

April 19, 2022

Ms. Susan Steinbrenner
Evergreen Public Schools
PO Box 8910
Vancouver, Washington 98668

Subject: Final Air Discharge Permit for a Replacement of the Wy'East Middle School and Associated Combustion Equipment

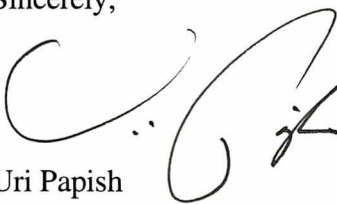
Dear Ms. Steinbrenner:

A final determination to issue Air Discharge Permit (ADP) 22-3507 has been completed for ADP Application CL-3184 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 CL-3184 was published in the permit section of SWCAA's website on March 18, 2022. 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 22-3507 and the associated Technical Support Document 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 22-3507 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 comments, or desire additional information, please contact me or Danny Phipps at (360) 574-3058, extension 124.

Sincerely,



Uri Papish
Executive Director

UP: dp

Enclosure: Technical Support Document and Air Discharge Permit 22-3507



SOUTHWEST CLEAN AIR AGENCY

**AIR DISCHARGE PERMIT
SWCAA 22-3507**

Issued: April 19, 2022

Facility Name: Evergreen School District
Wy'East Middle School
Physical Location: 1112 SE 136th Avenue
Vancouver, WA 98683
SWCAA ID: 418



REVIEWED BY: *Clinton H. Lamoreaux*
Clinton Lamoreaux, Chief Engineer

APPROVED BY: *Uri Papish*
Uri Papish, Executive Director

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1. Equipment/Activity Identification

ID No.	Generating Equipment/Activity	Control Equipment
1	Boiler 1 (ATH / KN 16+, 1.6 MMBtu/hr)	Low Emissions Burner, Low Sulfur Fuel (natural gas)
2	Boiler 2 (ATH / KN 16+, 1.6 MMBtu/hr)	Low Emissions Burner, Low Sulfur Fuel (natural gas)
3	Hot Water Heaters (units less than 0.4 MMBtu/hr each)(e.g. 1 and 2 (Rheem / GHE80SU-130A, 0.13 MMBtu/hr each))	Low Emission Burner, Low Sulfur Fuel (natural gas)
4	Emergency Generator Diesel Engine (Caterpillar, 247 bhp)	EPA Tier 3 Certified, Ultra-Low Sulfur Fuel (<15 ppm S diesel)

2. Approval Conditions

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

Emission Limits

No.	Emission Limits	Equipment/ Activity															
1.	<p>Emissions from Boiler 1 must not exceed:</p> <table border="0" style="margin-left: auto; margin-right: auto;"> <tr> <td></td> <td style="text-align: center;">Emission Limit</td> <td style="text-align: center;">Emission Limit</td> </tr> <tr> <td></td> <td style="text-align: center;">ppmvd @ 3% O₂</td> <td style="text-align: center;">tons per year</td> </tr> <tr> <td style="text-align: left;"><u>Pollutant</u></td> <td style="text-align: center;"><u>(1-hour average)</u></td> <td style="text-align: center;"><u></u></td> </tr> <tr> <td>NO_x</td> <td style="text-align: center;">30</td> <td style="text-align: center;">0.26</td> </tr> <tr> <td>CO</td> <td style="text-align: center;">50</td> <td style="text-align: center;">0.26</td> </tr> </table> <p>Annual emissions must be calculated consistent with the methodology and emission factors presented in Section 6 of the Technical Support Document for this Air Discharge Permit.</p>		Emission Limit	Emission Limit		ppmvd @ 3% O ₂	tons per year	<u>Pollutant</u>	<u>(1-hour average)</u>	<u></u>	NO _x	30	0.26	CO	50	0.26	1
	Emission Limit	Emission Limit															
	ppmvd @ 3% O ₂	tons per year															
<u>Pollutant</u>	<u>(1-hour average)</u>	<u></u>															
NO _x	30	0.26															
CO	50	0.26															
2.	<p>Emissions from Boiler 2 must not exceed:</p> <table border="0" style="margin-left: auto; margin-right: auto;"> <tr> <td></td> <td style="text-align: center;">Emission Limit</td> <td style="text-align: center;">Emission Limit</td> </tr> <tr> <td></td> <td style="text-align: center;">ppmvd @ 3% O₂</td> <td style="text-align: center;">tons per year</td> </tr> <tr> <td style="text-align: left;"><u>Pollutant</u></td> <td style="text-align: center;"><u>(1-hour average)</u></td> <td style="text-align: center;"><u></u></td> </tr> <tr> <td>NO_x</td> <td style="text-align: center;">30</td> <td style="text-align: center;">0.26</td> </tr> <tr> <td>CO</td> <td style="text-align: center;">50</td> <td style="text-align: center;">0.26</td> </tr> </table> <p>Annual emissions must be calculated consistent with the methodology and emission factors presented in Section 6 of the Technical Support Document for this Air Discharge Permit.</p>		Emission Limit	Emission Limit		ppmvd @ 3% O ₂	tons per year	<u>Pollutant</u>	<u>(1-hour average)</u>	<u></u>	NO _x	30	0.26	CO	50	0.26	2
	Emission Limit	Emission Limit															
	ppmvd @ 3% O ₂	tons per year															
<u>Pollutant</u>	<u>(1-hour average)</u>	<u></u>															
NO _x	30	0.26															
CO	50	0.26															

No.	Emission Limits	Equipment/ Activity
3.	Hot Water Heaters must only be fired on natural gas. Emissions from Hot Water Heaters must meet the specifications of SWCAA 400-070 (13) for the year of manufacture for each unit. Annual emissions must be calculated using the emission guaranteed value for the year of manufacture for each hot water heater. Factors are presented in Section 6 of the Technical Support Document for this Air Discharge Permit. Any replacement units not subject to permitting must also meet the specifications of SWCAA 400-070 (13) for the appropriate year.	3
4.	Visible emissions from natural gas-fired equipment must not exceed zero percent opacity for more than three minutes in any one-hour period as determined in accordance with SWCAA Method 9 (See Appendix A of SWCAA 400).	1 – 3
5.	Visible emissions from the Emergency Generator Diesel Engine must not exceed five percent opacity for more than 3 minutes in any one-hour period as determined in accordance with SWCAA Method 9 (See Appendix A of SWCAA 400) except during startup. For the purposes of this requirement, the startup period ends when the earlier of the following operating events occurs: (a) The engine has reached normal operating temperature; or (b) The engine has been operating for 15 minutes.	4

Operating Limits and Requirements

No.	Operating Limits and Requirements	Equipment/ Activity
6.	If the test results from any emissions monitoring event for Boilers 1 and 2 exceed 30 ppmvd NO _x @ 3% O ₂ or 50 ppmvd CO @ 3% O ₂ , the permittee must either perform 60 minutes of additional monitoring to more accurately quantify CO and NO _x emissions, or initiate corrective action. Additional testing 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 30 ppmvd NO _x @ 3% O ₂ or 50 ppmvd CO @ 3% O ₂ .	1 – 2
7.	The Emergency Generator Diesel Engine must only be fired on No. 2 diesel or better. The sulfur content of the fuel fired in the diesel engine must not exceed 0.0015% by weight (15 ppm). A fuel certification from the fuel supplier may be used to demonstrate compliance with this requirement.	4
8.	Operation of the Emergency Generator Diesel Engine must be limited to maintenance checks, readiness testing, and as necessary to provide emergency power to the facility.	4
9.	Operation of the Emergency Generator Diesel Engine for maintenance checks and readiness testing must not exceed 100 hours per year. Emergency operation of the emergency engine is not hours limited. A functioning non-resettable time totalizer must be installed on the engine and used to measure hours of operation.	4

No.	Operating Limits and Requirements	Equipment/ Activity
10.	Exhaust from the Emergency Generator Diesel Engine must be discharged vertically above the roof level of the building or enclosure in which the engine is housed (if applicable). Any device that obstructs or prevents vertical discharge is prohibited.	4
11.	Emission units identified in this Permit must be maintained and operated in total and continuous conformity with the conditions identified in this Permit. SWCAA reserves the right to take any and all appropriate action to maintain the conditions of this Permit, including directing the facility to cease operations until corrective action can be completed.	Facility-wide

Monitoring and Recordkeeping Requirements

No.	Monitoring and Recordkeeping Requirements	Equipment/ Activity
12.	<p>The following information must be collected, recorded at the intervals specified below, and readily available on-site for inspection:</p> <ul style="list-style-type: none"> (a) The total amount of natural gas consumed by the boilers and water heaters must be recorded for each calendar month; (b) The number of hours the emergency generator engine is operated must be recorded for each calendar year; (c) Maintenance activities that may affect emissions from equipment identified in this Permit must be logged for each occurrence; (d) The fuel sulfur content of the diesel burned in the emergency generator engine must be determined and recorded for each fuel delivery. A fuel supplier certification may be used in lieu of actual fuel testing; (e) Upset conditions that cause excess emissions must be recorded for each occurrence; and (f) All air quality related complaints, including odor complaints, received by the permittee and the results of any subsequent investigation or corrective action must be recorded for each occurrence. 	Facility-wide
13.	With the exception of data logged by a computerized data acquisition system, each record required by this Air Discharge Permit must include the date and the name of the person making the record entry.	Facility-wide
14.	All records required by this Permit must be kept for a minimum period of no less than three years and must be maintained in a form readily available for inspection by SWCAA representatives.	Facility-wide

Emission Monitoring and Testing Requirements

No.	Emission Monitoring and Testing Requirements	Equipment/ Activity
15.	Emissions monitoring of boilers must be conducted at least annually no later than the end of March of each calendar year as described in Appendix A.	1 – 2

Reporting Requirements

No.	Reporting Requirements	Equipment/ Activity
16.	The results of all emissions monitoring conducted in accordance with Appendix A must be reported to SWCAA within 15 days of test completion.	1 – 2
17.	Excess emissions must be reported to SWCAA as follows: (a) As soon as possible, but no later than 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 48 hours after discovery for emissions which the permittee wishes to claim as unavoidable pursuant to SWCAA 400-107; and (c) No later than 30 calendar days after the end of the month of discovery for all other excess emissions.	Facility-wide
18.	Deviations from permit conditions must be reported no later than 30 calendar days after the end of the month during which the deviation is discovered.	Facility-wide
19.	The following emissions related records must be reported to SWCAA by March 15 th for the previous calendar year: (a) The total amount of natural gas consumed by the boilers and water heaters; (b) The total number of hours the emergency generator engine operated; and (c) Air emissions of criteria air pollutants, volatile organic compounds, toxic air pollutants (TAPs), and hazardous air pollutants (HAPs).	Facility-wide

3. General Provisions

No.	General Provisions
A.	The equipment specified in ADP Application CL-3184 and this Permit must be maintained and operated in total and continuous conformity with the conditions identified in this Permit. SWCAA reserves the right to take any and all appropriate action to maintain the conditions of this Permit, including directing the facility to cease operations until corrective action can be completed.
B.	For the purpose of ensuring compliance with this Permit, 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 Permit and applicable regulations and to perform or require such tests as may be deemed necessary.
C.	The provisions, terms and conditions of this Permit shall be deemed to bind the permittee, its officers, directors, agents, servants, employees, successors and assigns, and all persons, firms, and corporations acting under or for the permittee.
D.	The requirements of this Permit shall survive any transfer of ownership of the source or any portion thereof.
E.	This Permit must be posted conspicuously at or be readily available near the source.
F.	This Permit shall be invalid if construction/installation has not commenced within eighteen months from date of issuance.

No.	General Provisions
G.	This Permit does not supersede requirements of other Agencies with jurisdiction and further, this Permit does not relieve the permittee of any requirements of any other governmental Agency. In addition to this Permit, the permittee may be required to obtain permits or approvals from other agencies with jurisdiction.
H.	Compliance with the terms of this Permit 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.
I.	If any provision of this Permit is held to be invalid, all unaffected provisions of the Permit shall remain in effect and be enforceable.
J.	No change in this Permit shall 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.
K.	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 Permit, the Washington Clean Air Act, and the applicable rules and regulations adopted under the Washington Clean Air Act.

Appendix A – ADP 22-3507
Emissions Monitoring Requirements
Boilers

1. Introduction:

- a. The purpose of periodically monitoring emissions at the exhaust of each boiler is to minimize emissions and provide a reasonable assurance that each unit is operating properly.
- b. Periodic monitoring may be conducted with an electrochemical cell combustion analyzer, analyzers used for reference method testing, or other analyzers pre-approved by SWCAA.

2. Monitoring Requirements:

- a. Monitoring to determine emission concentrations of the following constituents must be conducted for each unit no later than the end of March during each calendar year. The use of an alternative test schedule must be pre-approved by SWCAA in writing.

Constituents to be Measured

Carbon Monoxide (CO)

Nitrogen Oxides (NO_x)

Oxygen (O₂)

- b. Source operation during monitoring must be representative of maximum intended operating conditions during that year.
- c. Alternative monitoring methodologies must be pre-approved by SWCAA.

3. Minimum Quality Assurance/Quality Control Measures:

- a. The analyzer(s) response to span (calibration) gas of a known concentration (reference) must be determined before and after testing. No more than 12 hours may elapse between response checks. The test results are invalid if the analyzer zero or span drift exceeds 10% of the span value. The test may not be started until the calibration error (the difference between the reference concentration and the analyzer response) is no more than 10% of the span value.
- b. 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 limit. 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.
- c. Sampling of each exhaust stack must consist of at least 1 test consisting of at least 5 minutes of data collection following a "ramp-up phase." The ramp-up phase ends when analyzer readings have stabilized (less than 5%/minute change in emission concentration). Emission concentrations must be recorded at least once every 30 seconds during testing. All test data collected following the ramp-up phase(s) must be reported to SWCAA. Alternative testing methods may be utilized provided pre-approval is obtained from SWCAA.

Appendix A – ADP 22-3507
Emissions Monitoring Requirements
Boilers

Page 2 of 2

3. Minimum Quality Assurance/Quality Control Measures (continued):

If the test results from any emissions monitoring event exceed the relevant concentrations identified below, the permittee must either perform 60 minutes of additional monitoring to more accurately quantify CO and NO_x emissions or initiate corrective action. Additional testing or corrective action must be initiated as soon as practical but no later than three days after the potential exceedance is identified. Corrective action must be documented in written form. Corrective action includes tuning, maintenance by service personnel, limitation of unit load, or other action taken to maintain compliance with permitted emission 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 relevant concentrations indicated below on a 1-hour average basis. Initiation of corrective action does not shield the permittee from enforcement actions by SWCAA.

Unit	NO _x (ppmvd @ 3% O ₂)	CO (ppmvd @ 3% O ₂)
Boiler 1	30	50
Boiler 2	30	50

4. Reporting:

- a. All monitoring results must be recorded at the facility and reported to SWCAA in writing using a format designated by the Agency. Results must be reported within 15 calendar days of completion. The following information must be included in the report:
- (1) Time and date of the emissions evaluation;
 - (2) Identification of the personnel involved;
 - (3) Identification of the affected unit;
 - (4) A summary of results (NO_x, CO, O₂, etc.), reported in units consistent with the applicable emission standard(s) or limit(s);
 - (5) A summary of equipment operating conditions (e.g., firing rate, fuel flow, stack temperature, etc.);
 - (6) A description of the evaluation methods or procedures used including all field data, quality assurance/quality control procedures and documentation; and
 - (7) Analyzer response check and calibration error documentation including but not limited to calibration gas certificates and pre- and post-test zero and span gas checks.
- b. Individual data points must be reported as read (not O₂ corrected). Final average monitoring results must be corrected to 3% O₂ in the exhaust gas and adjusted to reflect analyzer response to zero and span gases using current SWCAA forms or SWCAA approved alternate forms. If data is collected electronically by the analyzer and is output in spreadsheet form, pre- and post-test zero and drift calibration checks must be clearly identified in the output.

5. Changes to Requirements

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.