



**MODIFICATION
WATER POLLUTION CONTROL FACILITIES PERMIT**

Department of Environmental Quality
Eastern Region
800 S.E. Emigrant Avenue, Suite 330, Pendleton, OR 97801
Telephone: (541) 276-4063

Issued pursuant to ORS 468B.050

FACILITY:

Portland General Electric Co.
121 SW Salmon St.
Portland, OR 97204

SOURCES COVERED BY THIS PERMIT:

<u>Type of Waste</u>	<u>Method of Disposal</u>
Industrial Wastewater	Seepage and Evaporation
Domestic Wastewater	Seepage and Evaporation
Coal Ash	Land Disposal

PLANT TYPE AND LOCATION:

Boardman Power Plant
(Coal-fired electricity generation)
Carty Generating Station
(Gas-powered electricity generation)

RIVER BASIN INFORMATION:

Basin: Umatilla
Sub-Basin: Middle Columbia / Lake Wallula
LLID: 1198031456823 RM 10
County: Morrow

Tower Road
Boardman, Oregon

Nearest surface stream which would receive
wastewater if it were to discharge: Sixmile Canyon

Treatment System Class: Level I

This second permit modification is attached to and made part of WPCF Permit No. 100189 and in addition to Addendum No. 1 that became effective on January 24, 2019.

Pursuant to ORS 469.378, a land use compatibility determination is not required for this permit and the permit is conditioned on a land use determination by the Energy Facility Siting Council.

Chad P. Gubala, Ph. D
Eastern Region Water Quality Permit Manager

Signature Date

Effective Date

ADDENDUM NO. 2

The following conditions are added or modified in Schedule A:

2. The Permittee must manage all wastewater in a manner that will prevent:
 - c. A violation of any permit-specific groundwater concentration limits, established pursuant to OAR 340-040-0030, which will be incorporated into the facility groundwater monitoring plan and subject to approval by DEQ.

6. Unless otherwise approved in writing by the Department, the Permittee is permitted to manage and dispose only the following wastes from operation of the Carty Generating Station in Carty Reservoir:

h. Turbine Rinse Water

7. The following limitations² must not be exceeded in Carty Reservoir at the intake structure to the Boardman Power Plant and Carty Generating Station:

Parameter	Limitations (Sample Maximum)
Chloride	100 mg/L
Sulfate	200 mg/L
Sodium	150 mg/L
Arsenic	0.01 mg/L
Boron	0.5 mg/L
Copper	0.1 mg/L
Cadmium	0.005 mg/L
Calcium	500 mg/L
Chromium	0.05 mg/L
Magnesium	250 mg/L
Bicarbonate Alkalinity	500 mg/L
Fluoride	1 mg/L
Nitrate	10 mg/L
Total Dissolved Solids (TDS)	500 mg/L
Mercury	0.002 mg/L
Zinc	0.1 mg/L
pH	9.4 s.u.
Oil sheen	No visible

10. Unless otherwise approved in writing by the Department, the Permittee is permitted to manage and dispose only the following wastes from operation of the Carty Generating Station in the lined evaporation ponds originally built to serve Boardman Coal Plant or in new lined evaporation ponds constructed in accordance with plans that are approved by the Department (See Schedule C, Condition 2):
- g. Turbine rinse water
15. Boardman Power Plant and Carty Generating Station domestic wastewater (sewage) may be disposed of in the Boardman Power Plant sewage lagoons or to a septic system constructed in accordance with a construction permit from Umatilla County Public Health. At the time of this writing, the approved average dry weather design flow for the domestic sewage lagoons is 10,500 gallons per day.

² Limitations are based on protection of wildlife and groundwater and may be modified after exceedance of a groundwater concentration limit (see Schedule A, Condition 2.c) and/or submittal of an updated hydrogeologic characterization report.

19. Storm water from the coal yard and uncovered ash disposal landfill must not be discharged to Carty Reservoir. Pending DEQ approval, storm water run-off from the final landfill cover system may be routed off the ash disposal landfill area and discharge to surrounding natural terrain, which ultimately discharges toward Carty Reservoir.
20. Management and disposal of Boardman Power Plant ash must be conducted in accordance with this permit and the Boardman Power Plant Ash Disposal Plan. Except as provided for in the Boardman Power Plant Ash Disposal Plan, disposal of wastes other than coal ash is prohibited in the ash disposal landfill. If management and disposal of coal ash becomes subject to requirements established by the Environmental Protection Agency or the Department during the term of this permit, or any administrative extension of the term of the permit, the new regulatory requirements control over any inconsistent provisions in the Boardman Power Plant Ash Disposal Plan and this permit.
22. The limitations established in the Groundwater Monitoring Plan must not be exceeded at the compliance points established in the Groundwater Monitoring Plan.

The following conditions are added or modified in Schedule B:

1. **Facilities Monitoring**

The Permittee must monitor the facilities in accordance with the following Department approved plans: OM&M Plan, Groundwater Monitoring Plan, Ash Disposal Plan and the Wastewater Quality Management Program, and any amendments to the plans and program approved in writing by the Department. Monitoring must include the following items and parameters:

a. Sanitary Lagoons

Items and Parameters	Minimum Frequency	Sample Type/Action
Influent ⁵		
Total flow (MGD)	Daily	Record
Flow meter calibration	Annually	Written verification
pH	2/week	Grab/field measurement
BOD ₅	Quarterly	Composite ⁶
TSS	Quarterly	Composite ⁶
Overflow to seepage cell ⁷		
Total flow (MGD)	Daily	Record
Flow meter calibration	Annually	Written verification
Quantity chlorine used	Daily	Measurement
Chlorine residual	Daily	Grab
pH	2/week	Grab/field measurement
<i>E. coli</i> bacteria	Monthly	Grab
BOD ₅	Quarterly	Composite ⁶
TSS	Quarterly	Composite ⁶
TKN	Quarterly	Grab
NO ₃ -N	Quarterly	Grab
Lagoon Site		
Freeboard ⁸	Weekly	Measure and record
Perimeter inspection ⁹	Weekly	Observation

⁵ Sample point is in discharge to lagoons, except that flow from Boardman Power Plant coal yard sewage collection system may be measured by monitoring domestic water usage of facilities that discharge wastes to the coal yard sewage collection system. And, except that BOD₅, TSS and pH monitoring results of domestic sewage from Boardman Power Plant power block may be deemed representative of BOD₅, TSS and pH from Boardman Power Plant coal yard sewage collection system.

⁶ Composite samples must consist of no less than 6 samples collected over a 24-hour period and apportioned according to the volume of flow at the time of sampling.

⁷ Required only when overflow occurs. Sample point is at overflow to seepage cell.

⁸ Freeboard is measured from lowest point on containment structure.

⁹ A perimeter inspection is a sight surveillance of the lagoon dikes looking for the presence of badgers, muskrats, ground hogs or other rodents whose burrowing activities could threaten the structural integrity of a dike.

b. Lined Evaporation Ponds (Boardman Power Plant and Carty Generating Station)

Items and Parameters	Minimum Frequency	Sample Type/Action
Each Pond ¹⁰		
Total Flow to pond (MG)	Quarterly	Record
Flow meter calibration	Annually	Written verification
As, Cd, Cr, Hg, TDS, Oil & Grease, TTHMs ¹¹ , pH	Quarterly	Grab
Freeboard	Weekly	Measure and record
Perimeter inspection	Weekly	Observation

c. Carty Reservoir

Items and Parameters	Minimum Frequency	Sample Type/Action
Effluent ¹²		
As, B, Cd, Ca, Cr, Cu, Fe, Mg, Hg, K, Na, V, Se, Zn, Bicarb Alk, Total Alk, Cl ⁻ , F ⁻ , NO ₃ , SiO ₂ , SO ₄ , TDS, Cond, pH, TTHMs	Monthly	Grab
Make-up water		
Total flow (MG)	Monthly	Record
Flow meter calibration	Annually	Written verification
Irrigation withdrawal ¹³		
Total flow (MG)	Monthly	Record
Flow meter calibration	Annually	Written verification
TDS, As, Cr, pH, SAR	Twice Monthly, except as required by Schedule B, Condition 2	Grab
Carty Reservoir		
Water elevation	Monthly	Measure and record

¹⁰ The permittee must designate and maintain a sampling station at each pond from which representative samples may be collected, except that flow to Boardman Power Plant's two lined evaporation ponds may be measured at a single location downstream of all possible flow additions.

¹¹ Total trihalomethanes

¹² Sample point is at the intake structure from Carty Reservoir to the Boardman Power Plant and Carty Generating Station.

¹³ Sample point is at intake to irrigation withdrawal pump

4. **Groundwater Monitoring Resampling Requirements¹⁴**

- a. If monitoring indicates that a concentration limit has been exceeded at a compliance point, the Permittee must immediately resample the monitoring well, unless otherwise approved in writing

by the Department. The results of both sampling events must be reported to the Department within 10 calendar days of receipt of the laboratory data.

5. Monthly Reporting Procedures – Sanitary Lagoons

Monitoring results must be reported on approved forms or as otherwise directed by DEQ. The reporting period is the calendar month. Reports must be submitted to the Department's Eastern Region Pendleton Office by the 15th day of the following month or via alternative electronic method as required.

Monitoring reports must identify the name, certificate classification and grade level of each principal operator designated by the Permittee as responsible for supervising the wastewater treatment system during the reporting period. Monitoring reports must also identify the treatment system classification as found on page one of this permit.

Monitoring reports must include a record of all applicable equipment breakdowns and bypassing.

6. Annual Reporting Requirements

On or before March 1 of each calendar year, the Permittee must submit an annual facility monitoring report to the Department that summarizes all wastewater and ash facilities operations and monitoring results for the preceding year. Following approval, annual reporting and data analyses must be in accordance with the approved OM&M Plan, Groundwater Monitoring Plan, Ash Disposal Plan and Wastewater Water Quality Management Program, and any amendments to the plans and program approved in writing by the Department.

¹⁴ OAR 340-040-0030(5) requires resampling after a significant increase (increase or decrease for pH). In addition, resampling is appropriate after a concentration limit exceedance and prior to a remedial investigation and feasibility study, which is required by OAR 340-040-0030(6).

The following condition is added to Schedule C:

10. Closure for Sanitary Lagoons and Evaporation Ponds
- a. The Permittee must submit closure plans to DEQ to document proper closure planning for the sanitary lagoons and evaporation ponds. For the sanitary lagoons, the closure plan must be

submitted by June 31, 2022. For evaporation ponds, the plan must be submitted at least 6 months before planned closure. The plans must include at a minimum:

- i. Characterization describing the size and contents (liquids and solids) of the lagoons/ponds to be decommissioned.
 - ii. How residual wastewater in the lagoons/ponds will be managed, stored, and disposed.
 - iii. Detail on how lagoon solids will be disposed (landfill or land application under an approved plan).
 1. If land application of solids will be utilized, see Schedule C. Condition 4.
 2. Odor control mitigation plan if biosolids will be dried in place prior to removal.
 - iv. Detail on long term stabilization of lagoons/ponds.
 - v. How pipes and liners will be abandoned or removed.
 - vi. Final stabilization/revegetation
- b. Closure of the lagoons must be completed by the schedule outlined in the closure plan unless otherwise approved in writing by DEQ.

The following condition is edited in Schedule D:

3. For the sanitary lagoons, the Permittee must comply with Oregon Administrative Rules (OAR) Chapter 340, Division 49, "Regulations Pertaining To Certification of Wastewater System Operator Personnel" and accordingly:

All other permit conditions remain unchanged by this permit modification.