



TECHNICAL SUPPORT DOCUMENT

**Air Discharge Permit 22-3518
Air Discharge Permit Application CL-3195**

Issued: June 22, 2022

Washington Department of Fish and Wildlife - Hatcheries

SWCAA ID – 1024

Prepared By: Danny Phipps
Air Quality Engineer I
Southwest Clean Air Agency

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ABBREVIATIONS

List of Acronyms

ADP	Air Discharge Permit	NOV	Notice of Violation/
AP-42	Compilation of Emission Factors, AP-42, 5th Edition, Volume 1, Stationary Point and Area Sources – published by EPA	NSPS	New Source Performance Standard
ASIL.....	Acceptable Source Impact Level	PSD	Prevention of Significant Deterioration
BACT.....	Best available control technology	RCW	Revised Code of Washington
CAM	Compliance Assurance Monitoring	SCAQMD	South Coast Air Quality Management
CAS#.....	Chemical Abstracts Service registry number	SCC.....	Source Classification Code
CFR.....	Code of Federal Regulations	SDS	Safety Data Sheet
EPA.....	U.S. Environmental Protection Agency	SQER	Small Quantity Emission Rate listed in WAC 173-460
EU	Emission Unit	Standard	Standard conditions at a temperature of 68°F (20°C) and a pressure of 29.92 in Hg (760 mm Hg)
MACT.....	Maximum Achievable Control Technologies	SWCAA.....	Southwest Clean Air Agency
mfr.....	Manufacturer	T-BACT	Best Available Control Technology for toxic air pollutants
NESHAP	National Emission Standards for Hazardous Air Pollutants	WAC	Washington Administrative Code

List of Units and Measures

μg/m ³	Micrograms per cubic meter	hp-hr	Horsepower-hour
μm.....	Micrometer (10 ⁻⁶ meter)	kW	Kilowatt
acfm	Actual cubic foot per minute	MMBtu	Million British thermal unit
bhp	Brake horsepower	MMcf.....	Million cubic feet
dscfm.....	Dry Standard cubic foot per minute	ppm	Parts per million
g/dscm.....	Grams per dry Standard cubic meter	ppmv	Parts per million by volume
gpm	Gallon per minute	ppmvd.....	Parts per million by volume, dry
gr/dscf	Grain per dry standard cubic foot	ppmw	Parts per million by weight
hp	Horsepower	rpm.....	Revolution per minute
		scfm	Standard cubic foot per minute
		tpy	Tons per year

List of Chemical Symbols, Formulas, and Pollutants

CO	Carbon monoxide	PM ₁₀	PM with an aerodynamic diameter 10 µm or less
CO ₂	Carbon dioxide	PM _{2.5}	PM with an aerodynamic diameter 2.5 µm or less
CO ₂ e	Carbon dioxide equivalent	SO ₂	Sulfur dioxide
HAP	Hazardous air pollutant listed pursuant to Section 112 of the Federal Clean Air Act	SO _x	Sulfur oxides
NO ₂	Nitrogen dioxide	TAP	Toxic air pollutant pursuant to Chapter 173-460 WAC
NO _x	Nitrogen oxides	VOC	Volatile organic compound
O ₂	Oxygen		
PM	Particulate Matter with an aerodynamic diameter 100 µm or less		

Terms not otherwise defined have the meaning assigned to them in the referenced regulations or the dictionary definition, as appropriate.

1. FACILITY IDENTIFICATION

Applicant Name: Washington State Department of Fish and Wildlife - Hatcheries
Applicant Address: 5525 South 11th Street, Ridgefield, WA 98684

Facility Name: Vancouver Hatchery, Skamania Steelhead Hatchery, Washougal Hatchery, Mossyrock Hatchery, Kalama Falls Hatchery, Fallert Creek Hatchery, North Toutle Hatchery, Beaver Creek Hatchery

Facility Address: Various locations displayed in section 5

SWCAA Identification: 1024

Contact Person: Sam Gibbons – Regional Hatchery Operations Manager

Primary Process: Fish Hatchery Operations
SIC/NAICS Code: 921: Fish Hatcheries and Preserves
112511: Finfish Farming and Fish Hatcheries

Facility Classification: Natural Minor

2. FACILITY DESCRIPTION

The Washington State Department of Fish and Wildlife (WDFW) operates fish hatcheries throughout the state producing fish for harvest and conservation. Eight fish hatcheries are owned and operated by WDFW in SWCAA's jurisdiction. WDFW operates several other facilities that are owned and financed by separate entities (e.g., Pacific Power and Tacoma Power). The fish hatcheries not owned by WDFW are not addressed by this permitting action.

3. CURRENT PERMITTING ACTION

This permitting action is in response to Air Discharge Permit (ADP) application number CL-3195 dated May 18, 2022. The Washington Department of Fish and Wildlife submitted ADP application CL-3195 requesting the following:

- Operation of existing generators at Skamania Steelhead, Mossyrock, Kalama Falls, Fallert Creek, and Beaver Creek Hatcheries.

ADP 22-3518 will supersede ADP 13-3038 and SUN-085 in their entirety.

4. PROCESS DESCRIPTION

The Washington State Department of Fish and Wildlife (WDFW) operates fish hatcheries throughout the state producing fish for harvest and conservation. To ensure survival of fish at the hatchery, water flows and aerator operation cannot be interrupted for a significant amount of time. Emergency generator sets are installed at each hatchery to power these critical systems in the event of an interruption in grid power.

5. EQUIPMENT/ACTIVITY IDENTIFICATION

- 5.a. Vancouver Hatchery Emergency Generator Engine (existing). This generator set is used to power a well pump. This pump has not been used for several years. The Vancouver Hatchery does not typically experience power interruptions.

Address:	12208 SE Evergreen Highway, Vancouver, WA
Engine Make:	Detroit Diesel
Engine Model:	6VF1921344
Engine Serial Number:	8063-7405
Engine Output Rating:	415 hp (estimated)
Manufacture Date:	Prior to 1997
Certification:	None
Fuel Type:	Diesel
Fuel Consumption:	21.1 gal/hr at full standby load
Generator Rating:	250 kW
Generator Make:	Kohler
Generator Model:	250ROZD71
Generator Serial Number:	288758
Stack Height:	114" from ground
Stack Diameter:	6"
Stack Location:	45°36' 1.06"N, 122°32' 45.92"W
Federal Regulations:	40 CFR 63 Subpart ZZZZ

- 5.b. Skamania Steelhead Emergency Generator Engine (new). This generator set is used to power building and the brush that removes debris from the screens. This engine replaced an engine that was moved to the Washougal Hatchery pump intake.

Address:	391 Steelhead Road, Washougal, WA
Engine Make:	Cummins
Engine Model:	QSL9-G7
Engine Serial Number:	73820655
Engine Output Rating:	464 hp
Manufacture Date:	September 2017
Certification:	EPA Tier 3
Fuel Type:	Diesel
Fuel Consumption:	23.5 gal/hr at full standby load
Generator Rating:	225 kW
Generator Make:	Cummins

Generator Model: DQDAA-1507204
 Generator Serial Number: D150824151
 Stack Height: ~6' from above grade
 Stack Diameter: ~6" diameter
 Stack Location: 45°37' 16.67"N, 122°12' 59.20"W
 Stack Flow: 2,296 cfm @ 1,025°F
 Federal Regulations: 40 CFR 63 Subpart ZZZZ
 40 CFR 60 Subpart IIII

- 5.c. Washougal Hatchery Buildings Emergency Generator Engine (incorporated from SUN-085). This generator set is used to power the hatchery building and the adjacent residences.

Address: 15632 Washougal River Road, Washougal, WA
 Engine Make: Cummins
 Engine Model: QSB7-G5 NR3
 Engine Serial Number: 73794672
 Engine Output Rating: 100 KW
 Engine Built: January 2015
 Certification: EPA Tier 3
 Fuel Type: Diesel
 Fuel Consumption: 4.2 gal/hr (estimated)
 Generator Rating: 100 KW
 Generator Make: Cummins
 Generator Model: DSGAA-1500673
 Generator Serial Number: B150792674
 Stack Height: ~6' from above grade
 Stack Location: 45°39' 11.14"N, 122°10' 08.95"W
 Stack Flow: 2,085 cfm @ 1,061°F
 Federal Regulations: 40 CFR 63 Subpart ZZZZ
 40 CFR 60 Subpart IIII

- 5.d. Washougal Hatchery Intake Emergency Generator Engine (moved from Skamania). This generator set is used to power a water intake pump.

Address: 15632 Washougal River Road, Washougal, WA
 Engine Make: Mitsubishi
 Engine Model: 6D16-T
 Engine Serial Number: 6D16-398434
 Engine Output Rating: 184 hp
 Certification: None
 Fuel Type: Diesel
 Fuel Consumption: 9.3 gal/hr
 Generator Rating: 125 kW
 Generator Make: Hobbs Industries
 Generator Model: Newage SC344A
 Generator Serial Number: 14485
 Stack Height: ~15' above grade. Through the side of the building roof.

Stack Diameter: ~3"
 Stack Location: 45°39' 14.92"N, 122°10' 13.28"W
 Federal Regulations: 40 CFR 63 Subpart ZZZZ

- 5.e. Mossyrock Hatchery Emergency Generator Engine (new). This generator set is used to power lights, two pumps, and 12 aerators.

Address: 249 Fish Hatchery Road, Mossyrock, WA
 Engine Make: John Deere
 Engine Model: 4045TF250E
 Engine Serial Number: PE4045T267946
 Engine Output Rating: 133 hp
 Engine Built: April 21, 2003
 Certification: EPA tier 1
 Fuel Type: Diesel
 Fuel Consumption: 6.7 gal/hr
 Generator Rating: 80 kW
 Generator Make: Kohler
 Generator Model: 80REOZJB
 Generator Serial Number: 0760596
 Stack Height: ~8' above grade
 Stack Diameter: ~ 3" diameter
 Stack Location: 46°32' 50.82"N, 122°31' 8.54"W
 Stack Flow: 679 cfm @ 1,074°F
 Federal Regulations: 40 CFR 63 Subpart ZZZZ

- 5.f. Kalama Falls Hatchery Emergency Generator Engine (new). This generator set is used to power the hatchery and an adjacent residence.

Address: 3900 Kalama River Road, Kalama, WA
 Engine Make: Cummins
 Engine Model: QSL9-G7
 Engine Serial Number: 74788929
 Engine Output Rating: 433 bhp
 Engine Built: April 30, 2021
 Certification: EPA Tier 3
 Fuel Type: Diesel
 Fuel Consumption: 23.5 gal/hr
 Generator Rating: 300 kW
 Generator Make: Cummins
 Generator Model: DQDAC-2160108
 Generator Serial Number: H210972867
 Stack Height: ~8' above grade
 Stack Diameter: ~ 7" diameter
 Stack Location: 46°0' 55.27"N, 122°43'55.96"W
 Stack Flow: 2,296 cfm @ 1,025°F
 Federal Regulations: 40 CFR 63 Subpart ZZZZ
 40 CFR 60 Subpart IIII

- 5.g. Kalama Falls Hatchery Housing Emergency Generator Engine (existing). This generator set is used to power the other three residences at the facility.

Address: 3900 Kalama River Road, Kalama, WA
 Engine Make: Perkins
 Engine Model: Engine series 4.236 (stands for 4-cylinder 236 in³)
 Engine Serial Number: U757057B
 Engine Output Rating: 40 kW
 Engine Built: Estimated: 1975
 Certification: None
 Fuel Type: Diesel
 Fuel Consumption: 3.2 gal/hr
 Generator Rating: 67 hp
 Generator Make: Katolight
 Generator Model: D40FJP4
 Generator Serial Number: LM198728 E-44313
 Stack Height: ~8' above grade
 Stack Diameter: ~ 2" diameter
 Stack Location: 46°1' 3.04"N, 122°43'49.52"W
 Federal Regulations: 40 CFR 63 Subpart ZZZZ

- 5.h. North Toutle Hatchery Housing Emergency Generator Engine (existing). This generator set is used to power the facility and a residence.

Address: 11285 Spirit Lake Highway, Toutle, WA
 Engine Make: Cummins
 Engine Model: NTA-855-G
 Engine Serial Number: 10591580
 Engine Output Rating: 300 hp
 Engine Built: October 1976
 Certification: None
 Fuel Type: Diesel
 Fuel Consumption: 3.2 gal/hr
 Generator Rating: 200 kW
 Generator Make: Engine Generator Systems
 Generator Model: 200D34
 Generator Serial Number: 2701-1
 Stack Height: ~6.5' above grade
 Stack Diameter: ~ 5" diameter
 Stack Location: 46°22' 29.81"N, 122°34'19.38"W
 Federal Regulations: 40 CFR 63 Subpart ZZZZ

- 5.i. Fallert Creek Hatchery Housing Emergency Generator Engine (new). This generator set is used to power the hatchery.

Address: 1404 Kalama River Road, Kalama, WA
 Engine Make: Cummins

Engine Model: QSB7-G5NR3
 Engine Serial Number: 74840574
 Engine Output Rating: 324 hp
 Engine Built: September 2021
 Certification: EPA Tier 3
 Fuel Type: Diesel
 Fuel Consumption: 15.59 gal/hr
 Generator Rating: 200 kW
 Generator Make: Cummins
 Generator Model: C200D6D
 Generator Serial Number: I210979384
 Stack Height: ~6' above grade
 Stack Diameter: ~ 6" diameter
 Stack Location: 46°2' 43.94"N, 122°48'13.55"W
 Stack Flow: 2,085 cfm @ 1,061°F
 Federal Regulations: 40 CFR 63 Subpart ZZZZ
 40 CFR 60 Subpart IIII

- 5.j. Beaver Creek Hatchery Housing Emergency Generator Engine (new hatchery). This generator set is used to power the well and river equipment.

Address: 28 Beaver Creek Road, Cathlamet, WA 98612
 Engine Make: Cummins
 Engine Model: QSL9-G7
 Engine Serial Number: 73827616
 Engine Output Rating: 464 bhp
 Certification: EPA Tier 3
 Fuel Type: Diesel
 Fuel Consumption: 23.51 gal/hr
 Generator Rating: 250 kW
 Generator Make: Cummins
 Generator Model: DQDAA-1507204
 Generator Serial Number: D150824152
 Installed: Estimated in 2017
 Stack Height: ~8' above grade
 Stack Diameter: ~ 6" diameter
 Stack Location: 46°13' 32.87"N, 123°19'42.00"W
 Stack Flow: 2,296 cfm @ 1,025°F
 Federal Regulations: 40 CFR 63 Subpart ZZZZ
 40 CFR 60 Subpart IIII

- 5.k. Insignificant Emission Units. The following pieces of facility equipment have been determined to have insignificant emissions, and are not registered as emission units:
- Welding. Several of the hatcheries perform small amounts of welding. The amount of weld wire used is well below the scale of industrial welding operations and emissions are assumed to be minimal.
 - Fuel Storage Tanks. Several of the hatcheries have small storage tanks on site for refueling equipment. The tanks store 1000 gallons or less.

5.1. Equipment/Activity Summary.

ID No.	Equipment/Activity	Control Equipment/Measure
1	Vancouver Hatchery Emergency Generator Engine	Ultralow Sulfur (≤ 15 ppm) Liquid Fuel Limited Operation (≤ 100 hr/yr)
2	Skamania Hatchery Emergency Generator Engine	Ultralow Sulfur (≤ 15 ppm) Liquid Fuel Limited Operation (≤ 100 hr/yr)
3	Washougal Hatchery Buildings Emergency Generator Engine	Ultralow Sulfur (≤ 15 ppm) Liquid Fuel Limited Operation (≤ 100 hr/yr)
4	Washougal Hatchery Intake Pump Emergency Generator Engine	Ultralow Sulfur (≤ 15 ppm) Liquid Fuel Limited Operation (≤ 100 hr/yr)
5	Mossyrock Hatchery Emergency Generator Engine	Ultralow Sulfur (≤ 15 ppm) Liquid Fuel Limited Operation (≤ 100 hr/yr)
6	Kalama Falls Hatchery Main Emergency Generator Engine	Ultralow Sulfur (≤ 15 ppm) Liquid Fuel Limited Operation (≤ 100 hr/yr)
7	Kalama Falls Hatchery Housing Emergency Generator Engine	Ultralow Sulfur (≤ 15 ppm) Liquid Fuel Limited Operation (≤ 100 hr/yr)
8	North Toutle Hatchery Emergency Generator Engine	Ultralow Sulfur (≤ 15 ppm) Liquid Fuel Limited Operation (≤ 100 hr/yr)
9	Fallert Creek Hatchery Emergency Generator Engine	Ultralow Sulfur (≤ 15 ppm) Liquid Fuel Limited Operation (≤ 100 hr/yr)
10	Beaver Creek Hatchery Emergency Generator Engine	Ultralow Sulfur (≤ 15 ppm) Liquid Fuel Limited Operation (≤ 100 hr/yr)

6. EMISSIONS DETERMINATION

Unless otherwise specified by SWCAA, actual emissions must be determined using the specified input parameter listed for each emission unit and the following hierarchy of methodologies:

- (a) Continuous emissions monitoring system (CEMS) data;
- (b) Source emissions test data (EPA reference method). When source emissions test data conflicts with CEMS data for the time period of a source test, source test data must be used;
- (c) Source emissions test data (other test method); and
- (d) Emission factors or methodology provided in this TSD.

- 6.a. Vancouver Hatchery Emergency Generator Engine. Potential annual emissions from the combustion of ultra-low sulfur diesel ($\leq 0.0015\%$ sulfur by weight) were calculated with the assumption that the equipment will operate at full load for up to 200 hours per year.

Vancouver Hatchery Emergency Generator Engine						
Hours of Operation =	200 hours					
Power Output =	415.0 horsepower					
Diesel Density =	7.206 pounds per gallon					
Fuel Sulfur Content =	0.0015 % by weight					
Fuel Consumption Rate =	21.1 gal/hr (estimated assuming efficiency of 7,000 Btu/hp-hr)					
Fuel Heat Content =	0.138 MMBtu/gal (for use with GHG factors from 40 CFR 98)					
Pollutant	Emission Factor		Emissions		Emission Factor Source	
	lb/hp-hr	lb/hr	tpy			
NO _x	0.031	12.87	1.29			AP-42 Table 3.3-1 (10/96)
CO	0.00668	2.77	0.28			AP-42 Table 3.3-1 (10/96)
VOC	0.0025141	1.04	0.10			AP-42 Table 3.3-1 (10/96)
SO _x as SO ₂		0.0046	0.00046			Mass Balance
PM	0.0022	0.91	0.091			AP-42 Table 3.3-1 (10/96)
PM ₁₀	0.0022	0.91	0.091			AP-42 Table 3.3-1 (10/96)
PM _{2.5}	0.0022	0.91	0.091			AP-42 Table 3.3-1 (10/96)
Greenhouse Gases	kg/MMBtu	GWP	CO ₂ e lb/MMBtu	CO ₂ e lb/gallon	tpy, CO ₂ e	Emission Factor Source
CO ₂	73.96	1	163.05	23	47	40 CFR 98
CH ₄	0.003	21	0.139	0.019	0.04	40 CFR 98
N ₂ O	0.0006	310	0.410	0.057	0.12	40 CFR 98
Total GHG - CO ₂ e	73.9636		163.603	23	48	

Emissions must be determined by the fuel usage or total number of hours of operation multiplied by the emission factors above unless new emission factors are developed through source testing. Any alternate emission calculation methodologies must be accepted or specified by SWCAA.

- 6.b. Skamania Steelhead Hatchery Emergency Generator Engine. Potential annual emissions from the combustion of ultra-low sulfur diesel ($\leq 0.0015\%$ sulfur by weight) were calculated with the assumption that the equipment will operate at full load for up to 200 hours per year.

Skamania Steelhead Hatchery Emergency Generator Engine						
Hours of Operation =		200 hours				
Power Output =		464.0 horsepower				
Diesel Density =		7.206 pounds per gallon				
Fuel Sulfur Content =		0.0015 % by weight				
Fuel Consumption Rate =		23.5 gal/hr (estimated assuming efficiency of 7,000 Btu/hp-hr)				
Fuel Heat Content =		0.138 MMBtu/gal (for use with GHG factors from 40 CFR 98)				
Pollutant	Emission Factor		Emissions		Emission Factor Source	
	g/hp-hr	lb/hr	tpy			
NO _x	2.63	2.69	0.27			SCAQMD
CO	2.46	2.52	0.25			SCAQMD
VOC	0.20	0.20	0.020			SCAQMD
SO _x as SO ₂		0.0051	0.00051			Mass Balance
PM	0.112	0.11	0.011			SCAQMD
PM ₁₀	0.112	0.11	0.011			SCAQMD
PM _{2.5}	0.112	0.11	0.011			SCAQMD
Greenhouse Gases	kg/MMBtu	GWP	CO ₂ e lb/MMBtu	CO ₂ e lb/gallon	tpy, CO ₂ e	Emission Factor Source
CO ₂	73.96	1	163.05	23	53	40 CFR 98
CH ₄	0.003	21	0.139	0.019	0.05	40 CFR 98
N ₂ O	0.0006	310	0.410	0.057	0.13	40 CFR 98
Total GHG - CO ₂ e	73.9636		163.603	23	53	

Emissions must be determined by the fuel usage or total number of hours of operation multiplied by the emission factors above unless new emission factors are developed through source testing. Any alternate emission calculation methodologies must be accepted or specified by SWCAA.

- 6.c. Washougal Hatchery Buildings Emergency Generator Engine. Potential annual emissions from the combustion of ultra-low sulfur diesel ($\leq 0.0015\%$ sulfur by weight) were calculated with the assumption that the equipment will operate at full load for up to 200 hours per year.

Washougal Building Generator Engine						
Hours of Operation =		200 hours				
Power Output =		324 horsepower				
Diesel Density =		7.206 pounds per gallon				
Fuel Sulfur Content =		0.0015 % by weight				
Fuel Consumption Rate =		15.6 gal/hr (estimated assuming efficiency of 7,000 Btu/hp-hr)				
Fuel Heat Content =		0.138 MMBtu/gal (for use with GHG factors from 40 CFR 98)				
Pollutant	Emission		Emissions lb/hr	Emissions tpy	Emission Factor	
	Factor g/hp-hr				Source	
NO _x	2.88		2.06	0.21	SCAQMD	
CO	0.75		0.54	0.054	SCAQMD	
VOC	0.11		0.079	0.0079	SCAQMD	
SO _x as SO ₂			0.0034	0.00034	Mass Balance	
PM	0.082		0.059	0.0059	SCAQMD	
PM ₁₀	0.082		0.059	0.0059	SCAQMD	
PM _{2.5}	0.082		0.059	0.0059	SCAQMD	
Greenhouse Gases	kg/MMBtu	GWP	CO ₂ e		CO ₂ e	
			lb/MMBtu	lb/gallon	tpy, CO ₂ e	
CO ₂	73.96	1	163.05	23	35	40 CFR 98
CH ₄	0.003	21	0.139	0.019	0.03	40 CFR 98
N ₂ O	0.0006	310	0.410	0.057	0.09	40 CFR 98
Total GHG - CO ₂ e	73.9636		163.603	23	35	

Emissions must be determined by the fuel usage or total number of hours of operation multiplied by the emission factors above unless new emission factors are developed through source testing. Any alternate emission calculation methodologies must be accepted or specified by SWCAA.

- 6.d. Washougal Hatchery Intake Pump Emergency Generator Engine. Potential annual emissions from the combustion of ultra-low sulfur diesel ($\leq 0.0015\%$ sulfur by weight) were calculated with the assumption that the equipment will operate at full load for up to 200 hours per year.

Washougal Intake Pump Generator Engine					
Hours of Operation =		200 hours			
Power Output =		184 horsepower (estimated)			
Diesel Density =		7.206 pounds per gallon			
Fuel Sulfur Content =		0.0015 % by weight			
Fuel Consumption Rate =		9.3 gal/hr (estimated assuming efficiency of 7,000 Btu/hp-hr)			
Fuel Heat Content =		0.138 MMBtu/gal (for use with GHG factors from 40 CFR 98)			
	Emission				
	Factor	Emissions	Emissions	Emission Factor	
Pollutant	lb/hp-hr	lb/hr	tpy	Source	
NO _x	0.031	5.70	0.57	AP-42 Table 3.3-1 (10/96)	
CO	0.0067	1.23	0.12	AP-42 Table 3.3-1 (10/96)	
VOC	0.0025	0.46	0.046	AP-42 Table 3.3-1 (10/96)	
SO _x as SO ₂		0.0020	0.00020	Mass Balance	
PM	0.0022	0.40	0.040	AP-42 Table 3.3-1 (10/96)	
PM ₁₀	0.0022	0.40	0.040	AP-42 Table 3.3-1 (10/96)	
PM _{2.5}	0.0022	0.40	0.040	AP-42 Table 3.3-1 (10/96)	
Greenhouse Gases	kg/MMBtu	GWP	CO ₂ e lb/MMBtu	CO ₂ e lb/gallon	tpy, CO ₂ e
CO ₂	73.96	1	163.05	23	21
CH ₄	0.003	21	0.139	0.019	0.02
N ₂ O	0.0006	310	0.410	0.057	0.05
Total GHG - CO ₂ e	73.9636		163.603	23	21
40 CFR 98					
40 CFR 98					
40 CFR 98					

Emissions must be determined by the fuel usage or total number of hours of operation multiplied by the emission factors above unless new emission factors are developed through source testing. Any alternate emission calculation methodologies must be accepted or specified by SWCAA.

- 6.e. Mossyrock Hatchery Emergency Generator Engine. Potential annual emissions from the combustion of ultra-low sulfur diesel ($\leq 0.0015\%$ sulfur by weight) were calculated with the assumption that the equipment will operate at full load for up to 200 hours per year.

Mossyrock Generator Engine						
Hours of Operation =		200 hours				
Power Output =		133 horsepower				
Diesel Density =		7.206 pounds per gallon				
Fuel Sulfur Content =		0.0015 % by weight				
Fuel Consumption Rate =		6.7 gal/hr (estimated assuming efficiency of 7,000 Btu/hp-hr)				
Fuel Heat Content =		0.138 MMBtu/gal (for use with GHG factors from 40 CFR 98)				
Pollutant	Emission		Emissions lb/hr	Emissions tpy	Emission Factor Source	
	Factor g/kw-hr					
NO _x	9.2		2.70	0.27	CARB	
CO	11.4		3.34	0.334	CARB	
VOC	1.3		0.38	0.038	CARB	
SO _x as SO ₂			0.0015	0.00015	Mass Balance	
PM	0.54		0.16	0.016	CARB	
PM ₁₀	0.54		0.16	0.016	CARB	
PM _{2.5}	0.54		0.16	0.016	CARB	
Greenhouse Gases	kg/MMBtu	GWP	CO ₂ e lb/MMBtu	CO ₂ e lb/gallon	tpy, CO ₂ e	
CO ₂	73.96	1	163.05	23	15	40 CFR 98
CH ₄	0.003	21	0.139	0.019	0.01	40 CFR 98
N ₂ O	0.0006	310	0.410	0.057	0.04	40 CFR 98
Total GHG - CO ₂ e	73.9636		163.603	23	15	

Emissions must be determined by the fuel usage or total number of hours of operation multiplied by the emission factors above unless new emission factors are developed through source testing. Any alternate emission calculation methodologies must be accepted or specified by SWCAA.

- 6.f. Kalama Falls Hatchery Emergency Generator Engine. Potential annual emissions from the combustion of ultra-low sulfur diesel ($\leq 0.0015\%$ sulfur by weight) were calculated with the assumption that the equipment will operate at full load for up to 200 hours per year.

Kalama Falls Main Generator Engine					
Hours of Operation =	200 hours				
Power Output =	464 horsepower				
Diesel Density =	7.206 pounds per gallon				
Fuel Sulfur Content =	0.0015 % by weight				
Fuel Consumption Rate =	23.5 gal/hr				
Fuel Heat Content =	0.138 MMBtu/gal (for use with GHG factors from 40 CFR 98)				
Pollutant	Emission Factor g/hp-hr	Emissions lb/hr	Emissions tpy	Emission Factor Source	
NO _x	2.63	2.69	0.27	SCAQMD	
CO	2.46	2.52	0.25	SCAQMD	
VOC	0.2	0.20	0.020	SCAQMD	
SO _x as SO ₂		0.0051	0.00051	Mass Balance	
PM	0.11	0.11	0.011	SCAQMD	
PM ₁₀	0.11	0.11	0.011	SCAQMD	
PM _{2.5}	0.11	0.11	0.011	SCAQMD	
Greenhouse Gases	kg/MMBtu	GWP	CO ₂ e lb/MMBtu	CO ₂ e lb/gallon	tpy, CO ₂ e
CO ₂	73.96	1	163.05	23	53 40 CFR 98
CH ₄	0.003	21	0.139	0.019	0.05 40 CFR 98
N ₂ O	0.0006	310	0.410	0.057	0.13 40 CFR 98
Total GHG - CO ₂ e	73.9636		163.603	23	53

Emissions must be determined by the fuel usage or total number of hours of operation multiplied by the emission factors above unless new emission factors are developed through source testing. Any alternate emission calculation methodologies must be accepted or specified by SWCAA.

- 6.g. Kalama Falls Housing Emergency Generator Engine. Potential annual emissions from the combustion of ultra-low sulfur diesel ($\leq 0.0015\%$ sulfur by weight) were calculated with the assumption that the equipment will operate at full load for up to 200 hours per year.

Kalama Falls Housing Generator Engine					
Hours of Operation =	200 hours				
Power Output =	67 horsepower (internet reference)				
Diesel Density =	7.206 pounds per gallon				
Fuel Sulfur Content =	0.0015 % by weight				
Fuel Consumption Rate =	3.2 gal/hr				
Fuel Heat Content =	0.138 MMBtu/gal (for use with GHG factors from 40 CFR 98)				
Pollutant	Emission		Emissions lb/hr	Emissions tpy	Emission Factor Source
	Factor				
	lb/hp-hr				
NO _x	0.031		2.08	0.21	AP-42 Table 3.3-1 (10/96)
CO	0.0067		0.45	0.045	AP-42 Table 3.3-1 (10/96)
VOC	0.0025		0.17	0.017	AP-42 Table 3.3-1 (10/96)
SO _x as SO ₂			0.00069	0.000069	Mass Balance
PM	0.0022		0.15	0.015	AP-42 Table 3.3-1 (10/96)
PM ₁₀	0.0022		0.15	0.015	AP-42 Table 3.3-1 (10/96)
PM _{2.5}	0.0022		0.15	0.015	AP-42 Table 3.3-1 (10/96)
Greenhouse Gases	kg/MMBtu	GWP	CO ₂ e		tpy, CO ₂ e
			lb/MMBtu	lb/gallon	
CO ₂	73.96	1	163.05	23	7 40 CFR 98
CH ₄	0.003	21	0.139	0.019	0.01 40 CFR 98
N ₂ O	0.0006	310	0.410	0.057	0.02 40 CFR 98
Total GHG - CO ₂ e	73.9636		163.603	23	7

Emissions must be determined by the fuel usage or total number of hours of operation multiplied by the emission factors above unless new emission factors are developed through source testing. Any alternate emission calculation methodologies must be accepted or specified by SWCAA.

- 6.h. North Toutle Hatchery Emergency Generator Engine. Potential annual emissions from the combustion of ultra-low sulfur diesel ($\leq 0.0015\%$ sulfur by weight) were calculated with the assumption that the equipment will operate at full load for up to 200 hours per year.

North Toutle Generator Engine					
Hours of Operation =	200 hours				
Power Output =	300 horsepower (estimated)				
Diesel Density =	7.206 pounds per gallon				
Fuel Sulfur Content =	0.0015 % by weight				
Fuel Consumption Rate =	3.2 gal/hr				
Fuel Heat Content =	0.138 MMBtu/gal (for use with GHG factors from 40 CFR 98)				
Pollutant	Emission Factor lb/hp-hr	Emissions lb/hr	Emissions tpy	Emission Factor Source	
NO _x	0.031	9.30	0.93	AP-42 Table 3.3-1 (10/96)	
CO	0.0067	2.00	0.20	AP-42 Table 3.3-1 (10/96)	
VOC	0.0025	0.75	0.075	AP-42 Table 3.3-1 (10/96)	
SO _x as SO ₂		0.00069	0.000069	Mass Balance	
PM	0.0022	0.66	0.066	AP-42 Table 3.3-1 (10/96)	
PM ₁₀	0.0022	0.66	0.066	AP-42 Table 3.3-1 (10/96)	
PM _{2.5}	0.0022	0.66	0.066	AP-42 Table 3.3-1 (10/96)	
Greenhouse Gases	kg/MMBtu	GWP	CO ₂ e lb/MMBtu	CO ₂ e lb/gallon	tpy, CO ₂ e
CO ₂	73.96	1	163.05	23	7 40 CFR 98
CH ₄	0.003	21	0.139	0.019	0.01 40 CFR 98
N ₂ O	0.0006	310	0.410	0.057	0.02 40 CFR 98
Total GHG - CO ₂ e	73.9636		163.603	23	7

Emissions must be determined by the fuel usage or total number of hours of operation multiplied by the emission factors above unless new emission factors are developed through source testing. Any alternate emission calculation methodologies must be accepted or specified by SWCAA.

- 6.i. Fallert Creek Hatchery Emergency Generator Engine. Potential annual emissions from the combustion of ultra-low sulfur diesel ($\leq 0.0015\%$ sulfur by weight) were calculated with the assumption that the equipment will operate at full load for up to 200 hours per year.

Fallert Creek Generator Engine					
Hours of Operation =	200 hours				
Power Output =	324 horsepower				
Diesel Density =	7.206 pounds per gallon				
Fuel Sulfur Content =	0.0015 % by weight				
Fuel Consumption Rate =	15.59 gallons per hour				
Fuel Heat Content =	0.138 MMBtu/gal (for use with GHG factors from 40 CFR 98)				
Pollutant	Emission Factor g/hp-hr	Emissions lb/hr	Emissions tpy	Emission Factor Source	
NO _x	2.88	2.06	0.21	SCAQMD	
CO	0.75	0.54	0.054	SCAQMD	
VOC	0.11	0.079	0.0079	SCAQMD	
SO _x as SO ₂		0.0034	0.00034	Mass Balance	
PM	0.082	0.059	0.0059	SCAQMD	
PM ₁₀	0.082	0.059	0.0059	SCAQMD	
PM _{2.5}	0.082	0.059	0.0059	SCAQMD	
Greenhouse Gases	kg/MMBtu	GWP	CO ₂ e lb/MMBtu	CO ₂ e lb/gallon	tpy, CO ₂ e
CO ₂	73.96	1	163.05	23	35 40 CFR 98
CH ₄	0.003	21	0.139	0.019	0.03 40 CFR 98
N ₂ O	0.0006	310	0.410	0.057	0.09 40 CFR 98
Total GHG - CO ₂ e	73.9636		163.603	23	35

Emissions must be determined by the fuel usage or total number of hours of operation multiplied by the emission factors above unless new emission factors are developed through source testing. Any alternate emission calculation methodologies must be accepted or specified by SWCAA.

- 6.j. Beaver Creek Hatchery Emergency Generator Engine. Potential annual emissions from the combustion of ultra-low sulfur diesel ($\leq 0.0015\%$ sulfur by weight) were calculated with the assumption that the equipment will operate at full load for up to 200 hours per year.

Beaver Creek Generator Engine						
Hours of Operation =		200 hours				
Power Output =		464 horsepower				
Diesel Density =		7.206 pounds per gallon				
Fuel Sulfur Content =		0.0015 % by weight				
Fuel Consumption Rate =		23.51 gallons per hour				
Fuel Heat Content =		0.138 MMBtu/gal (for use with GHG factors from 40 CFR 98)				
	Emission					
	Factor	Emissions	Emissions	Emission Factor		
Pollutant	g/hp-hr	lb/hr	tpy	Source		
NO _x	2.63	2.69	0.27	SCAQMD		
CO	2.46	2.52	0.25	SCAQMD		
VOC	0.20	0.20	0.020	SCAQMD		
SO _x as SO ₂		0.0051	0.00051	Mass Balance		
PM	0.11	0.11	0.011	SCAQMD		
PM ₁₀	0.11	0.11	0.011	SCAQMD		
PM _{2.5}	0.11	0.11	0.011	SCAQMD		
			CO ₂ e	CO ₂ e		
Greenhouse Gases	kg/MMBtu	GWP	lb/MMBtu	lb/gallon	tpy, CO ₂ e	
CO ₂	73.96	1	163.05	23	53	40 CFR 98
CH ₄	0.003	21	0.139	0.019	0.05	40 CFR 98
N ₂ O	0.0006	310	0.410	0.057	0.13	40 CFR 98
Total GHG - CO ₂ e	73.9636		163.603	23	53	

Emissions must be determined by the fuel usage or total number of hours of operation multiplied by the emission factors above unless new emission factors are developed through source testing. Any alternate emission calculation methodologies must be accepted or specified by SWCAA.

6.k. Emissions Summary

Air Pollutant	Potential to Emit (tpy)	Project Impact (tpy)
NO _x	4.48	-0.79
CO	1.84	+0.68
VOC	0.36	-0.11
SO ₂	0.00	N/A
PM/ PM ₁₀ / PM _{2.5}	0.27	-0.10
CO ₂ /CO _{2e}	328	+116

7. REGULATIONS AND EMISSION STANDARDS

Regulations have been established for the control of emissions of air pollutants to the ambient air. Regulations applicable to the proposed facility that have been used to evaluate the acceptability of the proposed facility and establish emission limits and control requirements include, but are not limited to, the following regulations, codes, or requirements. These items establish maximum emissions limits that could be allowed and are not to be exceeded for new or existing facilities. More stringent limits are established in this Permit consistent with implementation of Best Available Control Technology (BACT):

- 7.a. 40 CFR 60 Subpart IIII [§60.4200 et seq] "Standards of Performance for Stationary Compression Ignition Internal Combustion Engines" applies to each compression ignition (CI) internal combustion engine (ICE) that commences construction after July 11, 2005 and is manufactured after April 1, 2006, or that is modified or reconstructed after July 11, 2005.
- 7.b. 40 CFR 63 Subpart ZZZZ [§63.6580 et seq] "National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines" establishes national emission limitations and operating limitations for HAP emitted from stationary reciprocating internal combustion engines located at major and area sources of HAP emissions. This regulation applies to all of the stationary engines.

For existing emergency engines at an area source, the owner or operator is required to:

- Change oil and filter every 500 hours of operation or annually, whichever comes first except as allowed by 40 CFR 63.6625(i) [Table 2d(4)(a)];
- Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first [Table 2d(4)(b)];
- Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary [Table 2d(4)(c)];
- Install a non-resettable hour meter if one is not already installed. [§ 63.6625(f)]
- Report each instance in which the owner did not meet each operating limitation [§ 63.6640(b)];
- Limit operation of the engine to emergency use and maintenance checks and readiness testing. Operation for maintenance checks and readiness testing may be

- conducted only to the extent that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Operation for maintenance checks and readiness testing is limited to 100 hours per year [§ 63.6640(f)(2)(i)];
- Record the occurrence and duration of each malfunction of operation (i.e., process equipment) [§ 63.6655(a)(2)];
 - Record maintenance conducted on the engine in order to demonstrate that the engine was operated and maintained according to the applicable maintenance plan [§ 63.6655(e)]; and
 - Record the hours of operation of the engine by use of a non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation [§ 63.6655(f)].

There may be other requirements under the Subpart that apply to the facility that are not specified above. SWCAA has not yet taken delegation of this regulation; therefore, at this time, EPA is the Administrator of this regulation and the facility must communicate directly with EPA regarding compliance demonstrations and/or reporting required by this rule.

For purposes of this Subpart, "diesel fuel" also includes any non-distillate fuel with comparable physical and chemical properties (e.g., biodiesel) that is suitable for use in compression ignition engines per §63.6675.

- 7.c. Revised Code of Washington (RCW) 70A.15.2040 empowers any activated air pollution control authority to prepare and develop a comprehensive plan or plans for the prevention, abatement and control of air pollution within its jurisdiction. An air pollution control authority may issue such orders as may be necessary to effectuate the purposes of the Washington Clean Air Act (RCW 70A.15) and enforce the same by all appropriate administrative and judicial proceedings subject to the rights of appeal as provided in Chapter 62, Laws of 1970 ex. sess.
- 7.d. RCW 70A.15.2210 provides for the inclusion of conditions of operation as are reasonably necessary to assure the maintenance of compliance with the applicable ordinances, resolutions, rules and regulations when issuing an ADP for installation and establishment of an air contaminant source.
- 7.e. WAC 173-401 "Operating Permit Regulation" requires all major sources and other sources as defined in WAC 173-401-300 to obtain an operating permit. This regulation is not applicable because this source is not a potential major source and does not meet the applicability criteria set forth in WAC 173-401-300.
- 7.f. WAC 173-460 "Controls for New Sources of Toxic Air Pollutants" requires BACT for toxic air pollutants (T-BACT), identification and quantification of emissions of toxic air pollutants and demonstration of protection of human health and safety.

The facility emits TAPs; therefore, this regulation applies to the facility.

- 7.g. WAC 173-476 "Ambient Air Quality Standards" establishes ambient air quality standards for PM₁₀, PM_{2.5}, lead, SO₂, NO_x, ozone, and CO in the ambient air, which must not be exceeded. The facility emits PM₁₀, PM_{2.5}, SO_x, NO_x, and CO; therefore, certain sections of this regulation apply. The facility does not emit lead; therefore, the lead regulation section does not apply.
- 7.h. SWCAA 400-040 "General Standards for Maximum Emissions" requires all new and existing sources and emission units to meet certain performance standards with respect to Reasonably Available Control Technology (RACT), visible emissions, fallout, fugitive emissions, odors, emissions detrimental to persons or property, SO₂, concealment and masking, and fugitive dust. This regulation applies to the facility.
- 7.i. SWCAA 400-040(1) "Visible Emissions" requires that emissions of an air contaminant from any emissions unit must not exceed twenty percent opacity for more than three minutes in any one hour at the emission point, or within a reasonable distance of the emission point. This regulation applies to the facility.
- 7.j. SWCAA 400-040(2) "Fallout" requires that emissions of PM from any source must not be deposited beyond the property under direct control of the owner(s) or operator(s) of the source in sufficient quantity to interfere unreasonably with the use and enjoyment of the property upon which the material is deposited. This regulation applies to the facility.
- 7.k. SWCAA 400-040(3) "Fugitive Emissions" requires that reasonable precautions be taken to prevent the fugitive release of air contaminants to the atmosphere. This regulation applies to the facility.
- 7.l. SWCAA 400-040(4) "Odors" requires any source which generates odors that may unreasonably interfere with any other property owner's use and enjoyment of their property to use recognized good practice and procedures to reduce these odors to a reasonable minimum. This source must be managed properly to maintain compliance with this regulation. This regulation applies to the facility.
- 7.m. SWCAA 400-040(6) "Sulfur Dioxide" requires that no person is allowed to emit a gas containing in excess of 1,000 ppmv of SO₂, corrected to 7% O₂ or 12% CO₂ as required by the applicable emission standard for combustion sources.

The facility emits SO₂; therefore, this regulation applies to the facility.

- 7.n. SWCAA 400-050 "Emission Standards for Combustion and Incineration Units" requires that all provisions of SWCAA 400-040 be met and that no person is allowed to cause or permit the emission of PM from any combustion or incineration unit in excess of 0.23 g/Nm³_{dry} (0.1 gr/dscf) of exhaust gas at standard conditions.

The facility has combustion units; therefore, this regulation applies to the facility.

- 7.o. SWCAA 400-109 "Air Discharge Permit Applications" requires that an ADP application be submitted for all new installations, modifications, changes, or alterations to process and emission control equipment consistent with the definition of "new source". Sources

wishing to modify existing permit terms may submit an ADP application to request such changes. An ADP must be issued, or written confirmation of exempt status must be received, before beginning any actual construction, or implementing any other modification, change, or alteration of existing equipment, processes, or permits. This regulation applies to the facility.

- 7.p. SWCAA 400-111 "Requirements for Sources in a Maintenance Plan Area" requires that no approval to construct or alter an air contaminant source will be granted unless it is evidenced that:
- (1) The equipment or technology is designed and will be installed to operate without causing a violation of the applicable emission standards;
 - (2) Emissions will be minimized to the extent that the new source will not exceed emission levels or other requirements provided in the maintenance plan;
 - (3) BACT will be employed for all air contaminants to be emitted by the proposed equipment;
 - (4) The proposed equipment will not cause any ambient air quality standard to be exceeded; and
 - (5) If the proposed equipment or facility will emit any toxic air pollutant regulated under WAC 173-460, the proposed equipment and control measures will meet all the requirements of that Chapter.
- 7.q. SWCAA 400-113 "Requirements for New Sources in Attainment or Nonclassifiable Areas" requires that no approval to construct or alter an air contaminant source will be granted unless it is evidenced that:
- (1) The equipment or technology is designed and will be installed to operate without causing a violation of the applicable emission standards;
 - (2) BACT will be employed for all air contaminants to be emitted by the proposed equipment;
 - (3) The proposed equipment will not cause any ambient air quality standard to be exceeded; and
 - (4) If the proposed equipment or facility will emit any toxic air pollutant regulated under WAC 173-460, the proposed equipment and control measures will meet all the requirements of that Chapter.

Most of the engines are located in an area that is in attainment for (PM, NO_x, CO, SO₂, O₃); therefore, this regulation applies to the facility.

8. RACT/BACT/BART/LAER/PSD/CAM DETERMINATIONS

The proposed equipment and control systems incorporate BACT for the types and amounts of air contaminants emitted by the processes as described below:

- 8.a. BACT Determination – Emergency Engines. The use of modern diesel-fired engine design meeting EPA Tier Emission Standards, the use of ultra-low sulfur diesel fuel (≤15 ppmw), limitation of visible emissions to 5% opacity or less, and limitation of engine operation to less than 100 hr/yr for maintenance checks and readiness testing has

been determined to meet the requirements of BACT for the types and quantities of air contaminants emitted from these engines.

- 8.b. Prevention of Significant Deterioration (PSD) Applicability Determination. This permitting action will not result in a potential increase in emissions equal to or greater than the PSD thresholds. Therefore, PSD review is not applicable to this action.
- 8.c. Compliance Assurance Monitoring (CAM) Applicability Determination. CAM is not applicable to any emission unit at this facility because it is not a major source and is not required to obtain a Part 70 (Title V) permit.

9. AMBIENT IMPACT ANALYSIS

- 9.a. Criteria Air Pollutant Review. Emissions of NO_x, CO, PM, VOC (as a precursor to O₃), and SO₂ are emitted at levels where no adverse ambient air quality impact is anticipated.

Conclusions

- 9.b. Operation of Emergency Generator Engines, as proposed in ADP application CL-3195, will not cause the ambient air quality requirements of 40 CFR 50 "National Primary and Secondary Ambient Air Quality Standards" to be violated.
- 9.c. Operation of Emergency Generator Engines, as proposed in ADP application CL-3195, will not cause the requirements of WAC 173-460 "Controls for New Sources of Toxic Air Pollutants" or WAC 173-476 "Ambient Air Quality Standards" to be violated.
- 9.d. Operation of Emergency Generator Engines, as proposed in ADP application CL-3195, will not violate emission standards for sources as established under SWCAA General Regulations Sections 400-040 "General Standards for Maximum Emissions," 400-050 "Emission Standards for Combustion and Incineration Units," and 400-060 "Emission Standards for General Process Units."

10. DISCUSSION OF APPROVAL CONDITIONS

SWCAA has made a determination to issue ADP 22-3518 in response to ADP application CL-3195. ADP 22-3518 contains approval requirements deemed necessary to assure compliance with applicable regulations and emission standards as discussed below.

- 10.a. Supersession of Previous Permits. ADP 22-3518 supersedes ADP 13-3038 and SUN-085 in their entirety. Compliance will be determined under this ADP, not previously superseded ADPs. Existing approval conditions for units not affected by this project have been carried forward unchanged.
- 10.b. Emission Limits. Visual emissions from the emergency generator engines were limited to 5% opacity because greater opacity levels would only be expected from a unit in need of servicing. Note that this opacity limit applies only after the engine has reached normal operating temperature, or after 20 minutes of operation, whichever is sooner.

- 10.c. Operational Limits and Requirements. Approval conditions are based on limited service (100 hr/yr) for maintenance checks and readiness testing. Compliance with these requirements will be demonstrated based on manufacturer's emission factors and annual operation as recorded and reported by the source. BACT requirements for this unit include the use of low sulfur diesel (sulfur content not to exceed 0.0015% by weight). Visible emission limits have been established consistent with proper operation of the diesel engines. Due to the technical limitations of the engines, the limit of 5% opacity does not apply during periods of start-up.

SWCAA 400-072(5) requires engine exhaust shall be discharge vertically. Mossyrock, Skamania, Kalama Falls, North Toutle, Vancouver, and Beaver Creek Hatcheries all have engines that do not meet this requirement. They have been approved without requirements to redirect the exhaust due to the fact these hatcheries are located in remote locations and are used sparingly.

- 10.d. Monitoring and Recordkeeping Requirements. ADP 22-3518 establishes monitoring and recordkeeping requirements sufficient to document compliance with applicable emission limits, ensure proper operation of approved equipment and provide for compliance with generally applicable requirements.
- 10.e. Reporting Requirements. ADP 22-3518 establishes general reporting requirements for annual air emissions, upset conditions and excess emissions. Specific reporting requirements are established for operating hours. Reports are to be submitted on an annual basis.

11. START-UP AND SHUTDOWN/ALTERNATIVE OPERATING SCENARIOS/POLLUTION PREVENTION

- 11.a. Start-up and Shutdown Provisions. Pursuant to SWCAA 400-081 "Start-up and Shutdown", technology-based emission standards and control technology determinations must take into consideration the physical and operational ability of a source to comply with the applicable standards during start-up or shutdown. Where it is determined that a source is not capable of achieving continuous compliance with an emission standard during start-up or shutdown, SWCAA will include appropriate emission limitations, operating parameters, or other criteria to regulate performance of the source during start-up or shutdown.

Emergency Generator. Visible emissions from the diesel engine driven generator are limited to 5% opacity or less during normal operation. However, the engine is not capable of reliably limiting visible emissions to less than 20% opacity until the engine achieves normal operating temperature. Therefore, the 5% opacity limit does not apply to the generator exhaust during start-up periods.

- 11.b. Alternate Operating Scenarios. SWCAA conducted a review of alternate operating scenarios applicable to equipment affected by this permitting action. The permittee did not propose or identify any applicable alternate operating scenarios. Therefore, none were included in the approval conditions.

- 11.c. Pollution Prevention Measures. SWCAA conducted a review of possible pollution prevention measures for the facility. No pollution prevention measures were identified by either the permittee or SWCAA separate or in addition to those measures required under BACT considerations. Therefore, none were included in the approval conditions.

12. EMISSION MONITORING AND TESTING

There are no emission monitoring or testing requirements established as part of this permitting action.

13. FACILITY HISTORY

- 13.a. Previous Permitting Actions/Approvals. The following past permitting actions and approvals have been taken by SWCAA for this facility:

Permit	Application	Date Issued	Description
SUN-085	N/A	5/20/2015	Approval for a new Emergency Generator Engine at the Washougal Hatchery.
13-3038	CO-922	1/16/2013	Approval of eight existing and one new stationary generator engines.

- 13.b. Compliance History. The following compliance issues have been identified for this facility:

NOV	Date	Violation
10542	5/5/2022	Installation of unpermitted equipment
6210	9/5/2017	Registration invoice was not paid by the deadline

14. PUBLIC INVOLVEMENT OPPORTUNITY

- 14.a. Public Notice for ADP Application CL-3195. Public notice for ADP application CL-3195 was published on the SWCAA website for a minimum of fifteen (15) days beginning on May 24, 2022.
- 14.b. Public/Applicant Comment for ADP Application CL-3195. SWCAA did not receive specific comments, a comment period request, or any other inquiry from the public or the applicant regarding ADP application CL-3195, therefore no public comment period was provided for this permitting action.
- 14.c. State Environmental Policy Act. This project is exempt from SEPA requirements pursuant to WAC 197-11-800(3) since it only involves repair and/or maintenance of existing structures, equipment or facilities, and will not involve material expansions or

changes in use. SWCAA issued a Determination of SEPA Exempt (SWCAA 22-012) concurrent with issuance of ADP 22-3518.