



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

September 8, 2015

Mr. Edward D. Halpin
Senior Vice President and
Chief Nuclear Officer
Pacific Gas and Electric Company
Diablo Canyon Power Plant
P.O. Box 56, Mail Code 104/6
Avila Beach, CA 93424

SUBJECT: LICENSE RENEWAL ENVIRONMENTAL SITE AUDIT REGARDING DIABLO
CANYON POWER PLANT, UNITS 1 AND 2 (TAC NOS. MF4019 AND MF4020)

Dear Mr. Halpin:

The U.S. Nuclear Regulatory Commission (NRC) staff is reviewing Pacific Gas and Electric Company's license renewal application for Diablo Canyon Power Plant, Units 1 and 2. The environmental site audit will be conducted at Diablo Canyon Power Plant, Units 1 and 2, during the week of September 28, 2015, by NRC staff and its contractors. The environmental audit activities will be conducted in accordance with the environmental audit plan (Enclosure 1).

To develop the Supplemental Environmental Impact Statement, the NRC staff requests the information described in the environmental audit needs list (Enclosure 2) be made available, to the extent possible, during the environmental site audit. The NRC staff informally transmitted this information to your staff (Terry Grebel) by e-mail on August 27, 2015.

If you have any questions, please contact me by telephone at 301-415-6459, or by e-mail at michael.wentzel@nrc.gov.

Sincerely,

/RA/

Michael J. Wentzel, Project Manager
Projects Branch 2
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket Nos. 50-275 and 50-323

Enclosure:
As stated

cc w/encl: Listserv

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ADAMS Accession No.: ML15243A582

*concurrence via email

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NAME	IBetts	MWentzel	DWrona	JDanna	MWentzel
DATE	8/31/2015	9/1/15	9/2/15	9/1/15	9/8/15

OFFICIAL RECORD COPY

Letter from M. Wentzel to E. Halpin dated September 8, 2015

SUBJECT: LICENSE RENEWAL ENVIRONMENTAL SITE AUDIT REGARDING DIABLO
CANYON POWER PLANT, UNITS 1 AND 2 (TAC NOS. MF4019 AND MF4020)

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AMoreno, OCA

MWaters, EDO

LICENSE RENEWAL ENVIRONMENTAL AUDIT PLAN DIABLO CANYON POWER PLANT, UNITS 1 AND 2

1. Background

By letter dated November 24, 2009, Pacific Gas and Electric Company (PG&E or applicant) submitted to the U.S. Nuclear Regulatory Commission (NRC) an application pursuant to Title 10 of the *Code of Federal Regulations* Part 54 (10 CFR Part 54) to renew the operating licenses for Diablo Canyon Power Plant, Units 1 and 2 (DCPP). In accordance with the requirements of 10 CFR Part 51, the NRC staff is reviewing the information contained in the environmental report (ER) submitted in conjunction with the license renewal application (LRA).

As part of its review of the ER, the NRC staff will perform an environmental audit in San Luis Obispo. The purpose of this audit is to gain understanding, verify information, and identify information that will require docketing to support the basis of the licensing or regulatory decision. Specifically, the NRC staff will identify pertinent environmental data, review the facility and area, and obtain clarifications regarding information provided in the ER.

Per NRC guidance, the NRC staff prepared a regulatory audit plan that provides a clear overview of audit activities, scope, and team assignments.

2. Environmental Audit Bases

License renewal requirements are specified in 10 CFR Part 54, "Requirements for Renewal of Operating Licenses for Nuclear Power Plants." Licensees are required by 10 CFR 54.23 to submit an ER that complies with the requirements in 10 CFR Part 51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions," as part of the LRA. Review guidance for the staff is provided in NUREG-1555, "Standard Review Plans for Environmental Reviews for Nuclear Power Plants: Supplement 1 – Operating License Renewal."

NRC staff is required to prepare a site-specific supplement to NUREG-1437, "Generic Environmental Impact Statement for License Renewal of Nuclear Plants." During the scoping process required in 10 CFR Part 51, NRC staff is required to define the proposed action, identify significant issues which must be studied in depth, and to identify those issues that can be eliminated from further study.

3. Environmental Audit Scope

The scope of this environmental audit is to identify those issues which are significant and those issues which can be eliminated from further study and to identify the environmental resources that must be adequately described and evaluated in the site-specific supplemental environmental impact statement (SEIS). Audit team members will focus on reviewing the documents and requested information listed in the Environmental Audit Needs List (Enclosure 2) and discussing the information with the applicant's subject matter experts. Additional questions may develop during the audit.

4. Information and Other Material Necessary for the Environmental Audit

As described in the Environmental Audit Needs List (Enclosure 2).

ENCLOSURE 1

5. Tentative Team Assignments Area of Review Assigned Auditor

The environmental audit team members are shown in Table 1. Those members of the team who are contractors from Pacific Northwest National Laboratory will have PNNL after their name.

Table 1 Environmental Audit Team Members and Resource Assignments

Discipline	Team Members
Environmental Project Manager	Michael Wentzel, NRC
Alternatives	Robert Hoffman, NRC*
Aquatic Resources	Michelle Moser, NRC Valerie Cullinan, PNNL*
Cumulative Impacts	Robert Hoffman, NRC*
Geologic Environment	William Ford, NRC
Historic and Cultural Resources	Jeffrey Rikhoff, NRC Tara O'Neill, PNNL
Human Health	Russell Chazell, NRC*
Air Quality and Noise	Nancy Martinez, NRC
Socioeconomics	Jeffrey Rikhoff, NRC
Special Status Species and Habitats	Michelle Moser, NRC Briana Grange, NRC
Terrestrial Resources	Briana Grange, NRC
Waste Management	Russell Chazell, NRC*
Water Resources – Surface Water	Kevin Folk, NRC
Water Resources – Groundwater	William Ford, NRC
*Will participate in the environmental site audit by telephone, as necessary.	

6. Logistics

The environmental audit will be conducted in San Luis Obispo from September 29-October 1, 2015. An entrance meeting will be held with plant management at the beginning of the audit. An exit meeting will be held at the end of this audit.

7. Special Requests

The NRC staff requests the applicant make available the information identified on the Environmental Audit Needs List (Enclosure 2). Plant staff members who are subject matter experts in the disciplines listed on the Environmental Site Audit Needs List should be available for interviews and site tours as identified on the Environmental Audit Needs List (Enclosure 2).

8. Deliverables

An audit summary report is scheduled to be issued by NRC staff within 90 days from the end of the environmental audit.

DIABLO CANYON POWER PLANT, UNITS 1 AND 2 LICENSE RENEWAL ENVIRONMENTAL SITE AUDIT NEEDS LIST

The U.S. Nuclear Regulatory Commission (NRC) staff has reviewed Appendix E, the Environmental Report (ER), of the Diablo Canyon Power Plant, Units 1 and 2 (DCPP), license renewal application (LRA), as revised by amendments submitted by Pacific Gas and Electric (PG&E) in December 2014 and February 2015.

Please be prepared to discuss the following issues and make available the following information during the environmental site audit.

Alternatives

- ALT-1 Identify the available acreage and locations on the DCPD site that would be suitable for siting replacement power generation.
- ALT-2 Clarify whether or not 2012 State generating capacities or utilization presented in Section 7.2 of the ER (Amendment 2) were factored into the composition of the energy sources considered in the Combination Alternative.
- ALT-3 Clarify whether any components of the combination alternative would be sited outside of the PG&E service area.
- ALT-4 Provide the data sources supporting the conclusion on page 7.2-14 that "Currently, fuel cells are not economically or technologically competitive with other alternatives for electricity generation."
- ALT-5 Clarify the basis for the solar photovoltaic acreage estimates included under the discussion of distributed generation on page 7.2-11.
- ALT-6 Provide the data sources supporting the discussion and associated conclusions regarding the feasibility of Compressed Air Energy Storage (CAES) technology.
- ALT-7 Section 4.2.5 of the ER (Amendment 1) references studies that have been conducted which address retrofitting closed-cycle cooling at DCPD. Please indicate whether PG&E has conducted any additional closed-cycle cooling alternative analyses or associated screening studies since publication of the 2014 report prepared by Bechtel Power Corporation (reference 27 as listed in ER (Amendment 1), Section 4.22).

Meetings requested: Provide PG&E's subject matter expert(s) and/or contractor(s) responsible for writing the alternatives portion of the ER and who can discuss the above information requests.

Tours requested: Provide a tour of the site such that the NRC staff can observe the following:

- 1) Possible onsite locations suitable for siting replacement power generation facilities.

Aquatic Resources

AQ-1 Section 2.2.1 of the ER, "Marine Ecology," describes the various aquatic monitoring efforts that have occurred near DCPD since 1976, including the Thermal Effects Monitoring Program (TEMP); the Marine Ecological Monitoring Program (MEMP); and the Receiving Water Monitoring Program (RWMP). The most recent RWMP from 2012 and 2013 provide the count or percent cover, mean, and standard deviation for the abundance or percent cover for algae, invertebrates, and fish. For monitoring efforts from 1976-2011, provide the count or percent cover, mean, and standard deviation for each year of monitoring for the following species:

a) Algae

- i) Bull kelp (*Nereocystis luetkeana*)
- ii) Feather-boa kelp (*Egregia menziesii*)
- iii) Hollow-branched seaweed (*Gastroclonium subarticulatum*, formerly *G. coulteri*)
- iv) Iridescent seaweed (*Mazzella flaccida*, formerly *Iridaea flaccida*)
Oar-blade kelp (*Laminaria dentigera*)
- v) Tree kelp (*Pterygophora californica*)
- vi) Un-named red seaweed (*Chondracanthus canaliculatus*, formerly *Gigartina canaliculata*)

b) Invertebrates

- i) Aggregating sea anemone (*Anthopleura elegantissima*)
- ii) Black abalone (*Haliotis cracherodii*)
- iii) Brown turban snail (*Chlorostoma brunnea*, formerly *Tegula brunnea*)
- iv) Kelp crab (*Pugettia producta*)
- v) Ochre starfish (*Pisaster ochraceus*)
- vi) Purple sea urchin (*Strongylocentrotus purpuratus*)
- vii) Red Abalone (*Haliotis rufescens*)
- viii) Red sea urchin (*Strongylocentrotus franciscanus*)
- ix) Rock crab (*Cancer antennarius*)
- x) Sun stars (*Pycnopodia helianthoides*)
- xi) White abalone (*Haliotis sorenseni*)

c) Fish

- i) Blue rockfish (*Sebastes mystinus*)
- ii) Cabezon (*Scorpaenichthys marmoratus*)
- iii) Coho salmon (*Oncorhynchus kisutch*)
- iv) Green sturgeon (*Acipenser medirostris*)

- v) Gopher rockfish (*Sebastes carnatus*)
- vi) Rock Prickleback (*Xiphister mucosus*)
- vii) Steelhead trout (*Oncorhynchus mykiss*)

- AQ-2 Section 2.2.1.2 of the ER, "Species/Habitat Inventories, Marine Mammal Resources," states that no known or recorded incidents of marine mammal injuries or fatalities have occurred due to power plant operations through 2014. The NRC staff is aware of 3 reports of Marine Mammal Strandings at DCP in 2015 (February 22, March 16, and May 6). In each case, PG&E reported to the NRC that the death was likely attributable to natural causes and verbal notification of the incident was reported to National Oceanic and Atmospheric Administration (NOAA) Fisheries. Describe any comments or letters received from NOAA Fisheries in response to the Marine Mammal Strandings report, especially in regards to the cause of death.
- AQ-3 Section 2.2.1.3 of the ER, "Commercial and Recreationally Important Species" describes the commercial landing data collected by the California Department of Fish and Wildlife (CDFW) from 2009 through 2013. Provide a reference for this data.
- AQ-4 Section 2.2.2.1 of the ER, "Species and Relative Abundance," was revised to describe recent rainbow trout and steelhead (*Oncorhynchus mykiss*) studies in Diablo Creek and Coon Creek. In addition, a discussion of other aquatic resources in these creeks was deleted. Provide a description of the aquatic resources in Diablo Creek and Coon Creek, other than *O. mykiss*.
- AQ-5 Section 4.1 of the ER, "Entrainment of Fish and Shellfish in Early Life Stages," states that PG&E has had extensive communications and consultations with the Central Coast Regional Water Quality Control Board (CCRWQCB), the California State Water Resource Control Board (SWRCB), and the CDFW. Provide copies of all letters and communications to and from these agencies regarding impingement, entrainment, and heat shock since 2010. Indicate if PG&E anticipates or is aware of the need to conduct any additional studies related to impingement, entrainment, or heat shock, or any studies that may be conducted by State agencies or other organizations on these topics.
- AQ-6 Section 4.1 of the ER, "Entrainment of Fish and Shellfish in Early Life Stages," states that the Once Through Cooling (OTC) Water Policy adopted by the SWRCB effectively requires reductions of at least 85 percent of flow or commensurate with closed-cycle cooling. The SWRCB states that the OTC Water Policy requires a 93 percent reduction in water use. Describe PG&E's basis for the stating the OTC Water Policy requirement of reducing flow by at least 85 percent.

- AQ-7 Section 4.1 of the ER, "Entrainment of Fish and Shellfish in Early Life Stages," states that "during the current period of operation, available data from both DCPD-specific ecological studies, as well as independent studies of regional marine fisheries, provide evidence that local populations of fish susceptible to entrainment in larval stages have remained relatively stable...The conclusion from the extensive data from past and ongoing monitoring has shown that overall population decreases have not occurred, and the local marine ecosystem remains healthy." Describe the basis for this statement, including the references for studies that would support this statement.
- AQ-8 Section 4.3 of the ER, "Impingement of Fish and Shellfish," states that PG&E completed an impingement assessment of the OTC system in 1986 and the ER Amendment provides a summary of the results of the study. Provide a copy of this study.
- AQ-9 Section 4.4 of the ER, "Heat Shock," states that DCPD is updating a cooling system thermal discharge impacts assessment using data gathered from 2008 through 2013 from the ongoing Receiving Water Monitoring Program (RWMP) and expects the final report to be completed during the 2nd Quarter in 2015. Provide a copy of this report.

Meetings requested: Provide PG&E's subject matter expert(s) and/or contractor(s) responsible for writing the aquatic resources portion of the ER and who can discuss the above information requests. This meeting may be combined with the terrestrial resources and special status species and habitats meetings, as appropriate.

Cumulative Impacts

- CI-1 Please provide name, description, location, and status of any additional past, present, or reasonably foreseeable projects or actions that have been identified since ER (Amendment 1) was prepared.

Geologic Environment

Tours requested: Provide a tour of the site such that the NRC staff can observe the following:

- 1) Soil erosion control practices that have been implemented at the DCPD site.
- 2) Alluvial and stream terrace deposits associated with Diablo Creek.
- 3) Terrace deposits on top of the wave-cut platform along the Pacific Ocean.
- 4) The Obispo Formation from the shoreline along the Pacific Ocean. (Perhaps near the mouth of Diablo Creek or some other location where the structures and beds of the Diablo Creek Formation can be safely observed and examined).

Historic and Cultural Resources

- HC-1 Provide an updated map detailing the level of ground disturbance at the DCPD site, including documentation on how this level of disturbance was determined.
- HC-2 What percentage of land within the DCPD property has been formally surveyed?

- HC-3 What percentage of land within the DCPD property is undisturbed?
- HC-4 Provide updated map(s) of previously surveyed areas and archaeological site locations within the entire DCPD property (plant site and PG&E plant property) and along existing in-scope transmission lines, up to the first substation, which will be needed during the site visit. These maps will not be docketed, as they are considered sensitive information.
- HC-5 Provide copies of all references used to develop the historic and cultural resources portions of the ER.
- HC-6 Provide the status – and a draft copy if available – of the most recent Cal Poly Field School technical report for the excavation at CA-SLO-5 as discussed on page 2.11-8 of the ER (last sentence of first partial paragraph at the top of the page).
- HC-7 Provide the charter and meeting minutes for the last four years of the DCPD Land Stewardship Team as discussed in Section 2.11.3 of the ER. Provide a description of how a proposed activity on the DCPD site is evaluated for cultural resource impacts.
- HC-8 Provide a copy of any administrative controls and environmental procedures in place for land-disturbing activities (e.g., trenching, clearing, digging) on or associated with DCPD property. Describe how inadvertent discoveries are treated by DCPD during normal operations.
- HC-9 Provide information on management around less-developed areas of the plant site, especially near known historic and cultural resources or near unsurveyed areas.
- HC-10 Provide a copy of the program developed to monitor North Ranch sites as discussed in Section 2.11.4 of the ER. Additionally, provide copies of any reports generated from this monitoring (pages 2.11-6 and 7).
- HC-11 Provide the current status of the updated *National Register* nomination package for the *Pecho* district as discussed in Section 2.11.4 of the ER (page 2.11-7).
- HC-12 Provide documentation of construction projects that have occurred on the property since the last NRC license renewal site visit and tour in 2010. How were potential impacts to historic and cultural resources considered? Documentation demonstrating compliance with existing administrative controls and environmental procedures would be useful. What materials are used by PG&E staff to determine whether the State Historic Preservation Office (SHPO) should be consulted?
- HC-13 Provide any information on cultural resource management and protection training required for DCPD staff.
- HC-14 Provide copies of all letters and communications to and from the California State Historic Preservation Officer specific to determining the National Register of Historic Places (NRHP)-eligibility of all cultural resources identified since 2010 within the DCPD property, including the plant site and along existing in-scope transmission lines, up to the first substation.
- HC-15 Provide updated information on procedures for consulting/interacting with Federal- and State-recognized Indian tribes that have ancestral or historical ties to the DCPD area and surrounding lands.

- HC-16 Provide consultation letters and other communication documents indicating correspondence to and from the California SHPO and Federal- and State-recognized Indian tribes that have ancestral or historical ties to the project area and surrounding lands.
- HC-17 Provide the status and updated draft document of the SHPO-requested *Programmatic Agreement* and *Historic Resources Management Plan* intended to replace the current Archaeological Resources Management Plan as discussed in Section 9.1.3 of the ER.

Meetings requested: Provide PG&E's subject matter expert(s) and/or contractor(s) familiar with the cultural resources located within the DCPD and PG&E property and the cultural resource management plan. Additionally, provide knowledgeable staff to discuss any PG&E administrative controls and environmental procedures in place for the protection of historic and cultural resources.

Tours requested: Provide a tour of the site such that the NRC staff can observe the following:

- 1) In-scope transmission line tour up to the first substation (including any archaeological sites recorded along the lines).
- 2) Existing archaeological sites, preferably led by an archaeologist and PG&E staff familiar with National Historic Preservation Act historic properties and cultural resources located within the DCPD and PG&E property.

Human Health

- HH-1 Provide copies of the plant procedures that workers use that address safety standards, minimization of risks through the use of engineering controls, design controls, administrative controls, personal protection equipment, and safe work practices. (ER Section 4.0.2)
- HH-2 Provide any information relative to the processes used by the plant to control electrical shock hazards. (ER Section 4.0.2).

Air Quality and Noise

- AQ-1 Provide copies of DCPD's air permit(s) issued by the San Luis Obispo County Air Pollution Control District. Describe the compliance history associated with DCPD's air permit. Has PG&E received any Notice of Violations (NOVs) from the San Luis Obispo County Air Pollution Control District regarding conditions established in the air permit(s)?
- AQ-2 Provide copies of Annual Emission Reports submitted to the San Luis Obispo County Air Pollution Control District for the most recent five years.
- AQ-3 Summarize stationary and mobile sources of non-radiological air emissions at DCPD. Identify the equipment and quantity.

- AQ-4 Provide the associated annual air emissions (air pollutant and quantity) for the most recent five years of operation for air permitted emission sources at DCCP. Include criteria pollutants (ozone, particulate matter, carbon monoxide, nitrogen oxides, sulfur dioxide, lead), volatile organic compounds (VOCs), and hazardous air pollutants (HAPs).
- AQ-5 Provide a site-wide emission (quantity) inventory data (annual) for greenhouse gases (GHG) for the most recent 5 years. Emissions should include stationary combustion sources, mobile sources (commuters, visitors, delivery vehicle, etc.) and other sources (refrigerant leakage, emissions from switchyard). Please: 1) identify and discuss the GHG emission sources and 2) provide information used to support the GHG emission values (e.g. operating hours per year, fuel consumption and rates, and energy rating, as applicable) for each source.
- AQ-6 Have field tests concerning ozone and nitrogen oxides emissions generated by high voltage transmission lines been conducted near DCCP's in scope transmission lines? If so, please provide this information.
- AQ-7 Are there expected upgrade/replacement activities for equipment/operation that could increase or decrease air emissions over the license renewal period?
- AQ-8 Provide information about any noise complaints for the most recent 5 years resulting from plant operation.
- AQ-9 Describe the DCCP off-site noise environment and primary noise sources in the vicinity of DCCP.
- AQ-10 Identify and describe primary noise sources resulting from plant operation.
- AQ-11 Has PG&E conducted ambient noise surveys in and/or around the DCCP site? If so, provide this information.

Meetings requested: Provide PG&E's subject matter expert(s) and/or contractor(s) to discuss the air quality and noise portions of the ER to discuss the following aspects of facility operations:

- 1) Sources of air pollutants operating at DCCP
- 2) Air permits and emission inventories

Tours requested: Provide a tour of the site such that the NRC staff can observe the following:

- 1) General site layout
- 2) Major air emission and noise sources
- 3) Nearby noise sensitive receptors

Socioeconomics

- SOC-1 Provide updated permanent workforce data, preferably residential distribution of permanent workforce by county, in table format.

- SOC-2 In addition to property tax payment information presented in Section 2.7 of the ER, describe any other major annual support payments (e.g., emergency preparedness fees and payments or fees because of the independent spent fuel storage installation), one-time payments, and other forms of non-tax compensation (if any) provided to local organizations, communities, and jurisdictions (e.g., county, municipality, townships, villages, incorporated places, and school districts) on behalf of DCP.
- SOC-3 Provide information about any anticipated changes in State and local tax laws, rates, and assessed property value or any other recent or anticipated tax payment adjustments that could result in notable future increases or decreases in property taxes or other payments.

Special Status Species and Habitats

- SSH-1 In an Information for Planning and Conservation (IPaC) Report dated May 12, 2015 (ADAMS Accession No. ML15132A423), the U.S. Fish and Wildlife identified a number of Federally listed species that are not addressed in the ER. Provide any available information on potential habitat, occurrence, or sightings of the following species:
- a) Blunt-nosed leopard lizard (*Gambelia sila*)
 - b) California clapper rail (*Rallus longirostris obsoletus*)
 - c) California jewelflower (*Caulanthus californicus*)
 - d) Giant kangaroo rat (*Dipodomys ingens*)
 - e) Kerm primrose sphinx moth (*Euproserpinus euterpe*)
 - f) Marbled murrelet (*Brachyramphus marmoratus*)
 - g) Pismo clarkia (*Clarkia speciosa* spp. *immaculate*)
 - h) Salt marsh bird's-beak (*Chloropyron maritimum* ssp. *maritimum*)
 - i) Spreading navarretia (*Navarretia fossalis*)
 - j) Vernal pool fairy shrimp (*Branchinecta lynchi*)
- SSH-2 In the ER, Amendment 1, Table 2.4-1 states that multiple survey results have been negative for the California least tern (*Sternula antillarum browni*). However, the NRC staff was unable to find information indicating that past ecological studies actively surveyed for this species. Explain what surveys have been done for this species.
- SSH-3 In the ER, Amendment 1, Table 2.4-1 states that long-term monitoring has failed to identify western snowy plover (*Charadrius alexandrinus nivosus*) at Coon Creek beach. To what long-term monitoring is the ER referring?
- SSH-4 In the ER, Amendment 1, Table 2.4-1 states that long-term monitoring has failed to detect least Bell's vireo (*Vireo bellii pusillus*). To what long-term monitoring is the Environmental Report referring?

- SSH-5 In the ER, Amendment 1, Table 2.4-1 states that there is no record of the marsh sandwort (*Arenaria paludicola*) on the Diablo Canyon Lands. However, the NRC staff was unable to find information indicating that past ecological studies actively surveyed for this species. Explain what surveys have been done for this species.
- SSH-6 Section 2.5 of the ER, "Threatened and Endangered Species: Aquatic Listed Species," states that blue whale (*Balaenoptera musculus*), sperm whale (*Physeter macrocephalus*), fin whale (*Balaenoptera physalus*), humpback whale (*Megaptera novaeangliae*), and sei whale (*Balaenoptera borealis*) may be found near DCPD for limited amounts of time. Provide citations for any relevant monitoring studies that provide a basis for this statement. In addition, killer whales (*Orcinus orca*) and North Pacific right whales (*Eubalaena japonica*) could occur near DCPD. Provide any available information on the occurrence or sightings of whales near DCPD.
- SSH-7 Section 2.5 of the ER, "Threatened and Endangered Species: Aquatic Listed Species," states that white abalone (*Haliotis sorenseni*) may be found near DCPD for limited amounts of time. Provide citations for any relevant monitoring studies that provide a basis for this statement. In addition, provide any available information on the occurrence or sightings of this species near DCPD.
- SSH-8 Section 2.5 of the ER, "Threatened and Endangered Species, Tidewater Goby," states that no records of adult tidewater goby (*Eucyclogobius newberryi*) were found for drainages on the DCPD site. Describe the types of records PG&E searched in order to provide a basis for this statement. In addition, clarify whether any juveniles were observed on site.
- SSH-9 Section 2.5 of the ER, "Threatened and Endangered Species," describes the monitoring results for sea turtles, marine mammals, and black abalone. Provide a summary of the monitoring methods that are specific to sea turtles, marine mammals, and black abalone.
- SSH-10 Section 4.10 of the ER, "Threatened and Endangered Species," states that PG&E has not identified any impacts to the Southern Sea Otter (*Enhydra lutris*) or the Guadalupe Fur Seal (*Arctocephalus townsendi*) from DCPD operations based on extensive monitoring efforts. Provide a basis for this statement, including a summary of monitoring methods and activities and the references of any reports or studies that describe these monitoring efforts.
- SSH-11 Section 4.10 of the ER, "Threatened and Endangered Species," states that PG&E is not aware of sea turtles aggregating near the DCPD discharge area, based on stranding and siting data. Provide a summary of the stranding and siting data that PG&E reviewed to support this statement.
- SSH-12 Section 4.10 of the ER, "Threatened and Endangered Species," describes the likely presence of steelhead trout (*Oncorhynchus mykiss*), tidewater goby, green sturgeon (*Acipenser medirostris*), and coho salmon (*Oncorhynchus kisutch*) in the vicinity of the intake cover and potential impacts from impingement and entrainment. Provide a description of any known occurrences of these species near the discharge in Diablo Cove and potential direct and indirect effects to these species as a result of the thermal effluent.

Meetings requested: Provide PG&E's subject matter expert(s) and/or the contractor(s) responsible for writing the special status species and habitats portion of the ER and who can discuss the above information requests. This meeting may be combined with the aquatic and terrestrial resources meetings, as appropriate.

Terrestrial Resources

- TER-1 Approximately how many acres of land does the “Diablo Canyon Lands” (the DPCC site, North Ranch, and South Ranch, collectively) encompass? Within the DPCC site, how many acres are non-disturbed, natural areas?
- TER-2 Section 2.4.3 of the ER describes important state natural communities that are “considered unique or sensitive within California.” Clarify whether these natural communities are considered unique or sensitive by the State, another organization, the scientific community, etc.
- TER-3 Do the Diablo Canyon Lands contain habitats designated as “environmentally sensitive habitat areas” as defined by the California Coastal Act of 1976, as amended? If so, describe the location, species composition, and any other important characteristics of these areas.
- TER-4 In the ER, Amendment 1, Table 2.4-1 states that “multiple surveys from 2005 through 2011 failed to identify a nesting colony” of tricolored blackbirds (*Agelaius tricolor*). To what surveys is the ER referring?
- TER-5 In the ER, Amendment 1, Table 2.4-1 states that the burrowing owl (*Athene cunicularia*) is believed to be “nearly extirpated as a breeding species in coastal San Luis Obispo County.” What is the source of this information?
- TER-6 In the ER, Amendment 1, the “Record of Occurrence” column in Table 2.4-1 states that there is a record of occurrence for the silvery legless lizard (*Anniella pulchra pulchra*), but the “Occurrence Potential” column states that multiple survey results for the species have been negative. Clarify this seemingly contradictory information.
- TER-7 In the ER, Amendment 1, the “Record of Occurrence” column in Table 2.4-1 states that there is a record of occurrence for the southern rubber boa (*Charina umbratica*), but the “Occurrence Potential” column states that survey results for the species have been negative. Clarify this seemingly contradictory information.
- TER-8 Describe any site procedures that PG&E maintains for assessing and mitigating the environmental effects of new ground-disturbing activities or other new site activities that could affect terrestrial habitats or species. Provide copies of such procedures, as applicable.
- TER-9 Provide copies of PG&E’s landscape maintenance procedures for the DCPD site. If PG&E does not maintain such procedures, briefly describe how non-industrial, previously disturbed, or landscaped areas of the site are maintained.
- TER-10 Provide a copy of PG&E’s stormwater pollution prevention plan.

Meetings requested: Provide PG&E's subject matter expert(s) and/or the contractor(s) responsible for writing the terrestrial resources portion of the ER and who can discuss the above information requests. This meeting may be combined with the aquatic resources and special status species and habitats meetings, as appropriate.

Tours requested: Provide a tour such that the NRC staff can observe the various terrestrial and wetlands habitat types found on the site. This tour may be combined with the water resources – surface water tour, as appropriate.

Waste Management

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| WM-1 | Provide the chemical composition and generation volume of the waste streams discussed in Section 3.1.5 of the ER. |
| WM-2 | Provide a list of anticipated waste disposal companies and disposal sites for the waste streams discussed in Section 3.1.5 of the ER. |
| WM-3 | Provide NPDES monthly discharge monitoring reports for the past 5 years. (ER Section 3.1.5). |
| WM-4 | Provide a copy of the industrial process chemical inventory discussed in Section 4.0.2 of the ER. |
| WM-5 | Provide a copy of the Hazardous Waste Facility Permit discussed in Section 4.0.2 of the ER. |
| WM-6 | Provide an outline of the hazardous materials training program that workers complete. (ER Section 4.0.2) |
| WM-7 | Provide copies of the procedures used for managing hazardous waste, spill contingencies, waste minimization procedures, treatment, storage, & disposal (TSD) training, and industrial hygiene practices. (ER Section 4.0.2) |
| WM-8 | Discuss current DCPD waste minimization programs and their effectiveness. (ER Section 4.0.2). |
| WM-9 | Provide copies of the procedures used for managing universal wastes as defined in the Resource Conservation and Recovery Act (RCRA) and/or Chapter 22 of the California Code of Regulations (22 CCR). (ER Section 4.0.2). |
| WM-10 | Clarify whether DCPD is a large or small quantity hazardous waste generator under the RCRA and/or 12 CCR. (ER Section 4.0.2). |
| WM-11 | Provide a list, to include location within the facility, of any anticipated 90-day RCRA/CCR hazardous waste collection points and copies of applicable state or Federal RCRA audits for the last 5 years. (ER Section 4.0.2). |

Meetings requested: If necessary, provide PG&E's subject matter expert(s) and/or the contractor(s) responsible for writing the waste management and pollution prevention portion of the ER and who can discuss the above information requests.

Water Resources – Groundwater

- GW-1 Provide the records supporting the statements in the ER concerning volume of groundwater consumed.
- GW-2 Provide information that looks at the potential for saltwater intrusion into the groundwater of the Obispo Formation from the extraction of groundwater on site.
- GW-3 Provide any groundwater and geologic reports that have been prepared for DCPD to support the Nuclear Energy Institute "Industry Groundwater Protection Initiative."

Meetings requested: Provide PG&E's subject matter expert(s) and/or the contractor(s) responsible for writing the groundwater hydrology and quality portions of the ER and who can discuss the above information request and the following:

- 1) The direction of groundwater flow at the DCPD site and whether groundwater levels near the ocean are affected by ocean tides.
- 2) If Deep Water Well No. 2 withdraws its water from the Obispo Formation, clarify the following potentially contradictory statements in the ER:
 - a) From Page 2.3-1: "Groundwater at the DCPD site is limited to the streambed of Diablo Creek within the geographically isolated Diablo Canyon. No significant groundwater has been encountered outside of the stream bed gravels [...] Makeup water wells No. 1 and No. 2 with collar elevations at 232 ft above mean sea level (MSL) and 333.3 ft MSL, respectively, produced water from the alluvium in Diablo Creek and from fractured sandstone and dolomite of the Obispo Formation."
 - b) From Pages 2.3-1 and 2.3-2: "DCPD groundwater use is limited to the periodic withdrawal of freshwater supply from an onsite deep well. The groundwater source is geologically isolated to the DCPD watershed, and is therefore not hydraulically connected to other area groundwater resources."
 - c) From Page 3.1-6: "Groundwater reserves at the site are limited by the nature of the plant location, and lack of hydraulic connection with groundwater resources on properties outside of plant controlled lands."
 - d) From Page 4.0-7: "[T]he groundwater source at DCPD is geologically isolated to the DCPD watershed, and is therefore not hydraulically connected to other area groundwater resources."
 - e) From Page 4.5-2: "When in operation, the well draws from an isolated source specific to DCPD. The topography of the location precludes any connection between the well source water and offsite water resources. There are no neighboring wells (outside of the DCPD industrial site and adjacent controlled property) that can be impacted or made unavailable due to operation of the onsite well. Therefore, no cone of depression can be created from groundwater use on the plant site that could extend offsite regardless of pump withdrawal rate or an extended period of withdrawal."
 - f) From Page 5-3: "Deep Well #2 draws from an isolated source specific to Diablo Canyon that is replenished by flows through the alluvium near 200 ft MSL."

Tours requested: Provide a tour of the site such that the NRC staff can observe the following:

- 1) The locations of water wells 2 and 5.
- 2) The location of monitor wells GW-01 and GW-02.
- 3) Groundwater seeps, if any.
- 4) The desalination plant area, including the intake structure and brine discharge locations.

Water Resources – Surface Water

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| SW-1 | Provide a summary of documented/reported water withdrawals via the intake structure over the last 5 years and associated return discharges (via National Pollution Discharge Elimination System (NPDES) Outfall 001). Include monthly averages for each annual data set. |
| SW-2 | Provide a copy of the most recent application or Notice of Intent submitted to the State for coverage under the State General Industrial Storm Water Discharge permit. |
| SW-3 | Provide a copy of the Stormwater Pollution Prevention Plan (current version) |
| SW-4 | Provide a map of NPDES permitted outfall locations (inclusive of process wastewater and stormwater outfalls). |
| SW-5 | Provide a summary of the NPDES permit status for DCP, including status and recent actions and associated milestones for resolving outstanding NPDES permit renewal and associated Once-Through Cooling (OTC) Policy issues. In addition, provide copies of all letters and communications to and from the State of California (e.g., CCRWQCB and SWRCB) specific to the NPDES permit process since 2010. Indicate if PG&E anticipates or is aware of the need to conduct any additional studies with respect to the OTC Policy. |
| SW-6 | Provide copies of any NOVs, nonconformance notifications, or related infractions received from regulatory agencies associated with NPDES permitted discharges, sanitary sewage systems, groundwater or soil contamination, including spills, leaks, and other inadvertent releases of fuel solvents, chemicals, or radionuclides received to date (covering past 5 years inclusive of 2015). Include correspondence of self-reported violations to responsible agencies. |
| SW-7 | Clarify the use of the Raw Water Reservoirs, as described in Section 2.3 of the ER and cited elsewhere, and its relation to other plant systems. Clarify how the reservoirs are filled/maintained. Include information on size, capacity, and nature of construction. |
| SW-8 | The NRC staff understands that PG&E has very recently begun to provide the San Luis Obispo city and county with water produced by DCP's desalinization facility (discussed in Section 2.9.1 of the ER). Verify and provide a summary discussion of the nature of PG&E's agreement to deliver water and include the volume and rate supplied for public use, method of delivery, etc. |
| SW-9 | Provide a description of any planned operational and maintenance activities (or projects) anticipated to be undertaken during the license renewal term (as possible, identify expected timeframe, location(s) affected, acres disturbed, and activity/project duration). |

Meetings requested: Provide PG&E's subject matter expert(s) and/or the contractor(s) responsible for writing the surface water hydrology and quality portions of the ER and who can discuss the following:

- 1) The DCPD intake and circulating water systems, effluent discharges, and affected water resources.
- 2) The status of PG&E's NPDES permit renewal as well as related Once-Through Cooling Policy issues and the CWA Section 401 Water Quality Certification.

Tours requested: Provide a tour of the site such that the NRC staff can observe the following:

- 1) General tour of the site and vicinity including associated intake structures and conveyances (i.e., shoreline intake structure and circ. water/auxiliary pumps, Diablo Cove and shoreline outfall, Deep Well #2, and significant streams).
- 2) Other surface water/effluent management features (i.e., mouth of Diablo Creek at Diablo Cove, old Diversion Point 1 on Diablo Creek, Raw Water Storage Reservoir, and wastewater treatment facility).
- 3) Representative NPDES outfall locations.