40 CFR §60.4.

[45CSR16; 40 CFR §60.4245(e); 40 CFR §60.4214(d)] (~~SW-EG-1, SW-EG-2, SW-EG-3~~, SW-EG-4, SW-EG-5, SW-EG-6, SW-EG-7, ~~SW-EG-8, SW-EG-9, SW-EG-10, SW-EG-11~~, Communication Tower, ~~LP-EG-1, LV-EG-1~~, MTST-00-FP-ENG-1, MTST-00-FP-ENG-3)

- 8.5.2. The registrant shall comply with all applicable notification requirements under NSPS for Stationary Compression Ignition Internal Combustion Engines specified in 40 CFR Part 60, Subpart IIII, Stationary Spark Ignition Internal Combustion Engines specified in 40 CFR Part 60, Subpart JJJJ, and/or the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines specified in 40 CFR Part 63. Subpart ZZZZ.
- [45CSR13, ~~G60-D056, G60-D110, and G60-D116~~ General Permit Registrations and G60-D, condition 5.5.1.] (MTST-00-FP-ENG-1, MTST-00-FP-ENG-3, Communication Tower, ~~LP-EG-1, LV-EG-1, SW-EG-1, SW-EG-2, SW-EG-3~~, SW-EG-4, SW-EG-5, ~~SW-EG-8, SW-EG-9, SW-EG-10, and SW-EG-11~~)

8.6. Compliance Plan

- 8.6.1. *Reserved.*

ATTACHMENT J
SUPPORTING EMISSION CALCULATIONS/ESTIMATIONS

Generator Potential Emissions
 New Switchyard Propane Emergency Generators
 Mt. Storm Power Station

Updated: 11/7/2024

Engine Information: Doosan Model D219L 472 hp Engine
 Genset Information: Kohler Model 400REZXD 295kW Generator
 NSPS Applicability: 40 CFR 60 Subpart JJJJ
 Engine Rating: 472 bhp
 Engine Rating: 352 kW
 Fuel Input: 9.64 MMBtu/hr
 EPA Certified: Yes Family Number: NPSIB21.9NGP
 Propane Consumption: 3,856.0 cf/hr
 Maximum Hours of Operation: 8,760.0 hrs/yr
 500 hrs/yr
 Heating Value of Propane: 2,500 Btu/cf

Emission Calculations

Pollutant	Emission Factor ¹		Potential Emissions (1 engine)			Potential Emissions (4 engines)		
			(lb/hr)	8,760 Hours (tons/yr)	500 hours (tons/yr)	(lb/hr)	8,760 Hours (tons/yr)	500 hours (tons/yr)
			Criteria Pollutants					
PM ₁₀	0.019	lb/MMBtu	0.19	0.82	4.68E-02	0.75	3.28	0.19
PM _{2.5}	0.019	lb/MMBtu	0.19	0.82	4.68E-02	0.75	3.28	0.19
SO ₂	0.000588	lb/MMBtu	0.01	0.02	1.42E-03	0.02	0.10	5.67E-03
CO ²	0.34	g/kW-hr	0.26	1.16	6.60E-02	1.06	4.62	0.26
NO _x ²	0.03	g/kW-hr	0.02	0.10	5.82E-03	0.09	0.41	2.33E-02
VOC ²	0.050	g/kW-hr	0.04	0.17	9.70E-03	0.16	0.68	3.88E-02
Greenhouse Gases								
CO ₂ ³	136.047	lb/MMBtu	1311.49	5744.34	327.87	5245.97	22977.36	1311.49
CH ₄ ³	3.0E-03	lb/MMBtu	2.89E-02	1.27E-01	7.23E-03	0.12	0.51	0.03
N ₂ O ³	6.0E-04	lb/MMBtu	5.78E-03	2.53E-02	1.45E-03	0.02	0.10	0.01
CO ₂ e ⁴			1313.94	5755.06	328.48	5255.76	23020.22	1313.94
Hazardous Air Pollutants								
1,1,2,2-Tetrachloroethane	2.53E-05	lb/MMBtu	2.44E-04	1.07E-03	6.10E-05	9.76E-04	4.27E-03	2.44E-04
1,1,2-Trichloroethane	1.53E-05	lb/MMBtu	1.47E-04	6.46E-04	3.69E-05	5.90E-04	2.58E-03	1.47E-04
1,3-Butadiene	6.63E-04	lb/MMBtu	6.39E-03	2.80E-02	1.60E-03	2.56E-02	1.12E-01	6.39E-03
1,3-Dichloropropene	1.27E-05	lb/MMBtu	1.22E-04	5.36E-04	3.06E-05	4.90E-04	2.14E-03	1.22E-04
Acetaldehyde	2.79E-03	lb/MMBtu	2.69E-02	1.18E-01	6.72E-03	1.08E-01	4.71E-01	2.69E-02
Acrolein	2.63E-03	lb/MMBtu	2.54E-02	1.11E-01	6.34E-03	1.01E-01	4.44E-01	2.54E-02
Benzene	1.58E-03	lb/MMBtu	1.52E-02	6.67E-02	3.81E-03	6.09E-02	2.67E-01	1.52E-02
Carbon Tetrachloride	1.77E-05	lb/MMBtu	1.71E-04	7.47E-04	4.27E-05	6.83E-04	2.99E-03	1.71E-04
Chlorobenzene	1.29E-05	lb/MMBtu	1.24E-04	5.45E-04	3.11E-05	4.97E-04	2.18E-03	1.24E-04
Chloroform	1.37E-05	lb/MMBtu	1.32E-04	5.78E-04	3.30E-05	5.28E-04	2.31E-03	1.32E-04
Ethylbenzene	2.48E-05	lb/MMBtu	2.39E-04	1.05E-03	5.98E-05	9.56E-04	4.19E-03	2.39E-04
Ethylene Dibromide	2.13E-05	lb/MMBtu	2.05E-04	8.99E-04	5.13E-05	8.21E-04	3.60E-03	2.05E-04
Formaldehyde	2.05E-02	lb/MMBtu	1.98E-01	8.66E-01	4.94E-02	7.90E-01	3.46E+00	1.98E-01
Methanol	3.06E-03	lb/MMBtu	2.95E-02	1.29E-01	7.37E-03	1.18E-01	5.17E-01	2.95E-02
Methylene Chloride	4.12E-05	lb/MMBtu	3.97E-04	1.74E-03	9.93E-05	1.59E-03	6.96E-03	3.97E-04
Naphthalene	9.71E-05	lb/MMBtu	9.36E-04	4.10E-03	2.34E-04	3.74E-03	1.64E-02	9.36E-04
PAH	1.41E-04	lb/MMBtu	1.36E-03	5.95E-03	3.40E-04	5.44E-03	2.38E-02	1.36E-03
Styrene	1.19E-05	lb/MMBtu	1.15E-04	5.02E-04	2.87E-05	4.59E-04	2.01E-03	1.15E-04
Toluene	5.58E-04	lb/MMBtu	5.38E-03	2.36E-02	1.34E-03	2.15E-02	9.42E-02	5.38E-03
Vinyl Chloride	7.18E-06	lb/MMBtu	6.92E-05	3.03E-04	1.73E-05	2.77E-04	1.21E-03	6.92E-05
Xylene	1.95E-04	lb/MMBtu	1.88E-03	8.23E-03	4.70E-04	7.52E-03	3.29E-02	1.88E-03
TOTAL HAP:			3.13E-01	1.369	0.078	1.25E+00	5.475	0.313

¹ All emission factors based on AP-42 Section 3.2, Tables 3.2-3, unless otherwise specified.

² Emissions factors obtained from manufacturer's emissions data sheet

³ Emissions factors for LPG obtained from 40 CFR 98, Tables C-1 and C-2 (Note: 1 kg = 2.20462 lb):

⁴ CO₂e (Global Warming Potential) factors obtained from 40 CFR 98, Table A-1 as follows:

CO ₂ =	1	CO ₂ e
CH ₄ =	25	CO ₂ e
N ₂ O =	298	CO ₂ e

Generator Potential Emissions
Leachate Pond Pump Diesel Emergency Generator
Mt. Storm Power Station

Updated: 11/7/2024

Engine Information: Perkins Model 1104D-E44TA (C4.4)
 Genset Information: Caterpillar Model D100 GC
 NSPS Applicability: 40 CFR 60 Subpart IIII
 Engine Rating: 161 bhp
 Engine Rating: 120 kW
 Fuel Input: 1.01 MMBtu/hr
 EPA Certified: Yes Family Number: PPKXL04.4NR1-003
 Diesel Fuel Consumption: 7.4 gal/hr
 Maximum Hours of Operation: 8,760.0 hrs/yr
 500 hrs/yr
 Heating Value of Diesel Fuel: 19,300 Btu/lb
 Density of Diesel Fuel: 7.1 lb/gal

Emission Calculations

Pollutant	Emission Factor ¹		Potential Emissions		
			(lb/hr)	8,760 Hours (tons/yr)	500 hours (tons/yr)
Criteria Pollutants					
PM ²	0.30	g/kW-hr	0.08	0.35	0.020
SO ₂	0.29	lb/MMBtu	0.29	1.29	0.074
CO ²	5.0	g/kW-hr	1.32	5.79	0.331
NO _x ²	4.0	g/kW-hr	1.06	4.63	0.265
VOC ²	4.0	g/kW-hr	1.06	4.63	0.265
Greenhouse Gases					
CO ₂ ³	163.050	lb/MMBtu	165.34	724.17	41.33
CH ₄ ³	3.0E-03	lb/MMBtu	3.04E-03	1.33E-02	7.61E-04
N ₂ O ³	6.0E-04	lb/MMBtu	6.08E-04	2.66E-03	1.52E-04
CO ₂ e ⁴			165.59	725.30	41.40
Hazardous Air Pollutants					
Benzene	9.33E-04	lb/MMBtu	9.46E-04	4.14E-03	2.37E-04
Toluene	4.09E-04	lb/MMBtu	4.15E-04	1.82E-03	1.04E-04
Xylenes	2.85E-04	lb/MMBtu	2.89E-04	1.27E-03	7.22E-05
1,3-Butadiene	3.91E-05	lb/MMBtu	3.96E-05	1.74E-04	9.91E-06
Formaldehyde	1.18E-03	lb/MMBtu	1.20E-03	5.24E-03	2.99E-04
Acetaldehyde	7.67E-04	lb/MMBtu	7.78E-04	3.41E-03	1.94E-04
Acrolein	9.25E-05	lb/MMBtu	9.38E-05	4.11E-04	2.34E-05
Naphthalene	8.48E-05	lb/MMBtu	8.60E-05	3.77E-04	2.15E-05
TOTAL HAP:			3.84E-03	0.017	0.001

¹ All emission factors based on AP-42 Section 3.3, Tables 3.3-1 or 3.3-2, unless otherwise specified.

² Emissions factors obtained from Tier 3 emissions standards from Appendix I to Part 1039.

³ Emissions factors for No. 2 Fuel Oil (Diesel) obtained from 40 CFR 98, Tables C-1 and C-2 (Note: 1 kg = 2.20462 lb):

⁴ CO₂e (Global Warming Potential) factors obtained from 40 CFR 98, Table A-1 as follows:

CO ₂ =	1	CO ₂ e
CH ₄ =	25	CO ₂ e
N ₂ O =	298	CO ₂ e

Generator Potential Emissions
Low Volume Diesel Emergency Generator
Mt. Storm Power Station

Updated: 11/7/2024

Engine Information: John Deere Model 6135HF485S 617 bhp Engine
 Genset Information: Kohler Model 400REOZJC 400 kW Emergency Generator
 NSPS Applicability: 40 CFR 60 Subpart IIII
 Engine Rating: 617 bhp
 Engine Rating: 460 kW
 Fuel Input: 4.19 MMBtu/hr
 EPA Certified: Yes Family Number: RJDXL13.5103
 Diesel Fuel Consumption: 30.6 gal/hr
 Maximum Hours of Operation: 8,760.0 hrs/yr
 500 hrs/yr
 Heating Value of Diesel Fuel: 19,300 Btu/lb
 Density of Diesel Fuel: 7.1 lb/gal

Emission Calculations

Pollutant	Emission Factor ¹		Potential Emissions		
			(lb/hr)	8,760 Hours (tons/yr)	500 hours (tons/yr)
Criteria Pollutants					
PM ²	0.10	g/kW-hr	0.10	0.44	0.025
SO ₂	1.52E-04	lb/MMBtu	0.001	0.00	0.000
CO ²	0.6	g/kW-hr	0.61	2.67	0.152
NO _x ²	3.31	g/kW-hr	3.36	14.71	0.839
VOC ²	0.11	g/kW-hr	0.11	0.49	0.028
Greenhouse Gases					
CO ₂ ³	163.050	lb/MMBtu	683.69	2994.55	170.92
CH ₄ ³	3.0E-03	lb/MMBtu	1.26E-02	5.51E-02	3.14E-03
N ₂ O ³	6.0E-04	lb/MMBtu	2.52E-03	1.10E-02	6.29E-04
CO ₂ e ⁴			684.75	2999.21	171.19
Hazardous Air Pollutants					
Benzene	7.76E-04	lb/MMBtu	3.25E-03	1.43E-02	8.13E-04
Toluene	2.81E-04	lb/MMBtu	1.18E-03	5.16E-03	2.95E-04
Xylenes	1.93E-04	lb/MMBtu	8.09E-04	3.54E-03	2.02E-04
Formaldehyde	7.89E-05	lb/MMBtu	3.31E-04	1.45E-03	8.27E-05
Acetaldehyde	2.52E-05	lb/MMBtu	1.06E-04	4.63E-04	2.64E-05
Acrolein	7.88E-06	lb/MMBtu	3.30E-05	1.45E-04	8.26E-06
Naphthalene	1.30E-04	lb/MMBtu	5.45E-04	2.39E-03	1.36E-04
TOTAL HAP:			6.26E-03	0.027	0.002

¹ All emission factors based on AP-42 Section 3.4, Tables 3.4-1, 3.4-2, 3.4-3, and 3.4-4, unless otherwise specified.

² Emissions factors obtained from manufacturer emission data sheet for Kohler Model 400REOZJC

³ Emissions factors for No. 2 Fuel Oil (Diesel) obtained from 40 CFR 98, Tables C-1 and C-2 (Note: 1 kg = 2.20462 lb):

⁴ CO₂e (Global Warming Potential) factors obtained from 40 CFR 98, Table A-1 as follows:

CO ₂ =	1	CO ₂ e
CH ₄ =	25	CO ₂ e
N ₂ O =	298	CO ₂ e

Fire Pump Engine Potential Emissions
Fire Pump Diesel Emergency Generator
Mt. Storm Power Station

Updated: 11/7/2024

Engine Information: John Deere 6068 Engine
 Fire Pump Information: Clarke JU6H-UFADX8
 NSPS Applicability: 40 CFR 60 Subpart IIII
 Engine Rating: 305 bhp
 Engine Rating: 228 kW
 Fuel Input: 2.00 MMBtu/hr
 EPA Certified: Yes Family Number: PJDXL13.5103-012
 Diesel Fuel Consumption: 14.6 gal/hr
 Maximum Hours of Operation: 8,760.0 hrs/yr
 500 hrs/yr
 Heating Value of Diesel Fuel: 19,300 Btu/lb
 Density of Diesel Fuel: 7.1 lb/gal

Emission Calculations

Pollutant	Emission Factor ¹		Potential Emissions		
			(lb/hr)	8,760 Hours (tons/yr)	500 hours (tons/yr)
Criteria Pollutants					
PM ²	0.10	g/kW-hr	0.05	0.22	0.013
SO ₂	0.29	lb/MMBtu	0.58	2.54	0.145
CO ²	0.6	g/kW-hr	0.30	1.32	0.075
NO _x ²	3.31	g/kW-hr	1.66	7.27	0.415
VOC ²	0.11	g/kW-hr	0.06	0.24	0.014
Greenhouse Gases					
CO ₂ ³	163.050	lb/MMBtu	326.20	1428.77	81.55
CH ₄ ³	3.0E-03	lb/MMBtu	6.00E-03	2.63E-02	1.50E-03
N ₂ O ³	6.0E-04	lb/MMBtu	1.20E-03	5.26E-03	3.00E-04
CO ₂ e ⁴			326.71	1431.00	81.68
Hazardous Air Pollutants					
Benzene	9.33E-04	lb/MMBtu	1.87E-03	8.18E-03	4.67E-04
Toluene	4.09E-04	lb/MMBtu	8.18E-04	3.58E-03	2.05E-04
Xylenes	2.85E-04	lb/MMBtu	5.70E-04	2.50E-03	1.43E-04
1,3-Butadiene	3.91E-05	lb/MMBtu	7.82E-05	3.43E-04	1.96E-05
Formaldehyde	1.18E-03	lb/MMBtu	2.36E-03	1.03E-02	5.90E-04
Acetaldehyde	7.67E-04	lb/MMBtu	1.53E-03	6.72E-03	3.84E-04
Acrolein	9.25E-05	lb/MMBtu	1.85E-04	8.11E-04	4.63E-05
Naphthalene	8.48E-05	lb/MMBtu	1.70E-04	7.43E-04	4.24E-05
TOTAL HAP:			7.58E-03	0.033	0.002

¹ All emission factors based on AP-42 Section 3.3, Tables 3.3-1 or 3.3-2, unless otherwise specified.

² Emissions factors obtained from Tier 3 emissions standards from Appendix I to Part 1039.

³ Emissions factors for No. 2 Fuel Oil (Diesel) obtained from 40 CFR 98, Tables C-1 and C-2 (Note: 1 kg = 2.20462 lb):

⁴ CO₂e (Global Warming Potential) factors obtained from 40 CFR 98, Table A-1 as follows:

CO ₂ =	1	CO ₂ e
CH ₄ =	25	CO ₂ e
N ₂ O =	298	CO ₂ e

Each generator will be limited to 500 hours/year of operation.
 There are approximately 453.6 grams in a pound.

Emission factors for NOx + HC and CO taken from manufacturer performance data or US EPA limits.

Unit Ref.	Size (kW)	NOx + HC			CO			VOC*	
		g/kW-hr	lbs/hr	tons/year	g/kW-hr	lbs/hr	tons/year	lbs/hr	tons/year
SW-EG-1	167	2.70	0.99	0.25	4.40	1.62	0.40	(Included with NOx)	
SW-EG-2	167	2.70	0.99	0.25	4.40	1.62	0.40	(Included with NOx)	
SW-EG-3	167	2.70	0.99	0.25	4.40	1.62	0.40	(Included with NOx)	
Totals			2.98	0.75		4.86	1.21	(Included with NOx)	

* VOC emissions are included with "NOx + HC" emissions.

Heat Input Calculations (cf/hr propane consumption at 100% rated capacity)

	cf/hr	Btu/cf	MMBtu/hr	MMcf/year
Generac MG150 (SW-EG-1-3)	853	2500	2.1325	0.4265

Unit Ref.	Heat Input	PM10/PM2.5			SO2			CO2		
		lbs/MMBtu	lbs/hr	tons/year	lbs/MMBtu	lbs/hr	tons/year	lbs/MMBtu	lbs/hr	tons/year
SW-EG-1	2.1325	0.0099871	0.02	0.01	0.000240	0.001	0.0001	110	234.58	58.64
SW-EG-2	2.1325	0.0099871	0.02	0.01	0.000240	0.001	0.0001	110	234.58	58.64
SW-EG-3	2.1325	0.0099871	0.02	0.01	0.000240	0.001	0.0001	110	234.58	58.64
Totals			0.06	0.02		0.002	0.0004		703.73	175.93

SO2 is essentially negligible. These calculations use the US EIA factor of 0.6 lbs SO2/million cubic feet of propane.

(Found at http://www.eia.gov/electricity/annual/html/epa_a_01.html)

PM10/PM2.5 is the sum of the filterable PM10/PM2.5 + condensable PM from AP-42 Table 3.2-2 (Four-stroke lean burn natural gas engines)

CO2 is also taken from AP-42 Table 3.2-2.

AP-42 does not contain emission factors for small propane-fired engines such as these. Natural gas was used as a surrogate.

Hazardous/Toxic Air Pollutant emission factors from AP-42 Table 3.2-2 (Four-stroke lean burn natural gas engines)

Unit Ref.	Heat Input	Benzene			Ethylbenzene			Toluene		
		lbs/MMBtu	lbs/hr	tons/yr	lbs/MMBtu	lbs/hr	tons/yr	lbs/MMBtu	lbs/hr	tons/yr
SW-EG-1	2.1325	0.00044	0.00094	0.00023	0.000397	8.47E-05	2.12E-05	0.000408	0.00087	0.00022
SW-EG-2	2.1325	0.00044	0.00094	0.00023	0.000397	8.47E-05	2.12E-05	0.000408	0.00087	0.00022
SW-EG-3	2.1325	0.00044	0.00094	0.00023	0.000397	8.47E-05	2.12E-05	0.000408	0.00087	0.00022
Totals			0.00281	0.00070		2.54E-04	6.35E-05		0.00261	0.00065

Unit Ref.	Heat Input	Xylenes			n-Hexane			Formaldehyde		
		lbs/MMBtu	lbs/hr	tons/yr	lbs/MMBtu	lbs/hr	tons/yr	lbs/MMBtu	lbs/hr	tons/yr
SW-EG-1	2.1325	0.000184	0.00039	0.00010	0.00111	0.00237	0.00059	0.0528	0.11260	0.02815
SW-EG-2	2.1325	0.000184	0.00039	0.00010	0.00111	0.00237	0.00059	0.0528	0.11260	0.02815
SW-EG-3	2.1325	0.000184	0.00039	0.00010	0.00111	0.00237	0.00059	0.0528	0.11260	0.02815
Totals			0.00118	0.00029		0.00710	0.00178		0.33779	0.08445

AP-42 does not contain emission factors for small propane-fired engines such as these. Natural gas was used as a surrogate.

Dominion- Mt. Storm Power Station - Replaced Fire Pump - Emissions Calculations

Updated: 11/7/2024

Fire pump will be limited to
There are approximately

500 hours/year of operation.
453.6 grams in a pound.

Emission factors taken from John Deere Performance Data.

Unit Ref.	Size (hp)	NO _x			CO			VOC			PM/PM10/PM2.5		
		g/hp-hr	lbs/hr	tons/year	g/hp-hr	lbs/hr	tons/year	g/hp-hr	lbs/hr	tons/year	g/hp-hr	lbs/hr	tons/year
MTST-00-FP-ENG-1	305	2.70	1.82	0.45	0.40	0.27	0.07	0.10	0.07	0.02	0.06	0.04	0.01
Total			1.82	0.45		0.27	0.07		0.07	0.02		0.04	0.01

SO₂ Calculations:

Assume ULSD has: 137,000 Btu/gal 0.0015 % sulfur
 SO₂ Emission factor: 1.01 (S) lbs/mmBtu = **0.001515** lbs SO₂/mmBtu
 (AP-42 Table 3.4-1, 10/96)

Unit Ref.	Size (hp)	Gals/hr	mmBtu/hr	lbs/hr	tons/year
MTST-00-FP-ENG-1	305	14.6	2.00	0.003	0.001
Total				0.003	0.001

Unit Ref.	Size (hp)	Gals/hr	mmBtu/hr
MTST-00-FP-ENG-1	305	14.6	2.00
Total			

AP-42 Table 3.4-3	lbs/mmBtu	lbs/hr	tons/yr
Benzene	7.76E-04	0.0016	0.000388039
Ethylbenzene	unk.	unk.	unk.
Toluene	2.81E-04	0.0006	0.000140514
Xylenes	1.93E-04	0.0004	0.000097
n-Hexane	unk.	unk.	unk.
Formaldehyde	7.89E-05	0.0002	0.000039

Dominion Energy - Mt. Storm Power Station
Change in Potential to Emit

Pollutant	New Unit Emissions (tons/yr)					Old Unit Emissions (tons/yr)		
	Switchyard Generators	Leachate Pond Generator	Low Volume Generator	Fire Pump Engine	Total	Switchyard Generators	Fire Pump Engine	Total
NOx	0.023	0.265	0.839	0.415	1.542	0.746	0.454	1.199
SO2	0.006	0.074	0.000	0.145	0.224	0.000	0.001	0.001
CO	0.264	0.331	0.152	0.075	0.822	1.215	0.067	1.282
VOC	0.039	0.265	0.028	0.014	0.345	0.000	0.017	0.017
PM	0.187	0.020	0.025	0.013	0.245	0.016	0.010	0.026
HAPs	0.313	0.001	0.002	0.002	0.317	0.088	0.001	0.089

Pollutant	New Engines	Old Engines	Change
	(tons/yr)	(tons/yr)	(tons/yr)
NOx	1.542	1.199	0.343
SO2	0.224	0.001	0.223
CO	0.822	1.282	-0.460
VOC	0.345	0.017	0.328
PM	0.245	0.026	0.219
HAPs	0.317	0.089	0.228