

Regional Water Quality Control Board
North Coast Region

Executive Officer's Summary Report
Wednesday, July 11, 2018
Regional Water Board Office
Santa Rosa, California

ITEM: 4

SUBJECT: Public Hearing on Order No. R1-2018-0013 to consider adoption of proposed Waste Discharge Requirements for DG Fairhaven Power, LLC, Fairhaven Power Facility, WDID No. 1B85026RHUM, NPDES No. CA0024571 (Justin McSmith)

BOARD ACTION: The Board will consider adoption of Waste Discharge Requirements Order No. R1-2018-0013. The Order will serve as a National Pollutant Discharge Elimination System (NPDES) permit for a period of five years.

BACKGROUND: DG Fairhaven Power, LLC (Permittee), owns and operates a biomass power generation facility (Facility) in the Town of Samoa. The Facility combusts wood waste to produce electricity using a steam-turbine power generation process. Power generation uses approximately 0.5 million gallons per day (mgd) of potable water. The process water originates from the Humboldt Bay Municipal Water District.

The Facility is currently regulated under Waste Discharge Requirements Order No. R1-2012-0027, which serves as a NPDES permit for waste discharges to surface waters.

Process waters discharged under this Order include cooling tower blowdown, low volume wastes (including: boiler water blowdown, reverse osmosis concentrate, and demineralizer back-wash), and intermittent wastes (including: cooling tower cleaning wastes). Approximately 0.130 mgd of used process water is discharged to the Pacific Ocean through Humboldt Bay Harbor, Recreation & Conservation District's (Harbor District) outfall, located at the former Samoa Pulp Mill to the north of the Facility. The metal cleaning wastes from boiler cleaning also represent an intermittent waste stream, which is applied to incoming fuel and is not discharged to the Pacific Ocean. Approximately 0.021 mgd of screw and bearing cooling process water is recycled from the low-volume waste stream into the cooling tower feed water.

Process water is treated at various points in the power generation cycle before being discharged as effluent. The reverse osmosis unit and a demineralizer are used to reduce the concentration of total dissolved solids in the boiler water. The demineralizer back-wash, boiler blowdown and reverse osmosis concentrate are then routed back to the cooling tower. More than 60% of the cooling tower water is evaporated. The remaining cooling tower water is blown down via a valve to an oil/water separator and then discharged.

Bottom ash and fly ash generated during biomass combustion is used for amendment of soil in high-trafficked livestock agricultural areas and is regulated by separate Monitoring and Reporting Program R1-2013-0047.

The Proposed Permit contains several new noteworthy requirements or changes including:

1. Removal of numeric acute and chronic effluent limitations due to no reasonable potential. A reduction of chronic toxicity monitoring from semi-annually to annually and removal of acute toxicity monitoring.
2. New requirement to investigate and plan for any impacts to operations due to extreme weather events and/or sea level rise.
3. New requirement to perform a biological survey in the vicinity of the outfall to assess the possible impact of effluent on beneficial uses in the area.

Public Comment: Regional Water Board staff received timely comments on the Draft Order from the Permittee and made several changes to the Proposed Order in response to those comments. No other comments were received. The most significant changes made to the Proposed Order in response to the Permittee's comments were: (1) removing composite sampling requirements for zinc; (2) adding language to clarify the requirements of the Biological Survey near the ocean outfall; and (3) modifying the mass-loading calculations and effluent limitations for copper. A full explanation of the comments and responses is documented in the attached Response to Comments document.

The changes were acceptable to the Permittee. Staff expects the Proposed Order will be uncontested.

RECOMMENDATION: Adopt Order No. R1-2018-0013, as proposed.

**SUPPORTING
DOCUMENTS:**

1. Proposed Order No. R1-2018-0013
2. Staff Responses to Written Comments
3. DG Fairhaven Comment Letter
4. Public Notice