SWCAA
Southwest Clean Air Agency

11815 NE 99th Street, Suite 1294
Vancouver, WA 98682
(360) 574-3058
www.swcleanair.org

November 16, 2022

Jason Ackley
Vancouver School District #37
2901 Falk Road
Vancouver, WA 98661

RE: Final Air Discharge Permit for Operating of Natural Gas Fired Equipment at the Existing Skyview High School

Dear Mr. Ackley:

A final determination to issue Air Discharge Permit (ADP) 22-3547 has been completed for ADP Application CL-3201 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-3201 was published in the permit section of SWCAA's website on June 30, 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 22-3547 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 22-3547 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 22-3547

SWCAA
Southwest Clean Air Agency

AIR DISCHARGE PERMIT
22-3547

Issued: November 16, 2022

Vancouver School District #37
Skyview High School

1300 NW 139th Street, Vancouver, WA 98685

SWCAA ID – 1001

REVIEWED BY: _____
Clinton Lamoreaux, Chief Engineer

APPROVED BY: _____
Uri Papish, Executive Director

TABLE OF CONTENTS

1. Equipment/Activity Identification

ID No.	Equipment/Activity	Control Equipment/Measure
1	Boiler 1 (Lochinvar model FBN 2001)	Low Emission Burner Ultralow Sulfur Fuel (natural gas)
2	Boiler 2 (Lochinvar model FBN 2001)	Low Emission Burner Ultralow Sulfur fuel (natural gas)
3	Boiler 3 (Lochinvar model FBN 2001)	Low Emission Burner Ultralow Sulfur Fuel (natural gas)
4	Boiler 4 (Lochinvar model FBN 2001)	Low Emission Burner Ultralow Sulfur Fuel (natural gas)
5	Water Heater 1 (Lochinvar model CFN0400)	Low Emission Burner Ultralow Sulfur Fuel (natural gas)
6	Water Heater 2 (Lochinvar model AWH0800N)	Low Emission Burner Ultralow Sulfur Fuel (natural gas)
7	Water Heater 3 (Lochinvar model AWH0800N)	Low emission burner Ultralow Sulfur Fuel (natural gas)
8	Emergency Generator Engine (Ford LSG-8751-6005-A)	Ultralow Sulfur Fuel (natural gas)

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.

Emission Limits

<table>
<tr><th>Req. No.</th><th>Emission Limits</th><th>Equipment/ Activity ID No.</th></tr>
<tr><td>1.</td><td>Emissions from each of the boilers must not exceed any of the following:

<table>
<tr><th>Pollutant</th><th colspan="2">Emission Limit</th></tr>
<tr><td>Nitrogen Oxides</td><td>0.32 tpy</td><td>30 ppmvd @ 3% O_2</td></tr>
<tr><td>Carbon Monoxide</td><td>0.32 tpy</td><td>50 ppmvd @ 3% O_2</td></tr>
</table>

The long-term emission limits are 12-month rolling sums calculated consistent with Section 6 of the TSD for this ADP. The short-term emission limits are determined as a 1-hour average, corrected to 3% O_2.</td><td>1-4</td></tr>
</table>

<table>
<tr><th>Req. No.</th><th>Emission Limits</th><th>Equipment/ Activity ID No.</th></tr>
<tr><td>2.</td><td>Emissions from Water Heaters 2 and 3 each must not exceed any of the following:

<table><tr><th>Pollutant</th><th colspan="2">Emission Limit</th></tr><tr><td>Nitrogen Oxides</td><td>0.13 tpy</td><td>30 ppmvd @ 3% O_2</td></tr><tr><td>Carbon Monoxide</td><td>0.13 tpy</td><td>50 ppmvd @ 3% O_2</td></tr></table>
The long-term emission limits are 12-month rolling sums calculated consistent with Section 6 of the TSD for this ADP. The short-term emission limits are determined as a 1-hour average, corrected to 3% O_2.</td><td>6-7</td></tr>
<tr><td>3.</td><td>Visible emissions from all natural gas fired units must not exceed zero percent (0%) opacity for more than three (3) minutes in any 1-hour period as determined by a Certified Observer in accordance with SWCAA Method 9.</td><td>1-8</td></tr>
<tr><td>4.</td><td>Hot Water Heaters must only be fired on natural gas. Emissions from Hot Water Heaters with a heat input less than 0.4 MMBtu/hr must meet the specifications of SWCAA 400-070 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 for the appropriate year.</td><td>5</td></tr>
</table>

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
8.	All exhausts must be discharged vertically. Any device that obstructs or prevents vertical discharge is prohibited.	1-8
9.	All emission units must be fired on natural gas at all times.	1-8
10.	The Emergency Generator Engine must be equipped with a non-resettable hour meter to record hours of operation.	8

Req. No.	Operating Limits and Requirements	Equipment/ Activity ID No.
11.	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.	8
12.	Operation of the Emergency Generator Engine is limited to maintenance checks, readiness testing, and as necessary to provide emergency power.	8
13.	If the results from any performance monitoring event for Boilers 1, 2, 3, or 4 or Water Heaters 2 and 3 indicates that emission concentrations may 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.	1-4, 6, and 7

Monitoring and Recordkeeping Requirements

Req. No.	Monitoring and Recordkeeping Requirements	Equipment/ Activity ID No.
14.	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
15.	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
16.	The following information must be collected, recorded at the intervals specified below, and readily available on-site for inspection: (a) The total amount of natural gas consumed facility-wide must be recorded for each month. Billing records may serve this purpose; (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 must be logged for each occurrence; and (d) Excess emissions, and upset conditions that cause excess emissions, must be recorded for each occurrence.	Facility-wide

Emission Monitoring Requirements

Req. No.	Emission Monitoring and Testing Requirements	Equipment/ Activity ID No.
17.	Performance monitoring of Boilers 1, 2, 3, and 4 and Water Heaters 2 and 3 must be conducted at least annually as described in Appendix A of this Permit.	1-4, 6, 7

Reporting Requirements

Req. No.	Reporting Requirements	Equipment/ Activity ID No.
18.	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
19.	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
20.	Emission monitoring results must be reported to SWCAA in writing within fifteen (15) calendar days of completion.	1-4, 6, 7
21.	The following emissions related records must be reported to SWCAA by March 15th for the previous calendar year: (a) The total amount of natural gas consumed facility-wide; (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

Req. No.	General Provisions
A.	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.
B.	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.

Req. No.	General Provisions
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 Monitoring Requirements
Boilers and Water Heaters

1. Background

The purpose of emission monitoring is to quantify emissions from the Boilers 1-4 and Water Heaters 2-3, provide a basis for adjust the boilers and water heaters as necessary to minimize emissions, and to provide a reasonable assurance that the boilers and water heaters are operating properly.

2. Test Constituents and Test Methods

(a) Oxygen (O_2) 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 the end of February, while firing on natural gas, unless the unit is not in use during that year.
(b) Source Operation. Unit operation during the emissions test must be representative of current intended operating conditions.
(c) Data Collection.
    (1) 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) calendar days after the exceedance is identified. Corrective action includes tuning,

Appendix A
Emission Monitoring Requirements
Boilers and Water Heaters

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.

NO_X (ppmvd @ 3% O_2)	CO (ppmvd @ 3% O_2)
30	50

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% O_2;
(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.