UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

April 1, 2021

Mr. James M. Welsch
Senior Vice President
Generation and Chief Nuclear Officer
Diablo Canyon Power Plant
P.O. Box 56
Mail Code 104/6
Avila Beach, CA 93424

SUBJECT: HUMBOLDT BAY POWER PLANT, UNIT 3 – REQUEST FOR ADDITONAL INFORMATION ON LICENSE AMENDMENT REQUEST TO REVISE THE LICENSE TERMINATION PLAN (EPID L-2021-LLA-0012)

Dear Mr. Welsch:

By letter dated February 8, 2021 (Agencywide Document Access and Management System [ADAMS] Accession No. ML21039A515), Pacific Gas & Electric submitted a request for a License Amendment to revise a methodology in the License Termination Plan for Humboldt Bay Power Plant, Unit 3. On March 4, 2021 (ADAMS Accession No. ML21078A054), the U.S. Nuclear Regulatory Commission (NRC) accepted the application for technical review and provided a review schedule.

The NRC staff has reviewed your application and has identified additional information that will be needed to complete its review. Our request for additional information is enclosed. We request your response to this request within 30 days of receipt.

In accordance with 10 CFR 2.390 of the NRC's "Agency Rules of Practice and Procedure," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records component of NRC's Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html.

Should you have any questions regarding this request, please contact me at 301-415-6822 or via e-mail at amy.snyder@nrc.gov.

Sincerely,

Signed by Snyder, Amy
on 04/01/21

Amy M. Snyder, Senior Project Manager
Reactor Decommissioning Branch
Division of Decommissioning, Uranium Recovery
and Waste Programs
Office of Nuclear Material Safety
and Safeguards

Docket No. 50-133
License No. DPR-7

Enclosure: Request for Additional Information

cc w/Enclosure:
Humboldt Bay Service List
Maureen Zawalick: Maureen.Zawalick@pge.com
Eric Nelson: Eric.Nelson2@pge.com
Tom Jones: Tom.Jones@pge.com
Bill Barley: Bill.Barley@pge.com
Philippe Soenen: Philippe.Soenen@pge.com

Request for Additional Information (RAI) for Humboldt Bay License Termination Plan (LTP) Amendment Request

RAI 1) a) Identify the Quality Control (QC) measures and reference the procedures that the licensee plans to use to verify that the assumptions about the insignificant Radionuclides of Concern (ROCs) remain valid for each survey unit, and **b)** explain how the licensee will use Minimum Detectable Concentration (MDC) values or QC data to verify the deselection assumptions.

Basis: 10 CFR 20.1402 Radiological criteria for unrestricted use.

Discussion: The licensee requests an amendment for use of characterization data or general assumptions to consider select ROCs to be relatively insignificant and therefore can be "deselected" from the ROCs under consideration in a survey unit when evaluating data for Final Status Surveys. The proposed commitment for doing so is that:

> "the deselection process for radionuclides that were not specifically statistically evaluated in each specific survey area shall be performed. The sum-of-fractions for the deselected radionuclides shall be no more than 10 percent of the limit. The input for the Hard-to-Detect (HTD) isotopes for the sum-of-fractions calculation may be based on actual analytical characterization data or Minimum Detectable Concentration (MDC) values. The basis for input parameters chosen should be included with the area's deselection documentation."

The NRC staff note that the licensee had been previously analyzing approximately 10 percent of the samples collected in a survey unit for all ROCs for QC purposes. It is the NRC staff's understanding from the approved LTP that the purpose of obtaining this QC data was to verify surrogate relationships established for the HTD ROCs. However, based on licensee communications and the final status survey reports submitted to date, the licensee did not use the surrogate relationship strategy and does not anticipate doing so going forward. In the proposed amendment application for the LTP, the licensee deleted (see first paragraph on pages 5-14 of the red line/strikeout in submittal HBL-21-01) this QC verification strategy. The NRC staff could not identify any similar text requiring QC analysis of all ROCs in a survey unit elsewhere in the LTP. However, in the approved LTP, the licensee effectively commits to using the Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM) approach for final status surveys.

Because the licensee is using assumptions potentially based on previously collected characterization data, as well as general assumptions as to what ROCs may have been present in the survey units being assessed, the NRC staff believe that some QC evaluation is warranted based on the MARSSIM approach and to confirm the assumptions that the licensee is making, as well as to confirm that no recent impacts to the land area (due to decommissioning or restoration activities) have occurred that might disrupt anticipated radionuclide distribution across the site. Also, the NRC staff consider environmental transport mechanisms, such as resuspension/dust blowing and surface water runoff, could result in unexpected transport of the deselected ROCs to a survey unit, especially if no environmental cross contamination controls are in place. As such, if the licensee wants to delete the approved QC analysis strategy to verify surrogate relationships at the time of final status survey, it must propose another strategy that will address a QC requirement to verify its assumptions that the deselected radionuclides are not present at concentrations such that the Sum of Fractions (SOF) of the deselected ROCs

would exceed 10 percent of the dose criteria. Assuming the licensee will continue to analyze samples for QC data and verify the deselection assumptions, the NRC staff requests the licensee to explain how it would use the data (for example, use the larger MDC value of the QC data for a deselected ROC value under consideration, do not use negative concentration values for assessing against the 10 percent SOF criteria [2.5 mrem/y criteria], consideration of background, etc.).

Intent of RAIs: The NRC staff expects that a licensee describe, as a commitment in the LTP, the QC steps it will take to verify its assumptions for deselected radionuclides hold true when evaluating a survey unit. In such case, a licensee is expected to also provide the mathematical method it will use for deselecting ROCs.

- A licensee is expected to identify both when it will utilize the MDC values versus actual sample results, and from where it will obtain the MDC values (e.g., from the QC sample analyses or from the maximum MDC commitment values in the LTP or other?).

- A licensee is expected to identify how it will verify the deselected radionuclides assumptions (e.g., use QC data to do a 10 percent SOF compare [2.5 mrem/y]?). If the assumptions are not based on data but rather general knowledge as to the absence of select ROCs, the NRC staff expects that a licensee identify the criteria it would apply to the QC data to verify a general knowledge assumption.

- If a licensee plans to use previous characterization data to deselect ROCs, the NRC staff expects a licensee to identify the mathematical methods it will use for demonstrating consistency with the <2.5 mrem/y dose criterion (e.g., average values of ROC concentrations from what may be a limited data set are not likely to be considered suitably conservative in this case and negative concentrations are not to be utilized to directly compare against a dose based criterion [i.e., to estimate dose] although they may be used to generate suitable statistical information associated with a data set).

HUMBOLDT BAY POWER PLANT, UNIT 3 – REQUEST FOR ADDITONAL INFORMATION ON LICENSE AMENDMENT REQUEST TO REVISE THE LICENSE TERMINATION PLAN (EPID L-2021-LLA-0012)
DATE April 1, 2021

DISTRIBUTION:
RidsOgcMailCenterResource, OGC
RidsACRS_MailCTRResource, ACRS
GChapman, NMSS/DUWP/RDB
KPinkston, NMSS/DUWP/RTAB
GWarnick, R-IV/DNMS/RIB

ADAMS Accession No.: ML21091A047

OFFICE	NMSS/DUWP/RDB	NMSS/DUWP/RDB	NMSS/DUWP/RDB	
NAME	ASnyder *AS*	BWatson *BW*	ASnyder *AS*	
DATE	Apr 1, 2021	Apr 1, 2021	Apr 1, 2021	

OFFICIAL RECORD COPY