



**NUCLEAR REGULATORY COMMISSION**

**[Docket No. 50-133]**

**[NRC-2010-0291]**

**Exemption of Material for Proposed Disposal Procedures at the  
US Ecology Idaho Resource Conservation and Recovery Act Subtitle C  
Hazardous Disposal Facility Located Near Grand View, Idaho for Material from the  
Humboldt Bay Power Plant, Unit 3, License DPR-007, Eureka, California**

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Environmental assessment and finding of no significant impact.

**FOR FURTHER INFORMATION CONTACT:** John Hickman, Division of Waste Management and Environmental Protection, Office of Federal and State Materials and Environmental Management Programs, U.S. Nuclear Regulatory Commission, Washington, DC 20555-00001; telephone 301-415-3017, e-mail [john.hickman@nrc.gov](mailto:john.hickman@nrc.gov).

**SUPPLEMENTARY INFORMATION:**

**I. Introduction**

The U.S. Nuclear Regulatory Commission (NRC) staff is considering a request dated May 2, 2012, (ML12135A295) as supplemented by e-mail dated July 16, 2012, (ML123200007) by Pacific Gas and Electric Company (PG&E, the licensee) for alternate disposal of approximately 100,000 ft<sup>3</sup> of hazardous waste, soil, and debris and 50,000 ft<sup>3</sup> of water solidified with clay containing low-activity radioactive material, at the US Ecology Idaho (USEI) Resource Conservation and Recovery Act (RCRA) Subtitle C hazardous disposal facility located near Grand View, Idaho. Additionally, PG&E requested exemptions on behalf of USEI pursuant to section 30.11 of Title 10 of the *Code of Federal Regulations* (10 CFR) and 10 CFR 70.17 to allow USEI to receive and possess radioactive materials without an NRC license. These

requests were made under the alternate disposal provision contained in 10 CFR 20.2002 and the exemption provisions in 10 CFR 30.11 and 10 CFR 70.17.

This Environmental Assessment (EA) has been developed in accordance with the requirements of 10 CFR 51.21.

## **II. Environmental Assessment**

### *Identification of Proposed Action*

On July 2, 1976, Humboldt Bay Power Plant (HBPP) Unit 3 was shut down for annual refueling and to conduct seismic modifications. In 1983, updated economic analyses indicated that restarting Unit 3 would probably not be cost-effective, and in June 1983, PG&E announced its intention to decommission the unit. On July 16, 1985, the NRC issued Amendment No. 19 to the HBPP Unit 3 Operating License to change the status to possess-but-not-operate. In December 2008, PG&E completed the transfer of spent fuel from the fuel storage pool to the dry-cask Independent Spent Fuel Storage Installation and the decontamination and dismantlement phase of HBPP Unit 3 decommissioning commenced.

PG&E requested NRC authorization for the disposal of waste from the decommissioning of HBPP Unit 3 at the USEI facility in accordance with 10 CFR 20.2002. This waste consists of approximately 100,000 ft<sup>3</sup> of hazardous waste, soil, and debris and 50,000 ft<sup>3</sup> of water solidified with clay containing low-activity radioactive material generated during the demolition of structures and remediation activities at Unit 3.

The waste would be transported by truck from HBPP in Eureka, California to the USEI facility, Grand View, Idaho in the Owyhee Desert. The USEI facility is a RCRA Subtitle C hazardous waste disposal facility permitted by the State of Idaho. The USEI site has both natural and engineered features that limit the transport of radioactive material. The natural features include the low precipitation rate [i.e., 18.4 cm/year (7.4 in./year)] and the long vertical distance to groundwater (i.e., 61-meter (203-ft) thick on average unsaturated zone below the

disposal zone). The engineered features include an engineered cover, liners, and leachate monitoring systems. Because the USEI facility is not licensed by the NRC, this proposed action would require the NRC to exempt USEI from Atomic Energy Act of 1954, (AEA) and NRC licensing requirements with respect to the low-contaminated material authorized for disposal.

*Need for Proposed Action:*

The subject waste material consists of hazardous waste, soil, and debris containing low-activity radioactive debris generated during the demolition of structures and remediation activities at Unit 3. This proposed alternate disposal would conserve low-level radioactive waste disposal capacity at licensed low-level radioactive waste disposal sites.

*Environmental Impacts of the Proposed Action:*

The NRC staff has reviewed the evaluation performed by the licensee to demonstrate compliance with the 10 CFR 20.2002 alternate disposal criteria. Under these criteria, a licensee may seek NRC authorization to dispose of licensed material using procedures not otherwise authorized by the NRC's regulations. A licensee's supporting analysis must show that the radiological doses arising from the proposed 10 CFR 20.2002 disposal will be as low as reasonably achievable and within the 10 CFR Part 20 dose limits.

PG&E performed a radiological assessment in consultation with USEI. Based on this assessment, PG&E concludes that potential doses to members of the public, including workers involved in the transportation and placement of this waste will be approximately one millirem total effective dose equivalent in one calendar year for this project, and well within the "few millirem" criteria that the NRC has established (see NUREG-1757).

The staff evaluated activities and potential doses associated with transportation, waste handling and disposal as part of the review of this 10 CFR 20.2002 application. The projected doses to individual transportation and USEI workers have been appropriately estimated and are demonstrated to meet the NRC's alternate disposal requirement of not more than "a few

millirem per year” to any member of the public. Independent review of the post-closure and intruder scenarios confirmed that the maximum projected dose over a period of 1,000 years is also within “a few millirem per year.” Additionally, the proposed action will not significantly increase the probability or consequences of accidents and there is no significant increase in occupational or public radiation exposures.

With regard to potential non-radiological impacts, the proposed action does not have a potential to affect any historic sites. The proposed action does not affect non-radiological plant effluents, air quality, or noise.

The proposed action and attendant exemption of the material from further AEA and NRC licensing requirements will not significantly increase the probability or consequences of accidents, no changes are being made in the types of any effluents that may be released off site, and there is no significant increase in occupational or public radiation exposure.

Due to the very small amounts of radioactive material involved, the environmental impacts of the proposed action are not significant.

*Environmental Impacts of the Alternatives to the Proposed Action:*

Since the proposed action will cause no significant environmental impacts, the only alternative the staff considered is the no-action alternative, under which the staff would deny the disposal request. This denial of the request would only change the location of the disposal site to be used for the material. All other factors would remain the same or similar. Therefore, the environmental impacts of the proposed action and the no-action alternative are similar and the no-action alternative is accordingly not further considered.

*Conclusion*

The NRC staff has concluded that the proposed action will not significantly impact the quality of the human environment and that the proposed action is the preferred alternative.

### *Agencies and Persons Consulted*

NRC provided a draft of this EA to the State of Idaho Department of Environmental Quality for review on August 28, 2012. The State had no comments.

The NRC staff has determined that the proposed action is of a procedural nature and will not affect Endangered Species Act (ESA) listed species or their critical habitat. Therefore, no further consultation is required under Section 7 of the ESA. The NRC staff has also determined that the proposed action is not the type of activity that has the potential to affect historic properties. Therefore, no further consultation is required under Section 106 of the National Historic Preservation Act.

### **III. Finding of No Significant Impact**

The NRC staff has prepared this EA in support of the proposed action. On the basis of this EA, the NRC finds that there are no significant environmental impacts from the proposed action and that preparation of an environmental impact statement is not warranted. Accordingly, the NRC has determined that a Finding of No Significant Impact is appropriate.

### **IV. Further Information**

Documents related to this action, including the application and supporting documentation, are available electronically at the NRC's Electronic Reading Room at <http://www.nrc.gov/reading-rm/adams.html>. From this site, you can access the NRC's Agencywide Document Access and Management System (ADAMS), which provides text and image files of NRC's public documents. The documents related to this action are listed below, along with their ADAMS accession numbers.

- (1) Letter dated May 2, 2012, "Humboldt Bay Power Plant Unit 3 Request for 10 CFR 20.2002 Alternate Disposal Approval, and 10 CFR 30.11 and 10 CFR 70.17

Exemption of Humboldt Bay Power Plant Waste For Disposal at US Ecology, Inc”

[ADAMS Accession Number ML121350326]

(2) Email dated July 16, 2012, providing responses to a request for additional information. [ML12241A273]

(3) NRC letter dated November 2, 2010, approving prior request from Humboldt Bay for 10 CFR 20.2002 alternate disposal and 10 CFR 30.11 exemption. [ML102870344]

If you do not have access to ADAMS, or if there are problems in accessing the documents located in ADAMS, contact the NRC Public Document Room (PDR) Reference staff at 1-800-397-4209, 301-415-4737, or by e-mail to [pdr@nrc.gov](mailto:pdr@nrc.gov). These documents may also be viewed on the public computers located at the NRC's PDR, O 1 F21, One White Flint North, 11555 Rockville Pike, Rockville, MD 20852. The PDR reproduction contractor will copy documents for a fee.

Dated at Rockville, Maryland, this 23 day of November, 2012.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

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