



Lane Regional Air Protection Agency  
Simple Air Contaminant Discharge Permit

**REVIEW REPORT**

**PeaceHealth Sacred Heart Medical Center at Riverbend**  
3333 Riverbend Drive  
Springfield, OR 97477  
<https://www.peacehealth.org/sacred-heart-riverbend>

**Permit No. 207536**

**Source Information:**

|                                    |   |
|------------------------------------|---|
| Primary SIC                        | 8062  |
| Secondary SIC                      | --  |
| Primary NAICS                      | 622110                                      |
| Secondary NAICS                    | --  |
| Source Categories (LRAPA title 37, | Part B: 12 – Boilers and other fuel burning |

|                        |   |
|------------------------|---|
| Table 1)               | equipment over 10 MMBTU/hour heat input. Part C: 4 – All sources that request a PSEL equal to or greater than the SER for a regulated pollutant, except GHG, in a year. |
| Public Notice Category | III   |

**Compliance and Emissions Monitoring Requirements:**

|                      |   |
|----------------------|---|
| Unassigned Emissions | N |
| Emission Credits     | N |
| Special Conditions   | N |
| Compliance Schedule  | N |

|                       |   |
|-----------------------|---|
| Source Test [date(s)] | N |
| COMS                  | N |
| CEMS                  | N |
| Ambient monitoring    | N |

**Reporting Requirements**

|                               |             |
|-------------------------------|-------------|
| Annual Report (due date)      | February 15 |
| Semi-annual Report (due date) | August 15   |
| SACC (due date)               | N           |
| GHG Report (due date)         | March 31    |

|                             |   |
|-----------------------------|---|
| Quarterly Report (due date) | N |
| Monthly Report (due dates)  | N |
| Excess Emissions Report     | Y |
| Other Reports (due date)    | N |

**Air Programs**

|  |             |
|--|-------------|
| NSPS (list subparts)                                 | A, Dc, IIII |
| NESHAP (list subparts)                               | N           |
| 40 CFR part 64 Compliance Assurance Monitoring (CAM) | N           |
| Regional Haze (RH)                                   | N           |
| TACT   | N           |
| 40 CFR part 68 Risk Management                       | N           |
| Cleaner Air Oregon (CAO)                             | N           |
| Synthetic Minor (SM)                                 | N           |
| SM-80  | N           |

|   |   |
|---|---|
| Title V                                       | N |
| Major FHAP Source                             | N |
| Federal Major Source                          | N |
| Type A State New Source Review                | N |
| Type B State New Source Review                | N |
| Prevention of Significant Deterioration (PSD) | N |
| Nonattainment New Source Review (NNSR)        | N |

**Permit Identification**

1. Peace Health Sacred Heart Medical Center at Riverbend ('Peace Health' or 'the facility') operates a medical hospital at 3333 Riverbend Drive in Springfield, Oregon. The facility began operation in 2008.
2. The facility operates under the primary Standard Industrial Classification (SIC) code of 8062 - General Medical and Surgical Hospitals and the primary North American Industry Classification System (NAICS) code of 622110 - General Medical and Surgical Hospitals.

**General Background**

3. The facility operates a medical hospital. In support of its operations, the facility operates three (3) emergency generators and four (4) natural gas-fired boilers. The emergency generators (e-gens) are manufactured by Cummins Power Generation but are fired regularly for scheduled maintenance. The emergency generators are 2000 kW each and have fuel usage of 137.55 gallons per hour each. The natural gas-fired boilers burn primarily natural gas with diesel as a backup fuel. Boiler 1 manufactured by Mohican is rated at 12.6 MMBtu/hr. Boilers 2 and 3 manufactured by Mohican are rated at 33.6 MMBtu/hr each. Boiler 4 manufactured by Hurst is rated at 26.8 MMBtu/hr.
4. The facility operated an ethylene oxide sterilizer on site that was applicable to the National Emission Standards for Hazardous Air Pollutants subpart 6W, but has been removed from the facility.

**Reasons for Permit Action**

5. This permit action is a renewal for an existing Standard Air Contaminant Discharge Permit (Standard ACDP) which was issued on April 9, 2019 and expired on April 9, 2024. As the facility submitted a timely renewal application on October 9, 2023, the current permit will remain in effect until final action has been taken on the renewal application. The renewed Standard ACDP will be valid for up to five (5) years.

**Attainment Status**

6. Peace Health is located inside the Eugene-Springfield Air Quality Management Area. The facility is located in an area that has been designated attainment/unclassified for PM, PM<sub>2.5</sub>, ozone (VOC), NO<sub>x</sub> and SO<sub>2</sub>, and a maintenance area for CO and PM<sub>10</sub>. The facility is located within 100 kilometers of three Class I air quality protection areas: Diamond Peak, Three Sisters and Mount Washington Wilderness areas.

**Permitting History**

7. LRAPA has reviewed and issued the following permitting actions to this facility:

| <b>Date(s)<br/>Approved/Valid</b> | <b>Permit Action Type</b> | <b>Description</b>  |
|-----------------------------------|---------------------------|---|
| 04/15/2008                        | Synthetic Minor ACDP      | Initial permitting  |
| 05/12/2009                        | Standard ACDP             | Change to Standard ACDP and fee basis                           |
| 07/11/2013                        | Standard ACDP             | Renewal   |
| 04/28/2014                        | Standard ACDP             | Renewal   |
| 10/14/2018                        | Modification              | Installation of one (1) 26.8 MMBtu/hr natural gas-fired boiler  |
| 04/09/2019                        | Standard ACDP             | Renewal   |
| 01/03/2022                        | NC-207536-A22             | Removal of ethylene oxide (EtO) sterilizer and PCD (EtO abator) |
| Upon Issuance                     | Standard ACDP             | Renewal   |

**Emission Unit Descriptions**

8. The emission units regulated by this permit are the following:

| <b>Emission Unit ID</b> | <b>Description</b>  | <b>Pollution Control Device (PCD ID)</b> | <b>Installed /Last Modified</b> |
|-------------------------|---|--|---------------------------------|
| EEG-1                   | Emergency Generator, diesel-fired Cummins Power Generation, 2000 kW, 135 gal/hr | None                                     | 2008                            |
| EEG-2                   | Emergency Generator, diesel-fired Cummins Power Generation, 2000 kW, 135 gal/hr | None                                     | 2008                            |
| EEG-3                   | Emergency Generator, diesel-fired Cummins Power Generation, 2000 kW, 135 gal/hr | None                                     | 2008                            |
| B-4                     | Mohican Boiler, natural gas with No. 2 diesel as backup fuel, 12.6 MMBtu/hr     | None                                     | 2008                            |
| B-5                     | Mohican Boiler, natural gas with No. 2 diesel as backup fuel, 33.6 MMBtu/hr     | None                                     | 2008                            |
| B-6                     | Mohican Boiler, natural gas with No. 2 diesel as backup fuel, 33.6 MMBtu/hr     | None                                     | 2008                            |
| B-7                     | Hurst Boiler, natural gas with No. 2 diesel as backup fuel, 26.8 MMBtu/hr       | None                                     | 2018                            |

**Nuisance, Deposition and Other Emission Limitations**

9. Under LRAPA 49-010(1), the permittee must not cause or allow air contaminants from any source subject to regulation by LRAPA to cause a nuisance. Compliance is demonstrated through documentation of all complaints received by the facility from the general public and following procedures to notify LRAPA of receipt of these complaints.
10. Under LRAPA 32-055, the permittee must not cause or permit the emission of particulate matter which is larger than 250 microns in size at sufficient duration or quantity as to create an observable deposition upon the real property of another person. Compliance is demonstrated through documentation of all complaints received by the facility from the general public and following procedures to notify LRAPA of receipt of these complaints.
11. Under LRAPA 32-090(1), the permittee must not discharge from any source whatsoever such quantities of air contaminants which cause injury or damage to any persons, the public, business or property; such determination is to be made by LRAPA. Compliance is demonstrated through documentation of all complaints received by the facility from the general public and following procedures to notify LRAPA of receipt of these complaints.

**General Emission Limitations**

12. The facility is subject to a limit of 20 percent opacity for each source emission point. The facility is subject to the grains per dry standard cubic foot limitations under LRAPA 32-015(2)(b)(B), 32-015(c) and LRAPA 32-030(1)(b). Visual survey (opacity readings) must be performed quarterly and must not exceed an average of 20 percent opacity for a period, or periods measured as a six-minute block average using EPA Method 9. A survey log must be kept of all visual surveys conducted and any corrective actions taken.
13. For fuel burning equipment that burns fuels other than wood, the emission results are corrected to 50% excess air. Compliance with the emissions standards in section 32-030 is determined using DEQ Method 5, or an alternative method approved by LRAPA.

**Typically Achievable Control Technology (TACT)**

14. LRAPA 32-008(2) requires new units installed or existing emission units modified on or after January 1, 1994, meet TACT if the emission unit meets the following criteria: The emission unit is not subject to Major NSR in title 38, Type A State NSR in LRAPA title 38, an applicable Standard of Performance for New Stationary Sources in title 46, or any other standard applicable only to new or modified sources in title 32, title 33, or title 39 for the regulated pollutant emitted; the source is required to have a permit; if new, the emission unit has emissions of any criteria pollutant equal to or greater than one (1) ton per year of any criteria pollutant; if modified, the emission unit would have an increase in emissions of any criteria pollutant equal to or greater than one (1) ton per year of any criteria pollutant; and LRAPA determines that the proposed air pollution control devices and emission reduction processes do not represent TACT.
  - 14.a. The boilers (EUs: B-4 through B-7) for CO and NO<sub>x</sub> emission have the potential to exceed one (1) ton per year. While LRAPA has not performed a formal TACT determination for CO or NO<sub>x</sub> from these emission unit, the development of an Operation and Maintenance Plan (O&M Plan) requiring that the boilers are operated according to the manufacturer's specifications with good combustion practices and annual boiler tune-ups would likely meet the TACT requirements.
  - 14.b. The generators (EUs: EG-1 through EG-3) for NO<sub>x</sub> emissions have the potential to exceed one (1) ton per year. While LRAPA has not performed a formal TACT determination for NO<sub>x</sub> from these emission units, LRAPA has determined that operating according to the manufacturer's specifications would likely meet the TACT requirements.

**New Source Performance Standards (NSPS)**

15. 40 CFR part 60 subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units is applicable to the boilers (EUs: B-4 through B-7) because the boilers were manufactured after June 9, 1989 and they each have maximum design heat input capacity of 29 megawatts (MW) (100 MMBtu/hr) or less, but greater than or equal to 2.9 MW (10 MMBtu/hr).
16. The facility has met the notification requirement of 40 CFR 60.48c(a) by submitting the design heat input capacity, identification of fuels to be combusted and the annual capacity factor for each fuel or mixture of fuels for all boilers (EUs: B-4 through B-7).
17. The 40 CFR part 60 subpart Dc requirements that are applicable to the boilers (EUs: B-4 through B-7) are identified in the following table:

| <b>40 CFR part 60 subpart Dc Citation</b> | <b>Description</b>                              | <b>Applicable to Source (Yes/No)</b> | <b>Comments</b>  | <b>Permit Condition</b> |
|---|---|--------------------------------------|--|-------------------------|
| 60.40c                                    | Applicability and delegation of authority       | Yes                                  | Each boiler has a maximum heat input capacity between 10 and 100 MMBtu per hour.               | NA                      |
| 60.41c                                    | Definitions                                     | Yes                                  | Each boiler meets the definition of a <i>steam generating unit</i> .                           | NA                      |
| 60.42c                                    | Standards for sulfur dioxide (SO <sub>2</sub> ) | Yes                                  | SO <sub>2</sub> emission limits are demonstrated through certification from the fuel supplier. | 15-17                   |

| 40 CFR part 60 subpart Dc Citation | Description   | Applicable to Source (Yes/No) | Comments  | Permit Condition |
|------------------------------------|---|-------------------------------|---|------------------|
| 60.43c                             | Standard for particulate matter (PM)  | Yes                           | PM emissions limits are demonstrated through certification from the fuel supplier.                                      | 18 & 19          |
| 60.44c                             | Compliance and performance test methods and procedures for sulfur dioxide     | Yes                           | SO <sub>2</sub> emission limits are demonstrated through certification from the fuel supplier.                          | 21               |
| 60.45c                             | Compliance and performance test methods and procedures for particulate matter | Yes                           | PM emission limits are demonstrated through performance testing, CEMS or certification from the fuel supplier.          | 20               |
| 60.46c                             | Emission monitoring for sulfur dioxide  | Yes                           | SO <sub>2</sub> emission limits are demonstrated through CEMS.  | NA               |
| 60.47c                             | Emission monitoring for particulate matter                                    | Yes                           | The facility is required to perform visible emission testing on a schedule when combusting fuel oil.                    | 22 & 23          |
| 60.48c                             | Reporting and recordkeeping requirements                                      | Yes                           | Under the authority of 40 CFR 60.19(c), LRAPA has moved the postmark deadlines to align with the February 15 reporting. | 24-30            |

18. 40 CFR part 60 subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines is applicable to the 2000 kW diesel-fired Cummins emergency engines (EG-1 through EG-3) because the emergency engines were manufactured after April 1, 2006 and are not fire pump engines.

19. The 40 CFR part 60 subpart IIII requirements that are applicable to the emergency engines (EG-1 through EG-3) are identified in the following table:

| 40 CFR part 60 subpart IIII Citation | Description                                | Applicable to Source (Yes/No) | Comments   | Permit Condition |
|--------------------------------------|--|-------------------------------|--|------------------|
| 60.4200                              | Subpart applicability                      | Yes                           | Informational.   | NA               |
| 60.4201                              | Emission standards (non-emergency engines) | No                            | --   | NA               |
| 60.4202                              | Emissions standards (emergency engine)     | Yes                           | Applicable to (a) through 60.4205(b) reference.  | 15.a             |
| 60.4203                              | Emission standards (manufacturer)          | No                            | --   | NA               |
| 60.4204                              | Emission (non-emergency engine)            | No                            | --   | NA               |
| 60.4205                              | Emission standards (emergency engines)     | Yes                           | Owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters | 15               |

| 40 CFR part 60 subpart IIII Citation | Description   | Applicable to Source (Yes/No) | Comments  | Permit Condition |
|--------------------------------------|---|-------------------------------|---|------------------|
|                                      |   |                               | per cylinder that are not fire pump engines must comply with 60.4202.   |                  |
| 60.4206                              | Emission standards                                      | Yes                           | The emission standards are applicable for the life of the engine.   | 16               |
| 60.4207                              | Fuel requirements                                       | Yes                           | Must use diesel fuel that meets the requirements of 40 CFR 1090.305 for nonroad diesel fuel.                                    | 15.b             |
| 60.4208                              | Requirements – deadlines for installing                 | No                            | --  | NA               |
| 60.4209                              | Monitoring requirements                                 | No                            | --  | NA               |
| 60.4210                              | Compliance requirements (manufacturer)                  | No                            | --  | NA               |
| 60.4211                              | Compliance requirements                                 | Yes                           | --  | 17 - 20          |
| 60.4212                              | Testing requirements                                    | No                            | --  | NA               |
| 60.4213                              | Testing methods   | No                            | --  | NA               |
| 60.4214                              | Notification, reporting, and recordkeeping requirements | Yes                           | If engine does not meet the applicable emission standards, then the owner or operator must install a non-resettable hour meter. | 21               |
| 60.4215                              | Special requirements                                    | No                            | Engine is not located in the listed geographic areas.   | NA               |
| 60.4216                              | Special requirements                                    | No                            | Engine is not located in the listed geographic areas.   | NA               |
| 60.4217                              | Special requirements                                    | No                            | Engines do not use special fuel   | NA               |
| 60.4218                              | General provisions                                      | Yes                           | Informational   | NA               |
| 60.4219                              | Definitions   | Yes                           | --  | NA               |

**Hazardous Air Pollutants (HAPs) and National Emission Standards for Hazardous Air Pollutants (NESHAPs)**

20. The emergency engines (EG-1 through EG-3) are subject to 40 CFR part 63 subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines because these emission units are considered new stationary RICE under this regulation. However, under 40 CFR 63.6590(c)(1), a new or reconstructed stationary RICE at an area source of federal HAP emissions must meet the requirements of 40 CFR part 63 subpart ZZZZ by meeting the requirements of 40 CFR part 60 subpart IIII. No further requirements apply for these engines under 40 CFR part 63 subpart ZZZZ.
21. 40 CFR part 63 subpart JJJJJJ – National Emissions Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources is not applicable to the boilers (EUs: B-4 through B-7) because the boilers are gas-fired as defined by 40 CFR part 63 subpart JJJJJJ.

**Plant Site Emission Limits (PSELs)**

22. Provided below is a summary of the baseline emission rate, netting basis and PSELs for this facility.

| Pollutant               | Baseline Emission Rate (TPY) | Netting Basis  |                | Plant Site Emission Limit (PSEL) |                     | PSEL Increase Over Netting Basis (TPY) | Significant Emission Rate (TPY) |
|-------------------------|------------------------------|----------------|----------------|----------------------------------|---------------------|--|---------------------------------|
|                         |                              | Previous (TPY) | Proposed (TPY) | Previous PSEL (TPY)              | Proposed PSEL (TPY) |  |                                 |
| PM                      | NA                           | 0              | 0              | 24                               | 2.0                 | 2.0                                    | 25                              |
| PM <sub>10</sub>        | NA                           | 0              | 0              | 14                               | 2.0                 | 2.0                                    | 15                              |
| PM <sub>2.5</sub>       | NA                           | 0              | 0              | 9                                | 2.0                 | 2.0                                    | 10                              |
| CO                      | NA                           | 0              | 0              | 99                               | 41                  | 41                                     | 100                             |
| NO <sub>x</sub>         | NA                           | 0              | 0              | 39                               | 39                  | 39                                     | 40                              |
| SO <sub>2</sub>         | NA                           | 0              | 0              | 39                               | 2.6                 | 2.6                                    | 40                              |
| VOC                     | NA                           | 0              | 0              | 39                               | 3.5                 | 3.5                                    | 40                              |
| GHG (CO <sub>2</sub> e) | NA                           | 0              | 0              | 74,000                           | 55,144              | 55,144                                 | 75,000                          |
| Individual HAP          | NA                           | NA             | NA             | NA                               | NA                  | NA                                     | NA                              |
| Aggregate HAPs          | NA                           | NA             | NA             | NA                               | NA                  | NA                                     | NA                              |

- 22.a. The facility does not have a baseline emission rate (BER) because the facility was not in operation during the 1977-1978 baseline years.
- 22.b. BER for PM<sub>2.5</sub> was not established in accordance with LRAPA 42-0048(3).
- 22.c. The facility did not request a BER for GHG for the 2008-2010 years the facility operated. Therefore, a BER for GHG was not established in accordance with LRAPA 42-0048(b).
- 22.d. A netting basis was not established for this permitting action because a modification of the netting basis was not triggered in accordance with LRAPA 42-0046.
- 22.e. For all pollutants, the netting basis is zero because the facility was constructed after the 1978 baseline year.
- 22.f. Proposed PSELs are set at the facility's potential to emit in accordance with LRAPA 42-0041(3), except NO<sub>x</sub>, which is set below the SER.

**Unassigned Emissions and Emission Reduction Credits**

- 23. The facility has zero (0) unassigned emissions. Unassigned emissions are equal to the netting basis minus the source's current PTE, minus any banked emission reduction credits. The facility has zero (0) tons of emission reduction credits.

**New Source Review (NSR) and Prevention of Significant Deterioration (PSD)**

- 24. This source is located in an area that is designated attainment or unclassified for all regulated pollutants other than CO and PM<sub>10</sub>. For pollutants other than CO and PM<sub>10</sub>, the proposed PSELs are less than the federal major source threshold for non-listed sources of 250 TPY per regulated pollutant and are not subject to Major NSR. For CO and PM<sub>10</sub>, the source is located in a maintenance area. The proposed PSELs for CO and PM<sub>10</sub> are less than the 100 TPY threshold that determines the applicability of Major NSR in a maintenance area.

**Federal Hazardous Air Pollutants/Toxic Air Contaminants**

- 25. Potential annual federal hazardous air pollutant emissions (FHAP) are based on the potential to emit of the facility operating under permit limitations. Formaldehyde has the highest single FHAP emissions at approximately 0.07 tons per year. The potential total FHAP emissions are 0.16 tons

per year. A major source of FHAPs is defined as having potential FHAP emissions of at least 10 tons per year of any single HAP and 25 tons per year of the aggregate of all FHAPs. This facility does not have potential FHAP emissions exceeding these thresholds and is considered a minor or area source of FHAPs.

26. Under the Cleaner Air Oregon program, only existing sources that have been notified by LRAPA and new sources are required to perform risk assessments. This source has not been notified by LRAPA and, therefore, is not yet required to perform a risk assessment or report annual emissions of toxic air contaminants. LRAPA required reporting of approximately 600 toxic air contaminants in 2016 and regulates approximately 260 toxic air contaminants (TAC) that have Risk Based Concentrations established in rule. All FHAPs are on the list of approximately 600 TACs. The FHAPs and TACs listed below are based upon safety data sheets and standard emission factors for the types of emission units at this facility. After the source is notified by LRAPA, they must update their inventory and perform a risk assessment to see if they must reduce risk from their TACs. Until then, this source will be required to report TAC emissions triennially.
27. The table below represents the potential emissions of federal HAPs/TACs from this facility assuming operation at the permit allowable limitations:

| CAS/DEQ Number | Pollutant              | PTE (TPY) | FHAP | CAO TAC |
|----------------|------------------------|-----------|------|---------|
| 106-99-0       | 1,3-Butadiene          | 4.76E-03  | Yes  | Yes     |
| 91-57-6        | 2-Methyl naphthalene   | 2.54E-04  | No   | Yes     |
| 83-32-9        | Acenaphthene           | 1.52E-05  | Yes  | Yes     |
| 208-96-8       | Acenaphthylene         | 1.67E-05  | Yes  | Yes     |
| 75-07-0        | Acetaldehyde           | 2.41E-02  | Yes  | Yes     |
| 107-02-8       | Acrolein               | 8.42E-03  | Yes  | Yes     |
| 7664-41-7      | Ammonia                | 1.52E+00  | No   | Yes     |
| 120-12-7       | Anthracene             | 9.32E-06  | Yes  | Yes     |
| 7440-36-0      | Antimony               | 6.56E-06  | No   | Yes     |
| 7440-38-2      | Arsenic                | 1.26E-04  | Yes  | Yes     |
| 7440-39-3      | Barium                 | 2.00E-03  | No   | Yes     |
| 56-55-3        | Benzo[a]anthracene     | 1.00E-06  | Yes  | Yes     |
| 71-43-2        | Benzene                | 6.55E-03  | Yes  | Yes     |
| 50-32-8        | Benzo[a]pyrene         | 1.49E-06  | Yes  | Yes     |
| 205-99-2       | Benzo[b]fluoranthene   | 9.15E-07  | Yes  | Yes     |
| 192-97-2       | Benzo[e]pyrene         | 6.78E-07  | Yes  | Yes     |
| 191-24-2       | Benzo[g,h,i]perylene   | 4.51E-07  | Yes  | Yes     |
| 207-08-9       | Benzo[k]fluoranthene   | 2.69E-07  | Yes  | Yes     |
| 7440-41-7      | Beryllium              | 5.53E-06  | Yes  | Yes     |
| 7440-43-9      | Cadmium                | 5.27E-04  | Yes  | Yes     |
| 18540-29-9     | Chromium, Hexavalent   | 6.43E-04  | Yes  | Yes     |
| 218-01-9       | Chrysene               | 1.38E-06  | Yes  | Yes     |
| 7440-48-4      | Cobalt                 | 3.83E-05  | Yes  | Yes     |
| 7440-50-8      | Copper                 | 4.71E-04  | No   | Yes     |
| 53-07-3        | Dibenzo[a,h]anthracene | 2.14E-08  | Yes  | Yes     |
| 200            | DPM (Filt+Cond)        | 3.50E-01  | No   | Yes     |
| 100-41-4       | Ethyl Benzene          | 3.35E-03  | Yes  | Yes     |
| 206-44-0       | Fluoranthene           | 7.63E-06  | Yes  | Yes     |
| 86-73-7        | Fluorene               | 4.51E-05  | Yes  | Yes     |



| CAS/DEQ Number                   | Pollutant               | PTE (TPY) | FHAP        | CAO TAC     |
|----------------------------------|-------------------------|-----------|-------------|-------------|
| 50-00-0                          | Formaldehyde            | 6.80E-02  | Yes         | Yes         |
| 110-54-3                         | Hexane                  | 2.70E-03  | Yes         | Yes         |
| 7647-01-0                        | Hydrochloric acid       | 7.30E-03  | Yes         | Yes         |
| 193-39-5                         | Indeno[1,2,3-cd]pyrene  | 2.21E-07  | Yes         | Yes         |
| 7439-92-1                        | Lead Compounds          | 3.88E-04  | Yes         | Yes         |
| 7439-96-5                        | Manganese               | 2.38E-04  | Yes         | Yes         |
| 7439-97-6                        | Mercury                 | 1.55E-04  | Yes         | Yes         |
| 1313-27-5                        | Molybdenum Trioxide (5) | 7.47E-04  | No          | Yes         |
| 91-20-3                          | Naphthalene             | 7.78E-04  | Yes         | Yes         |
| 365                              | Nickel                  | 1.03E-03  | Yes         | Yes         |
| 198-55-0                         | Perylene                | 2.43E-08  | Yes         | Yes         |
| 85-01-8                          | Phenanthrene            | 9.37E-05  | Yes         | Yes         |
| 504                              | Phosphorus              | 1.73E-04  | No          | Yes         |
| 7782-49-2                        | Selenium                | 5.94E-05  | Yes         | Yes         |
| 7440-22-4                        | Silver                  | 9.90E-07  | No          | Yes         |
| 7440-28-0                        | Thallium                | 4.95E-06  | No          | Yes         |
| 108-88-3                         | Toluene                 | 1.42E-02  | Yes         | Yes         |
| 401                              | Total PAHs (exc. Nap.)  | 8.70E-04  | Yes         | Yes         |
| 7440-62-2                        | Vanadium                | 1.04E-03  | No          | Yes         |
| 1330-20-7                        | Xylene(s)               | 1.40E-02  | Yes         | Yes         |
| 7440-66-6                        | Zinc                    | 1.32E-02  | No          | Yes         |
| <b>Total HAPs and TACs (tpy)</b> |                         |           | <b>0.16</b> | <b>2.05</b> |

**Toxic Release Inventory**

28. The Toxics Release Inventory (TRI) is a federal program that tracks the management of certain toxic chemicals that may pose a threat to human health and the environment. It is a resource for learning about toxic chemical releases and pollution prevention activities reported by certain industrial facilities. Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) created the TRI Program. In general, chemicals covered by the TRI Program are those that cause:

- Cancer or other chronic human health effects;
- Significant adverse acute human health effects; or
- Significant adverse environmental effects.

There are currently over 650 chemicals covered by the TRI Program. Facilities that manufacture, process or otherwise use these chemicals in amounts above established levels must submit annual TRI reports on each chemical. NOTE: The TRI Program is a federal program over which LRAPA has no regulatory authority. LRAPA does not guarantee the accuracy of any information copied from EPA's TRI website.

In order to report emissions to the TRI program, a facility must operate under a reportable NAICS code, meet a minimum employee threshold, and manufacture, process, or otherwise use chemicals in excess of the applicable reporting threshold for the chemical. The facility's NAICS code 622110 - General Medical and Surgical Hospitals is not a reportable NAICS code therefore, the facility does not have to report to the TRI program.

**Compliance History**

29. This facility has been inspected by LRAPA. The following table indicates the inspection history of this facility since 2008.

| Type of Inspection                 | Date       | Results                               |
|------------------------------------|------------|---------------------------------------|
| LRAPA - Full Compliance Evaluation | 08/08/2019 | No areas of non-compliance discovered |
| LRAPA - Full Compliance Evaluation | 10/18/2023 | Not in compliance                     |

30. LRAPA has issued the following violation notices and/or taken the following enforcement action against this facility since the facility began operation:

30.a. On October 8, 2023, during an LRAPA inspection, it was discovered that the facility had not retained the required EPA Method 22 observation forms for the minimum of two (2) years as required in Condition 23.e. The facility reported having combusted fuel oil in B-2 and B-3 Mohican Boilers rated at 33.6 MMBtu/hr on three (3) separate occasions within the last two (2) years, but only maintained Method 22 records for one (1) of those instances. A Notice of Non-Compliance (NON 23-3896) was issued on December 8, 2023 for a deviation of condition 23.e. This NON was subsequently closed with no further action taken.

**Source Testing History**

31. Visible emission surveys have been conducted using EPA Method 9 for Boilers B-5 and B-6 when combusting #2 diesel in accordance with 40 CFR part 60 subpart Dc and Condition 21. The initial performance test was conducted on April 29, 2019, and subsequent testing on September 19, 2019.

**Recordkeeping Requirements**

32. To ensure compliance with the annual PSELs, the facility is required to keep a record of the following information for a period of two (2) years.

| Activity  | Units           | Minimum Recording Frequency |
|---|-----------------|-----------------------------|
| <b>PSEL Recordkeeping</b>   |                 |                             |
| PSEL pollutant emissions as calculated according to Condition 5, including the supporting process information | Tons            | Monthly                     |
| Natural gas combusted by each boiler  | Therms or MMscf | Monthly                     |
| No. 2 diesel combusted by each boiler   | Gallons         | Monthly                     |
| <b>40 CFR part 60 subpart Dc Recordkeeping</b>  |                 |                             |
| Natural gas combusted by each boiler  | Therms or MMscf | Monthly                     |
| No. 2 diesel combusted by each boiler   | Gallons         | Monthly                     |
| Fuel oil supplier certifications of sulfur content of diesel fuel oil for boilers                             | Weight percent  | Each Delivery               |
| Visible emission survey logs for EUs: B-5 and B-6 according to Condition 21                                   | percent         | Monthly                     |
| <b>40 CFR part 60 subpart JJJJJ Recordkeeping</b>   |                 |                             |
| Total monthly and calendar year hours that each EUs: B-4 through B-7 combusted No. 2 diesel                   | Hours           | Monthly                     |

| Activity   | Units             | Minimum Recording Frequency      |
|--|-------------------|----------------------------------|
| The date that the No. 2 diesel was combusted by each boiler (EUs: B-4 through B-7) | Date              | Monthly                          |
| <b>Emergency Generators Recordkeeping</b>  |                   |                                  |
| Documentation of maintenance performed on each engine                              | NA                | Each occurrence                  |
| Visible emission survey logs for generators (EG-1 through EG-3)                    | percent           | Monthly                          |
| Hours of maintenance and readiness checking operation of each generator            | Hours             | Monthly                          |
| <b>General Recordkeeping</b>   |                   |                                  |
| Log of each nuisance complaint and the resolution                                  | NA                | Upon receipt of complaint        |
| Operation and Maintenance Plan   | NA                | Maintain current version on-site |
| Excess emissions log of all planned and unplanned excess emissions                 | See Condition G16 | Per occurrence                   |

**Reporting Requirements**

33. The facility must submit to LRAPA the following reports by no later than the dates indicated in the table below.

| Report  | Reporting Period | Due Date                             |
|---|------------------|--------------------------------------|
| Excess emission reports as required by 40 CFR part 60 subpart Dc for EUs: B-5 and B-6 in accordance with Condition 37 of the permit | Semiannual       | Postmarked by February 15, August 15 |
| Semiannual fuel oil report as required by 40 CFR part 60 subpart Dc for EUs: B-5 and B-6  | Semiannual       | Postmarked by February 15, August 15 |
| PSEL pollutant emissions as calculated according to Condition 5 of the permit, including supporting calculations.                   | Annual           | February 15                          |
| Natural gas combusted by each boiler.   | Annual           | February 15                          |
| No. 2 diesel combusted by each boiler.  | Annual           | February 15                          |
| A summary of nuisance complaints from the public and the resolution, as applicable.   | Annual           | February 15                          |
| The upset log information required by Condition G14, if required by Condition G14.  | Annual           | February 15                          |
| GHG Report, as required by Condition 7 of the permit.   | Annual           | March 31                             |

**Public Notice**

34. Pursuant to paragraph 37-0066(4)(a), issuance of a renewed Standard Air Contaminant Discharge Permit requires a Category III public notice according to title 31. In accordance with paragraph 31-0030(3)(c), LRAPA will provide public notice of the proposed permit action and a minimum of 35 days for interested persons to submit written comments.

The draft permit will be on public notice from July 31, 2024 to September 6, 2024. Written comments may be submitted during this public comment period. If requested by at least ten (10) persons or an organization representing at least ten (10) persons, LRAPA will schedule a public hearing on the proposed permit action. LRAPA will provide a minimum of 30 days notice for a public hearing.

After the public comment period and public hearing, if requested, LRAPA will respond to comments received and then take final action to issue or deny the permit.

QL/BE/aa  
07/31/2024

Emission Details

| PLANT SITE EMISSION LIMITS  |            |                  |                   |           |                 |                 |            |                           |               |               |
|---|------------|------------------|-------------------|-----------|-----------------|-----------------|------------|---------------------------|---------------|---------------|
| Emission Units  | PM         | PM <sub>10</sub> | PM <sub>2.5</sub> | CO        | NO <sub>x</sub> | SO <sub>2</sub> | VOC        | Single HAP <sup>(2)</sup> | Aggregate HAP | GHG           |
|   | tpy        | tpy              | tpy               | tpy       | tpy             | tpy             | tpy        | tpy                       | tpy           | tpy           |
| 3 Emergency Generators (EG-1, EG-2 & EG-3)  | 0.88       | 0.88             | 0.88              | 2.68      | 12.46           | 0.82            | 1.02       | 0.06                      | 0.50          | 466           |
| 4 Boilers (B-4, B-5, B-6 & B-7)   | 1.16       | 1.15             | 1.15              | 38.06     | 45.44           | 1.81            | 2.49       | 0.01                      | 1.55          | 54678         |
| Potential to Emit (PTE)   | 2.04       | 2.03             | 2.02              | 40.74     | 57.89           | 2.63            | 3.51       | 0.07                      | 2.05          | 55,144        |
| <b>PSELS <sup>(1)</sup></b>   | <b>2.0</b> | <b>2.0</b>       | <b>2.0</b>        | <b>41</b> | <b>39</b>       | <b>2.6</b>      | <b>3.5</b> | <b>0.07</b>               | <b>2.05</b>   | <b>55,144</b> |
| (1) The PSELS are set equal to the source's potential to emit in accordance with LRAPA 42-0041(3)                         |            |                  |                   |           |                 |                 |            |                           |               |               |
| (1)NOX PSEL is set below the SER on the facility's request.   |            |                  |                   |           |                 |                 |            |                           |               |               |
| (1) PSELS were rounded to the 0.45. If PSEL was below the 0.45, it was rounded down and if above the PSEL was rounded up. |            |                  |                   |           |                 |                 |            |                           |               |               |
| (2) This is the single highest HAP for each type of emission unit.  |            |                  |                   |           |                 |                 |            |                           |               |               |

| Baseline Emission Rate and Netting Basis   |                 |                   |          |   |                  |                  |                  |                                |        |
|--|-----------------|-------------------|----------|---|------------------|------------------|------------------|--------------------------------|--------|
| Pollutant  | Baseline<br>(1) | Netting Basis (2) |          | Plant Site Emission<br>Limit (PSEL) (3) |                  | PSEL<br>Increase | PTE<br>Emissions | Increase over<br>Netting Basis | SER    |
|  |                 | Previous          | Proposed | Previous<br>PSEL                        | Proposed<br>PSEL |                  |                  |                                |        |
|  | tpy             | tpy               | tpy      | tpy                                     | tpy              | tpy              | tpy              | tpy                            | tpy    |
| PM   | NA              | 0.0               | 0.0      | 24                                      | 2.0              | -22              | 2.04             | 2.0                            | 25     |
| PM <sub>10</sub>   | NA              | 0.0               | 0.0      | 14                                      | 2.0              | -12              | 2.03             | 2.0                            | 15     |
| PM <sub>2.5</sub>  | NA              | 0.0               | 0.0      | 9.0                                     | 2.0              | -7.0             | 2.02             | 2.0                            | 10     |
| CO   | NA              | 0.0               | 0.0      | 99                                      | 41               | -58              | 40.74            | 41                             | 99     |
| NO <sub>x</sub>  | NA              | 0.0               | 0.0      | 39                                      | 39               | 0                | 57.89            | 39                             | 39     |
| SO <sub>2</sub>  | NA              | 0.0               | 0.0      | 39                                      | 2.6              | -36              | 2.63             | 2.6                            | 39     |
| VOC  | NA              | 0.0               | 0.0      | 39                                      | 3.5              | -35.5            | 3.51             | 3.5                            | 39     |
| GHG (3)  | 0.0             | 0.0               | 0.0      | 74,000                                  | 55,144           | -18,856          | 55,144           | 55,144                         | 74,000 |
| (1) Baseline emission rates (BERs) have been set at zero (0) for all criteria pollutants because the facility was not in operation during the 1978 baseline years. |                 |                   |          |   |                  |                  |                  |                                |        |
| (1) BER for PM <sub>2.5</sub> was not established in accordance with LRAPA 42-0048(3).   |                 |                   |          |   |                  |                  |                  |                                |        |
| (1) BER for GHG was not established in accordance with LRAPA 42-0048(b).   |                 |                   |          |   |                  |                  |                  |                                |        |
| (2) Netting was not established for this permitting action because netting was not triggered in accordance with LRAPA 42-0046.                                     |                 |                   |          |   |                  |                  |                  |                                |        |
| (2) For all pollutants the netting is zero because the facility was constructed after the 1978 baseline year.  |                 |                   |          |   |                  |                  |                  |                                |        |
| (3) PSELs are set at the source's potential to emit in accordance with LRAPA 42-0041(3).   |                 |                   |          |   |                  |                  |                  |                                |        |

**Boilers Calculations**

| <b>Detail Sheet: Boilers</b> |                                  |                 |
|------------------------------|----------------------------------|-----------------|
|                              | <b>Maximum heat input rating</b> | <b>Unit</b>     |
| EU: BL-1 - Mohican Boiler    | 12.6                             | MMBtu/hr        |
| EU: BL-2 - Mohican Boiler    | 33.6                             | MMBtu/hr        |
| EU: BL-3 - Mohican Boiler    | 33.6                             | MMBtu/hr        |
| EU: BL-4 - Hurst Boiler      | 26.8                             | MMBtu/hr        |
| <b>Total</b>                 | <b>106.6</b>                     | <b>MMBtu/hr</b> |

| <b>All Combustion Boilers Specifications</b> |       |               |
|--|-------|---------------|
| Max Heat Input                               | 106.6 | MMBtu/hr      |
| Heat Value - Natural Gas                     | 1026  | MMBtu/MMCF    |
| Heat Value - Diesel                          | 138   | MMBtu/1000gal |
| Max NG Hrs Operation                         | 8,712 | hr/yr         |
| Mohican Boiler                               | 90    | gal/hr        |
| Hurst Boiler                                 | 100   | gal/hr        |
| Max Diesel Hrs Operation                     | 48    | hr/yr         |

| <b>Pollutant</b>              | <b>NG Total Potential Annual Total Emissions (TPY)</b> | <b>Diesel Potential Annual Total Emissions (TPY)</b> | <b>Potential Annual Total Emissions (TPY)</b> |
|-------------------------------|--|--|---|
| PM                            | 1.13   | 0.03   | <b>1.16</b>                                   |
| PM <sub>10</sub>              | 1.13   | 0.02   | <b>1.15</b>                                   |
| PM <sub>2.5</sub>             | 1.13   | 0.01   | <b>1.15</b>                                   |
| Carbon Monoxide               | 38.02  | 0.04   | <b>38.06</b>                                  |
| Nitrogen Oxides               | 45.26  | 0.18   | <b>45.44</b>                                  |
| Sulfur Dioxide                | 1.18   | 0.63   | <b>1.81</b>                                   |
| VOC                           | 2.49   | 0.00   | <b>2.49</b>                                   |
| GHGs (CO <sub>2</sub> equiv.) | 54,260   | 418  | <b>54,678</b>                                 |

| <b>GHG-Related Emission Factors</b>                            |                               |                          |            |
|--|-------------------------------|--------------------------|------------|
| <b>Pollutant</b>   | <b>Natural Gas (kg/MMBtu)</b> | <b>Diesel (kg/MMBtu)</b> | <b>GWP</b> |
| Carbon Dioxide (CO <sub>2</sub> )                              | 53.06                         | 73.96                    | 1          |
| Methane (CH <sub>4</sub> )                                     | 1.0E-03                       | 3.0E-03                  | 25         |
| Nitrous Oxide (N <sub>2</sub> O)                               | 1.0E-04                       | 6.0E-04                  | 298        |
| Note: GHG emissions are based on 40 CFR 98, Tables C-1 and C-2 |                               |                          |            |

| Natural Gas Criteria Pollutants for Boilers   |                    |                                   |                         |                         |                         |                       |  |  |
|---|--------------------|-----------------------------------|-------------------------|-------------------------|-------------------------|-----------------------|--|--|
| Pollutant   | NG Emission Factor | Natural Gas Emission Factor Units | Mohican Boiler (EU: B4) | Mohican Boiler (EU: B5) | Mohican Boiler (EU: B6) | Hurst Boiler (EU: B7) | Total Potential Hourly Total Emissions | Total Potential Annual Total Emissions |
|   |                    |                                   | (lbs/hr)                | (lbs/hr)                | (lbs/hr)                | (lbs/hr)              | (lbs/hr)                               | (TPY)                                  |
| PM/PM <sub>10</sub> /PM <sub>2.5</sub>  | 2.5                | lbs/MMCF                          | 0.03                    | 0.08                    | 0.08                    | 0.07                  | 0.26                                   | 1.13                                   |
| Carbon Monoxide   | 84                 | lbs/MMCF                          | 1.03                    | 2.75                    | 2.75                    | 2.19                  | 8.73                                   | 38.02                                  |
| Nitrogen Oxides   | 100                | lbs/MMCF                          | 1.23                    | 3.27                    | 3.27                    | 2.61                  | 10.39                                  | 45.26                                  |
| Sulfur Dioxide  | 2.6                | lbs/MMCF                          | 0.03                    | 0.09                    | 0.09                    | 0.07                  | 0.27                                   | 1.18                                   |
| VOC   | 5.5                | lbs/MMCF                          | 0.07                    | 0.18                    | 0.18                    | 0.14                  | 0.57                                   | 2.49                                   |
| GHGs (CO <sub>2</sub> equiv.)   | 119,891            | lbs/MMCF                          | 1472.34                 | 3926.25                 | 3926.25                 | 3131.65               | 12,456                                 | 54,260                                 |
| Notes:  |                    |                                   |                         |                         |                         |                       |  |  |
| 1. Emission Factors are based on DEQ Emission Factors Gas Fired Boilers (AQ-EF05), Revised 08/01/11 |                    |                                   |                         |                         |                         |                       |  |  |
| 2. GHG emissions are based on 40 CFR 98, Tables C-1 and C-2   |                    |                                   |                         |                         |                         |                       |  |  |

| Diesel Criteria Pollutants for Boilers  |                        |                                   |                           |                           |                           |                         |   |  |
|---|------------------------|-----------------------------------|---------------------------|---------------------------|---------------------------|-------------------------|---|--|
| Pollutant   | Diesel Emission Factor | Diesel Fuel Emission Factor Units | Mohican Boiler 1 (lbs/hr) | Mohican Boiler 2 (lbs/hr) | Mohican Boiler 3 (lbs/hr) | Hurst Boiler 4 (lbs/hr) | Potential Hourly Total Emissions (lbs/hr) | Potential Annual Total Emissions (TPY) |
|   |                        |                                   | (lbs/hr)                  | (lbs/hr)                  | (lbs/hr)                  | (lbs/hr)                | (lbs/hr)                                  | (TPY)                                  |
| PM  | 3.3                    | lbs/1000 gals                     | 0.297                     | 0.297                     | 0.297                     | 0.330                   | 1.22                                      | 0.03                                   |
| PM <sub>10</sub>  | 2.3                    | lbs/1000 gals                     | 0.207                     | 0.207                     | 0.207                     | 0.230                   | 0.85                                      | 0.02                                   |
| PM <sub>2.5</sub>   | 1.6                    | lbs/1000 gals                     | 0.144                     | 0.144                     | 0.144                     | 0.160                   | 0.59                                      | 0.01                                   |
| Carbon Monoxide   | 5                      | lbs/1000 gals                     | 0.450                     | 0.450                     | 0.450                     | 0.500                   | 1.85                                      | 0.04                                   |
| Nitrogen Oxides   | 20                     | lbs/1000 gals                     | 1.800                     | 1.800                     | 1.800                     | 2.000                   | 7.40                                      | 0.18                                   |
| Sulfur Dioxide  | 71.0                   | lbs/1000 gals                     | 6.390                     | 6.390                     | 6.390                     | 7.100                   | 26.27                                     | 0.63                                   |
| VOC   | 0.2                    | lbs/1000 gals                     | 0.018                     | 0.018                     | 0.018                     | 0.020                   | 0.07                                      | 0.00                                   |
| GHGs (CO <sub>2</sub> equiv.)   | 163                    | lbs/MMBtu                         | 2057                      | 5486                      | 5486                      | 4376                    | 17,405                                    | 418                                    |
| Notes:  |                        |                                   |                           |                           |                           |                         |   |  |
| 1. Emission Factors are based on DEQ Emission Factors Gas Fired Boilers (AQ-EF05), Revised 08/01/11 |                        |                                   |                           |                           |                           |                         |   |  |
| 2. GHG emissions are based on 40 CFR 98, Tables C-1 and C-2   |                        |                                   |                           |                           |                           |                         |   |  |



| HAP Emissions for Boilers   |                              |                    |                                  |                         |                        |                              |                |               |
|---|------------------------------|--------------------|----------------------------------|-------------------------|------------------------|------------------------------|----------------|---------------|
| Pollutant Organics  | NG Emission Factor (lb/MMCF) | NG Emission lbs/hr | Diesel Emission Factor (lb/kgal) | Diesel emissions lbs/hr | Total Emissions lbs/hr | Annual Emissions (TPY)       | Federal HAP    | CAO Air Toxic |
| 1,3-Butadiene   |                              |                    | 1.48E-02                         | 1.1E-02                 | 1.1E-02                | 2.74E-04                     | Yes            | Yes           |
| Acetaldehyde  | 3.10E-03                     | 3.2E-04            | 3.51E-01                         | 2.7E-01                 | 2.7E-01                | 7.90E-03                     | Yes            | Yes           |
| Acrolein  | 2.70E-03                     | 2.8E-04            | 3.51E-01                         | 2.7E-01                 | 2.7E-01                | 7.72E-03                     | Yes            | Yes           |
| Benzene   | 5.80E-03                     | 6.0E-04            | 4.40E-03                         | 3.4E-03                 | 4.0E-03                | 2.71E-03                     | Yes            | Yes           |
| Benzo[a]pyrene  | 1.20E-06                     | 1.2E-07            | 3.52E-05                         | 2.7E-05                 | 2.7E-05                | 1.20E-06                     | Yes            | Yes           |
| Ethyl Benzene   | 6.90E-03                     | 7.2E-04            | 2.00E-04                         | 1.5E-04                 | 8.7E-04                | 3.13E-03                     | Yes            | Yes           |
| Formaldehyde  | 1.23E-02                     | 1.3E-03            | 3.51E-01                         | 2.7E-01                 | 2.7E-01                | 1.21E-02                     | Yes            | Yes           |
| Hexane  | 4.60E-03                     | 4.8E-04            | 3.50E-03                         | 2.7E-03                 | 3.2E-03                | 2.15E-03                     | Yes            | Yes           |
| Hydrochloric Acid   |                              |                    | 1.86E-01                         | 1.4E-01                 | 1.4E-01                | 3.45E-03                     |                |               |
| Naphthalene   | 3.00E-04                     | 3.1E-05            | 5.30E-03                         | 4.1E-03                 | 4.1E-03                | 2.34E-04                     | Yes            | Yes           |
| Total PAHs (exc. Nap.)  | 1.00E-04                     | 1.0E-05            | 4.45E-02                         | 3.4E-02                 | 3.4E-02                | 8.70E-04                     | Yes            | Yes           |
| Toluene   | 2.65E-02                     | 2.8E-03            | 4.40E-03                         | 3.4E-03                 | 6.2E-03                | 1.21E-02                     | Yes            | Yes           |
| Xylenes   | 2.90E-02                     | 3.0E-03            | 1.60E-03                         | 1.2E-03                 | 4.2E-03                | 1.32E-02                     | Yes            | Yes           |
| <b>Inorganic Gases</b>  |                              |                    |                                  |                         |                        |                              |                |               |
| Ammonia   | 3.20E+00                     | 3.3E-01            | 8.00E-01                         | 6.2E-01                 | 9.5E-01                | 1.46E+00                     | No             | Yes           |
| <b>Metals <sup>(2)</sup></b>  |                              |                    |                                  |                         |                        |                              |                |               |
| Arsenic   | 2.0E-04                      | 2.1E-05            | 1.60E-03                         | 1.2E-03                 | 1.3E-03                | 1.20E-04                     | Yes            | Yes           |
| Barium  | 4.4E-03                      | 4.6E-04            |                                  |                         | 4.6E-04                | 1.99E-03                     | No             | Yes           |
| Beryllium   | 1.2E-05                      | 1.2E-06            |                                  |                         | 1.2E-06                | 5.43E-06                     | Yes            | Yes           |
| Cadmium   | 1.1E-03                      | 1.1E-04            | 1.50E-03                         | 1.2E-03                 | 1.3E-03                | 5.26E-04                     | Yes            | Yes           |
| Chromium, Hexavalent <sup>(3)</sup>   | 1.4E-03                      | 1.5E-04            | 1.00E-04                         | 7.7E-05                 | 2.2E-04                | 6.35E-04                     | Yes            | Yes           |
| Cobalt  | 8.4E-05                      | 8.7E-06            |                                  |                         | 8.7E-06                | 3.80E-05                     | Yes            | Yes           |
| Copper  | 8.5E-04                      | 8.8E-05            | 4.10E-03                         | 3.2E-03                 | 3.3E-03                | 4.61E-04                     | No             | Yes           |
| Lead <sup>(4)</sup>   | 5.0E-04                      | 5.2E-05            | 8.30E-03                         | 6.4E-03                 | 6.5E-03                | 3.80E-04                     | Yes            | Yes           |
| Manganese   | 3.8E-04                      | 3.9E-05            | 3.10E-03                         | 2.4E-03                 | 2.4E-03                | 2.29E-04                     | Yes            | Yes           |
| Mercury   | 2.6E-04                      | 2.7E-05            | 2.00E-03                         | 1.5E-03                 | 1.6E-03                | 1.55E-04                     | Yes            | Yes           |
| Molybdenum Trioxide <sup>(5)</sup>  | 1.7E-03                      | 1.7E-04            |                                  |                         | 1.7E-04                | 7.47E-04                     | No             | Yes           |
| Nickel  | 2.1E-03                      | 2.2E-04            | 3.90E-03                         | 3.0E-03                 | 3.2E-03                | 1.02E-03                     | Yes            | Yes           |
| Selenium  | 2.4E-05                      | 2.5E-06            | 2.20E-03                         | 1.7E-03                 | 1.7E-03                | 5.16E-05                     | Yes            | Yes           |
| Vanadium  | 2.3E-03                      | 2.4E-04            |                                  |                         | 2.4E-04                | 1.04E-03                     | No             | Yes           |
| Zinc  | 2.9E-02                      | 3.0E-03            |                                  |                         | 3.0E-03                | 1.31E-02                     | No             | Yes           |
|   |                              |                    |                                  |                         |                        | <b>Total (TPY) =</b>         | <b>0.07</b>    | <b>1.55</b>   |
|   |                              |                    |                                  |                         |                        | <b>Max Federal HAP (tpy)</b> | <b>1.3E-02</b> |               |
| <b>Notes:</b>   |                              |                    |                                  |                         |                        |                              |                |               |
| 1. All emission factors were based from DEQ AQ104B Toxics Reporting & Air Toxics Emission Inventory (ATEI) - Combustion Emission Factor Search Tool, 03/01/2024 |                              |                    |                                  |                         |                        |                              |                |               |

**Emergency Generators Calculations**

| <b>3 Emergency Generators installed prior to April 1, 2006</b> |       |                           |
|--|-------|---------------------------|
| Maximum Hours per year   | 100   | hours                     |
| Each Engine rated  | 2000  | kW/each                   |
| Heat Value for diesel  | 138   | MMBtu/1000 gal            |
| Maximum Fuel Consumption in total per each Generator           | 137.5 | gal/hour                  |
| 3 Generators   | 413   | gal/hour for 3 generators |

| Pollutant  | Max Fuel Consumption (gals/hr) | Emission Factors       |             | Hourly Emission Rate (lbs/hr) | Annual Emissions (tpy) |
|--|--------------------------------|------------------------|-------------|-------------------------------|------------------------|
|  |                                | Factors <sup>(1)</sup> | Units       |                               |                        |
| PM   | 412.50                         | 42.50                  | lb/1000 gal | 17.53                         | <b>0.88</b>            |
| PM <sub>10</sub>   | 412.50                         | 42.50                  | lb/1000 gal | 17.53                         | <b>0.88</b>            |
| PM <sub>2.5</sub>  | 412.50                         | 42.50                  | lb/1000 gal | 17.53                         | <b>0.88</b>            |
| SO <sub>2</sub>  | 412.50                         | 39.70                  | lb/1000 gal | 16.38                         | <b>0.82</b>            |
| NO <sub>x</sub>  | 412.50                         | 604.00                 | lb/1000 gal | 249.15                        | <b>12.46</b>           |
| CO   | 412.50                         | 130.00                 | lb/1000 gal | 53.63                         | <b>2.68</b>            |
| VOC  | 412.50                         | 49.30                  | lb/1000 gal | 20.34                         | <b>1.02</b>            |
| GHG  | 405.00                         | 163.61                 | lb/MMBtu    | 9314                          | <b>466</b>             |
| (1) Emission factors are from Oregon DEQ AQ-EF07 - Emission Factors - Power (Electric) Generators (08/01/2011) |                                |                        |             |                               |                        |

| <b>GHG-Related Emission Factors</b> |                   |            |
|-------------------------------------|-------------------|------------|
|                                     | <b>Diesel</b>     |            |
| <b>Pollutant</b>                    | <b>(kg/MMBtu)</b> | <b>GWP</b> |
| Carbon Dioxide                      | 73.96             | 1          |
| Methane                             | 3.0E-03           | 25         |
| Nitrous Oxide                       | 6.0E-04           | 298        |

| FHAP and CAO TAC for Generators       |                   |                          |                             |                           |             |             |
|---------------------------------------|-------------------|--------------------------|-----------------------------|---------------------------|-------------|-------------|
| Pollutant Name<br>(Chemical Compound) | CAS/DEQ<br>Number | Emission Factor lb/M gal | Hourly Emissions<br>(lb/hr) | Annual Emissions<br>(tpy) | Federal HAP | CAO TAC     |
| 1,3-Butadiene                         | 106-99-0          | 0.2174                   | 0.0897                      | 4.48E-03                  | Yes         | Yes         |
| 2-Methyl naphthalene                  | 91-57-6           | 1.23E-02                 | 0.0051                      | 2.54E-04                  | No          | Yes         |
| Acenaphthene                          | 83-32-9           | 7.35E-04                 | 0.0003                      | 1.52E-05                  | Yes         | Yes         |
| Acenaphthylene                        | 208-96-8          | 8.10E-04                 | 0.0003                      | 1.67E-05                  | Yes         | Yes         |
| Acetaldehyde                          | 75-07-0           | 0.7833                   | 0.3231                      | 1.62E-02                  | Yes         | Yes         |
| Acrolein                              | 107-02-8          | 0.0339                   | 0.0140                      | 6.99E-04                  | Yes         | Yes         |
| Ammonia                               | 7664-41-7         | 2.9                      | 1.1963                      | 5.98E-02                  | No          | Yes         |
| Anthracene                            | 120-12-7          | 4.52E-04                 | 0.0002                      | 9.32E-06                  | Yes         | Yes         |
| Antimony                              | 7440-36-0         | 3.18E-04                 | 0.0001                      | 6.56E-06                  | No          | Yes         |
| Arsenic                               | 7440-38-2         | 2.77E-04                 | 0.0001                      | 5.71E-06                  | Yes         | Yes         |
| Barium                                | 7440-39-3         | 3.74E-04                 | 0.0002                      | 7.71E-06                  | No          | Yes         |
| Benzo[a]anthracene                    | 56-55-3           | 4.85E-05                 | 0.0000                      | 1.00E-06                  | Yes         | Yes         |
| Benzene                               | 71-43-2           | 0.1863                   | 0.0768                      | 3.84E-03                  | Yes         | Yes         |
| Benzo[a]pyrene                        | 50-32-8           | 1.44E-05                 | 0.0000                      | 2.97E-07                  | Yes         | Yes         |
| Benzo[b]fluoranthene                  | 205-99-2          | 4.44E-05                 | 0.0000                      | 9.15E-07                  | Yes         | Yes         |
| Benzo[e]pyrene                        | 192-97-2          | 3.29E-05                 | 0.0000                      | 6.78E-07                  | Yes         | Yes         |
| Benzo[g,h,i]perylene                  | 191-24-2          | 2.19E-05                 | 0.0000                      | 4.51E-07                  | Yes         | Yes         |
| Benzo[k]fluoranthene                  | 207-08-9          | 1.31E-05                 | 0.0000                      | 2.69E-07                  | Yes         | Yes         |
| Beryllium                             | 7440-41-7         | 4.77E-06                 | 0.0000                      | 9.84E-08                  | Yes         | Yes         |
| Cadmium                               | 7440-43-9         | 8.08E-05                 | 0.0000                      | 1.67E-06                  | Yes         | Yes         |
| Chromium, Hexavalent                  | 18540-29-9        | 3.51E-04                 | 0.0001                      | 7.24E-06                  | Yes         | Yes         |
| Chrysene                              | 218-01-9          | 6.70E-05                 | 0.0000                      | 1.38E-06                  | Yes         | Yes         |
| Cobalt                                | 7440-48-4         | 1.58E-05                 | 0.0000                      | 3.25E-07                  | Yes         | Yes         |
| Copper                                | 7440-50-8         | 5.02E-04                 | 0.0002                      | 1.04E-05                  | No          | Yes         |
| Dibenzo[a,h]anthracene                | 53-07-3           | 1.04E-06                 | 0.0000                      | 2.14E-08                  | Yes         | Yes         |
| DPM (Filt+Cond)                       | 200               | 16.98                    | 7.0023                      | 3.50E-01                  | No          | Yes         |
| Ethyl Benzene                         | 100-41-4          | 0.0109                   | 0.0045                      | 2.25E-04                  | Yes         | Yes         |
| Fluoranthene                          | 206-44-0          | 3.70E-04                 | 0.0002                      | 7.63E-06                  | Yes         | Yes         |
| Fluorene                              | 86-73-7           | 2.18E-03                 | 0.0009                      | 4.51E-05                  | Yes         | Yes         |
| Formaldehyde                          | 50-00-0           | 2.71                     | 1.1191                      | 5.60E-02                  | Yes         | Yes         |
| Hexane                                | 110-54-3          | 0.0269                   | 0.0111                      | 5.55E-04                  | Yes         | Yes         |
| Hydrochloric acid                     | 7647-01-0         | 0.19                     | 0.0768                      | 3.84E-03                  | Yes         | Yes         |
| Indeno[1,2,3-cd]pyrene                | 193-39-5          | 1.07E-05                 | 0.0000                      | 2.21E-07                  | Yes         | Yes         |
| Lead Compounds                        | 7439-92-1         | 3.64E-04                 | 0.0002                      | 7.50E-06                  | Yes         | Yes         |
| Manganese                             | 7439-96-5         | 4.20E-04                 | 0.0002                      | 8.66E-06                  | Yes         | Yes         |
| Mercury                               | 7439-97-6         | 1.51E-05                 | 0.0000                      | 3.12E-07                  | Yes         | Yes         |
| Naphthalene                           | 91-20-3           | 2.64E-02                 | 0.0109                      | 5.44E-04                  | Yes         | Yes         |
| Nickel                                | 365               | 1.82E-04                 | 0.0001                      | 3.76E-06                  | Yes         | Yes         |
| Perylene                              | 198-55-0          | 1.18E-06                 | 0.0000                      | 2.43E-08                  | Yes         | Yes         |
| Phenanthrene                          | 85-01-8           | 4.54E-03                 | 0.0019                      | 9.37E-05                  | Yes         | Yes         |
| Phosphorus                            | 504               | 8.40E-03                 | 0.0035                      | 1.73E-04                  | No          | Yes         |
| Selenium                              | 7782-49-2         | 3.76E-04                 | 0.0002                      | 7.76E-06                  | Yes         | Yes         |
| Silver                                | 7440-22-4         | 4.80E-05                 | 0.0000                      | 9.90E-07                  | No          | Yes         |
| Thallium                              | 7440-28-0         | 2.40E-04                 | 0.0001                      | 4.95E-06                  | No          | Yes         |
| Toluene                               | 108-88-3          | 0.11                     | 0.0435                      | 2.17E-03                  | Yes         | Yes         |
| Xylene(s)                             | 1330-20-7         | 0.04                     | 0.0175                      | 8.75E-04                  | Yes         | Yes         |
| Zinc                                  | 7440-66-6         | 5.23E-03                 | 0.0022                      | 1.08E-04                  | No          | Yes         |
| <b>TOTALS (typ)</b>                   |                   |                          |                             |                           | <b>0.09</b> | <b>0.50</b> |
| <b>Max Federal HAP (typ)</b>          |                   |                          |                             |                           | <b>0.06</b> |             |