



State of Oregon
Department of
Environmental
Quality

Permit Number: 18-0003-TV-01

Expiration Date: 6/1/2022

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OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY OREGON TITLE V OPERATING PERMIT

Eastern Region
475 NE Bellevue Dr., Suite 110
Bend, OR 97701
Telephone: 541-388-6146

**Issued in accordance with provisions of ORS 468A.040
and based on the land use compatibility findings included in the permit record.**

ISSUED TO:

Klamath Energy LLC
1125 NW Couch Street, Suite 700
Portland, OR 97209

INFORMATION RELIED UPON:

Application Number: 32643
Received: 08/18/2020

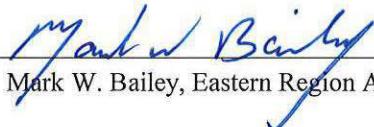
PLANT SITE LOCATION:

Klamath Cogeneration Project (KCP) and
Klamath Generation Peakers (KGP)
4940 Hwy. 97 South
Klamath Falls, OR 97603

LAND USE COMPATIBILITY STATEMENT:

Pursuant to ORS 469, Oregon Department of Energy's
Energy Facility Siting Council, in their orders,
determined that the proposed land use complies with
state wide planning goals.

ISSUED BY THE DEPARTMENT OF ENVIRONMENTAL QUALITY


Mark W. Bailey, Eastern Region Air Quality Manager

DEC - 8 2020

Date

Nature of Business

Electric power generation, natural gas fired, 25 MW or more	<u>SIC</u>	NAICS
	4911	221112

Acid Rain Program Information:

Plant Name	State	ORIS Code	NADB#
Klamath Cogeneration Project	OR	55103	CT-1, CT-2
Klamath Generation Peakers	OR	55544	CT-3, CT-4, CT-5, CT-6

RESPONSIBLE OFFICIAL and
Acid Rain Designated Representative

FACILITY CONTACT PERSON

Title: Managing Director	Name: Jay Schindler
	Title: EH & S
	Phone: 541-850-6131

Addendum No. 1**Minor Permit Modification**

In accordance with OAR 340-218-0170(1), Condition 31 of Oregon Title V Operating Permit 18-0003-TV-01 is revised to read as follows: (Changes are shown with highlight)

EMISSIONS UNIT (EU) AND POLLUTION CONTROL DEVICE (PCD) IDENTIFICATION

3. The emissions units regulated by this permit are the following: [OAR 340-218-0040(3)]

Table 1: Emission Units and Pollution Control Device Identification

Emission Unit (EU) Description	EU ID	Pollution Control Device (PCD)	PCD ID
Turbine/duct burners/heat recovery steam generator (HRSG)	CT-1	Ultra Low-NOx Combustor with Selective catalytic reduction (SCR)	SCR-1
Turbine/duct burners/HRSG	CT-2	Ultra Low-NOx Combustor with SCR	SCR-2
Pratt & Whitney combustion turbine #3	CT-3	Water injection, SCR, CO catalyst	WI#3, SCR#3, CO#3
Pratt & Whitney combustion turbine #4	CT-4	Water injection, SCR, CO catalyst	WI#4, SCR#4, CO#4
Pratt & Whitney combustion turbine #5	CT-5	Water injection, SCR, CO catalyst	WI#5, SCR#5, CO#5
Pratt & Whitney combustion turbine #6	CT-6	Water injection, SCR, CO catalyst	WI#6, SCR#6, CO#6
Auxiliary boiler – natural gas/oil fired	BR	None	NA
Aggregate insignificant activities – dust emissions from vehicle traffic on paved and unpaved roads	AI	None	NA

3.a. Ultra Low-NOx Combustors are to be installed and operational on Combustion Turbines (CT-1 & CT-2) by January 1, 2022.

3.b. The permittee must notify DEQ in writing when the ultra Low-NOx combustors are brought into operation. The notification must be submitted no later than seven (7) days after the initial startup of the ultra Low-NOx combustors. [OAR 340-214-0110]

Source Specific Recordkeeping Requirements

61. Source specific recordkeeping requirements:

61.a. Monthly total plant production (electricity, by unit);

61.b. Hourly and 12-month total auxiliary boiler steam production;

61.c. Operating time of each turbine, duct burner and auxiliary boiler;

61.d. Hourly and 12-month rolling total amount of natural gas burned in each combustion turbine, duct burner and auxiliary boiler;

61.e. Hourly and 12-month rolling total amount of oil burned in the auxiliary boiler, CT 3, CT 4, CT 5 and CT 6 (gallons);

61.f. Number of hours each day and calendar month that oil is burned in the Auxiliary Boiler, CT 3, CT 4, CT 5 and CT 6;

61.g. Hourly and 12-month rolling total heat input for each combustion turbine, duct burner and auxiliary boiler (MMBtu/hr, MMBtu/yr);

61.h. HHV of natural gas as measured by the permittee;

61.i. Oil sulfur content records, HHV and certifications from the oil supplier;

61.j. Valid purchase contract, tariff sheet or transportation contract for the gaseous fuel and/or sulfur content of the natural gas fuel;

61.k. Amount of time CT-1, CT-2, the duct burners and auxiliary boiler are operated simultaneously;

61.l. Total operating time that CT-1 or CT-2 operated broken down to periods within the normal operating range (60 – 100%) and periods within the partial load range (50 - 60%);

61.m. Number of CT-1 and CT-2 start-up and shut-downs and duration of each start up and shut down; CT-1 and CT-2 hourly NO_x emissions data (ppmdv corrected to 15% O₂, lb/MMBtu, lb/hr, and

lb/MWh, if complying with the lb/MWh limit);

61.o. CT 1 and CT 2, 30 unit operating day rolling average NO_x emissions data (ppmdv corrected to 15% O₂ and lb/MWh, if complying with the lb/MWh limit);

61.p. CT 1 and CT 2, 24 hour rolling average NO_x concentration (ppmdv, corrected to 15% O₂);

61.q. CT 1 and CT 2 hourly CO emissions data (ppmdv corrected to 15% O₂ and lb/hr);

61.r. CT 1 and CT 2, 8 hour rolling average CO concentration (ppmdv, corrected to 15% O₂);

61.s. CT 1 and CT 2 CO and VOC emissions during less than full load operation (lbs/hr);

61.t. Auxiliary boiler hourly NO_x emissions data (ppmdv corrected to 15% O₂, lb/MMBtu, and lb/hr);

61.u. Auxiliary boiler 30 unit operating day rolling average NO_x emissions data (lb/MMBtu);

61.v. Auxiliary boiler 24 hour rolling average NO_x concentration (ppmdv corrected to 3% O₂);

61.w. CT 3, CT 4, CT 5 and CT 6 hourly NO_x emissions data (ppmdv, corrected to 15% O₂ and lb/hr);

61.x. CT 3, CT 4, CT 5 and CT 6, 4 hour rolling average NO_x data (ppmdv, corrected to 15% O₂);

61.y. CT 3, CT 4, CT 5 and CT 6 hourly CO emissions data (ppmdv, corrected to 15% O₂ and lb/hr);

61.z. CT 3, CT 4, CT 5 and CT 6, 4 hour rolling average CO data (ppmdv, corrected to 15% O₂);

61.aa. Dates the Aux Boiler burned distillate oil and the amount of distillate oil burned and hours the boiler operated on oil (date, gal/yr, hr/yr);

61.bb. Auxiliary boiler visible emission observations while burning oil;

61.ee. Number of hours each calendar day oil is burned in CT 3, CT 4, CT 5 and CT 6;

61.dd. CT 3, CT 4, CT 5, CT 6 visible emission observations while burning oil;

61.ee. CEMS quality assurance/quality control records (including, but not limited to daily zero and span calibration checks, weekly inspection and maintenance activities, quarterly linearity and cylinder gas audits, annual relative test accuracy audits);

61.ff. Occurrence and length of downtime for all pollution control devices;

61.gg. Permit deviations;

61.hh. Excess emissions;

61.ii. 12 month rolling total pollutant emissions;

61.jj. Auxiliary boiler visible emissions observations according to 40 CFR 60.49b(f);

61.kk. Auxiliary boiler NO_x CEMS data according to 40 CFR 60.49b(g)

61.ll. Fuel receipts according to 40 CFR 60.49b(f)(1); and

61.mm. NSPS records in accordance with 40 CFR 60.7(b), including:

- 61.mm.i. Occurrence and duration of any startup, shutdown or malfunction in operation;
- 61.mm.ii. Any malfunction of the air pollution control equipment; or
- 61.mm.iii. Any periods during which a continuous monitoring system or monitoring device is inoperative.

Semi-Annual and Annual Reports

66. The permittee must submit three (3) copies of reports of any required monitoring at least every 6 months, completed on forms approved by DEQ. Six month periods are January 1 to June 30, and July 1 to December 31. One copy of the report must be submitted to the EPA and two copies to the DEQ regional office. All instances of deviations from permit requirements must be clearly identified in such reports: [OAR 340-218-0050(3)(c)(A) and 340-218-0080(6)(d)]

66.a. The first semi-annual report is due on July 30 and must include the semi-annual compliance certification, OAR 340-218-0080.

66.b. The annual report is due on February 15 and must consist of the following:

- 66.b.i. The emission fee report; [OAR 340-220-0100]
- 66.b.ii. A summary of the excess emissions upset log; [OAR 340-214-0340]
- 66.b.iii. The second semi-annual compliance certification; [OAR 340-218-0080]
- 66.b.iv. Annual greenhouse gas emissions in accordance with OAR 340, Division 215;
- 66.b.v. The annual certification that the risk management plan is being properly implemented; OAR 340-244-0230; [OAR 340-218-0080(7)]
- 66.b.vi. Calendar year operating time for each unit;
- 66.b.vii. Calendar year production (electricity) for each unit;

- 66.b.viii. Calendar year steam production from the auxiliary boiler;
- 66.b.ix. Calendar year natural gas burned in each unit;
- 66.b.x. Calendar year distillate oil burned in each unit; and
- 66.b.xi. 12-month rolling total emissions;
- 66.b.xii. Starting January 1, 2023, the combined rolling 12-month annual emissions for PM₁₀, SO₂, and NO_x as tons per year.