United States Department of the Interior

FISH AND WILDLIFE SERVICE
Pacific Southwest Region
2800 Cottage Way, Room W-2606
Sacramento, California 95825-1846

IN REPLY REFER TO:
Region 8 - ES

March 3, 2014

Anne Holden
California Regional Water Quality Control Board
Lahontan Region
2501 Lake Tahoe Boulevard
South Lake Tahoe, California 96150

Re: Comments on Proposed Board Order No. R6V-2014, Waste Discharge Requirements for Pacific Gas and Electric Company Groundwater Remediation Project, Agricultural Treatment Units, San Bernardino County, California

Dear Ms. Holden:

We are commenting on the California Regional Water Quality Control Board, Lahontan Region's (Lahontan Water Board) proposed Board Order No. R6V-2014 (Order) concerning Waste Discharge Requirements for Pacific Gas and Electric Company's (PG&E) Groundwater Remediation Project, Agricultural Treatment Units, in San Bernardino County, California . The proposed Order was circulated for a 30-day comment period on February 11, 2014. The U.S. Fish and Wildlife Service's (Service) responsibilities include administering the Migratory Bird Treaty Act (MBTA) and Endangered Species Act of 1973, as amended (ESA). Our comments are limited to aspects of the proposed Order that relate to our responsibility for migratory birds and listed species pursuant to the MBTA and ESA.

The proposed Order authorizes ongoing discharges of chromium-contaminated groundwater to agricultural treatment units up to a maximum of 500 acres, as part of PG&E's groundwater remediation project in Hinkley, California. The proposed Order requires continued soil and plant tissue monitoring to verify hexavalent chromium removal efficiencies and investigate the accumulation of chromium (trivalent and hexavalent) and other constituents in soil and plants. The chromium soil limits proposed in the Order align with screening levels developed by the State of California, based on human health risk assessments. The range of screening levels for hexavalent chromium in California is 17 to 21 miligrams per kilogram (mg/kg); and for trivalent chromium, the range is 100,000 to 120,000 mg/kg. These ranges will be used to compare to sampling results for hexavalent and trivalent chromium in soils required by the proposed Order.

The Service is concerned that the range of screening levels for trivalent chromium, which are based on risks to human health, are not adequately protective of wildlife. The U.S. Environmental Protection Agency (EPA) issues ecological soil screening levels, which are

generally used in the development of screening-level ecological risk assessments. The ecological soil screening levels for chromium are summarized in the table below (Table 1), which appears in EPA's 2008 document Ecological Soil Screening Levels for Chromium (EPA 2008).

Table 1 Chromium Eco-SSLs (mg/kg dry weight in soil)

Plants	Soil Invertebrates	Wildlife	
		Avian	Mammalian
Not enough data to derive Eco-SSL.	Not enough data to derive Eco- SSL.	Cr III - 26 Cr VI -NA	Cr III - 34 Cr VI -130

EPA's soil-screening level for trivalent chromium is 26 mg/kg for avian species and 34 mg/kg for mammalian species. These levels are substantially lower than the levels proposed in the Order. We recommend that the Lahontan Water Board consider the potential risks to ecological receptors when developing the monitoring requirements associated with the proposed Order. Because trivalent chromium is far less soluble than hexavalent chromium, increasing accumulation of trivalent chromium in the soil would be expected as the agricultural units continue to operate. The most recent ecological risk assessment for the Hinkley site is from 1988 and does not comport with current practices or EPA guidelines for conducting ecological risk assessments. We recommend that the Lahontan Water Board conduct an updated ecological risk assessment for the site in order to provide a basis for establishing site-specific screening levels and cleanup goals that are protective of wildlife.

If you have any questions regarding these comments, please contact Jenny Marek of the Ventura Fish and Wildlife Office at (805) 644-1766 extension 325 or Jenny_Marek@fws.gov.

Sincerely,

damian_higgins@fws.gov

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Damian Higgins
Regional Coordinator, Environmental Quality Programs

cc:
Erin Nordin, Fish and Wildlife Biologist, Ventura Fish and Wildlife Office
Carl Benz, Assistant Field Supervisor, Ventura Fish and Wildlife Office
Virginia Strohl, Senior Terrestrial Biologist, PG&E

REFERENCES

U.S. Environmental Protection Agency [EPA], 2008. Ecological Soil Screening Levels for Chromium. Interim Final. Office of Solid Waste and Emergency Response, Washington D.C..