

PG&E Letter DCL-22-039

ATTN: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

10 CFR 50.54(bb)

Docket No. 50-275, OL-DPR-80
Docket No. 50-323, OL-DPR-82
Diablo Canyon Power Plant, Units 1 and 2
Diablo Canyon Power Plant, Units 1 and 2 Irradiated Fuel Management Plan,
Revision 1

References:

1. PG&E Letter DCL-19-081, "Diablo Canyon Power Plant, Units 1 and 2 Irradiated Fuel Management Plan," dated December 4, 2019 (ML19338F260)
2. PG&E Letter DCL-21-073, "Notification of Changes to Post-Shutdown Decommissioning Activities Report, Site-Specific Decommissioning Cost Estimate, and Irradiated Fuel Management Plan for Diablo Canyon Power Plant, Units 1 and 2," dated October 19, 2021 (ML21293A120)

Dear Commissioners and Staff:

In Reference 1, Pacific Gas and Electric Company (PG&E) submitted Revision 0 of the Irradiated Fuel Management Plan (IFMP) for Diablo Canyon Power Plant (DCPP) Units 1 and 2. In Reference 2, PG&E notified the NRC of significant changes to the decommissioning plans for DCPP Units 1 and 2, which impact the information provided in Reference 1. In addition, PG&E executed a contract with Orano TN Americas for spent nuclear fuel and Greater-Than-Class-C waste dry cask storage systems. This contract was executed in 2022, and therefore all cost and schedule updates associated with implementation of the new system have not been finalized. PG&E will provide a future update to the IFMP to reflect implementation of the new system at DCPP. The purpose of this submittal is to provide Revision 1 of the DCPP Units 1 and 2 IFMP which has been updated to reflect PG&E's plans for decommissioning as submitted to the California Public Utilities Commission in the 2021 Nuclear Decommissioning Cost Triennial Proceeding. Revision bars in the margin indicate sections where information has been updated. In accordance with 10 CFR 50.54(bb), PG&E will continue to notify the NRC of significant changes to the IFMP.

PG&E makes no new or revised regulatory commitments (as defined in NEI 99-04)

in this letter.

If you have any questions or require additional information, please contact Mr. Philippe Soenen at (805) 459-3701.

Sincerely,



Maureen R. Zawalick
Vice President Decommissioning and Technical Services

October 12, 2022

Date

Enclosure

cc: Diablo Canyon Distribution
cc/enc: Mahdi O. Hayes, NRC Senior Resident Inspector
Samson S. Lee, NRC Senior Project Manager
Scott A. Morris, NRC Region IV Administrator
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**Diablo Canyon Power Plant Units 1 and 2
Irradiated Fuel Management Plan, Revision 1**

I. Background and Introduction

On November 27, 2018, Pacific Gas and Electric Company (PG&E) notified the Nuclear Regulatory Commission (NRC) of the intent to permanently cease power operations at Diablo Canyon Power Plant (DCPP) Units 1 and 2 upon expiration of the operating licenses (Reference 1). The operating license for DCPP Unit 1 expires on November 2, 2024, and the operating license for DCPP Unit 2 expires on August 26, 2025.

In accordance with 10 CFR 50.54(bb), licensees are required to submit a plan for the management of irradiated fuel (spent nuclear fuel (SNF)) until title and possession of the fuel is transferred to the Secretary of Energy for its ultimate disposal in a repository. The Irradiated Fuel Management Plan (IFMP) is required to be submitted to the NRC either five years before expiration of the operating license or within two years following permanent cessation of operations, whichever occurs first. Therefore, the DCPP Units 1 and 2 plans were required to be submitted five years before the expiration of the operating licenses. The submittal provided to the NRC in Reference 2, satisfied the requirement to provide the IFMP for DCPP Units 1 and 2 five years before the expiration of the operating licenses. The purpose of this submittal is to update the IFMP to reflect the plans for managing SNF for DCPP Units 1 and 2 as submitted to the California Public Utilities Commission (CPUC) in the 2021 Nuclear Decommissioning Cost Triennial Proceeding (NDCTP) (Reference 5).

The CPUC required PG&E to conduct an assessment for expediting the offload of SNF to the Diablo Canyon (DC) Independent Spent Fuel Storage Installation (ISFSI). The results of this study demonstrated that there are currently alternate dry casks storage systems available (as compared to those currently approved for use in the DC ISFSI site-specific license) that may reduce the cooling time required in the spent fuel pools (SFPs) prior to transfer to the DC ISFSI. Thus, in 2020, PG&E conducted a request-for-proposal process to select an alternate dry cask storage system. In 2022, PG&E executed a contract with Orano TN Americas (Orano) for SNF and Greater-Than-Class-C (GTCC) waste dry cask storage systems. In the 2022-2024 timeframe, PG&E and Orano will perform the work necessary to prepare for implementing the new dry cask storage systems, including any regulatory actions and preparation for physical modifications to the site to store SNF at the DC ISFSI and GTCC waste at a new GTCC Waste Storage Facility. PG&E plans to employ the NUHOMS-EOS system to store SNF at DCPP under Certificate of Compliance 1042, which will be amended via an NRC licensing action with Orano in the 2022-2024 timeframe. As this contract was recently executed, all cost and schedule updates associated with the new system have not been finalized. PG&E will provide a future update to the cost and schedule information in the IFMP to reflect implementation of the NUHOMS-EOS system at DCPP.

**Diablo Canyon Power Plant Units 1 and 2
Irradiated Fuel Management Plan, Revision 1**

PG&E has prepared an updated site-specific decommissioning cost estimate (SSDCE) for DCPD Units 1 and 2 (Reference 3). The updated SSDCE identifies the details, schedules, and costs of spent fuel management activities associated with the IFMP, along with license termination and site restoration activities and costs. The updated SSDCE and an updated Post-Shutdown Decommissioning Activities Report (Reference 4) are being submitted concurrent with IFMP, Revision 1. The assumptions regarding the United States Department of Energy (US DOE) acceptance of irradiated fuel are consistent with the Decommissioning Cost Estimate submitted to the NRC in the most recent DCPD Decommissioning Funding Report (Reference 8). The DCPD Units 1 and 2 updated SSDCE and this IFMP are based on the assumption that the US DOE would commence transporting SNF from DCPD in 2038.

II. Irradiated Fuel Management Strategy

Spent Fuel Pool Storage

The initial interim storage of DCPD Units 1 and 2 SNF will be “wet storage” in each unit’s respective SFP. The SFPs are located in the fuel handling building (FHB), which encloses the two fuel handling areas of Unit 1 and Unit 2 and is a shared structure that contains the SFPs, the fuel handling cranes, fuel racks, and related equipment. SFP equipment in the FHB must be operated and maintained properly to provide the capability to safely store SNF, remove decay heat generated by SNF, and provide shielding from the radiation emitted by SNF. The necessary operational activities involve the monitoring of system parameters, periodic testing of important equipment functions, performing inspections, and operating and maintaining equipment and facility security. The SFP facility equipment requiring maintenance includes instrumentation, pumps, valves, heat exchangers, filters, ventilation fans, ducting, and dampers. The existing SFP support systems will be utilized until all fuel is transferred to the DC ISFSI.

Transfer and Storage at the Independent Spent Fuel Storage Installation

All irradiated fuel in the DCPD Units 1 and 2 SFPs will be transferred to dry storage at the DC ISFSI. The current DC ISFSI is licensed under a Part 72 site-specific license. In addition to SNF, the nuclear industry stores fuel debris, damaged SNF assemblies, and GTCC waste in dry cask storage systems. Consistent with the industry, PG&E plans to store these items in dry cask storage systems. The current dry cask storage system utilized at the DC ISFSI uses the Multi-Purpose Canister (MPC)-32, HI-TRAC 125D transfer cask, and HI-STORM 100SA overpack. The DC ISFSI Technical Specifications limit the materials that can be stored in the MPC-32. Specifically, the MPC-32 is currently allowed to contain only intact SNF assemblies and non-fuel hardware with specific dimensions, enrichment, and cladding material. Fuel debris, damaged SNF assemblies, and GTCC waste cannot be stored in the MPC-32 under current DC ISFSI Technical Specifications. PG&E plans to obtain NRC approval to store these items in the Orano dry cask storage system onsite.

**Diablo Canyon Power Plant Units 1 and 2
Irradiated Fuel Management Plan, Revision 1**

This plan is consistent with the assumptions included in the SSDCE. Dry storage of these items is also considered interim storage pending transfer to the US DOE.

The DC ISFSI is a separately licensed facility and is located approximately 0.22 miles northeast of the Unit 1 Containment Building (ISFSI/Containment center-to-center) at an elevation of approximately 310 feet situated directly on bedrock. It consists of a security boundary and concrete storage pads that securely anchor the current dry cask storage system casks storing the SNF. The current dry cask storage system at the DC ISFSI is comprised of the following:

- HI-STORM 100 System
 - an MPC for SNF capable of storing up to 32 SNF assemblies
 - a dry cask storage overpack for SNF, referred to as a HI-STORM 100SA
 - a transfer cask, referred to as a HI-TRAC
- a low-profile transporter
- a vertical cask transporter
- cask transfer facility

The dry cask storage system provides radiation shielding, heat transfer capability, missile protection, and protection against natural phenomena and accidents. The DC ISFSI Updated Final Safety Analysis Report provides additional information related to the current design of the DC ISFSI (Reference 6).

In order to provide the capability to safely and securely transfer SNF and GTCC waste to the DC ISFSI and GTCC Waste Storage Facility, respectively, transfer equipment must be operated and maintained properly, and security forces deployed. The security during SNF transfer operations consists of maintaining those measures required by the NRC that are necessary to control personnel, vehicles, and materials during the transfers of SNF and GTCC waste from the power plant to the DC ISFSI and GTCC Waste Storage Facility, respectively, in order to ensure adequate protection of public health and safety and the environment.

Currently, there are 1,856 SNF assemblies stored at the DC ISFSI. The SNF assemblies are stored within 58 casks with 32 assemblies per cask. PG&E anticipates at the time of shut down, there will be approximately 1,261 and 1,281 SNF assemblies stored in the Unit 1 and 2 SFPs, respectively. While the DC ISFSI has adequate capacity for all fuel-related storage (including fuel debris and damaged SNF assemblies) with the current 58 Holtec canisters and proposed 69 Orano canisters (each containing up to 37 assemblies), it does not have capacity for GTCC waste. The SSDCE includes costs for designing, licensing, and constructing an additional storage pad onsite to address these additional GTCC waste capacity requirements. Refer to Figure 1 for the proposed site of the future GTCC Waste Storage Facility. PG&E plans to store up to 10 casks of GTCC waste onsite.

**Diablo Canyon Power Plant Units 1 and 2
Irradiated Fuel Management Plan, Revision 1**

As described above, to support Decommissioning of DCPD Units 1 and 2, PG&E is in the process of implementing new dry cask storage systems which will include the following:

- non-fuel waste storage canisters for GTCC waste
- non-fuel waste storage horizontal storage modules (HSMs) for GTCC waste
- dry shielded canisters (DSCs) capable of storing SNF (intact and damaged) and fuel debris
- HSMs capable of storing SNF (intact and damaged) and fuel debris

Consistent with the decommissioning cost estimate submitted to the CPUC in the 2021 NDCTP, the costs included in this IFMP and the updated SSDCE assume final offload of SNF from the Unit 1 and Unit 2 SFP within 3.25 years of Unit 2 shutdown. As discussed above, PG&E plans to employ the NUHOMS-EOS system at DCPD under Certificate of Compliance 1042 to store SNF, which will be amended via an NRC licensing action with Orano in the 2022-2024 timeframe. As the contract associated with this new SNF dry cask storage system was recently executed, the associated cost and schedule updates have not been finalized. Figure 2 provides a conceptual layout of the current and new dry cask storage systems side-by-side. PG&E will provide a future update to the IFMP to reflect implementation of the new system at DCPD.

In addition to the security, operations, and maintenance (including aging management activities) for the dry casks during storage, ISFSI operations consists of the activities required to prepare and plan for safe transfer of the canisters containing SNF and GTCC waste to an off-site licensed facility. In Reference 12, PG&E submitted a license renewal application for the current DC ISFSI dry cask storage system.

As decommissioning progresses and structures, systems, and components are removed from the plant, PG&E will ensure compliance with the regulatory requirements for SNF storage and compliance with applicable requirements associated with moving or unloading a SNF storage system.

Transfer to United States Department of Energy

The US DOE's repository program assumes that SNF allocations will be accepted for disposal from the nation's commercial nuclear plants, with limited exceptions, in the order (the "queue") in which it was discharged from the reactor (Reference 7). PG&E's current SNF management plan for the DCPD SNF is based in general upon: (1) a 2031 start date for US DOE initiating transfer of commercial SNF to a federal facility with DCPD SNF transfer beginning in 2038, and (2) completion of SNF and GTCC waste receipt by year 2067 (Reference 5). The completion date is based upon the US DOE's generator allocation/receipt schedules which assume the oldest fuel receives the highest priority for DOE acceptance. In accordance with the annual allotment in the 10 CFR 961 standard contract, PG&E will be able to load a

**Diablo Canyon Power Plant Units 1 and 2
Irradiated Fuel Management Plan, Revision 1**

maximum of five full MPCs/DSCs into five DOE-supplied transportation casks each year. Table 2b provides a detailed shipping schedule for DCPD Units 1 and 2.

The total costs associated with spent fuel management activities included in each decommissioning phase, including start and end dates for each period are identified in Table 1. Table 3 shows the major activities associated with spent fuel management during each of the decommissioning phases.

III. Financial Assurance

In accordance with 10 CFR 50.54(bb), the IFMP is required to show how the licensee intends to provide funding for the management of all irradiated fuel.

PG&E's Nuclear Decommissioning Trust (NDT) Fund is regulated by both the CPUC and the NRC. Financial assurance reports for DCPD Units 1 and 2 have been provided to the NRC as required by 10 CFR 50.75(f)(1) (Reference 8). In addition, reports regarding ISFSI costs and decommissioning funding assurance for these costs are summarized in triennial reports as required by 10 CFR 72.30(c) (Reference 9).

The updated SSDCE (Reference 3) is being submitted to the NRC concurrent with the IFMP. The SSDCE is based on decommissioning and the termination of the 10 CFR Part 50 licenses in 2035, approximately 10 years following the permanent cessation of operations, with termination of the Part 72 license in 2072. Tables 5-1 (Unit 1) and 5-2 (Unit 2) in the SSDCE summarize the estimated annual spending for all decommissioning activities (license termination, spent fuel management, and site restoration (Non-NRC Scope)), in 2022 dollars. The information included in Table 1 provides costs associated with spent fuel management during each of the decommissioning phases.

At the end of calendar year 2021, the market values of the DCPD Units 1 and 2 decommissioning trust fund were \$1,921.7 million and \$2,513.5 million, respectively. Based on the SSDCE, PG&E estimates that the license termination decommissioning costs are about \$1,270.2 million for DCPD Unit 1 and \$1,182.3 million for Unit 2 in 2022 dollars. The estimated costs in 2022 dollars for site restoration of the facilities is \$674.9 million and spent fuel management costs are \$951.1 million. PG&E submitted a decommissioning cost estimate to the CPUC in December of 2021 (Reference 5).

The annual collections and rates of return assumed for funding projections are included in Enclosure 1 of the most recent Decommissioning Funding Report for DCPD Units 1 and 2 (Reference 8). Decommissioning trust fund earnings are projected using a 2 percent real rate of return on decommissioning funds as allowed by 10 CFR 50.75(E)(1)(i). Decommissioning costs are escalated using the PG&E union contract and non-represented employee General Rate Case forecast, a weighted Gross Domestic Product implicit price deflator, Employment Cost Index for

**Diablo Canyon Power Plant Units 1 and 2
Irradiated Fuel Management Plan, Revision 1**

total private compensation, and an average growth rate of Pressurized Water Reactor burial costs from NUREG-1307 (Reference 11). The rates used for escalation are shown in Table 4-6 of the SSDCE (Reference 3).

In addition to the NDT Fund described above, PG&E was authorized by the CPUC to deposit additional rate-payer contributions to a non-qualified trust fund or other non-qualified mechanism, which will include subaccounts to track separately the costs associated with license termination, spent fuel management, and site restoration. The non-qualified trust will include funds associated with spent fuel management activities. The non-qualified trust which was authorized by the CPUC is not subject to NRC jurisdiction.

IV. Regulatory Activities

This IFMP assumes that PG&E will make withdrawals from the NDT for spent fuel management purposes. PG&E has collected funds from ratepayers and accumulated funds in the NDT for the purpose of funding the three primary categories of costs: (1) license termination; (2) spent fuel management; and (3) site restoration.

In addition, on September 10, 2019 (Reference 10), NRC granted exemptions from 10 CFR 50.82(a)(8)(ii) and 10 CFR 50.82(a)(8)(i)(A) to allow PG&E to withdraw \$187.8 million (2017 dollars) from the Diablo Canyon NDT for decommissioning planning between now and permanent cessation of operations, instead of three percent of the generic amount specified in 10 CFR 50.75. A portion of the funds will be used for pre-planning activities associated with spent fuel management.

In accordance with 10 CFR 50.82(a)(8)(vii), PG&E will annually submit to the NRC by March 31st a report on the status of the funding for managing spent fuel. The report will include, current through the end of the previous calendar year, the amount of funds accumulated to cover the cost of managing the SNF, the projected cost of managing SNF until title to the fuel and possession of the fuel is transferred to the Secretary of Energy, and if the funds accumulated do not cover the projected cost, a plan to provide additional funding assurance using one of the methods allowed by NRC regulations.

As described in Section II, PG&E plans to employ the NUHOMS-EOS system at DCPD under Certificate of Compliance 1042 to store SNF, which will be amended via an NRC licensing action with Orano in the 2022-2024 timeframe. PG&E and/or Orano will submit for NRC approval, the required licensing documentation associated with implementation of the NUHOMS-EOS dry cask storage systems. In addition, PG&E has submitted a license renewal application for the current DC ISFSI dry cask storage system (Reference 12).

**Diablo Canyon Power Plant Units 1 and 2
Irradiated Fuel Management Plan, Revision 1**

V. References

1. PG&E Letter DCL-18-096, "Certification of Permanent Cessation of Power Operations," dated November 27, 2018 (ADAMS Accession No. ML18331A553).
2. PG&E Letter DCL-19-081, "Diablo Canyon Power Plant, Units 1 and 2 Irradiated Fuel Management Plan," dated December 4, 2019 (ML19338F260).
3. PG&E Letter DCL-22-041, "Diablo Canyon Power Plant, Units 1 and 2 – Site-Specific Decommissioning Cost Estimate, Revision 1."
4. PG&E Letter DCL-22-042, "Diablo Canyon Power Plant, Units 1 and 2 – Post-Shutdown Decommissioning Activities Report, Revision 1 ."
5. "Application of Pacific Gas and Electric Company in the 2021 Nuclear Decommissioning Cost Triennial Proceeding. December 14, 2021." Available under case "Nuclear Decommissioning Cost Triennial Proceeding [A.21-12-007]" online at <http://pgera.azurewebsites.net/Regulation/>.
6. PG&E Letter DIL-21-004, "Biennial Submittal of Diablo Canyon Independent Spent Fuel Storage Installation Updated Final Safety Analysis Report," dated December 15, 2021 (ADAMS Accession No. ML21349B166).
7. U.S. Code of Federal Regulations, Title 10, Part 961.11, Article IV - Responsibilities of the Parties, B. DOE Responsibilities, 5.(a) " ... DOE shall issue an annual acceptance priority ranking for receipt of SNF and/or HLW at the DOE repository. This priority ranking shall be based on the age of SNF and/or HLW as calculated from the date of discharge of such materials from the civilian nuclear power reactor. The oldest fuel or waste will have the highest priority for acceptance, except as ... "
8. PG&E Letter DCL-22-023, "Decommissioning Funding Report for Diablo Canyon Power Plants, Units 1 and 2," dated March 30, 2022 (ADAMS Accession No. ML22089A150).
9. PG&E Letter DIL-21-010, "Diablo Canyon Independent Spent Fuel Storage Installation Decommissioning Funding Plan," dated December 14, 2021 (ADAMS Accession No. ML21348A772).
10. U.S. Nuclear Regulatory Commission, "Diablo Canyon Nuclear Power Plant, Units 1 and 2 – Exemptions from the Requirements of 10 CFR Part 50, Sections 50.82(a)(8)(i)(A) and 50.82(a)(8)(ii) (EPID L-2018-LLE-0023)," dated September 10, 2019 (ADAMS Accession No. ML19163A104).

**Diablo Canyon Power Plant Units 1 and 2
Irradiated Fuel Management Plan, Revision 1**

11. NUREG-1307, Revision 17, "Report on Waste Burial Charges," dated February 2019 (ADAMS Accession No. ML19037A405).
12. PG&E Letter DIL-22-003, License Renewal Application for the Diablo Canyon Independent Spent Fuel Storage Installation, dated March 9, 2022 (ADAMS Accession No. ML22068A189).

**Diablo Canyon Power Plant Units 1 and 2
Irradiated Fuel Management Plan, Revision 1**

**Table 1
Summary of Estimated Costs (\$ Thousands) for Diablo Canyon Power Plant Units 1 and 2
Spent Fuel Management Activities**

Scope Description	A Total Estimate Nominal / 2022\$	B 1-Pre- Shutdown Planning 11/2010 - 10/2024	C 2-Zirc Fire 11/2024 - 02/2027	D 3-Wet Storage 03/2027 - 11/2028	E 4-Building Demolition 12/2028 - 12/2032	F 5-Non-ISFSI Site Restoration 01/2033 - 04/2035	G 6-ISFSI Operations 05/2035 - 08/2067	H 7-SNF and GTCC Storage Demolition and Restoration 09/2067 - 01/2076
Decommissioning Program Oversight	\$37,126	\$3,596	\$2,406	\$1,922	\$304	\$59	\$21,147	\$7,692
Site Costs	518,889	5,883	13,039	16,585	38,985	24,785	388,287	31,324
Administration & General	68,081					79	53,670	14,333
SNF & GTCC Transfer to Onsite Storage	264,756	165,073	15,930	77,779	5,974			
SNF & GTCC Storage Demolition & Restoration	62,216						5,712	56,504
GRAND TOTAL	\$951,068	\$174,552	\$31,375	\$96,286	\$45,263	\$24,923	\$468,816	\$109,853

Note: 2010-2021 in Nominal Dollars. 2022-2076 in 2022 dollars.

**Diablo Canyon Power Plant Units 1 and 2
Irradiated Fuel Management Plan, Revision 1**

**Table 2a⁵
Spent Fuel Pool Inventory from Unit 2 Shutdown to All Spent Fuel Assemblies
in Dry Storage**

Year ¹	Assemblies in Wet Storage ²		Assemblies in Dry Storage		Casks at ISFSI ³	
	Unit 1	Unit 2	Unit 1	Unit 2	Unit 1	Unit 2
2025	1261	1281	928	928	29	29
2026	1261	1281	928	928	29	29
2027	205	1281	1984	928	62	29
2028	0	0	2189	2209	69	69 ⁴

Note 1 – Inventories provided are as of end of the year.

Note 2 – Actual number of fuel assemblies will depend on final fuel cycle design.

Note 3 – This schedule assumes no additional transfer of fuel assemblies to the ISFSI until after both units are shutdown. Currently, there are 58 casks at the DC ISFSI.

Note 4 – Based on estimated number of fuel assemblies, the last cask for Unit 1 will contain fuel assemblies from Unit 2.

Note 5 – This table has not been updated to reflect implementation of the NUHOMS-EOS system for SNF at DCPD.

**Diablo Canyon Power Plant Units 1 and 2
Irradiated Fuel Management Plan, Revision 1**

**Table 2b⁴
Spent Fuel and Greater-Than-Class C Waste Shipping Schedule
(Assumes Five Casks Shipped Offsite Per Year)**

Year ¹	Casks at ISFSI ²		Cumulative Casks Transferred to DOE	
	Unit 1	Unit 2	Unit 1	Unit 2
2037	74	74	0	0
2038	69	74	5	0
2039	69	69	5	5
2040	64	69	10	5
2041	64	64	10	10
2042	59	64	15	10
2043	59	59	15	15
2044	54	59	20	15
2045	54	54	20	20
2046	49	54	25	20
2047	49	49	25	25
2048	44	49	30	25
2049	44	44	30	30
2050	39	44	35	30
2051	39	39	35	35
2052	34	39	40	35
2053	34	34	40	40
2054	29	34	45	40
2055	29	29	45	45
2056	24	29	50	45
2057	24	24	50	50
2058	19	24	55	50
2059	19	19	55	55
2060	14	19	60	55
2061	14	14	60	60
2062	9	14	65	60
2063	9	9	65	65
2064	5 ³	9	69	65
2065	5 ³	5 ³	69	69
2066	0	5 ³	74	69
2067	0	0	74	74

Note 1 – Inventories provided are as of end of the year.

Note 2 – Five casks associated with GTCC waste included for each unit.

Note 3 – GTCC casks for Unit 1 assumed to be shipped in 2066 and Unit 2 assumed to be shipped in 2067.

Note 4 - This table has not been updated to reflect implementation of the NUHOMS-EOS system for SNF at DCPD.

**Diablo Canyon Power Plant Units 1 and 2
Irradiated Fuel Management Plan, Revision 1**

**Table 3
Major Spent Fuel Management Costs in Each Decommissioning Phase**

Phase	Phase Title	Period Start	Period Finish	Total Cost Attributed to Spent Fuel Management (\$Thousands)	General Description of Activities Associated with Spent Fuel Management
1	Pre-Shutdown Planning	Nov. 2010	Oct. 2024	\$174,552	Staffing, permitting, licensing, scheduling, paper studies, and work planning associated with the current DC ISFSI, and the new dry cask storage systems (including cask procurement).
2	Zirc Fire ¹	Nov. 2024	Feb. 2027	\$31,375	A new ISFSI Security building and GTCC waste storage facility will be constructed. Staffing, licensing, security operations, aging management and storage equipment inspections, cask procurement, SNF transfer to ISFSI.
3	Wet Storage	Mar. 2027	Nov. 2028	\$96,286	Staffing, licensing, permitting, security operations, SNF and GTCC waste transfer to ISFSI and GTCC waste storage facility, respectively, and aging management and storage equipment inspections.
4	Building Demolition	Dec. 2028	Dec. 2032	\$45,263	Staffing, licensing, permitting, security operations, planning for SNF and GTCC waste transfer to US DOE, and aging management and storage equipment inspections.
5	Non-ISFSI Site Restoration	Jan. 2033	Apr. 2035	\$24,923	Staffing, licensing, permitting, security operations, aging management, storage equipment inspections and planning for SNF and GTCC waste transfer to US DOE.

**Diablo Canyon Power Plant Units 1 and 2
Irradiated Fuel Management Plan, Revision 1**

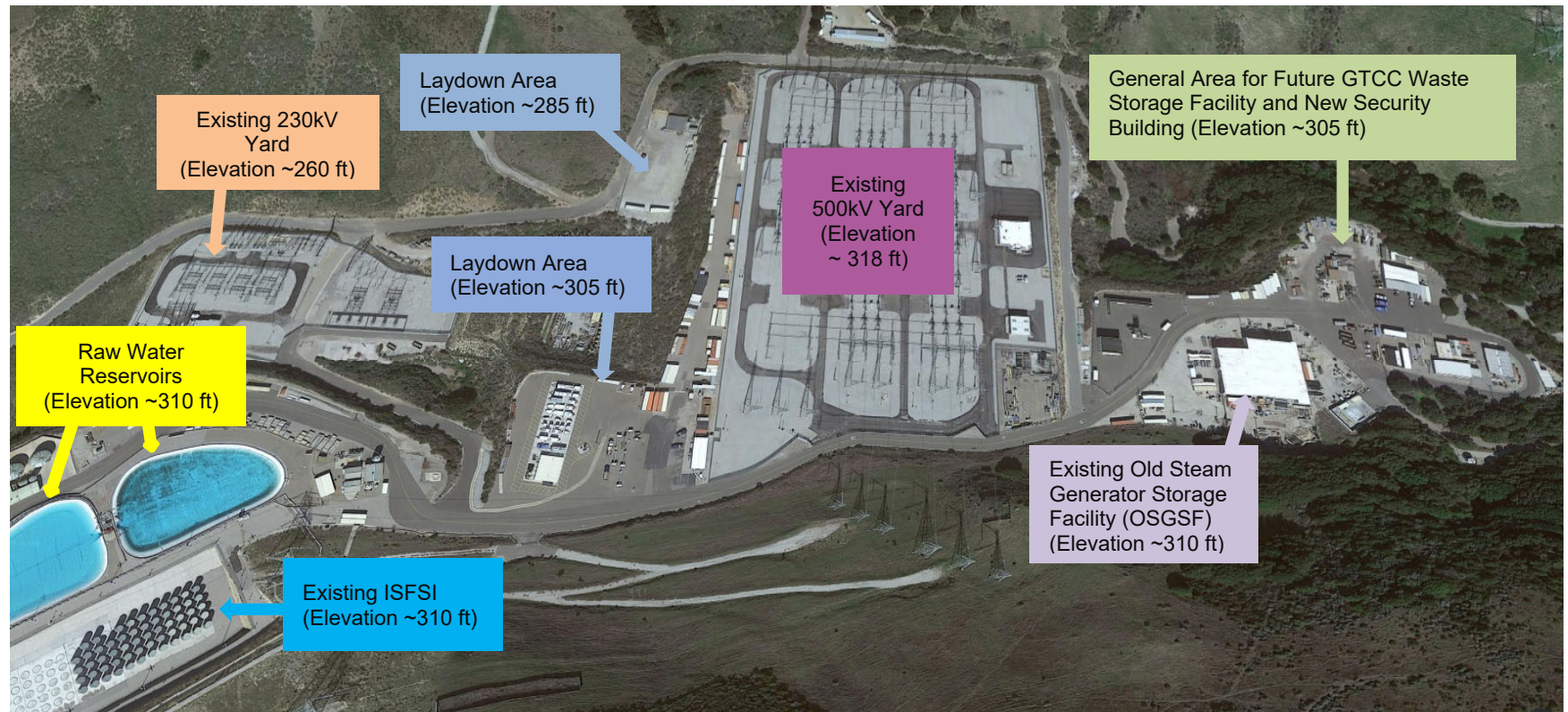
Phase	Phase Title	Period Start	Period Finish	Total Cost Attributed to Spent Fuel Management (\$Thousands)	General Description of Activities Associated with Spent Fuel Management
6	ISFSI Operations ²	May 2035	Aug. 2067	\$468,816	SNF and GTCC waste storage activities: Staffing, licensing, security operations, aging management and storage equipment inspections.
					SNF and GTCC waste US DOE pre-transfer and transfer activities: Licensing and permitting associated with transfer of SNF and GTCC waste to an off-site facility, specialized work, tooling and equipment, coordination with offsite facilities, engineering for pre-transfer preparations.
7	SNF and GTCC Storage Demolition and Restoration	Sep. 2067	Jan. 2076	\$109,853	Consists of removal of the GTCC waste storage facility, ISFSI structures, permitting, conduct of final radiological surveys for license termination, restoration of affected areas, and biological monitoring.

Note 1 – Costs associated with construction of a new security building and the GTCC waste storage facility were accounted for in the SSDCE under License Termination Costs.

Note 2 – Costs associated with GTCC waste incurred after termination of the Part 50 licenses are accounted for under spent fuel management.

**Diablo Canyon Power Plant Units 1 and 2
Irradiated Fuel Management Plan, Revision 1**

**Figure 1
Aerial View of Future Greater-Than-Class C Waste Storage Facility**



**Diablo Canyon Power Plant Units 1 and 2
Irradiated Fuel Management Plan, Revision 1**

**Figure 2
Conceptual Layout of Diablo Canyon Independent Spent Fuel Storage Installation
with Current and New Dry Cask Storage Systems**

