NOTICE OF CONSTRUCTION APPLICATION



Klickitat Valley Health

Prepared By:

Sam Najmolhoda - Senior Consultant Elayna Meyer - Consultant

> TRINITY CONSULTANTS 315 5th Ave S, Suite 830 Seattle, WA 98104 (253) 867-5600

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Klickitat Valley Health is proposing to install burners for two existing hot water boilers and one emergency diesel generator at their facility in Goldendale, WA. The water boilers will fire natural gas, and the diesel generator will fire ultra-low sulfur diesel (ULSD). As part of this project, Klickitat Valley Health will remove two existing emergency diesel generators, two domestic hot water heaters, and a rooftop unit (RTU) with gas pre-heat. This will bring the total natural gas fired boilers at the facility to 4, but Klickitat Valley Health will only operate two boilers at a given time.

In addition, during discussions with the Washington State Department of Ecology (Ecology), Klickitat Valley Health and Ecology identified one existing diesel-fired emergency generator that is in need of permitting. The permitting applicability and potential emissions from the existing generator are included in the scope of this proposed project.

The potential emissions increase due to the proposed project does not exceed any of the New Source Review (NSR) exemption thresholds for criteria pollutants; however, the proposed emissions do exceed the de minimis thresholds for Toxic Air Pollutants (TAPs) included in the Washington Administrative Code (WAC) 173-460-150. Therefore, the installation of the proposed equipment units at the hospital requires a Notice of Construction (NOC) application in accordance with WAC 173-400-110.

A State Environmental Protection Act (SEPA) checklist is provided in Appendix E.

This NOC application contains the following elements:

- Section 2. Description of the Facility
- ► Section 3. Emission Calculations
- ► Section 4. Regulatory Applicability
- ► Section 5. Best Available Control Technology Analysis
- Appendix A. NOC Application Form
- ► Appendix B. Site Plan
- ► Appendix C. Emission Calculations
- ► Appendix D. Equipment Specifications
- Appendix E. SEPA Checklist

2.1 Project Location

Klickitat Valley Health is located at 310 S. Roosevelt, Goldendale, WA 98620. Klickitat County is in attainment for all criteria pollutants. A map showing the location of the facility is provided in Figure 2-1.



Figure 2-1. Site Location

2.2 Emission Unit Descriptions

Klickitat Valley Health will remove the following existing equipment from the facility:

- ▶ One natural gas fired rooftop unit (RTU-1) with gas pre-heat, with an input of 1.5 mmBtu/hr;
- ▶ One natural gas fired humidifier for RTU-1, with an input of 0.06 mmBTU/hr;
- ► Two 100 kW emergency diesel generators;
- ▶ Two natural gas fired domestic hot water heaters, with an input of 0.26 and 0.25 mmBtu/hr; and
- ▶ Two hot water boilers, with an input of 3.5 mmBtu/hr each

Klickitat is proposing to add two new hot water boilers (B-3 and B-4), each with an input of 2 mmBtu/hr, and one additional 450 kW emergency diesel generator.

2.2.1 Hot Water Boilers

Following the completion of the proposed project, the facility will operate four natural gas fired hot water boilers: boilers B-1 and B-2 with a heat input of 3.5 MMBtu/hr and the proposed boilers B-3 and B-4 with a heat input of 2 MMBtu/hr. Only two boilers will be operated at one time, and an evaluation of the emissions from the new boilers are included in this application. Calculations of emissions from natural gas combustion are included in Section 3.

2.2.2 Existing 450kW Emergency Diesel Generator

Klickitat Valley Health has one existing 450 kW diesel fired emergency generator, which uses ULSD.¹ Calculations of emissions from the combustion of diesel by this generator are included in Section 3.

2.2.3 New Emergency Diesel Generator

In addition to the existing emergency generator, Klickitat is proposing to install a 450-kW diesel fired emergency generator. This emergency generator will run on ULSD. Calculations of emissions from diesel combustion are included in Section 3.

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¹ The sulfur content of fuel is conservatively assumed to be to 15ppm, in accordance with maximum allowable % w/w of sulfur in ULSD per 40 CFR 1090.305.

3.1 Project Emissions

Emissions of criteria pollutants and TAPs from natural gas combustion in the boilers are calculated using a combination of manufacturer specific emission factors and publicly available emission factors. Emissions of particulate matter (PM₁₀ and PM_{2.5}), sulfur dioxide (SO₂), nitrogen dioxide (NO₂) volatile organic compounds (VOC), and carbon monoxide (CO) were calculated using manufacturer specifications. Speciated TAP and HAP emissions were calculated using the maximum emission factor from **EPA's AP**-42 Table 1.4-3, Ventura County Air Pollution Control District (VCAPCD) AB 2588 Combustion Emission Factors, and California Air Toxics Emission Factors (CATEFs).

Emissions of criteria pollutants from diesel combustion in the generators were calculated using worst-case manufacturer specific emission factors. Emissions of SO₂ were quantified under the assumption that the maximum sulfur content of diesel combusted was equal to 15 ppm, the maximum allowable weight percentage allowable in ultra-low sulfur diesel (ULSD) per **EPA's guidance.**² Speciated TAP and HAP emissions were calculated using emission factors from AP-42 Table 3.4-3 and 3.4-4 and VCAPCD AB 2588 Combustion Emission Factors.

Annual uncontrolled emissions are based on 8,760 hours per year of operation. Criteria pollutant project emissions are summarized in Table 3-1. Speciated emissions for pollutants that exceed the respective de minimis thresholds are summarized in Table 3-2. Detailed emission calculations are provided in Appendix C.

Employing Dalat	Annual Emission Rate (tpy)							
Emission Point	PM	PM ₁₀	PM _{2.5}	SO_2	NOx	VOC	CO	Lead
Emergency Generators ^a	0.01	0.01	0.01	0.00	0.42	0.02	0.05	1.51E-05
Boilers ^b	0.26	0.26	0.26	0.11	0.42	0.0298	1.35	
Project Total	0.27	0.27	0.27	0.11	0.84	0.05	1.40	1.51E-05
NSR Exemption Threshold ^c	1.25	0.75	0.5	2	2	2	5	0.005
Above Threshold?	No	No	No	No	No	No	No	No

Table 3-1. Project Criteria Pollutants Summary

c. New Source Review (NSR) exemption levels can be found at WAC 173-400-110(5).

a. Based on 500 hours per year operation, in accordance to EPA's September 6, 1995 memo, available at https://www.epa.gov/sites/production/files/2015-08/documents/emgen.pdf.

b. Based on 8,760 hours per year operation.

² https://www.epa.gov/diesel-fuel-standards/diesel-fuel-standards-and-rulemakings

Table 3-2. Toxic Air Pollutant Emissions Summary

		Averaging	Project Total		SQER	Exceeds	
Pollutant	CAS Period		(tpy)	(lb/avg. period)	(lb/avg. period)	SQER?	
7,12- Dimethylbenz[a]anthracene	57-97-6	year	2.75E-07	5.50E-04	1.40E-03	No	
Acetaldehyde	75-07-0	year	1.58E-03	3.15E+00	6.00E+01	No	
Acrolein	107-02-8	24-hr	1.08E-04	4.96E-02	2.60E-02	Yes	
Arsenic & inorganic arsenic compounds, NOS	7440-38-2	year	6.34E-06	1.27E-02	4.90E-02	No	
Cadmium & compounds, NOS	7440-43-9	year	2.16E-05	4.32E-02	3.90E-02	Yes	
Chromium (III), soluble particulates, NOS	Cr(III)sol	24-hr	2.42E-05	9.99E-04	7.40E-03	No	
Chromium (VI) & compounds, NOS	18540-29-9	year	1.14E-06	2.29E-03	6.50E-04	Yes	
Formaldehyde	50-00-0	year	6.94E-03	1.39E+01	2.70E+01	No	
Mercury, elemental	7439-97-6	24-hr	8.10E-06	2.93E-03	2.20E-03	Yes	
Nickel & compounds, NOS	7440-02-0	year	4.32E-05	8.63E-02	6.20E-01	No	
Carbon monoxide	630-08-0	1-hr	2.75E+00	2.35E+00	4.30E+01	No	
Nitrogen dioxide	10102-44-0	1-hr	1.26E+00	1.42E+01	8.70E-01	Yes	

Klickitat Valley Health is in Klickitat County, Washington, which is an attainment area for all criteria pollutants. ³ The following section analyzes the regulatory requirements potentially applicable to the emission sources identified for Klickitat Valley Health.

4.1 NOC Applicability

A NOC permit application must be filed, and a permit issued by Ecology prior to construction or modification of an affected facility per WAC 173-400-110. The installation of the new emergency generator and hot water boilers B-3 and B-4 qualify as new construction and exceed the de minimis thresholds for several TAPs identified in WAC 173-460-150, as shown in Table 3-2of this report. Therefore, an NOC application is required. The NOC form is included in Appendix A.

4.2 Prevention of Significant Deterioration (PSD) and Title V Applicability

The facility is a minor source with respect to EPA's Prevention of Significant Deterioration (PSD) permit under 40 CFR 52.21 and Title V Operating Permit Program under WAC 173-401. The potential emissions increase due to the proposed project is below the PSD and Title V permitting thresholds, and the facility is not on the list of source categories under 40 CFR 52.21(b)(1)(iii). Therefore, the proposed project does not require review under the PSD or Title V permit program.

4.3 Best Available Control Technology (BACT)

Pursuant to WAC 173-400-113(2), each new or modified stationary source must employ BACT for all pollutants not previously emitted, or any pollutants for which there is an emissions increase. WAC 173-460-040 requires that each source of TAPs with project emissions greater than the de minimis levels specified in WAC 173-460-150 employ BACT for toxics (tBACT). An analysis of BACT and tBACT is provided in Section 5 of this report.

4.4 New Source Performance Standards (NSPS)

NSPS applies to new, modified, and reconstructed facilities in specific source categories listed in 40 CFR Part **60. The facility's operations are not liste**d among the NSPS categories; therefore, the facility is not subject to NSPS standards defined in 40 CFR Part **60**.

4.4.1 Subpart D- Standards of Performance for Fossil-Fuel-Fired Steam Generating Units

40 CFR 60.40 specifies that the affected facilities are limited to units with a heat input rate of more than 250 MMBtu/hour. The existing and proposed boilers have firing rates of 3.5MMBtu/hour and 2 MMBtu/hour, respectively. Therefore, Subpart D does not apply to the proposed boilers.

³ A list of nonattainment areas are here: https://www.epa.gov/green-book/green-book-national-area-and-county-level-multi-pollutant-information.

4.4.2 Subpart Db – Standards of Performance for Industrial- Commercial-Institutional Steam Generating Units

40 CFR 60.40b specifies that the affected facilities are limited to units constructed, modified, or reconstructed after June 19, 1984, and with a heat input rate of more than 100 MMBtu/hour. The existing boilers and the proposed boilers have firing rates of 3.5 MMBtu/hour and 2 MMBtu/hour, respectively. Therefore, Subpart Db does not apply.

4.4.3 Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

40 CFR 60.40c specifies that the affected facilities are limited to units constructed, modified, or reconstructed after June 9, 1989, and with a heat input rate between 10 MMBtu/hour and 100 MMBtu/hour. The existing boilers and the proposed boilers have firing rates of 3.5 MMBtu/hour and 2 MMBtu/hour, respectively. Therefore, Subpart Dc does not apply.

4.4.4 Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

Subpart IIII establishes performance standards for stationary compression ignition internal combustion engines with model years 2007 and later for non-fire pump engines. The emergency generator has a model that is 2007 or later and therefore is subject to Subpart IIII. Subpart IIII requirements include the following for the owner and operator for an emergency engine:

- ► Purchase a certified engine.
- ▶ Use ultra-low sulfur diesel with sulfur content less than 15ppm.
- ▶ Operate and maintain the engine according to the manufacturer's emission-related written instructions.
- ▶ Operate for less than 100 hours per year for maintenance and testing, 50 of which can be nonemergency operations.
- ▶ Install a non-resettable hour meter to record the time of operation of the engine and reason the engine was in operation.

The facility will continue to comply with the applicable requirements of Subpart IIII.

4.5 National Emission Standards for Hazardous Air Pollutants (NESHAP)

Two sets of NESHAPs must be considered for this facility. The first NESHAP regulations are from 40 CFR Part 61, which addresses a more limited scope of pollutants and industries. For Klickitat Valley Health, the facility does not fall under any of the industries listed in 40 CFR Part 61. Therefore, 40 CFR Part 61 regulations do not apply to this facility.

Newer regulations are codified in 40 CFR Part 63, which has a more extensive list of pollutants and industries. These standards regulate hazardous air pollutant (HAP) emissions from specific source categories and often affect only major sources of HAPs. Part 63 regulations for major sources of HAP are frequently called Maximum Achievable Control Technology (MACT) standards. Major HAP sources are defined as facilities that have a PTE of 10 tpy or more of any single HAP or 25 tpy or more of all combined HAP emissions. Klickitat Valley Health has a PTE that is below 10 tpy for a single HAP and a PTE that is less than 25 tpy combined. Therefore, Klickitat Valley Health is considered an area source with regards to emissions of HAPs.

4.5.1 Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

40 CFR 63, Subpart ZZZZ applies to facilities that operate stationary reciprocating internal combustion engines (RICE). The emergency engines at Klickitat Valley Health will satisfy the requirements of Subpart ZZZZ by complying with the standards of NSPS IIII pursuant to 40 CFR 63.6590(c)(1). No other requirements apply under this subpart.

4.5.2 Subpart JJJJJJ – National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources

40 CFR 63, Subpart JJJJJJ applies to industrial, commercial, and institutional boilers located at area sources of HAP emissions. Pursuant to 40 CFR 63.11195(e), the requirements of NESHAP Subpart JJJJJJ do not apply to the proposed boilers as natural gas fired units are not subject to this subpart.

4.6 State and Local Regulatory Applicability

4.6.1 Washington Toxic Air Pollutant Regulations

In Washington, all new sources emitting TAPs are required to demonstrate compliance with the Washington TAP program pursuant to WAC 173-460. Ecology has established a de minimis emission rate, a small quantity emission rate (SQER), and an acceptable source impact level (ASIL) for each listed TAP. If the total project-related TAP emissions increase exceeds the de minimis level for a pollutant, then permitting and a control technology review is triggered. If the emissions increases exceed their respective SQER, further determination of compliance with the ASIL using air dispersion modeling is required.

The TAP review is performed for the proposed boilers, the new emergency engine, and the existing emergency engine. The project emission increase is determined according to the calculation methodologies discussed in Section 3 of this document. Detailed emissions calculations for TAPs are included in Appendix C. The emissions of five TAPs are above their respective SQER. Therefore, further determination of compliance with the ASIL through air dispersion modeling is required.

The proposed boilers, proposed emergency generator, and existing emergency generator were modeled as point sources using BREEZE and EPA executable AERMOD v24142. The modeled pollutants include acrolein, cadmium, chromium (VI), mercury, and NO₂. Meteorological data from the Yakima Regional Airport for the years 2018-2022 were used in the air dispersion modeling analysis. The modeled concentrations are included below. As shown in Table 4-1, all modeled concentrations are below the respective ASIL, demonstrating compliance with the WA TAP Rule.

Table 4-1. TAP Modeled Concentrations Summary

Pollutant	CAS	Averaging Period	Max Modeled Concentration (ug/m³) 2018-2022	ASIL (ug/m³)	Exceeds ASIL?
Acrolein	107-02-8	24-hr	3.93E-02	3.50E-01	No
Cadmium & compounds, NOS	7440-43-9	year	7.00E-05	2.40E-04	No
Chromium (VI) & compounds, NOS	18540-29-9	year	3.88E-06	4.00E-06	No
Mercury, elemental	7439-97-6	24-hr	2.32E-03	3.00E-02	No
Nitrogen dioxide	10102-44-0	1-hr	4.60E+02	4.70E+02	No

4.6.2 State Regulatory Applicability

The following Washington state regulations are also applicable to the facility and the proposed project.

- ▶ WAC 173-400-050(1): No person shall cause or allow emissions of particulate matter from combustion units in excess of 0.23 gram per dry cubic meter at standard conditions (0.1 gr/dscf).
- ▶ WAC 173-400-040(2): No person shall cause or allow the emission for more than three minutes, in any one hour, of an air contaminant from any emissions unit which at the emission point, or within a reasonable distance of the emission point, exceeds twenty percent opacity as determined by Ecology Method 9A.
- ▶ WAC 173-400-040(7): No person shall cause or allow the emission of a gas containing sulfur dioxide from any emissions unit in excess of one thousand ppm of sulfur dioxide on a dry basis, corrected to seven percent oxygen for combustion sources, and based on the average of any period of sixty consecutive minutes.

5. BEST AVAILABLE CONTROL TECHNOLOGY (BACT) REVIEW

Under WAC 173-400-113(2), all new sources or modifications to existing sources must employ BACT for all pollutants not previously emitted or whose emissions would increase because of the new source or modification. A BACT analysis is included in this section for the emission units subject to NOC permitting.

5.1 BACT Methodology

A search was performed on RACT/BACT/LAER Clearinghouse (RBLC) to identify control technologies for emissions from the natural gas boilers and the diesel-powered generator. Two searches were run: one for "Natural Gas (including propane and liquefied petroleum gas)" under 100 MMBtu/hour and one for "Commercial/Institutional- Size Boilers/Furnaces- Distillate Fuel Oil" under 100 MMBtu/hour. Both search results take records over the span of the past decade. The RBLC search identified the following technologies for similar equipment units:

- ▶ PM₁₀, PM_{2.5}, and VOC: Good combustion, operation, and maintenance practices
- ▶ CO: Good combustion, operation, and maintenance practices
- ▶ NO_x: Good combustion, operation, maintenance practices, and Low- NO_x burners
- ► SO₂: Ultra-low sulfur fuel oil

5.2 BACT Discussion

This NOC application covers the two proposed boilers, one new emergency diesel generator, and one existing emergency diesel generator. The following sections will provide a BACT analysis for the boilers and the emergency generators.

5.2.1 BACT analysis for PM₁₀, PM_{2.5}, and VOC Emissions

VOC emissions depend on combustion efficiency, and $PM_{10}/PM_{2.5}$ emissions primarily consist of non-combusted hydrocarbons. Good combustion practices are the identified applicable control technology for PM_{10} , $PM_{2.5}$, and VOC emissions.

The proposed boilers are natural gas fired combustion units. Good combustion, operation, and maintenance practices are proposed as BACT for PM₁₀, PM_{2.5}, and VOC.

5.2.2 BACT analysis for CO and NO_x Emissions

CO is typically produced by incomplete combustion of fuel. NO_x emissions could be either from "thermal NO_x ," which is generated in high temperature environments, or from "fuel NO_x ," which is generated by combustion nitrogen-containing compounds in the fuel. If a specific combustion technology is used to control thermal NO_x , then higher CO emissions may be observed.

Based on a review of the RBLC database, the typical control technology for controlling NO_x emissions from boilers is by installing a low-NO_x burner (LNB) or an ultra-low NO_x burner (ULNB). An alternative to the LNB and/or an ULNB can be to have good combustion, operation, and maintenance practices. The proposed boilers use LNB, and Klickitat Valley Health proposes that good combustion, operation, and maintenance practices and the use of the LNB constitute BACT for CO and NO_x.

5.2.3 BACT Analysis for SO₂ Emissions

Sulfur dioxide emissions are produced by combusting fuel oil. Sulfur dioxide emissions are primarily dependent on the sulfur content of the fuel being combusted, rather than burner specifications. Ultra-low sulfur fuel oil (ULSD) is classified as fuel with a sulfur content less than or equal to 0.0015% by weight. Use of ULSD oil in the proposed emergency generators is considered BACT.

5.2.4 BACT Analysis for Toxic Air Pollutants

Pursuant to WAC 173-460-040, each source of TAP with project emissions greater than the de minimis levels must employ tBACT.

All TAPs emitted above the de minimis rate are emitted either in the form of PM or VOC. Therefore, the BACT determinations for PM and VOC emissions presented in Section 5.2.1 also satisfy tBACT requirements for these TAPs.

APPENDIX A. NOC APPLICATION FORM



Notice of Construction Application

A notice of construction permit is required before installing a new source of air pollution or modifying an existing source of air pollution. This application applies to facilities in Ecology's jurisdiction. Submit this application for review of your project. For general information about completing the application, refer to Ecology Forms ECY 070-410a-g, "Instructions for Ecology's Notice of Construction Application."

Ecology offers up to two hours of free pre-application assistance. We encourage you to schedule a pre-application meeting with the contact person specified for the location of your proposal, below. If you use up your two hours of free pre-application assistance, we will continue to assist you after you submit Part 1 of the application and the application fee. You may schedule a meeting with us at any point in the process.

Upon completion of the application, please enclose a check for the initial fee and mail to:

Department of Ecology Cashiering Unit PO Box 47611 Olympia, WA 98504-7611 For Fiscal Office Use Only: 0299-3030404-B00-216--001--000404

Check the box for the location of your proposal. For assistance, call the appropriate office listed below:

Check box	Ecology Permitting Office	Contact
X	Chelan, Douglas, Kittitas, Klickitat, or Okanogan County Ecology Central Regional Office (509) 575-2490	Lynnette Haller (509) 457-7126
		<u>lynnette.haller@ecy.wa.gov</u>
	Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Stevens, Walla Walla, or Whitman County	Karin Baldwin (509) 329-3452
	Ecology Eastern Regional Office (509) 329-3400	karin.baldwin@ecy.wa.gov
	San Juan County	David Adler
	Ecology Northwest Regional Office (206) 594-0000	(425) 649-7267
		david.adler@ecy.wa.gov
	For actions taken at Kraft and Sulfite Paper Mills and Aluminum Smelters Only	James DeMay (360) 407-6868
	Ecology Industrial Section (360) 407-6900	james.demay@ecy.wa.gov
	For actions taken on the US Department of Energy Hanford Reservation Only	Lilyann Murphy (509) 372-7951
	Ecology Nuclear Waste Program (509) 372-7950	lilyann.murphy@ecy.wa.gov

Check the box below for the fee that applies to your application.
New project or equipment:
\$1,904: Basic project initial fee covers up to 16 hours of review. \$12,614: Complex project initial fee covers up to 106 hours of review.
Change to an existing permit or equipment:
\$357: Administrative or simple change initial fee covers up to 3 hours of review. Ecology may determine your change is complex during the completeness review of your application. If you project is complex, you must pay the additional xxx before we will continue working on your application \$1,190: Complex change initial fee covers up to 10 hours of review \$350flat fee: Replace or alter control technology equipment under WAC 173-400-114. Ecology will contact you if we determine your change belongs in another fee category. You must pay the fee associated with that category before we will continue working on your application.
Read each statement below, then check the box next to it to acknowledge that you agree.
The initial fee you submitted may not cover the cost of processing your application. Ecology will track the number of hours spent on your project. If the number of hours Ecology spends exceed the hours included in your initial fee, Ecology will bill you \$119 per hour for the extra time. You must include all information requested by this application. Ecology may not process your application if it does not include all the information requested. Submittal of this application allows Ecology staff to visit and inspect your facility. Part 1: General Information
I. Project, Facility, and Company Information
1. Project Name: Klickitat Health Center NOC Application
2. Facility Name: Klickitat Valley Health
3. Facility Street Address:
310 S Roosevelt Ave, Goldendale, WA 98620
4. Facility Legal Description:
5. Company Legal Name (if different from Facility Name): Same as Facility Name
6. Company Mailing Address (street, city, state, zip)
Same as Facility Address
II. Contact Information and Certification
Facility Contact Name (who will be onsite): <u>Jonathan Lewis</u>
2. Facility Contact Mailing Address (if different than Company Mailing Address: Same as Company Mailing Address

3.	Facility Contact Phone Number: 509-773-1005					
4.	Facility Contact E-mail: jlewis@kvhealth.net					
5.	Billing Contact Name (who should receive billing information): Jonathan Lewis					
6.	Billing Contact Mailing Address (if different Company Mailing Address):					
	Same as Company Mailing Address					
7.	Billing contact Phone Number: Same as Facility Contact					
8.	Billing Contact E-mail: Same as Facility Contact					
9.	Consultant Name (optional – if 3 rd party hired to complete application elements): Sam Najmolhoda					
10.	Consultant Organization/Company: Trinity Consultants					
11.	Consultant Mailing Address (street, city, state, zip):					
12.	Consultant Phone Number: <u>(253)</u> 867-5600 x4806					
13.	Consultant E-mail: snajmolhoda@trinityconsultants.com					
14.	Responsible Official Name and Title (who is responsible for project policy or decision making): Same as Facility Contact					
15.	Responsible Official Phone: Same as Facility Contact					
16.	Responsible Official E-mail: Same as Facility Contact					
17.	Responsible Official Certification and Signature:					
	I certify that the information on this application is accurate and complete.					
	Signature:Date:					

Part 2: Technical Information

The Technical Information may be sent with this application form to the Cashiering Unit, or may be sent directly to the Ecology regional office with jurisdiction along with a copy of this application form.

For all sections, check the box next to each item as you complete it.

III. Projec	t Description
X w	ritten narrative describing your proposed project.
Pro	ojected construction start and completion dates.
Op	perating schedule and production rates.
Lis	st of all major process equipment and manufacturer and maximum rated capacity.
Pro	ocess flow diagram with all emission points identified.
X Pla	an view site map.
X Ma	anufacturer specification sheets for major process equipment components
Ma	anufacturer specification sheets for pollution control equipment.
X Fu	el specifications, including type, consumption (per hour and per year) and percent sulfur.
IV. State I	Environmental Policy Act (SEPA) Compliance
Check the	e appropriate box below.
	PA review is complete. Include a copy of the final SEPA checklist and SEPA determination (e.g., NS, MDNS, and EIS) with your application.
SE	PA review has not been conducted:
	If review will be conducted by another agency, list the agency. You must provide a copy of the final SEPA checklist and SEPA determination before Ecology will issue your permit. Agency reviewing SEPA:
	If the review will be conducted by Ecology, fill out a SEPA checklist and submit it with your application. You can find a SEPA checklist online at https://ecology.wa.gov/Regulations-permits/SEPA/Environmental-review/SEPA-document-templates
V. Emissio	ons Estimations of Criteria Pollutants
Does you	r project generate criteria air pollutant emissions? XYes No
If yes, plea	ase proved the following information regarding your criteria emissions in the application.
X Th	ie names of the criteria air pollutants emitted (i.e., NO_X , SO_2 , CO , $PM_{2.5}$, PM_{10} , TSP , VOC , and Pb
	otential emissions of criteria air pollutants in tons per hour, tons per day, and tons per year include calculations)
L If t	there will be any fugitive criteria pollutant emissions, clearly identify the pollutant and quantity
VI. Emissi	ons Estimations of Toxic Air Pollutants
Does you	r project generate toxic air pollutant emissions? Yes No
If yes, plea	ase provide the following information regarding your toxic air pollutant emissions in your

\times The names of the toxic air pollutants emitted (specified in WAC 173-460-150 ¹)
Potential emissions of toxic air pollutants in pounds per hour, pounds per day, and pounds per year (include calculations)
If there will be any fugitive toxic air pollutant emissions, clearly identify the pollutant and quanti
VII. Emission Standard Compliance
Provide a list of all applicable new source performance standards, national emission standards for hazardous air pollutants, national emission standards for hazardous air pollutants for source categories, and emission standards adopted under Chapter 70A.15 RCW.
Does your project comply with all applicable standards identified? XYes No
VIII. Best Available Control Technology
Provide a complete evaluation of Best Available Control Technology (BACT) for your proposal.
IX. Ambient Air Impacts Analyses
Please provide the following:
Ambient air impacts analyses for Criteria Air Pollutants (including fugitive emissions)
Ambient air impacts analyses for Toxic Air Pollutants (including fugitive emissions)
Discharge point data for each point included in air impacts analyses (include only if modeling is required)
Exhaust height
Exhaust inside dimensions (ex. diameter or length and width)
Exhaust gas velocity or volumetric flow rate
Exhaust gas exit temperature
The volumetric flow rate
Description of the discharges (i.e., vertically or horizontally) and whether there are any obstructions (ex., raincap)
Identification of the emission unit(s) discharging from the point
The distance from the stack to the nearest property line
Emission unit building height, width, and length
Height of tallest building on-site or in the vicinity and the nearest distance of that buildin to the exhaust
Whether the facility is in an urban or rural location
Does your project cause or contribute to a violation of any ambient air quality standard or acceptable source impact level? Yes No
To request ADA accommodation, call Ecology at (360) 407-6800, 711 (relay service), or (877) 833-6341 (TTY)

 $^{^{1}\,\}underline{\text{http://apps.leg.wa.gov/WAC/default.aspx?cite=}173\text{-}460\text{-}150}$



APPENDIX C. EMISSION CALCULATIONS

Table 1. Criteria Pollutants - Emergency Generators

Tuble 1. Criteria i onatanto Emergency denerators		
Emergency Engine Size	755 bhp	
Generator Operating Hours ¹	60 hr/year	
Number of Generators	2 generators	

Number of deficiators			generators	
Diesel Emission Factor		Singular Uncontro	Total Uncontrolled Emission Rates	
Pollutant	(g/bhp-hr)	(lb/hr) (tpy)		(tpy)
PM	0.08	0.13	3.99E-03	7.99E-03
PM_{10}^{2}	0.08	0.13	3.99E-03	7.99E-03
PM _{2.5} ²	0.08	0.13	3.99E-03	7.99E-03
SO ₂ ³	0.01	9.16E-03	2.75E-04	5.50E-04
NO_X^2	4.20	6.99	0.21	0.41945
VOC ²	0.22	0.37	1.10E-02	0.02197
CO ²	0.52	0.87	0.03	0.05193

Based on 500 hours per year operation, in accordance to EPA's September 6, 1995 memo, available at https://www.epa.gov/sites/production/files/2015-08/documents/emgen.pdf.

Table 2. Criteria Pollutants - Lochinvar Crest FBN2001 Boilers

Table 2. Criteria Fonutants - Locinival Crest FBN2001 Bonel	13		
Uncontrolled Operating Hours	8,760	hr/year	
Natural Gas Heating Value ¹	1,020	Btu/scf	
Heat Input Capacity Lochinvar Crest FBN2001 Boiler	2.00	MMBtu/hr	
Number of Boilers Operating Simultaneously	2	boilers	
Total Number of Boilers	4	boilers	

	Emission Factor	•	olled Emission Rates	Total Uncontrolled Emission Rates
Pollutant	(lb/MMBtu)	(lb/hr)	(tpy)	(tpy)
PM ²	1.49E-02	0.03	0.13	0.26105
PM_{10}^{2}	1.49E-02	0.03	0.13	0.26105
PM _{2.5} ²	1.49E-02	0.03	0.13	0.26105
SO ₂ ²	6.00E-03	1.20E-02	0.05	0.10512
NO _X ²	0.0239	0.05	0.21	0.41873
VOC ²	0.00170	3.40E-03	1.49E-02	0.02978
CO ²	0.0770	0.15	0.67	1.34904

¹ The natural gas heating value uses a typical heating value from AP-42 Appendix A.

² Emission factors for the emergency engine are obtained from manufacturer's specifications. Worst case emission factors for each pollutant across all loads were used.

³ The sulfur content of fuel is conservatively assumed to be to 15 ppm, in accordance with maximum allowable % w/w of sulfur in ULSD (https://www.epa.gov/diesel-fuel-standards/diesel-fuel-standards-and-rulemakings). The SO₂ emission factor is calculated from Table 3.4-1, AP-42 Chapter 3.4, Large Stationary Diesel and All Stationary Dual-fuel Engines.

 $^{^{\}rm 2}$ Emission factors for the Lochinvar Crest FBN2001 Boilers were obtained from manufacturer's specifications.

Table 4. Project Emissions Summary - Criteria Pollutants

Emission Point		Annual Emission Rate (tpy)										
Emission Fome	PM	PM10	PM2.5	SO ₂	NOx	VOC	co	Lead				
Emergency Generators ¹	0.01	0.01	0.01	0.00	0.42	0.02	0.05	1.51E-05				
Boilers ²	0.26	0.26	0.26	0.11	0.42	0.0298	1.35					
Project Total	0.27	0.27	0.27	0.11	0.84	0.05	1.40	1.51E-05				
NSR Exemption Threshold ³	1.25	0.75	0.5	2	2	2	5	0.005				
Above Threshold?	No	No	No	No	No	No	No	No				

Table 5. Speciated Emissions Summary

				Averaging	Emerge	ency Generators		Boilers	Pr	oject Total	De Minimis	SQER		
Pollutant	CAS	HAP?	TAP?	Period	(tpy)	(lb/avg. period)	(tpy)	(lb/avg. period)	(tpy)	(lb/avg. period)	(lb/avg. period)	(lb/avg. period)	Exceeds De Minimis?	Exceeds SQER?
3-Methylcholanthrene	56-49-5	yes	yes	year	NA	NA	3.09E-08	6.18E-05	3.09E-08	6.18E-05	7.80E-04	1.60E-02	No	No
7,12-Dimethylbenz[a]anthracene	57-97-6	yes	yes	year	NA	NA	2.75E-07	5.50E-04	2.75E-07	5.50E-04	6.90E-05	1.40E-03	Yes	No
Acetaldehyde	75-07-0	yes	yes	year	1.42E-03	2.85E+00	1.52E-04	3.05E-01	1.58E-03	3.15E+00	3.00E+00	6.00E+01	Yes	No
Acrolein	107-02-8	ves	ves	24-hr	6.16E-05	4.93E-02	4.64E-05	2.54E-04	1.08E-04	4.96E-02	1.30E-03	2.60E-02	Yes	Yes
Arsenic & inorganic arsenic compounds, NOS	7440-38-2	yes	yes	year	2.91E-06	5.82E-03	3.44E-06	6.87E-03	6.34E-06	1.27E-02	2.50E-03	4.90E-02	Yes	No
Benzfalanthracene	56-55-3	ves	ves	vear	1.56E-07	3.12E-04	3.09E-08	6.18E-05	1.87E-07	3.74E-04	4.50E-02	8.90E-01	No	No
Benzene	71-43-2	yes	yes	year	3.39E-04	6.77E-01	9.96E-05	1.99E-01	4.38E-04	8.77E-01	1.00E+00	2.10E+01	No	No
Benzofalpyrene	50-32-8	ves	ves	vear	NA	NA	8.59E-08	1.72E-04	8.59E-08	1.72E-04	8.20E-03	1.60E-01	No	No
Benzo[b]fluoranthene	205-99-2	yes	yes	year	2.78E-07	5.57E-04	3.09E-08	6.18E-05	3.09E-07	6.19E-04	4.50E-02	8.90E-01	No	No
Benzolklfluoranthene	207-08-9	ves	ves	vear	5.47E-08	1.09E-04	3.09E-08	6.18E-05	8.56E-08	1.71E-04	4.50E-02	8.90E-01	No	No
Beryllium & compounds, NOS	7440-41-7	yes	yes	year	NA	NA	2.06E-07	4.12E-04	2.06E-07	4.12E-04	3.40E-03	6.80E-02	No	No
Cadmium & compounds. NOS	7440-43-9	ves	ves	vear	2.73E-06	5.45E-03	1.89E-05	3.78E-02	2.16E-05	4.32E-02	1.90E-03	3.90E-02	Yes	Yes
Chromium(III), soluble particulates, NOS	Cr(III)sol	yes	yes	24-hr	1.09E-06	8.73E-04	2.31E-05	1.26E-04	2.42E-05	9.99E-04	3.70E-04	7.40E-03	Yes	No
Chromium(VI) & compounds, NOS	18540-29-9	yes	yes	year	1.82E-07	3.64E-04	9.62E-07	1.92E-03	1.14E-06	2.29E-03	3.30E-05	6.50E-04	Yes	Yes
Chrysene	218-01-9	yes	yes	year	3.84E-07	7.68E-04	3.09E-08	6.18E-05	4.15E-07	8.30E-04	4.50E-01	8.90E+00	No	No
Cobalt and compounds, NOS	7440-48-4	yes	yes	24-hr	NA	NA	1.44E-06	7.91E-06	1.44E-06	7.91E-06	3.70E-04	7.40E-03	No	No
Dibenz[a,h]anthracene	53-70-3	yes	yes	year	8.68E-08	1.74E-04	2.06E-08	4.12E-05	1.07E-07	2.15E-04	4.10E-03	8.20E-02	No	No
Ethyl benzene	100-41-4	yes	yes	year	1.98E-05	3.96E-02	1.19E-04	2.37E-01	1.38E-04	2.77E-01	3.20E+00	6.50E+01	No	No
Formaldehyde	50-00-0	yes	yes	year	3.14E-03	6.28E+00	3.80E-03	7.61E+00	6.94E-03	1.39E+01	1.40E+00	2.70E+01	Yes	No
Indeno[1,2,3-cd]pyrene	193-39-5	yes	yes	year	1.04E-07	2.08E-04	3.09E-08	6.18E-05	1.35E-07	2.70E-04	4.50E-02	8.90E-01	No	No
Lead	Pb	yes	yes	year	1.51E-05	3.02E-02	8.59E-06	1.72E-02	2.37E-05	4.74E-02	1.00E+01	1.40E+01	No	No
Manganese & compounds	7439-96-5	yes	yes	24-hr	NA	NA	6.53E-06	3.58E-05	6.53E-06	3.58E-05	1.10E-03	2.20E-02	No	No
Mercury, elemental	7439-97-6	yes	yes	24-hr	3.64E-06	2.91E-03	4.47E-06	2.45E-05	8.10E-06	2.93E-03	1.10E-04	2.20E-03	Yes	Yes
Naphthalene	91-20-3	yes	yes	year	3.58E-05	7.16E-02	1.05E-05	2.10E-02	4.63E-05	9.26E-02	2.40E-01	4.80E+00	No	No
n-Hexane	110-54-3	yes	yes	24-hr	4.89E-05	3.91E-02	3.09E-02	1.69E-01	3.10E-02	2.09E-01	2.60E+00	5.20E+01	No	No
Nickel & compounds, NOS	7440-02-0	yes	yes	year	7.09E-06	1.42E-02	3.61E-05	7.21E-02	4.32E-05	8.63E-02	3.10E-02	6.20E-01	Yes	No
Selenium & selenium compounds (other than hydrogen selenid	7782-49-2	yes	yes	24-hr	4.00E-06	3.20E-03	4.12E-07	2.26E-06	4.41E-06	3.20E-03	7.40E-02	1.50E+00	No	No
Toluene	108-88-3	yes	yes	24-hr	1.92E-04	1.53E-01	4.55E-04	2.49E-03	6.47E-04	1.56E-01	1.90E+01	3.70E+02	No	No
Xvlene (mixture), including m-xvlene, o-xvlene, p-xvlene	1330-20-7	ves	ves	24-hr	7.71E-05	6.17E-02	3.38E-04	1.85E-03	4.15E-04	6.35E-02	8.20E-01	1.60E+01	No	No
Carbon monoxide	630-08-0	no	yes	1-hr	5.19E-02	1.73E+00	2.70E+00	6.16E-01	2.75E+00	2.35E+00	1.10E+00	4.30E+01	Yes	No
Copper & compounds	7440-50-8	no	ves	1-hr	7.45E-06	2.48E-04	1.46E-05	3.33E-06	2.21E-05	2.52E-04	9.30E-03	1.90E-01	No	No
Nitrogen dioxide	10102-44-0	no	yes	1-hr	4.19E-01	1.40E+01	8.37E-01	1.91E-01	1.26E+00	1.42E+01	4.60E-01	8.70E-01	Yes	Yes
Propylene	115-07-1	no	ves	24-hr	8.49E-04	6.79E-01	9.10E-03	4.99E-02	9.95E-03	7.29E-01	1.10E+01	2.20E+02	No	No
Sulfur dioxide	7446-09-5	no	yes	1-hr	5.50E-04	1.83E-02	1.05E-01	2.40E-02	1.06E-01	4.23E-02	4.60E-01	1.20E+00	No	No
Vanadium (fume or dust)	7440-62-2	no	ves	24-hr	NA	NA	3.95E-05	2.16E-04	3.95E-05	2.16E-04	3.70E-04	7.40E-03	No	No

Table 6. Emergency	Generator HAPs	/TAPs Emission Summar	v

Emergency Generator Fuel Consumption ¹
Emergency Generator Operational Hours ²
Number of Emergency Generators 30.3 60 2 gal/hr hrs/yr generators

Number of Emergency Generators	2	generators					1			
					Diesel Combustion Emi	ssion Factor				
Pollutant ⁴	CAS	HAP?	TAP?		AP-42 Diesel Combustion Emission Factor	VCAPCD Diesel Combustion Emission	Singular Generator: Hourly	T-t-1V	In controlled Production D	
Pollutant	CAS	HAP	IAP			Factor	Emissions (lb/hr)	(lb/hr)	Incontrolled Emission Ra	
Benzene	71-43-2	Yes	Yes	Averaging Period year	(lb/Mgal) 0.107088	(lb/Mgal) 0.1863	0.00564489	1.13E-02	(tpy) 3.39E-04	(lb/avg. period) 0.68
Formaldehyde	50-00-0	Yes	Yes	year	0.107088	1.7261	0.00564489	0.10	3.39E-04 3.14E-03	6.28
Toluene	108-88-3	Yes	Yes	24-hr	0.038778	0.1054	0.003230063	6.39E-03	1.92E-04	0.15
Acenaphthylene	208-96-8	No	No	NA NA	0.00127374	0.1034	3.85943E-05	7.72E-05	2.32E-06	NA NA
Dibenz[a,h]anthracene	53-70-3	No	Yes	year	0.00047748		1.44676E-06	2.89E-06	8.68E-08	1.74E-04
Naphthalene	91-20-3	Yes	Yes	year	0.01794	0.0197	0.00059691	1.19E-03	3.58E-05	0.07
Acetaldehyde	75-07-0	Yes	Yes	year	0.0034776	0.7833	0.02373399	0.05	1.42E-03	2.85
Acrolein	107-02-8	Yes	Yes	24-hr	0.00108744	0.0339	0.00102717	2.05E-03	6.16E-05	0.05
1,3-Butadiene	106-99-0	Yes	Yes	year		0.2174	0.00658722	1.32E-02	3.95E-04	0.79
Chlorobenzene	108-90-7	Yes	Yes	24-hr		0.0002	0.00000606	1.21E-05	3.64E-07	2.91E-04
Propylene	115-07-1	No	Yes	24-hr	0.38502	0.467	0.0141501	0.03	8.49E-04	0.68
n-Hexane	110-54-3	Yes	Yes	24-hr		0.0269	0.00081507	1.63E-03	4.89E-05	0.04
Hydrogen chloride	7647-01-0	Yes	Yes	24-hr	-	0.1863	0.00564489	1.13E-02	3.39E-04	0.27
Acenaphthene	83-32-9	No	No	NA	0.00064584		1.9569E-05	3.91E-05	1.17E-06	NA
Anthracene	120-12-7	No	No	NA	0.00016974		5.14312E-06	1.03E-05	3.09E-07	NA
Benz[a]anthracene	56-55-3	No	Yes	year	0.000085836		2.60083E-06	5.20E-06	1.56E-07	3.12E-04
Benzo[b]fluoranthene	205-99-2	No	Yes	year	0.00015318		4.64135E-06	9.28E-06	2.78E-07	5.57E-04
Benzo[k]fluoranthene	207-08-9	No	Yes	year	0.000030084		9.11545E-07	1.82E-06	5.47E-08	1.09E-04
Benzo(g,h,i)perylene	191-24-2	No	No	NA	0.000076728		2.32486E-06	4.65E-06	1.39E-07	NA
Chrysene	218-01-9	No	Yes	year	0.00021114		6.39754E-06	1.28E-05	3.84E-07	7.68E-04
Ethyl benzene	100-41-4	Yes	Yes	year		0.0109	0.00033027	6.61E-04	1.98E-05	0.04
o-Xylene	95-47-6	Yes	Yes	24-hr	0.026634		0.00080701	1.61E-03	4.84E-05	0.04
m-Xylene	108-38-3	Yes	Yes	24-hr	0.026634		0.00080701	1.61E-03	4.84E-05	0.04
p-Xylene	106-42-3	Yes	Yes	24-hr	0.026634		0.00080701	1.61E-03	4.84E-05	0.04
Xylene (mixture), including m-xylene, o-xylene, p-xylene	1330-20-7	Yes	Yes	24-hr	0.026634	0.0424	0.00128472	2.57E-03	7.71E-05	0.06
Polyaromatic Hydrocarbons / Polycyclic Organic Matter	PAH_n	Yes	No	NA		0.0559	0.00169377	3.39E-03	1.02E-04	NA
Fluoranthene	206-44-0	No	No	NA	0.00055614		1.6851E-05	3.37E-05	1.01E-06	NA
Fluorene	86-73-7	No	No	NA	0.0017664		5.35219E-05	1.07E-04	3.21E-06	NA O OOD O I
Indeno[1,2,3-cd]pyrene	193-39-5	No No	Yes No	year	0.000057132 0.0056304		1.7311E-06 0.000170601	3.46E-06 3.41E-04	1.04E-07	2.08E-04 NA
Phenanthrene	85-01-8			NA NA					1.02E-05	
Pyrene Arsenic & inorganic arsenic compounds, NOS	129-00-0 7440-38-2	No Yes	No Yes	NA vear	0.00051198	0.0016	1.5513E-05 0.00004848	3.10E-05 9.70E-05	9.31E-07 2.91E-06	NA 5.82E-03
Cadmium & compounds, NOS	7440-38-2	No.	Yes			0.0016	0.00004848	9.70E-05 9.09E-05	2.73E-06	5.82E-03 5.45E-03
Chromium & compounds, NOS	7440-43-9	Yes	No	year NA		0.0015	0.00004545	3.64E-05	2.73E-06 1.09E-06	5.45E-03 NA
Chromium(VI) & compounds, NOS	18540-29-9	No	Yes	year	-	0.0001	0.00001818	6.06E-06	1.82E-07	3.64E-04
Chromium(III), soluble particulates, NOS	Cr(III)sol	No	Yes	24-hr		0.0001	0.00000303	3.64E-05	1.09E-06	8.73E-04
Copper & compounds	7440-50-8	No	Yes	1-hr		0.0041	0.0001313	2.48E-04	7.45E-06	2.48E-04
Lead & compounds, NOS	Pb	Yes	Yes	year	_	0.0083	0.00012123	5.03E-04	1.51E-05	0.03
Manganese & compounds	7440-96-5	No	No	NA NA	-	0.0031	0.00023149	1.88E-04	5.64E-06	NA
Mercury, elemental	7439-97-6	Yes	Yes	24-hr		0.002	0.0000606	1.21E-04	3.64E-06	2.91E-03
Nickel & compounds, NOS	7440-02-0	Yes	Yes	year	_	0.0039	0.00011817	2.36E-04	7.09E-06	1.42E-02
Selenium & selenium compounds (other than hydrogen selenide)	7782-49-2	Yes	Yes	24-hr		0.0022	0.00006666	1.33E-04	4.00E-06	3.20E-03
Zinc	7440-66-6	No	No	NA	_	0.0224	0.00067872	1.36E-03	4.07E-05	NA
Sulfur dioxide ⁴	7446-09-5	No	Yes	1-hr	_	0.0221	0.009161925	0.02	5.50E-04	0.02
NO ₂ ⁴	10102-44-0	No	Yes	1-hr			6.990858334	13.98	0.42	13.98
CO ⁴					_		0.865534841			
LU	630-08-0	No	Yes	1-hr			0.865534841 Total	1.73 15.97	0.05 0.48	1.73
							Total HAP	0.21	0.48	+
							Total TAP	15.97	0.48	ł
l							TOTAL TAP	13.7/	0.40	1

The bourty field consumption rate is conservatively assumed to be equal to the volumetric fuel consumption provided on the manufacturer's specification sheet for the full standily load.

Total TAP | 15.97

The bourty field consumption rate is conservatively assumed to be equal to the volumetric fuel consumption provided on the manufacturer's specification sheet for the full standily load.

Based on 500 hours per year operation, in accordance to EPA's September 6, 1995 memo, available at https://www.epa.gov/sites/production/files/2015-08/documents/emgen.pdf.

Diesel emission factors are obtained from Tables 3.4-3 and 3.4-4. PA'2 and Ventura County Air Pollution Control District AB 2588 (combustion Emission Factors, Diesel Combustion Factors, Annual uncontrolled emissions are based on 500 hours per year of operation.

Emission factors for NO₂, CO, and SO₂ are obtained from the worst case loading secaris of the manufacturer specifications. It is conservatively assumed that all NO₄ is emitted in the form of NO₂.

Sulfur doode 0.01 g/bbp-br

NO₂ 4.20 g/bbp-br

CO 0.52 g/bbp-br

Table 7. Boiler HAPs/TAPs Emission Summary

Uncontrolled Operating Hours	8,760	hr/yr
Natural Gas Heating Value 1	1,020	Btu/scf
Heat Input Capacity Lochinvar Crest FBN2001 Boiler	2	MMBtu/hr
Number of Boilers Operating Simultaneously	2	boilers
Total Number of Boilers	4	boilers

					Natura	l Gas Combustion	2			
					Natural Gas Combustion		Singular Boiler:			
					Emission Factor	Emission	Hourly Emissions	Total U	ncontrolled Emission I	Rates
Pollutant 1	CAS	HAP?	TAP?	Averaging Period	lb/MMscf	Factor Source	(lb/hr)	(lb/hr)	(tpy)	(lb/avg. period)
3-Methylcholanthrene	56-49-5	yes	yes	year	1.80E-06	AP-42	3.53E-09	7.06E-09	3.09E-08	6.18E-05
7,12-Dimethylbenz[a]anthracene	57-97-6	yes	yes	year	1.60E-05	AP-42	3.14E-08	6.27E-08	2.75E-07	5.50E-04
Acetaldehyde	75-07-0	yes	yes	year	8.87E-03	CATEF	1.74E-05	3.48E-05	1.52E-04	0.30
Acrolein	107-02-8	yes	yes	24-hr	2.70E-03	VCAPCD	5.29E-06	1.06E-05	4.64E-05	2.54E-04
Arsenic & inorganic arsenic compounds, NOS	7440-38-2	yes	yes	year	2.00E-04	AP-42	3.92E-07	7.84E-07	3.44E-06	6.87E-03
Benz[a]anthracene	56-55-3	yes	yes	year	1.80E-06	AP-42	3.53E-09	7.06E-09	3.09E-08	6.18E-05
Benzene	71-43-2	yes	yes	year	5.80E-03	VCAPCD	1.14E-05	2.27E-05	9.96E-05	0.20
Benzo[a]pyrene	50-32-8	yes	yes	year	5.00E-06	VCAPCD	9.80E-09	1.96E-08	8.59E-08	1.72E-04
Benzo[b]fluoranthene	205-99-2	yes	yes	year	1.80E-06	AP-42	3.53E-09	7.06E-09	3.09E-08	6.18E-05
Benzo[k]fluoranthene	207-08-9	yes	yes	year	1.80E-06	AP-42	3.53E-09	7.06E-09	3.09E-08	6.18E-05
Beryllium & compounds, NOS	7440-41-7	yes	yes	year	1.20E-05	AP-42	2.35E-08	4.71E-08	2.06E-07	4.12E-04
Cadmium & compounds, NOS	7440-43-9	yes	yes	year	1.10E-03	AP-42	2.16E-06	4.71E-06 4.31E-06	1.89E-05	0.04
Chromium(III), soluble particulates, NOS	Cr(III)sol	yes	yes	24-hr	1.34E-03	AP-42	2.64E-06	5.27E-06	2.31E-05	1.26E-04
Chromium(VI) & compounds, NOS	18540-29-9	yes	yes	year	5.60E-05	AP-42	1.10E-07	2.20E-07	9.62E-07	1.92E-03
Chrysene	218-01-9	yes	yes	year	1.80E-06	AP-42	3.53E-09	7.06E-09	3.09E-08	6.18E-05
Cobalt and compounds, NOS	7440-48-4	yes	yes	24-hr	8.40E-05	AP-42	1.65E-07	3.29E-07	1.44E-06	7.91E-06
Dibenz[a,h]anthracene	53-70-3	yes	yes	year	1.20E-06	AP-42	2.35E-09	4.71E-09	2.06E-08	4.12E-05
Ethyl benzene	100-41-4	yes	yes	year	6.90E-03	VCAPCD	1.35E-05	2.71E-05	1.19E-04	0.24
Formaldehyde	50-00-0	yes	yes	year	0.22	CATEF	4.34E-04	8.69E-04	3.80E-03	7.61
Indeno[1,2,3-cd]pyrene	193-39-5	yes	yes	year	1.80E-06	AP-42	3.53E-09	7.06E-09	3.09E-08	6.18E-05
Lead	Pb	yes	yes	year	5.00E-04	AP-42	9.80E-07	1.96E-06	8.59E-06	0.02
Manganese & compounds	7439-96-5	yes	yes	24-hr	3.80E-04	AP-42	7.45E-07	1.49E-06	6.53E-06	3.58E-05
Mercury, elemental	7439-97-6	yes	yes	24-hr	2.60E-04	AP-42	5.10E-07	1.02E-06	4.47E-06	2.45E-05
Naphthalene	91-20-3	yes	yes	year	6.10E-04	AP-42	1.20E-06	2.39E-06	1.05E-05	0.02
n-Hexane	110-54-3			24-hr	1.80	AP-42	3.53E-03	7.06E-03	0.03	0.17
Nickel & compounds, NOS	7440-02-0	yes yes	yes yes	vear vear	2.10E-03	AP-42	4.12E-06	8.24E-06	3.61E-05	0.07
Selenium & selenium compounds (other than hydrogen selenide)	7782-49-2	-	-	24-hr	2.40E-05	AP-42	4.71E-08	9.41E-08	4.12E-07	2.26E-06
Toluene	108-88-3	yes	yes	24-hr	0.03	VCAPCD	5.20E-05	1.04E-04	4.55E-04	2.49E-03
Xylene (mixture), including m-xylene, o-xylene, p-xylene	1330-20-7	yes	yes	24-nr 24-hr	0.03	VCAPCD	3.86E-05	7.73E-05	4.55E-04 3.38E-04	2.49E-03 1.85E-03
2-Methylnaphthalene	91-57-6	yes	yes	NA	0.02 2.40E-05	AP-42	3.86E-05 4.71E-08	9.41E-08	3.38E-04 4.12E-07	1.85E-03 NA
Z-metnyinapitnaiene Acenaphthene	83-32-9	yes	no	NA NA	2.40E-05 1.80E-06	AP-42 AP-42	4.71E-08 3.53E-09	7.06E-09	4.12E-07 3.09E-08	NA NA
	203-96-8	yes	no	NA NA	1.80E-06	AP-42 AP-42	3.53E-09 3.53E-09	7.06E-09 7.06E-09	3.09E-08	NA NA
Acenaphthylene	120-12-7	yes	no	NA NA	2.40E-06	AP-42 AP-42	3.53E-09 4.71E-09	9.41E-09	3.09E-08 4.12E-08	NA NA
Anthracene		yes	no	NA NA		AP-42 AP-42	4.71E-09 2.35E-09	4.71E-09		NA NA
Benzo(g,h,i)perylene Dichlorobenzene	191-24-2 25321-22-6	yes	no	NA NA	1.20E-06 1.20E-03	AP-42 AP-42	2.35E-09 2.35E-06		2.06E-08 2.06E-05	NA NA
Fluoranthene		yes	no	NA NA	3.00E-06	AP-42 AP-42	5.88E-09	4.71E-06 1.18E-08		NA NA
	206-44-0	yes	no						5.15E-08	
Fluorene	86-73-7	yes	no	NA NA	2.80E-06	AP-42	5.49E-09	1.10E-08	4.81E-08	NA
PAH's (including naphthalene)	PAH_n	yes	no	NA NA	4.00E-04	VCAPCD	7.84E-07	1.57E-06	6.87E-06	NA
Phenanthrene	85-01-8	yes	no	NA NA	1.70E-05 5.00E-06	AP-42 AP-42	3.33E-08 9.80E-09	6.67E-08	2.92E-07 8.59E-08	NA
Pyrene	129-00-0	yes	no	NA				1.96E-08		NA
Carbon monoxide 3	630-08-0	no	yes	1-hr				0.62	2.70	0.62
Copper & compounds	7440-50-8	no	yes	1-hr	8.50E-04	AP-42	1.67E-06	3.33E-06	1.46E-05	3.33E-06
Nitrogen dioxide ³	10102-44-0	no	yes	1-hr				0.19	0.84	0.19
Propylene	115-07-1	no	yes	24-hr	0.53	VCAPCD	1.04E-03	2.08E-03	9.10E-03	0.05
Sulfur dioxide	7446-09-5	no	yes	1-hr	-			0.02	0.11	0.02
Vanadium (fume or dust)	7440-62-2	no	yes	24-hr	2.30E-03	AP-42	4.51E-06	9.02E-06	3.95E-05	2.16E-04
							Total	8.42E-01	3.69E+00	4
							Total HAP	8.24E-03	3.61E-02	1
							Total TAP	8.42E-01	3.69E+00	

Natural gas heating value is obtained from AP +2 Chapter 1.4 Natural Gas Combustion

A Natural gas heating value is obtained from AP +2 Chapter 1.4 Natural Gas Combustion

A Natural gas heating value is obtained from AP +2 Chapter 1.4 Natural Gas Combustor

A Natural gas emission factors for combustion until between 19-100 MMBtu/h are obtained from Table 1.4-3, AP-42, Ventura County Air Pollution Control District (VCAPCI) AB 2580 Combustion Emission Factors, Natural Gas Combustion Factors, and California Air Toxics Emission Factors (CATEFs) as advised by Ecology. Annual uncontrolled emissions are based on 60 profession.

But a controlled from manual currer specifications and included below for reference. It is conservatively assumed that all NO₈ is emitted in the form of NO₉.

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APPENDIX D. EQUIPMENT SPECIFICATIONS



March 30, 2016

Subject: Crest Emissions

To whom it may concern:

Please be advised. Lochinvar's Crest Boilers have been tested by an independent third party agency (Gas Consultants, Inc.), for NO_x emissions.

See the following table for emissions data:

Model No.	Equipment MMBtu	NO _X	со	VOC	TSP	SO2	Pb	PM 0.0149
FBN2001	2.000	0.0239	0.077	0.0017	0.00743	0.00060	0.00000044	0.01.0

All emissions values above are listed in lb/MMBtu

Gas Consultants, Inc. is certified as a SCAQMD NO_x testing laboratory per SCAQMD's laboratory approval program (reference number 94LA0815).

Please do not hesitate to call if you have any questions.

Flue Gas Volume 432 CFM

Daniel M. Rettig Product Manager Lochinvar LLC



Exhaust Emission Data Sheet 450DFEJ

60 Hz Diesel Generator Set EPA NSPS Stationary Emergency

912 cu. in. (14.9 liters)

Engine Information:

 Model:
 Cummins Inc. QSX15-G9 NR 2
 Bore:
 5.39 in. (137 mm)

 Nameplate BHP @
 755
 Stroke:
 6.65 in. (169 mm)

1800 RPM:

Type: 4 cycle, in-line, 6 cylinder diesel

Aspiration: Turbocharged with air-to-air

charge air cooling

Compression Ratio: 17:1

Emission Control Device: Turbocharged with charge

air-cooled

	1/4	1/2	3/4	<u>Full</u>	<u>Full</u>
Performance Data	<u>Standby</u>	Standby	Standby	Standby	<u>Prime</u>
Engine HP @ Stated Load (1800 RPM)	185	344	502	661	605
Fuel Consumption (gal/Hr)	10.6	17.4	23.6	30.3	28.0
Exhaust Gas Flow (CFM)	1360	2000	2605	3110	2920
Exhaust Gas Temperature (°F)	735	820	810	865	825
Exhaust Emission Data					
HC (Total Unburned Hydrocarbons)	0.22	0.08	0.06	0.12	0.11
NOx (Oxides of Nitrogen as NO ₂)	2.97	3.31	4.20	4.00	3.66
CO (Carbon Monoxide)	0.52	0.31	0.37	0.35	0.32
PM (Particulate Matter)	0.08	0.05	0.04	0.02	0.02
Smoke (Pierburg)	0.47	0.40	0.38	0.19	0.18
			All values (exc	cept smoke) are	cited: g/BHP-hr

Displacement:

Test Methods and Conditions

Steady-state emissions recorded per ISO8178-1 during operation at rated engine speed (+/- 2%) and stated constant load (+/- 2%) with engine temperatures, pressures and emission rated stabilized.

Fuel specification: 40-48 Cetane Number, 0.05 Wt.% max. Sulfur; Reference ISO8178-5,

40CFR86.1313-98 Type 2-D and ASTM D975 No. 2-D.

Air Inlet Temperature: $25 \, ^{\circ}\text{C} \, (77 \, ^{\circ}\text{F})$ Fuel Inlet Temperature: $40 \, ^{\circ}\text{C} \, (104 \, ^{\circ}\text{F})$

Barometric Pressure: 100 kPa (29.53 in Hg)

Humidity: 10.7 g/kg (75 grains H₂O/lb) of dry air (required for NOx correction)

Intake Restriction: Set to maximum allowable limit for clean filter

Exhaust Back Pressure: Set to maximum allowable limit

Data was taken from a single engine test according to the test methods, fuel specification and reference conditions stated above and is subjected to instrumentation and engine-to-engine variability. Tests conducted with alternate test methods, instrumentation, fuel or reference conditions can yield different results.



2022 EPA Tier 2 Exhaust Emission Compliance Statement 450DFEJ

Stationary Emergency

60 Hz Diesel Generator Set

Compliance Information:

The engine used in this generator set complies with Tier 2 emissions limit of U.S. EPA New Source Performance Standards for stationary emergency engines under the provisions of 40 CFR 60 Subpart IIII.

Engine Manufacturer: Cummins Inc.

EPA Certificate Number: NCEXL015.AAJ-051

Effective Date: 09/03/2021

Date Issued: 09/03/2021

EPA Engine Family (Cummins Emissions Family): NCEXL015.AAJ

Engine Information:

Model:QSX/QSX15/QSX15-G/QSX15-G9Bore:5.39 in. (137 mm)Engine Nameplate HP:755Stroke:6.65 in. (169 mm)Type:4 Cycle, In-line, 6 Cylinder DieselDisplacement:912 cu. in. (15 liters)

Aspiration: Turbocharged and CAC Compression ratio: 17.0:1

Emission Control Device: Electronic Control Exhaust stack diameter: 8 in. (203 mm)

Diesel Fuel Emission Limits

D	2 Cycle Exhaust Emissions	Gran	ns per BH	IP-hr	Grams per kWm-hr			
		NO _x +	<u>co</u>	<u>PM</u>	NO _x +	<u>co</u>	<u>PM</u>	
	Test Results	4.3	0.4	0.10	5.7	0.6	0.13	
	EPA Emissions Limit	4.8	2.6	0.15	6.4	3.5	0.20	

Test methods: EPA emissions recorded per 40 CFR Part 60, 89, 1039, 1065 and weighted at load points prescribed in the regulations for constant speed engines.

Diesel fuel specifications: Cetane number: 40-50, Reference: ASTM D975 No. 2-D, 300-500 ppm Sulfur

Reference conditions: Air Inlet Temperature: 25 °C (77 °F), Fuel Inlet Temperature: 40 °C (104 °F). Barometric Pressure: 100 kPa (29.53 in Hg), Humidity: 10.7 g/kg (75 grains H2O/lb) of dry air; required for NOx correction, Restrictions: Intake Restriction set to a maximum allowable limit for clean filter; Exhaust Back Pressure set to a maximum allowable limit..

Tests conducted using alternate test methods, instrumentation, fuel or reference conditions can yield different results. Engine operation with excessive air intake or exhaust restriction beyond published maximum limits, or with improper maintenance, may result in elevated emission levels.

APPENDIX E. SEPA CHECKLIST

SEPA¹ Environmental Checklist

Purpose of checklist

Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization, or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

Instructions for applicants

This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. You may use "not applicable" or "does not apply" only when you can explain why it does not apply and not when the answer is unknown. You may also attach or incorporate by reference additional studies reports. Complete and accurate answers to these questions often avoid delays with the SEPA process as well as later in the decision-making process.

The checklist questions apply to **all parts of your proposal**, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Instructions for lead agencies

Please adjust the format of this template as needed. Additional information may be necessary to evaluate the existing environment, all interrelated aspects of the proposal and an analysis of adverse impacts. The checklist is considered the first but not necessarily the only source of information needed to make an adequate threshold determination. Once a threshold determination is made, the lead agency is responsible for the completeness and accuracy of the checklist and other supporting documents.

Use of checklist for nonproject proposals

For nonproject proposals (such as ordinances, regulations, plans and programs), complete the applicable parts of sections A and B, plus the Supplemental Sheet for Nonproject Actions (Part D). Please completely answer all questions that apply and note that the words "project," "applicant," and "property or site" should be read as "proposal," "proponent," and "affected geographic area," respectively. The lead agency may exclude (for non-projects) questions in "Part B: Environmental Elements" that do not contribute meaningfully to the analysis of the proposal.

¹ https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/Checklist-guidance

A.Background

Find help answering background questions²

1. Name of proposed project, if applicable:

Klickitat Valley Health NOC Application

2. Name of applicant:

Klickitat Valley Health (KVH)

3. Address and phone number of applicant and contact person:

Jonathan Lewis, 509-261-1004

- 4. 310 S Roosevelt Ave, Goldendale, WA 98620
- 5. Date checklist prepared:

3/26/2025

6. Agency requesting checklist:

Ecology: Central Regional Office

7. Proposed timing of schedule (including phasing, if applicable):

2025

8. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

N/A

9. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

Air quality impacts

10. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

No additional applications pending.

11. List any government approvals or permits that will be needed for your proposal, if known.

N/A

12. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

Klickitat Valley Health is proposing to install burners for two existing hot water boilers and one emergency diesel generator at their facility in Goldendale, WA. As part of this project,

² https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-A-Background

Klickitat Valley Health will remove two existing emergency diesel generators, two domestic hot water heaters, and a rooftop unit (RTU) with gas pre-heat. This will bring the total natural gas fired boilers at the facility to 4, but Klickitat Valley Health will only operate two boilers at a given time.

13. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

At Klickitat Valley Health Hospital, located at 310 S. Roosevelt, Goldendale, WA 98620.

B.Environmental Elements

1. Earth

Find help answering earth questions³

a. General description of the site:

Hospital

Circle or highlight one: Flat rolling hilly, steep slopes, mountainous, other:

b. What is the steepest slope on the site (approximate percent slope)?

12%

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them, and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

The area involved is almost entirely existing parking lots and roadways. Soil is built up gravel, rock and asphalt with a sublayer of a clay sand mix.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

No

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill.

N/A

³ https://ecology.wa.gov/regulations-permits/sepa/environmental-review/sepa-guidance/sepa-checklist-guidance/sepa-checklist-section-b-environmental-elements/environmental-elements-earth

f. Could erosion occur because of clearing, construction, or use? If so, generally describe.

No

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

No change

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any.

N/A

2. Air

Find help answering air questions⁴

a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

Minimal emissions are expected during equipment installation. Emission estimates are provided in the associated Notice of Construction Application for the operation of the proposed equipment.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

No

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

Good combustion, operation, and maintenance practices for low NOx burner (LNB) boilers and the emergency diesel generator. Only ultra-low sulfur diesel (ULSD) will be combusted in the diesel generator.

3. Water

Find help answering water questions⁵

a. Surface:

Find help answering surface water questions⁶

1. Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If

⁴ https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-Air

⁵ https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-3-Water

⁶ https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-3-Water/Environmental-elements-Surface-water

yes, describe type and provide names. If appropriate, state what stream or river it flows into.

No

2. Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

No

3. Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

No

4. Will the proposal require surface water withdrawals or diversions? Give a general description, purpose, and approximate quantities if known.

No

5. Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

No

6. Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

No

b. Ground:

Find help answering ground water questions⁷

1. Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give a general description, purpose, and approximate quantities if known.

No

2. Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (domestic sewage; industrial, containing the following chemicals...; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

None

c. Water Runoff (including stormwater):

⁷ https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-3-Water/Environmental-elements-Groundwater

1. Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

N/A

2. Could waste materials enter ground or surface waters? If so, generally describe.

No

3. Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.

No

d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any:

N/A

4. Plants

Find help answering plants questions

a.	Check the types of vegetation found on the site:
	\square deciduous tree: alder, maple, aspen, other
	\square evergreen tree: fir, cedar, pine, other
	□ shrubs
	⊠ grass
	□ pasture
	□ crop or grain
	\square orchards, vineyards, or other permanent crops.
	\square wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
	☐ water plants: water lily, eelgrass, milfoil, other
	\square other types of vegetation
b.	What kind and amount of vegetation will be removed or altered?
	None
c.	List threatened and endangered species known to be on or near the site.
	None
d.	Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any.
	None

e. List all noxious weeds and invasive species known to be on or near the site.

None known

5. Animals

Find help answering animal questions⁸

a. List any birds and other animals that have been observed on or near the site or are known to be on or near the site.

Examples include:

- Birds nawk, heron, eagle, songbirds other:
- Mammals: deer, bear, elk, beaver, other: Squirrel
- Fish: bass, salmon, trout, herring, shellfish, other: None
- b. List any threatened and endangered species known to be on or near the site.

Columbia Torrent Salamander Rhyacotriton kezeri - SC Cascade Torrent Salamander Rhyacotriton cascadae - SC Dunn's Salamander Plethodon dunni - SC Larch Mountain Salamander Plethodon larselli - SS Van Dyke's Salamander Plethodon vandykei - SC Western Toad Bufo boreas - SC Oregon Spotted Frog Rana pretiosa FC SE Columbia Spotted Frog Rana luteiventris - SC Birds Bald Eagle Haliaeetus leucocephalus FT ST Black-backed Woodpecker Picoides arcticus - SC Burrowing Owl Athene cunicularia - SC Ferruginous Hawk Buteo regalis - ST Flammulated Owl Otus flammeolus - SC Golden Eagle Aquila chrysaetos - SC Lewis's Woodpecker Melanerpes lewis - SC Loggerhead Shrike Lanius Iudovicianus - SC Northern Goshawk Accipiter gentilis - SC Pileated Woodpecker Dryocopus pileatus - SC Sage Sparrow Amphispiza belli - SC Sage Thrasher Oreoscoptes montanus - SC Sage Grouse Centrocercus urophasianus FC ST Sandhill Crane Grus canadensis - SE Northern Spotted Owl Strix occidentalis FT SE Vaux's Swift Chaetura vauxi - SC Western Grebe Aechmophorus occidentalis - SC White-headed Woodpecker Picoides albolarvatus - SC Willow Flycatcher Empidonax traillii - - Mammals Black-tailed Jackrabbit Lepus californicus - SC Fisher Martes pennanti - SE Merriam's Shrew Sorex merriami - SC Townsend's Ground Squirrel Spermophilus townsendii - SC Townsend's Big-eared Bat Corynorhinus townsendii - SC Western Gray Squirrel Sciurus griseus - ST White-tailed Jackrabbit Lepus townsendii - SC Wolverine Gulo gulo - SC

https://www.nwcouncil.org/sites/default/files/Appendix_A_D.pdf

c. Is the site part of a migration route? If so, explain.

Not known

d. Proposed measures to preserve or enhance wildlife, if any.

None

⁸ https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-5-Animals

e. List any invasive animal species known to be on or near the site.

None known

6. Energy and natural resources

Find help answering energy and natural resource questions⁹

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

Natural gas for heating and ULSD for electricity generation in emergency situations.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

No

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any.

None

7. Environmental health

Health Find help with answering environmental health questions¹⁰

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur because of this proposal? If so, describe.

No

1. Describe any known or possible contamination at the site from present or past uses.

None known

2. Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.

Natural gas lines run along the road and through the existing parking lots.

Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.

Diesel fuel will be stored at the hospital's diesel generators in double wall tanks.

⁹ https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-6-Energy-natural-resou ¹⁰ https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-7-Environmental-health

4. Describe special emergency services that might be required.

None known

5. Proposed measures to reduce or control environmental health hazards, if any.

N/A

b. Noise

1. What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

Regular small town traffic noise. Diesel generator noise. There is a helipad at the hospital – helicopter noise 2 to 4 times per month.

2. What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site)?

Minimal noise from equipment during installation phase.

3. Proposed measures to reduce or control noise impacts, if any:

8. Land and shoreline use

Find help answering land and shoreline use questions¹¹

a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.

Current land use is residential, healthcare and education. No changes to land use will take place.

b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses because of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?

No

1. Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how?

No

c. Describe any structures on the site.

Hospital buildings. Bus barn. High School, Middle School, Primary School.

¹¹ https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-8-Land-shoreline-use

d. Will any structures be demolished? If so, what?

No

e. What is the current zoning classification of the site?

MC – Medical Center District, R1 – Residential, R2 – Residential.

f. What is the current comprehensive plan designation of the site?

Same.

- g. If applicable, what is the current shoreline master program designation of the site?
 Not applicable at this site.
- h. Has any part of the site been classified as a critical area by the city or county? If so, specify.

No

- i. Approximately how many people would reside or work in the completed project?320 people work at the hospital and schools. Plus 867 students and staff at the schools.
- j. Approximately how many people would the completed project displace?

None

k. Proposed measures to avoid or reduce displacement impacts, if any.

None

I. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any.

N/A, no changes to existing land use with this application.

m. Proposed measures to reduce or control impacts to agricultural and forest lands of long-term commercial significance, if any:

No impact.

9. Housing

Find help answering housing questions¹²

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

None

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

None

¹² https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-9-Housing

c. Proposed measures to reduce or control housing impacts, if any:

None

10. Aesthetics

Find help answering aesthetics questions 13

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

No new proposed structures.

b. What views in the immediate vicinity would be altered or obstructed?

The parking lot currently has views of Mt Adams and Mt Hood. These views will not be impacted from the proposed location of the equipment.

c. Proposed measures to reduce or control aesthetic impacts, if any:

None

11. Light and glare

Find help answering light and glare questions¹⁴

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

None

b. Could light or glare from the finished project be a safety hazard or interfere with views?

No

c. What existing off-site sources of light or glare may affect your proposal?

None

d. Proposed measures to reduce or control light and glare impacts, if any:

None

12. Recreation

Find help answering recreation questions

a. What designated and informal recreational opportunities are in the immediate vicinity?

The school district has playgrounds and ball fields of many types.

b. Would the proposed project displace any existing recreational uses? If so, describe.

No

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https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-10-Aesthetics
 https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-11-Light-glare

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

No changes.

13. Historic and cultural preservation

Find help answering historic and cultural preservation questions¹⁵

a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers? If so, specifically describe.

The original hospital building was built in 1949.

b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.

None that are known.

c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.

No changes will impact nearby cultural or historical resources, project scope only includes changes to existing operation of the hospital.

d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.

Restricting the project to previously disturbed sites and areas is our main effort to minimize impact or disturbance to resources.

14. Transportation

Find help with answering transportation questions¹⁶

a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any.

Roosevelt Avenue runs in front of the hospital and adjacent to the schools. Existing streets will be maintained.

¹⁵ https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-13-Historic-cultural-p https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-14-Transportation

b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?

Mt Adams Transportation serves the hospital site and GSD has buses to pick up school children.

c. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle, or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).

No.

d. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

No

e. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates?

None

f. Will the proposal interfere with, affect, or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.

No

g. Proposed measures to reduce or control transportation impacts, if any:

Careful planning for street excavation to maintain one lane and traffic control at all times.

15. Public services

Find help answering public service questions 17

a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.

No

b. Proposed measures to reduce or control direct impacts on public services, if any.

Careful safety measures in place at all times.

¹⁷ https://ecology.wa.gov/regulations-permits/sepa/environmental-review/sepa-guidance/sepa-checklist-guidance/sepa-checklist-section-b-environmental-elements/environmental-elements-15-public-services

16. Utilities

Find help answering utilities questions 18

a. Circle utilities currently available at the site electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other:

Oxygen

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

The interconnection of the Microgrid between buildings will be an underground electrical line. This line will be placed along current utility infrastructure.

C.Signature

Find help about who should sign 19

X Jonethontonia

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Type name of signee: Jonathan Lewis

Position and agency/organization: Director of Support Services, Klickitat Valley Health

Date submitted:

¹⁸ https://ecology.wa.gov/regulations-permits/sepa/environmental-review/sepa-guidance/sepa-checklist-guidance/sepa-checklist-section-b-environmental-elements/environmental-elements-16-utilities
¹⁹ https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-section-b-environmental-review/SEPA-guidance/SEPA-checklist-section-b-environmental-review/SEPA-guidance/SEPA-checklist-section-b-environmental-review/SEPA-guidance/SEPA-checklist-section-b-environmental-review/sepa-guidance/sepa-checklist-section-b-environmental-review/sepa-guidance/sepa-checklist-section-b-environmental-review/sepa-guidance/sepa-checklist-section-b-environmental-elements-16-utilities

¹⁹ https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-C-Signature

D.Supplemental sheet for nonproject actions

Find help for the nonproject actions worksheet 20

Do not use this section for project actions.

Because these questions are very general, it may be helpful to read them in conjunction with the list of the elements of the environment.

When answering these questions, be aware of the extent the proposal, or the types of activities likely to result from the proposal, would affect the item at a greater intensity or at a faster rate than if the proposal were not implemented. Respond briefly and in general terms.

- 1. How would the proposal be likely to increase discharge to water; emissions to air; production, storage, or release of toxic or hazardous substances; or production of noise?
 - Proposed measures to avoid or reduce such increases are:
- 2. How would the proposal be likely to affect plants, animals, fish, or marine life?
 - Proposed measures to protect or conserve plants, animals, fish, or marine life are:
- 3. How would the proposal be likely to deplete energy or natural resources?
 - Proposed measures to protect or conserve energy and natural resources are:
- 4. How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection, such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, floodplains, or prime farmlands?
 - Proposed measures to protect such resources or to avoid or reduce impacts are:
- 5. How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans?
 - Proposed measures to avoid or reduce shoreline and land use impacts are:
- 6. How would the proposal be likely to increase demands on transportation or public services and utilities?
 - Proposed measures to reduce or respond to such demand(s) are:
- 7. Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.

²⁰ https://ecology.wa.gov/regulations-permits/sepa/environmental-review/sepa-guidance/sepa-checklist-guidance/sepa-checklist-section-d-non-project-actions