

March 15, 2023

Chuck Johnson, Facilities Manager Peace Health – St. Johns Medical Center 4857 NW Lake Road, Suite 300 Camas, WA 98607

RE: Final Air Discharge Permit for Installation of two Replacement Unilux Water Tube Boilers

Dear Mr. Johnson:

A final determination to issue Air Discharge Permit (ADP) 23-3570 has been completed for ADP application CO-1068 pursuant to Section 400-110(4) of the General Regulations for Air Pollution Sources of the Southwest Clean Air Agency (SWCAA). Public notice for ADP Application CO-1068 was published in the permit section of SWCAA's website on February 16, 2023. SWCAA did not receive a request for a public comment period in response to the public notice and has concluded that significant public interest does not exist for this determination. Therefore, a public comment period will not be provided for this permitting action. Electronic copies of ADP 23-3570 and the associated Technical Support Document (TSD) are available for public review in the "Recent Air Discharge Permits" section under the "Air Permits" link on SWCAA's website (*http://www.swcleanair.gov*). Original copies are enclosed for your files.

ADP 23-3570 may be appealed directly to the Pollution Control Hearings Board (PCHB) at P.O. Box 40903, Olympia, Washington 98504-0903 within thirty (30) days of receipt as provided in Revised Code of Washington (RCW) 43.21B.

If you have any questions or comments, or desire additional information, please contact me or Danny Phipps at (360) 574-3058, extension 124.

Sincerely,

Uri Papish

Executive Director

UP:edp

Enclosure: Technical Support Document and Air Discharge Permit 23-3570

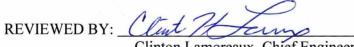


AIR DISCHARGE PERMIT 23-3570

Issued: March 15, 2023

St. John Medical Center – Delaware Campus 1615 Delaware Street Longview, WA 98632

SWCAA ID - 914



Clinton Lamoreaux, Chief Engineer





APPROVED BY:____

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1. Equipment/Activity Identification

ID No.	Equipment/Activity	Control Equipment/Measure
1	Unilux Boiler #1 10.33 MMBtu/hr, model ZF 1000HS-MH	Low Emissions Burner, Low Sulfur/Ash Primary Fuel (natural gas)
2	Unilux Boiler #2 10.33 MMBtu/hr, model ZF 1000HS-MH	Low Emissions Burner, Low Sulfur/Ash Primary Fuel (natural gas)
3	Babcock and Wilcox Boiler ~23.0 MMBtu/hr	Low Sulfur/Ash Primary Fuel (natural gas)
4	Emergency Generator Engine Caterpillar 3512B, 2,166 hp	Ultra Low Sulfur Diesel Fuel $(\leq 15 \text{ ppm S})$

2. Permit Requirements

The following tables detail the specific requirements of this Air Discharge Permit (ADP). In addition to the requirements listed below, equipment at this facility may be subject to other federal, state, and local regulations. The requirement number is identified in the left-hand column. The text of the requirement is contained in the middle column. The emission unit, equipment, or activity to which the requirement applies is listed in the right-hand column.

ADP 23-3570 supersedes ADP 10-2958 in its entirety.

Req. No.	Emiss	sion Limits			Equipment/ Activity ID No.
1.	Emissions from the Unilux Boilers must each not exceed any of the following:			1-2	
	Pollutant	Emi	ssion Limit		
	Nitrogen Oxides	0.75 tpy	12/80 ppmvd*		
	Carbon Monoxide	1.67 tpy	50/50 ppmvd*		
	Volatile Organic Compounds	0.24 tpy			
	Particulate Matter, PM ₁₀ , total	0.35 tpy			
	Particulate Matter, PM _{2.5} , total	0.34 tpy	—		
	Sulfur Dioxide	0.028 tpy	—		
	The long-term emission limits are 12-m Section 6 of the Technical Support Do emission limits are determined as a 1-h *Two short term limits listed are for na	cument (TSD) t nour average, co	for this ADP. The shor prrected to $3\% O_2$.	t-term	

Req. No.	Emission Limits	5		Equipment/ Activity ID No.
2.	Emissions from the Babcock and Wilcox Boiler must not exceed any of the following:			3
	Pollutant			
	Nitrogen Oxides	10.0 tpy		
	Carbon Monoxide	8.16 tpy]	
	Volatile Organic Compounds	0.53 tpy		
	Particulate Matter, PM ₁₀ , total	0.77 tpy		
	Particulate Matter, PM _{2.5} , total	0.76 tpy		
	Sulfur Dioxide	0.062 tpy		
	The long-term emission limits are 12-month rollin Section 6 of the TSD for this ADP.	g sums calculat	ed consistent with	
3.	Visible emissions from the boilers must not exceed three minutes in any one hour period as determine Method 9.		•	1-3
4.	 Visible emissions from the Emergency Generate percent opacity for more than three minutes in any accordance with SWCAA Method 9, except during requirement, the startup period ends when the earlier occurs: (a) The engine has reached normal operating term (b) The engine has been operating for 15 minutes 	one-hour period g startup. For th r of the followin pperature; or	d as determined in he purposes of this	4

Operating Limits and Requirements

Req. No.	Operating Limits and Requirements	Equipment/ Activity ID No.
5.	Reasonable precautions must be taken at all times to prevent and minimize fugitive emissions from plant operations.	Facility-wide
6.	Operations that cause or contribute to a nuisance odor must use recognized good practice and procedures to reduce these odors to a reasonable minimum.	Facility-wide
7.	Emission units and activities identified in this ADP must be maintained and operated in total and continuous conformity with the conditions identified in this ADP. SWCAA reserves the right to take any and all appropriate action to maintain the conditions of this ADP, including directing the facility to cease operations until corrective action can be completed.	Facility-wide

Req. No.	Operating Limits and Requirements	Equipment/ Activity ID No.
8.	If the monitoring results from any performance monitoring event for Unilux Boiler $#1$ or Unilux Boiler $#2$ indicate that emission concentrations may exceed the permitted emission concentration, the permittee must either perform 60 minutes of additional monitoring to more accurately quantify CO and NO _X emissions or initiate corrective action. Additional monitoring or corrective action must be initiated as soon as practical but no later than three days after the potential exceedance is identified. Corrective action includes tuning, maintenance by service personnel, limitation of boiler load, or other action taken to maintain compliance with permitted limits. Monitoring of unit emissions must be conducted within three days following completion of any corrective action to confirm that the corrective action has been effective. Corrective action must be pursued until observed emission concentrations no longer exceed the permitted emission concentrations.	1-2
9.	The exhausts of the Unilux Boilers must be discharged vertically into the ambient air above the level of the building roof. Any device that obstructs or prevents vertical discharge is prohibited.	1-2
10.	All boilers must only be fired on natural gas or #2 diesel. Diesel fuel may only be fired for maintenance checks, readiness testing, and when natural gas is not available (e.g. involuntary curtailments).	1-3
11.	Diesel consumption by Unilux Boiler #1 and Unilux Boiler #2 must not exceed 14,740 gallons per year each.	1-2
12.	The Emergency Generator Engine must only be fired on fuel oil with a maximum sulfur content of 15 ppmw. Any fuel other than ultra low-sulfur fuel oil must be approved by SWCAA in writing prior to use.	4
13.	The Emergency Generator Engine must be equipped with a non-resettable hour meter to record hours of operation.	4
14.	Operation of the Emergency Generator Engine for maintenance checks and readiness testing must not exceed 100 hours per year. Emergency operation of the emergency engine is not limited.	4
15.	Operation of the Emergency Generator Engine is limited to maintenance checks, readiness testing, and as necessary to provide emergency power.	4

Monitoring and Recordkeeping Requirements

Req. No.	Monitoring and Recordkeeping Requirements	Equipment/ Activity ID No.
16.	With the exception of data logged by a computerized data acquisition system, each record required by this ADP must include the date and the name of the person making the record entry, at minimum. If a control device or process is not operating, a record must be made to that effect.	Facility-wide

Req. No.	Monitoring and Recordkeeping Requirements	Equipment/ Activity ID No.
17.	All records required by this ADP must be kept for a minimum period of no less than three (3) years and must be maintained in a form readily available for inspection by SWCAA representatives.	Facility-wide
18.	Excess emissions and upset conditions must be recorded for each occurrence.	Facility-wide
19.	 The following information must be collected, recorded at the intervals below, and readily available onsite for inspection: (a) The total amount of natural gas consumed by each boiler and other natural gas equipment must be determined for each calendar month; (b) The total amount of diesel consumed by each boiler must be determined for each calendar month; (c) The total number of hours the Emergency Generator Engine operated must be recorded for each calendar year; (d) Maintenance activities that affect emissions from any of the boilers or emergency engines must be logged for each occurrence; and (e) All air quality complaints, including odor complaints, received by the permittee and results of subsequent investigation or corrective action must be recorded for each occurrence. 	Facility-wide

Emission Monitoring and Testing Requirements

Req. No.	Emission Monitoring and Testing Requirements	Equipment/ Activity ID No.
20.	Source emissions testing of Unilux Boiler #1 and Unilux Boiler #2 must be conducted initially and at least once every ten years after startup (no later than the end of December in the applicable year) in accordance with the requirements in Appendix A of this Permit. Initial source emissions testing of each boiler must be conducted within 60 days of startup. Alternative schedules or test methods may be pre-approved by SWCAA if appropriately justified by the Permittee (e.g. a delay in emissions testing could be approved if operation was not sufficient to allow or justify testing).	1-2
21.	Performance monitoring of Unilux Boiler #1 and Unilux Boiler #2 must be conducted no later than the end of December each year as described in Appendix B of this Permit unless an alternative schedule has been approved by SWCAA in writing. If the unit is not operated in a month during which performance monitoring is due, monitoring must be conducted no later than the end of the calendar month in which it is next operated. Performance monitoring is not required in any year during which source emissions testing of the unit is conducted in accordance with Appendix A.	1-2

Reporting Requirements

Req. No.	Reporting Requirements	Equipment/ Activity ID No.
22.	Upset conditions must be reported to SWCAA within five (5) business days after discovery. The Permittee may provide notification to SWCAA via telephone or email. A message may be left on the answering machine for upset conditions that occur outside of normal business hours.	Facility-wide
23.	 Excess emissions must be reported to SWCAA as follows: (a) As soon as possible, but no later than twelve (12) hours after discovery for emissions that represent a potential threat to human health or safety; (b) As soon as possible, but no later than forty-eight (48) hours after discovery for emissions which the Permittee wishes to claim as unavoidable pursuant to SWCAA 400-107(1); and (c) No later than thirty (30) calendar days after the end of the month of discovery for all other excess emissions. 	Facility-wide
24.	Deviations from permit conditions must be reported no later than 30 days after the end of the month during which the deviation is discovered.	Facility-wide
25.	 An annual emissions inventory report must be submitted to SWCAA by March 15 for emissions from the previous calendar year in accordance with SWCAA 400-105(1). Each report must contain, at a minimum, the following information: (a) The annual sum of emissions of NO_x, CO, VOC, PM, PM₁₀, PM_{2.5}, SO₂, TAPs, and HAPs; (b) The total amount of natural gas consumed by each boiler; (c) The total amount of diesel fuel consumed by each boiler; and (d) The number of hours the emergency generator operated. 	Facility-wide
26.	The results of all emission testing required by this ADP must be reported to SWCAA in writing within forty-five (45) calendar days of test completion.	1-2
27.	Emission monitoring results must be reported to SWCAA in writing within fifteen (15) calendar days of completion.	1-2
28.	Within ten (10) business days of initiating normal operation of each of the Unilux boilers, the Permittee must notify SWCAA that the boilers are operating.	1-2

3. General Provisions

Req. No.	General Provisions	
А.	For the purpose of ensuring compliance with this ADP, duly authorized representatives of the	
	Southwest Clean Air Agency must be permitted access to the Permittee's premises and the facilities being constructed, owned, operated and/or maintained by the Permittee for the purpose of inspecting	
	said facilities. These inspections are required to determine the status of compliance with this ADP and	
	applicable regulations and to perform or require such tests as may be deemed necessary.	

Req. No.	General Provisions
В.	The provisions, terms, and conditions of this ADP bind the Permittee, its officers, directors, agents, servants, employees, successors and assigns, and all persons, firms, and corporations acting under or for the Permittee.
C.	The requirements of this ADP survive any transfer of ownership of the source or any portion thereof.
D.	This ADP must be posted conspicuously at or be readily available near the source.
E.	This ADP will be invalidated, in whole or in part, if construction or installation of any new or modified equipment has not commenced within eighteen (18) months from date of issuance, if construction is discontinued for a period of eighteen (18) months or more without prior SWCAA approval, or if construction is not completed within a reasonable time.
F.	This ADP does not supersede requirements of other Agencies with jurisdiction and further, this ADP does not relieve the Permittee of any requirements of any other governmental Agency. In addition to this ADP, the Permittee may be required to obtain permits or approvals from other agencies with jurisdiction.
G.	Compliance with the terms of this ADP does not relieve the Permittee from the responsibility of compliance with SWCAA General Regulations for Air Pollution Sources, previously issued Regulatory Orders, RCW 70A.15, Title 173 WAC or any other applicable emission control requirements, nor from the resulting liabilities and/or legal remedies for failure to comply.
H.	If any provision of this ADP is held to be invalid, all unaffected provisions of the ADP will remain in effect and be enforceable.
I.	No change in this ADP will be made or be effective except as may be specifically set forth by written order of the Southwest Clean Air Agency upon written application by the Permittee for the relief sought.
J.	The Southwest Clean Air Agency may, in accordance with RCW 70A.15, impose such conditions as are reasonably necessary to assure the maintenance of compliance with the terms of this ADP, the Washington Clean Air Act, and the applicable rules and regulations adopted under the Washington Clean Air Act.

Appendix A Emission Testing Requirements Unilux Boilers

1. Background

The purpose of this testing is to quantify emissions from Unilux Boiler # 1 and Unilux Boiler #2 and to provide an adequate assurance of compliance with the terms and conditions of this ADP.

2. Test Constituents and Test Methods

		<u>Minimum</u> <u>Test Run</u>
Constituent	Reference Test Method	Duration
Volumetric flow rate	EPA Method 1	N/A
Gas velocity, temperature	EPA Method 2	N/A
Oxygen (O ₂), carbon dioxide (CO ₂)	EPA Method 3A	60 minutes
Stack Gas Moisture Content	EPA Method 4	60 minutes
Oxides of nitrogen (NOx)	EPA Method 7E	60 minutes
Carbon monoxide (CO)	EPA Method 10	60 minutes

3. Test Plan and Notification

A comprehensive test plan must be submitted to SWCAA for review and approval a minimum of ten (10) business days prior to the proposed test date. SWCAA must be notified a minimum of three (3) business days prior to the proposed test date so that a SWCAA representative may be present during testing.

4. Test Requirements

(a) Test Dates.

Testing must be completed within sixty (60) calendar days of reaching maximum production, but no later than one hundred eighty (180) calendar days after initial construction.

Subsequent emission testing must be conducted no later than December at least once within every ten (10) year period after the initial test date. Tests conducted more than three months before the required due date will not satisfy the periodic source emission testing requirement without prior written approval from SWCAA.

- (b) Test Duration. Tests must include a minimum of three (3) test runs, each at least one (1) hour in duration.
- (c) Test Location. The Permittee must provide the necessary platform and sampling ports for testing personnel to perform a test of the emission unit. Testing must be performed at the exhaust of each unit.
- (d) Source Operations. Source operations during the emissions test must be representative of the maximum intended level of operation. Inability to achieve maximum level of intended operation must be preapproved by SWCAA in advance of performing the test. Testing must be conducted while firing natural gas unless otherwise approved by SWCAA.
- (e) Test Records. A complete record of operation related parameters, including process startups and shutdowns, control equipment startups and shutdowns, and any adjustments made during testing must be kept during emissions testing to correlate operations with emissions and must

Appendix A Emission Testing Requirements Unilux Boilers

be recorded in the test results final report. Include a summary of production related parameters, which may include fuel type, operating temperature, process throughput, pressure or pressure drop, pH, recirculation rates, or other parameters unique to the operation of the unit being tested.

5. Reporting Requirements

Unless otherwise directed by SWCAA, a final test report must be prepared and submitted (hard copy or electronic) to SWCAA within forty-five (45) calendar days of test completion and, at a minimum, must contain the following information:

- (a) A brief description of the purpose of the test, for example, an initial test, a periodic test required by an ADP, a test required by a federal, state, or local rule or regulation, or a test required to determine compliance with a Notice to Correct;
- (b) Description of the unit being tested, including manufacturer, model number, serial number, and design capacity of the equipment;
- (c) The location and description of the discharge point (stack, port, etc.), including the dimensions (diameter, length and width, or other) and height above ground level. A photo of the discharge point is highly recommended;
- (d) The location of the sample ports or test location and a description of how the sampling location relates to the discharge point. For example, the sampling location may be in a square duct some distance away from the discharge point, which is a round stack. A photo of the sample ports or test location is highly recommended;
- (e) Time and date of the test and identification and qualifications of the personnel involved;
- (f) Summary of results, reported in units and averaging periods consistent with the application emissions standard or unit;
- (g) Test results must be reported in:
 - (1) ppmv, dry, corrected to 3% O₂; and
 - (2) pound per hour (lb/hr);
- (h) Summary of air pollution control systems or equipment operating conditions during the test;
- (i) Summary of production related parameters, which may include fuel type, operating temperature, process throughput, pressure or pressure drop, pH, recirculation rates, or other parameters unique to the operation of the unit being tested;
- (j) A description of the test methods or procedures used, including all field data, quality assurance/quality control procedures and documentation;
- (k) A description of the analytical procedures used, including all laboratory data, quality assurance/quality control procedures and documentation;
- (l) Copies of field data and example calculations;
- (m) Chain of custody information;
- (n) Calibration documentation;
- (o) Discussion of any abnormalities associated with the results; and
- (p) A statement signed by the senior management official of the testing firm certifying the validity of the source test report. Reports with material mistakes or misinformation may be rejected by SWCAA.

Appendix A Emission Testing Requirements Unilux Boilers

6. Changes to Testing Requirements

The source test must be conducted as specified in the sections above. The Permittee may submit a written request to SWCAA for approval of minor modifications to the requirements above or the testing schedule. Upon review of the request and in accordance with EPA delegation, SWCAA will inform the Permittee in writing of any approved modifications.

Appendix B Emission Monitoring Requirements Unilux Boilers

1. Background

The purpose of emission monitoring ("tuning") is to quantify emissions from the Unilux Boilers, provide a basis for adjust the boilers as necessary to minimize emissions, and to provide a reasonable assurance that the boiler is operating properly.

2. Test Constituents and Test Methods

- (a) Oxygen (O₂) using a calibrated portable combustion analyzer or EPA Methods 3 or 3A;
- (b) Nitrogen oxides (NO_x) using a calibrated portable combustion analyzer or EPA Method 7E; and
- (c) Carbon monoxide (CO) using a calibrated portable combustion analyzer or EPA Method 10.

Combustion analyzers include electrochemical cell combustion analyzers, analyzers used for reference method testing, or other analyzers pre-approved by SWCAA.

3. Monitoring Requirements

- (a) Dates. Emission monitoring must be conducted at least once within every twelve (12) month period no later than December, while firing on natural gas, unless the boiler is not in use during that year, or a reference method source testing was conducted on that unit during that year. A primary fuel is the fuel that was burned in the largest quantity, in terms of therms or MMBtu, in the previous twelve (12) months.
- (b) Source Operation. Boiler operation during the emissions test must be representative of current intended operating conditions.
- (c) Data Collection.
 - Sampling must consist of at least one (1) test consisting of at least five (5) minutes of data collection following a "ramp-up phase." The ramp-up phase ends when analyzer readings have stabilized (less than 5% per minute change in emission concentration). Emission concentrations must be recorded at least once every thirty (30) seconds during the data collection phase. All test data collected following the ramp-up phase must be reported to SWCAA.
 - (2) The analyzer(s) response to span gas of a known concentration must be determined before and after testing. No more than twelve (12) hours may elapse between span gas response checks. The results of the analyzer response will not be valid if the pre and post response check results vary by more than 10% of the known span gas value.
 - (3) The CO and NO_x span gas concentrations must be no less than 50% and no more than 200% of the emission concentration corresponding to the permitted emission limits. A lower concentration span gas may be used if it is more representative of measured concentrations. Ambient air may be used to zero the CO and NO_x cells/analyzer(s) and span the oxygen cell/analyzer.
 - (4) If the monitoring results from any monitoring event indicate that emission concentrations exceed the permitted emission limits for the unit, the Permittee must either perform sixty (60) minutes of additional monitoring to more accurately quantify CO and NO_x emissions, or initiate corrective action. Additional monitoring or corrective action must be initiated as soon as practical but no later than three (3)

Appendix B Emission Monitoring Requirements Unilux Boilers

calendar days after the exceedance is identified. Corrective action includes tuning, maintenance by service personnel, limitation of unit load, or other action taken to maintain compliance with permitted limits. Monitoring of unit emissions must be conducted within three (3) calendar days following completion of any corrective action to confirm that the corrective action has been effective. Initiation of corrective action does not shield the Permittee from enforcement.

NOx	CO	Fuel
(ppmvd @ 3% O ₂)	(ppmvd @ 3% O ₂)	
12	50	Natural Gas
80	50	Diesel

4. Reporting Requirements

Monitoring results must be reported to SWCAA within fifteen (15) calendar days of monitoring completion. The average of the results of each run is evaluated against the requirements of the ADP. Results must be submitted on forms provided by SWCAA or in an alternative format previously approved by SWCAA. The report must include the following information:

- (a) A description of the emission unit, including manufacturer, model number and facility designation;
- (b) Time and date of the emissions evaluation;
- (c) Identification of the personnel involved;
- (d) Test "tapes" or other direct information generated by the monitoring equipment;
- (e) All collected data, calculations, and final results, reported in units consistent with the applicable emission standard or limit;
- (f) Final test result concentrations will be corrected to 3% O₂;
- (g) A summary of control system or equipment operating conditions;
- (h) A description of the evaluation methods or procedures used, including all field data, quality assurance/quality control procedures and documentation; and
- (i) Calibration error checks documentation.

5. Changes to Requirements

Emission monitoring must be conducted as specified in the sections above. The Permittee may submit a written request to SWCAA for approval of minor modifications to the requirements above or the monitoring schedule. Upon review of the request and in accordance with EPA delegation, SWCAA will inform the Permittee in writing of any approved modifications.

State Environmental Policy Act DETERMINATION OF SEPA EXEMPTION 23-012

Description of proposal:

Peace Health submitted Air Discharge Permit (ADP) Application CO-1068 to the Southwest Clean Air Agency in which the facility is seeking approval to install and operate two replacement boilers. St. John Medical Center is a 256-bed hospital that provides emergency, out-patient, and long term medical care at the Delaware Campus Facility.

Proponent:

Chuck Johnson, Facilities Manager, Peace Health

Location of proposal, including street address if any:

1615 Delaware Street, Longview, WA 98632

Lead agency:

Southwest Clean Air Agency

The lead agency for this proposal has determined that the proposed project is exempt from the requirements of the State Environmental Policy Act (SEPA) under Washington Administrative Code (WAC) 197-11-800(3) as follows: "The repair, remodeling, maintenance, or minor alteration of existing private or public structures, facilities or equipment, including utilities, recreation, and transportation facilities involving no material expansions or changes in use beyond that previously existing." The proposed project is identified as maintenance of existing equipment and as such it does not have a probable significant impact on the environment. Neither an environmental checklist nor an Environmental Impact Statement is required under Revised Code of Washington (RCW) 43.21C.030(2)(c). This decision was made by SWCAA after review of the proponent's proposal and the information on file with the lead agency. This information is available to the public on request.

□ This project/permitting action by SWCAA is SEPA exempt.

Responsible official: Position/title:	Clinton Lamoreaux, P.E. Chief Engineer
Address:	Southwest Clean Air Agency 11815 NE 99th St. Suite 1294 Vancouver, WA 98682-2322
Phone:	(360) 574-3058 ext 131

Signature: _____

Date: