

Diablo Canyon Power Plant

Post-Shutdown Decommissioning Activities Report, Site-Specific Decommissioning Cost Estimate, and Irradiated Fuel Management Plan

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Purpose / Goals

Provide an overview of the Diablo Canyon Power Plant (DCPP) decommissioning plans described in the Post-Shutdown Decommissioning Activities Report (PSDAR), Site-Specific Decommissioning Cost Estimate (SSDCE) and Irradiated Fuel Management Plan (IFMP).

- Includes the initial submittals from 2019 and updates submitted to the NRC in 2021.



DCPP Decommissioning Planning

PG&E is currently working on decommissioning planning activities necessary to support direct transition to decommissioning upon permanent cessation of operations.

- Plans continue to evolve as DCPP Units 1 and 2 progress closer to permanent cessation of operations.
 - This evolution will drive future updates in accordance with the NRC process.
- PG&E continues to plan for decommissioning independent of current state policy discussions around continued operations.



NRC Notification Requirements

10 CFR 50.82(a)(7) - PSDAR

- In taking actions permitted under § 50.59 following submittal of the PSDAR, the licensee shall notify the NRC, in writing and send a copy to the affected State(s), before performing any decommissioning activity inconsistent with, or making any significant schedule change from, those actions and schedules described in the PSDAR, including changes that significantly increase the decommissioning cost.

10 CFR 50.54(bb) - IFMP

- The licensee shall notify the NRC of any significant changes in the proposed waste management program as described in the initial notification.



Timeline

2018

2019

2020

2021

2022

11/2018

PG&E Notifies
NRC of
Permanent
Cessation of
Operations

12/2019

PG&E Submits
[PSDAR](#)
[SSDCE](#)
[IFMP](#)

01/2020

PG&E Submits
Settlement
Agreement in
2018 NDCTP

09/2021

CPUC Approves
2018 NDCTP
Settlement
Agreement

07/2022

Public Meeting

3Q/2022

PG&E Plans to
Submit Updated
PSDAR, SSDCE,
and IFMP

12/2018

PG&E Files 2018
NDCTP with CPUC

03/2020

COVID-19
Pandemic Delays
Public Meeting

10/2021

PG&E Files NRC
Update
[Notification](#)

12/2021

PG&E Files 2021
NDCTP

NDCTP: Nuclear Decommissioning Cost Triennial Proceeding

CPUC: California Public Utilities Commission

PSDAR: Post-Shutdown Decommissioning Activities Report

SSDCE: Site-Specific Decommissioning Cost Estimate



2019 PSDAR and SSDCE – Planned Activities and Schedule

Period Title	Start	Finish	General Description
1) Pre-Shutdown Planning	Dec. 2010	Oct. 2024	Consists of detailed planning, engineering, licensing, and permitting efforts, the bulk of which will take place 2017 - 2024.
2) Power Block Modifications	Nov. 2024	Apr. 2027	Transitions the plant to a decommissioning configuration to support safe and efficient decommissioning.
3) Wet Storage	May 2027	Jun. 2032	Designates the timeframe when spent nuclear fuel (SNF) is cooling in the spent fuel pools (SFPs) and/or is being transferred to the DC Independent Spent Fuel Storage Installation (ISFSI). Concurrently, preparations are being made for major decontamination and dismantlement (D&D) in period 4.
4) Building Demolition	Jul. 2032	Apr. 2035	Consists of D&D of radiological systems, structures, and components. Also includes removal of several ancillary (non-radiological) structures.



2019 PSDAR and SSDCE – Planned Activities and Schedule (continued)

Period Title	Start	Finish	General Description
5) Site Restoration	May 2035	Dec. 2038	Includes demolition of non-radiological structures, conduct of final radiological surveys to support license termination, and restoration of non-ISFSI areas. Period ends with 10 CFR 50 license termination.
6) ISFSI Operations	Jan. 2039	Aug. 2067	Designates the timeframe after 10 CFR 50 license termination where SNF and greater than Class C (GTCC) waste are stored only at the DC ISFSI and transferred to the Department of Energy (DOE) for storage at a permanent off-site repository. This period also includes biological monitoring of the plant site restoration.
7) ISFSI Restoration	Sep. 2067	Jan. 2076	Consists of removal of ISFSI structures, conduct of final radiological surveys for ISFSI license termination, restoration of affected areas, and biological monitoring of ISFSI restoration.



Significant Changes

Wet Cooling Time for Spent Nuclear Fuel (SNF)

- Spent Fuel Pool Island not needed due to reduced time until fuel transferred to ISFSI
- Cold and Dark Modifications
 - Reduced scope and delay of full implementation until final SNF offload
- Reduced number of Security Modifications

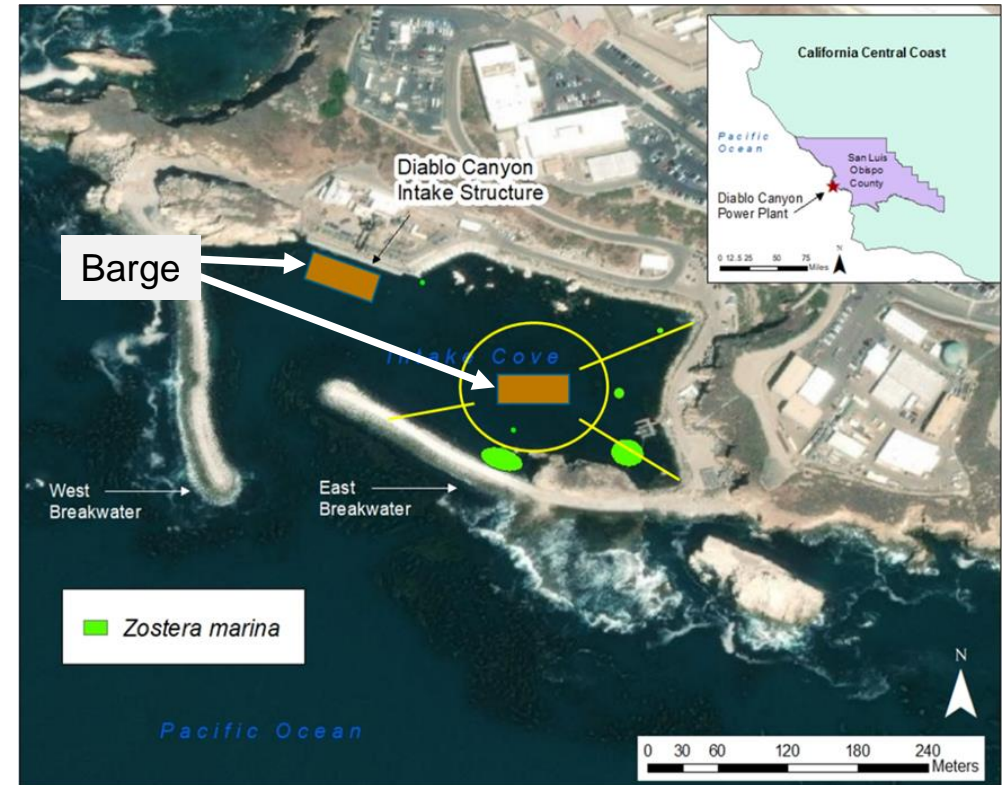
Significant Changes

Repurposing

- Breakwater and Intake
- Proposed to serve as barging terminal for shipment of vast majority of decommissioning waste



Current



Future



Significant Changes

Elimination of Offsite Power Supply Modifications

- Utilize existing 230kV lines and switchyard in lieu of bringing 12kV power into the site from an available offsite source, requiring new distribution lines.

Shipment of Waste via Pismo Beach Railyard (Contingency only)

- Changed from principal shipping location to a contingency facility only because of the shift to barging.



Significant Changes

Revised Waste Transportation Strategy

- PG&E has determined that a plan which uses a blended approach of barges and trucks is best for the shipment of bulk waste from DCCP.
 - Barging is proposed for shipping the majority of bulk waste offsite during decommissioning.
- This blended approach significantly reduces risk and environmental impacts while also reducing total overall costs for transporting waste during decommissioning.
- Consistent with the recommendations included in Section IV.I of the Diablo Canyon Decommissioning Engagement Panel Strategic Vision Document.



Reduction Drives Significant Changes

Significant changes result in a cumulative reduction in decommissioning project duration, costs, and environmental impacts.

- Reduction in environmental impacts such as the following:
 - Federally endangered or threatened species
 - Emissions
 - Total Waste
- Earlier termination of the 10 CFR Part 50 licenses
- Significant reduction in estimated costs to decommission DCPP



Significant Change to PSDAR Environmental Report

PG&E has responsibly managed significant cultural resources within the Diablo Canyon lands for more than 40 years and is committed to continuing into decommissioning.

- Ongoing consultation with Native American Tribes
- DCPD Land Stewardship Committee

PG&E evaluated the impacts of decommissioning activities on Cultural, Historical, and Archaeological Resources.

- Initially concluded that impacts within the DCPD operational area are small and bounded by the Decommissioning Generic Environmental Impact Statement (GEIS).



Significant Change to PSDAR Environmental Report

Based on the number of known cultural resources within the operational area and subsequent review of proposed decommissioning activities, PG&E identified the potential to have large impacts¹ on cultural, historical and archaeological resources.

¹ Significance level as defined in NRC Decommissioning GEIS



Significant Change to PSDAR Environmental Report

PG&E will verify that decommissioning activities that impact cultural, historical, and archaeological resources are bounded by previously issued environmental impact statements or seek appropriate regulatory approval if needed prior to performing the activity.

- A comprehensive Archaeological Resources Protection Plan (ARPP) will be developed as part of decommissioning.
 - ARPP will inventory the cultural resources and develop a monitoring and mitigation plan.
- Additional mitigation measures will be required through permitting approvals and will involve Native American monitoring.



Pre-Shutdown Planning

PG&E made the decision many years in advance to retire DCPP Units 1 and 2 upon expiration of the current operating licenses.

- Provides a unique opportunity to streamline the decommissioning effort, accelerate the decommissioning schedule, and reduce overall decommissioning costs by proceeding with substantial decommissioning planning activities.
- NRC granted PG&E an exemption request to allow withdrawal of \$187.8 million (\$2017) from the Diablo Canyon Nuclear Decommissioning Trust to fund planning activities prior to permanent cessation of operations.

Plans will continue to evolve as DCPP Units 1 and 2 progress closer to permanent cessation of operations and we progress through the state permitting process.

- This evolution will drive future updates in accordance with the NRC process.



Future Updates

PG&E plans to provide the NRC an updated PSDAR, SSDCE, and IFMP in 3Q22.

- Update will reflect plans as submitted to the CPUC in the 2021 NDCTP.

In 2022, PG&E executed a contract with Orano TN Americas for spent nuclear fuel and Greater-Than-Class-C waste dry cask storage systems. All cost and schedule updates associated with implementation of the new system have not been finalized. PG&E will provide a future update to reflect implementation of the new systems at DCPD.

PG&E will continue to provide the NRC notification of significant changes as required by 10 CFR 50.82(a)(7) and 10 CFR 50.54(bb).

Thank You

