Appendix F

Historic Built Environment Evaluation

PAGE&TURNBULL

DIABLO CANYON POWER PLANT DECOMMISSIONING PROJECT HISTORIC BUILT ENVIRONMENT EVALUATION REPORT

SAN LUIS OBISPO COUNTY, CALIFORNIA
[P21214]

PREPARED FOR ASPEN ENVIRONMENTAL GROUP
April 14, 2022
REVISED

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1. INTRODUCTION

This Historic Built Environment Evaluation Report has been prepared for Aspen Environmental Group as part of the Diablo Canyon Power Plant (DCPP) Decommissioning Project proposed by Pacific Gas & Electric (PG&E), which operates the plant. The report evaluates the early buildings and structures at the DCPP site individually and collectively to determine if any meet the qualifications for listing as a historical resource for the purpose of the California Environmental Quality Act (CEQA). This report provides a summary of the regulatory setting for built historic resources, a physical description of the DCPP site, and historic context for the power plant, followed by its site history and evaluation for listing in the National Register of Historic Places and the California Register of Historical Resources.

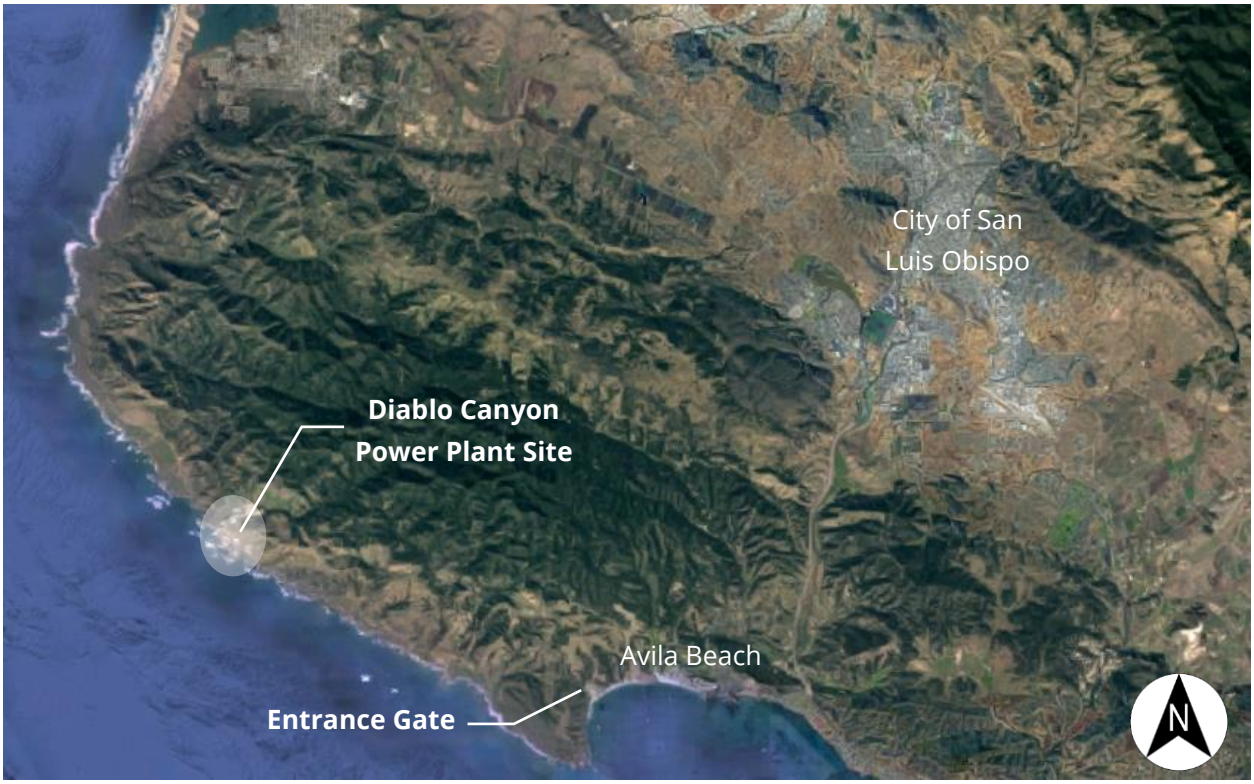


Figure 1. General Site Vicinity map for Diablo Canyon Power Plant Decommissioning Project. No scale.
Source: Google Maps, 2022. Edited by Page & Turnbull.

DCPP is located along the coast of the Pacific Ocean, approximately seven miles to the northwest of the unincorporated community of Avila Beach in San Luis Obispo County, California **(Figure 1)**. The site consists of a 750-acre high security zone, surrounded by approximately 12,000-acre area of owner-controlled land (jointly owned by PG&E and its subsidiary, Eureka Energy Company) that extends from Montaña de Oro State Park to the north to Port San Luis to the south. The built

resources associated with DCPP are primarily on a flat terrace several hundred feet from the shoreline and at a leveled plateau (upper terrace) created on the hillside above the flat terrace, all within the 750-acre area that is the existing power plant boundaries.

Construction of the two-unit nuclear power plant began in 1968. Although most of the buildings and structures necessary for the plant's operation were essentially completed by 1973, operating licenses for DCPP Units 1 and 2 were not granted until 1984 and 1985, respectively, with both units going into commercial operation the following year. DCPP is the last nuclear power plant in operation in California and is scheduled to be decommissioned after its operating licenses under the U.S. Nuclear Regulatory Commission (NRC) expire in 2024 (Unit 1) and 2025 (Unit 2).

Methodology

Page & Turnbull prepared this report using books, journal articles, and other pieces of scholarly literature about the history of the plant, nuclear power, and the environmental movement, as well as various online sources including Newspapers.com and the websites of the NRC and World Nuclear Association. Key primary sources consulted and cited in this report include historic photographs from the PG&E archives, historic aerial photographs, and historical newspapers. Inquiries were made the University of California, Berkeley's Environmental Design Archives and to the Oregon Historical Society Research Library for information regarding Wurster, Bernardi, and Emmons and Pietro Belluschi, respectively, and their involvement as architects in the original plant design. Page & Turnbull staff conducted a site visit to DCPP on September 23 and 24, 2021. All photographs within this report were taken at that time, unless otherwise noted.

Names and numbers of the individual buildings and structures at DCPP, along with their dates of construction and the decommissioning zones in which they are located, are based on the Facilities Database spreadsheet provided by PG&E to Aspen Environmental Group, and shared with Page & Turnbull, along with a Revised Facilities Data site plan (SK-002-R1, dated October 10, 2018) denoting the various decommissioning zones. The dates of construction listed in the Facility Database spreadsheet are approximate substantial completion dates, as buildings and structures continued to be modified and PG&E records did not include consistent completion dates. During the September 2021 site visit, PG&E architect Al Clark provided Page & Turnbull with a separate spreadsheet dated August 27, 2009 with building information that he had compiled over the years of working at the plant. According to Mr. Clark, dates of construction in this 2009 spreadsheet were based on dates on original architectural drawings, though the construction completion dates were not recorded. As such, Page & Turnbull used the dates from Mr. Clark's spreadsheet as the secondary source for confirming the date of construction for individual buildings and structures at DCPP. In cases where the date of construction differed between these two sources, the dates were cross-referenced and

confirmed where possible. This included reviewing historic photographs of the site, such as a historic aerial photograph taken in 1981, and other construction timelines provided by PG&E. In addition, PG&E confirmed date of construction and associated architect or engineer for six buildings through their response to Data Request Set 2. Page & Turnbull also referenced building permit records available online from the County of San Luis Obispo. However, because individual permit records could not always be definitively associated with a specific building or structure, the permits were only used to identify dates of construction in very limited instances.

For the purposes of evaluation, 1985 was selected as the end point for the site's potential period of significance, as DCPP's Unit 2 reactor was licensed for full commercial operation by the Nuclear Regulatory Commission that year and the plant was considered functionally complete. While this is less than 50 years ago, sufficient resources are available to understand DCPP within the context of nuclear power in California and the nation. The buildings and structures listed in the Facilities Database with a date of construction of 1985 or earlier, and confirmed by PG&E, were reviewed as part of the evaluation; they are described on California Department of Parks and Recreation Primary Record (DPR 523A) forms appended to this report. DPR 523A forms were not prepared for buildings and structures with construction dates after 1985, such as the Administration Building that PG&E confirmed had a 1986 date of construction.

It should be noted that some archival materials, including historical aerials from the University of California, Santa Barbara Library Geospatial Collection, were not available as a result of limited access due to the COVID-19 pandemic.

Summary of Findings

Upon evaluation, Page & Turnbull finds that the Diablo Canyon Power Plant is not eligible for listing on the National Register of Historic Places or the California Register of Historical Resources under any criteria. DCPP is not strongly associated with any significant events, patterns, or trends in nuclear power history under Criterion A/1. Construction on DCPP began in the late 1960s after an initial wave of nuclear power plants had already been completed in the country and in California in the late 1950s and early 1960s. After years of delays and setbacks, the plant went into full commercial operation in the mid-1980s, becoming one of the last nuclear power plants to begin operation in California. As such, it did not strongly influence the design or development of nuclear power plants in the state.

Although DCPP attracted significant and sustained opposition throughout its development, it does not appear to have directly contributed to the decline of the nuclear power industry nationally or at the state level; been the primary cause for any major actions, pieces of legislation, or policy changes;

or have had a historically significant impact on the development of the environmental movement. Rather, DCPP was one of many complicated and overlapping factors that contributed to a widespread atmosphere of growing concern and distrust toward nuclear power that emerged across the United States from the 1960s to the 1980s.

Furthermore, research did not indicate that DCPP is associated with any historically significant individuals under Criterion B/2 (Persons). Lastly, it does not appear that the site, nor any building or structure, is historically significant for its architectural design or construction under Criterion C/3 (Architecture). DCPP was built around two pressurized water reactors, the most common type of nuclear reactor in the United States. The design of these reactors and that of the support buildings and structures that comprise DCPP do not appear to be particularly unique or innovative within the history of nuclear power plants in California or the United States. Research did not uncover significant architectural designs or engineering achievements associated with DCPP. PG&E staff appear to be responsible for the design of many built resources, including larger-scale buildings such as the Training Building (Building 109) from 1984 and the 1986 Administration Building (Building 104). Master architects Wurster, Bernardi, and Emmons (WBE) and Pietro Belluschi were consultants to PG&E on the initial group of buildings around the nuclear reactors, though existing scholarship has not identified DCPP as an important work for WBE or Belluschi. Additional research was unable to confirm the extent of their contributions to attribute the design of any specific building or structure to either the firm or the architect. Where other outside architects, engineers, or designers had involvement with DCPP on specific buildings or structures, their work has not been recognized as of particular importance to meet Criterion C/3. As such, the plant's buildings and structures are not currently considered the work of a master architect or builder.

In addition, none of the individual buildings or structures rose to the level of significance to meet any of the criteria for listing on the National Register or California Register. Because no resource was found to meet any significance criteria, those that are less than 50 years of age also did not meet the threshold for exceptional significance under Criterion Consideration G.

Overall, no individual building or structure, or the Diablo Canyon Power Plant as a grouping or potential historic district, appear to qualify as a historic resource for the purposes of review under the California Environmental Quality Act (CEQA).

2. REGULATORY SETTING

California Environmental Quality Act

The California Environmental Quality Act (CEQA) is state legislation (Pub. Res. Code §21000 et seq.), which provides for the development and maintenance of a high-quality environment for the present-day and future through the identification of significant environmental effects.[1] CEQA applies to "projects" proposed to be undertaken or requiring approval from state or local government agencies. In accordance with CEQA Guidelines Section 15378, a "Project" is defined as "…the whole of an action, which has the potential for resulting in either a direct change in the environment, or a reasonably foreseeable indirect physical change in the environment" and which involves an activity directly undertaken by a public agency, an activity that requires public agency assistance or entitlement, or an activity that requires discretionary approval by a public agency.[2] Historic and cultural resources are considered to be part of the environment. In general, the lead agency must complete the environmental review process as required by CEQA.

A building may qualify as a historic resource if it falls within at least one of four categories listed in CEQA Guidelines Section 15064.5(a), which are defined as:

1. A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (California Register) (Pub. Res. Code SS5024.1, Title 14 CCR, Section 4850 et seq.).

2. A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements of section 5024.1 (g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

3. Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of

[1] California Enviornmental Quality Act (CEQA), Public Resources Code (PRC), §21000 et seq., accessed online, November 9, 2021, https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=PRC&sectionNum=21000. .
[2] Guidelines for Implementation of the California Enviornmental Quality Act, California Code of Regulations (CCR), Title 14 § 15000 et seq., Thomson Reuters Westlaw, accessed online November 9, 2021, https://govt.westlaw.com/calregs/Browse/Home/California/CaliforniaCodeofRegulations?guid=IEB5FF9F0D48811DEBC02831C6D6C108E&originationContext=documenttoc&transitionType=Default&contextData=(sc.Default)

California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code SS5024.1, Title 14 CCR, Section 4852).

4. The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to section 5020.1(k) of the Pub. Resources Code), or identified in an historical resources survey (meeting the criteria in section 5024.1(g) of the Pub. Resources Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Pub. Ressources Code sections 5020.1(j) or 5024.1.[3]

Properties listed or formally determined eligible for listing in the National Register are listed automatically in the California Register. [4] As such, they are considered historic resources under CEQA.

Historic Registers

NATIONAL REGISTER OF HISTORIC PLACES

The National Register of Historic Places (National Register) is the nation's most comprehensive inventory of historic resources. The National Register is administered by the National Park Service and includes districts, sites, buildings, structures and objects significant in American history, architecture, archeology, engineering, and culture. These resources contribute to an understanding of the historical and cultural foundations of the Nation at the national, state, or local level. Typically, properties over fifty years of age may be eligible for listing in the National Register if they meet any one of the four significance criteria and if they retain sufficient historic integrity to convey that significance. However, properties under fifty years of age may be determined eligible if it can be demonstrated that they are of "exceptional importance." Other criteria considerations apply to cemeteries, birthplaces, graves of historical figures, properties owned by religious institutions or used for religious purposes, structures that have been moved from their original locations, reconstructed buildings, and properties primarily commemorative in nature. National Register criteria are defined in depth in *National Register Bulletin Number 15: How to Apply the National Register Criteria for Evaluation.*

[3] Pub. Res. Code SS5024.1, Title 14 CCR, Section 4850 et seq.
[4] California Office of Historic Preservation, *Technical Assistant Series No. 7, How to Nominate a Resource to the California Register of Historic Resources* (Sacramento: California Office of State Publishing, 2001),11.

Historic Significance

The National Register has four basic criteria under which a property may be considered eligible for listing. It can be found significant under one or more of the following criteria:

- Criterion A (Events): Properties associated with events that have made a significant contribution to the broad patterns of our history;
- Criterion B (Person): Properties associated with the lives of persons significant in our past;
- Criterion C (Architecture): Properties that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant distinguishable entity whose components lack individual distinction; and
- Criterion D (Information Potential): Properties that have yielded, or may be likely to yield, information important in prehistory or history.

A property may be considered significant on a national, state, or local level to American history, architecture, archaeology, engineering, and culture.

Criteria Consideration G

Properties that have achieved significance within the past 50 years shall not be considered eligible for the National Register unless it can be demonstrated that they are of exceptional importance. According to National Register Bulletin 15, the phrase exceptional importance "may be applied to the extraordinary importance of an event or to an entire category of resources so fragile that survivors of any age are unusual."[5] In order for a property to be evaluated under Criteria Consideration G, there must be sufficient historical perspective to determine that the property is exceptionally important. In addition, the property must be compared with other related properties to determine if the property qualifies as exceptionally important. Properties which have achieved significance within the past 50 years can also be eligible for the National Register if they are an integral part of a district which qualifies for the National Register listing.

[5] National Park Service, "National Register Bulletin Number 15: How to Apply the National Register Criteria for Evaluation" (Washington, D.C.: National Park Service, 1995), 42.

Integrity

In addition to qualifying for listing under at least one of the National Register criteria, a property must be shown to have sufficient historic integrity in order to be considered eligible for listing in the National Register. The concept of integrity is essential to identifying the important physical characteristics of historic resources and hence, in evaluating adverse changes to them. Integrity is defined as "the authenticity of an historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance."[6]

According to the *National Register Bulletin Number 15: How to Apply the National Register Criteria for Evaluation*, integrity is determined through seven aspects: location, design, setting, materials, workmanship, feeling, and association.

Integrity is a "yes" or "no" determination. A historic property either has adequate integrity, or it does not. To retain historic integrity, a property will often possess several, if not all, of the aforementioned aspects. Specific aspects of integrity may also be more important, depending on the criteria for which it is significant.

CALIFORNIA REGISTER OF HISTORICAL RESOURCES

The California Register of Historical Resources (California Register) is an inventory of significant architectural, archaeological, and historical resources in the State of California. Resources can be listed in the California Register through a number of methods. State Historical Landmarks and National Register-listed properties are automatically listed in the California Register. Properties can also be nominated to the California Register by local governments, private organizations, or citizens.

In order for a property to be eligible for listing in the California Register, it must be found significant under one or more of the following criteria.

- **Criterion 1 (Events):** Resources that are associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States.

- **Criterion 2 (Persons):** Resources that are associated with the lives of persons important to local, California, or national history.

[6] National Park Service, "National Register Bulletin Number 15", 46.

- **Criterion 3 (Architecture):** Resources that embody the distinctive characteristics of a type, period, region, or method of construction, or represent the work of a master, or possess high artistic values.

- **Criterion 4 (Information Potential):** Resources or sites that have yielded or have the potential to yield information important to the prehistory or history of the local area, California, or the nation.

These criteria are based upon National Register of Historic Places criteria; however, the California Register does not impose as specific of requirements for integrity and age as the National Register. Properties eligible for listing in the California Register must retain enough of their historic character or appearance to be recognizable as historic resources and to convey the reasons for their significance. While the National Register guidelines for integrity can be applied for California Register eligibility, it is possible that resources that may not retain sufficient integrity for listing in the National Register may still be eligible for the California Register. Moved or reconstructed buildings, structures, or objects may also be considered for listing in the California Register under specific circumstances. In addition, properties that were constructed less than 50 years ago or which achieved significance less than 50 years ago may be eligible for inclusion in the California Register provided that sufficient time has passed to understand their significance within a historic context. With the exception of some properties with additional criteria consideration (50 years or less, moved buildings, etc.), properties that meet the National Register criteria typically also meet the California Register criteria and vice versa and are often evaluated together.

SAN LUIS OBISPO COUNTY

The County of San Luis Obispo, in which the subject property is located, currently does not have a historic preservation ordinance nor registration system for historic resources.

Historic Surveys and Evaluations

CEQA also recognizes a property that has been surveyed or evaluated and meets the criteria for listing in the California Register as a historic resource, unless a preponderance of evidence demonstrates that it is not historically or culturally significant. Below are relevant surveys and evaluations.

CALIFORNIA HISTORICAL RESOURCE STATUS CODES

Properties listed or under review by the State of California Office of Historic Preservation are listed within the Built Environment Resource Directory (BERD) and are assigned a California Historical Resource Status Code (Status Code) of "1" to "7" to establish their historical significance in relation to the National Register of Historic Places (National Register) or California Register of Historical Resources (California Register).[7] Properties with a Status Code of "1" or "2" are either eligible for listing in the California Register or the National Register, or are already listed in one or both of the registers. Properties assigned Status Codes of "3" or "4" appear to be eligible for listing in either register, but normally require more research to support this rating. Properties assigned a Status Code of "5" have typically been determined to be locally significant or to have contextual importance. Properties with a Status Code of "6" are not eligible for listing in either register. Finally, a Status Code of "7" means that the resource has not been evaluated for the National Register or the California Register, or needs reevaluation.

Historic Status of the Diablo Canyon Power Plant

The Diablo Canyon Power Plant is not currently listed in the National Register or California Register. It is also not listed in the BERD database for San Luis Obispo County, as of the March 2020 update. This means no previous evaluations or surveys of the property have been submitted to Office of Historic Preservation.

[7] California State Office of Historic Preservation, Built Environment Resource Directory (BERD), Los Angeles County, updated March 2020.

3. PHYSICAL DESCRIPTION

The Diablo Canyon Power Plant occupies a 750-acre site within a larger approximately 12,000-acre existing owner-controlled area on the California coast in central San Luis Obispo County. The 750-acre site where most of the built resources were constructed is located within the Irish Hills approximately seven miles northwest of Avila Beach, 12 miles southwest of the City of San Luis Obispo, and directly southeast of Montaña de Oro State Park.

The primary access to Diablo Canyon Power Plant is Diablo Canyon Road, which starts at its intersection with Avila Beach Drive close to Port San Luis near Avila Beach. A guard station controls entrance to the road and property at this Ávila Gate. Diablo Canyon Road is a paved, seven-mile, two-lane road that winds its way along the coast to the area where the power plant's built resources are located.

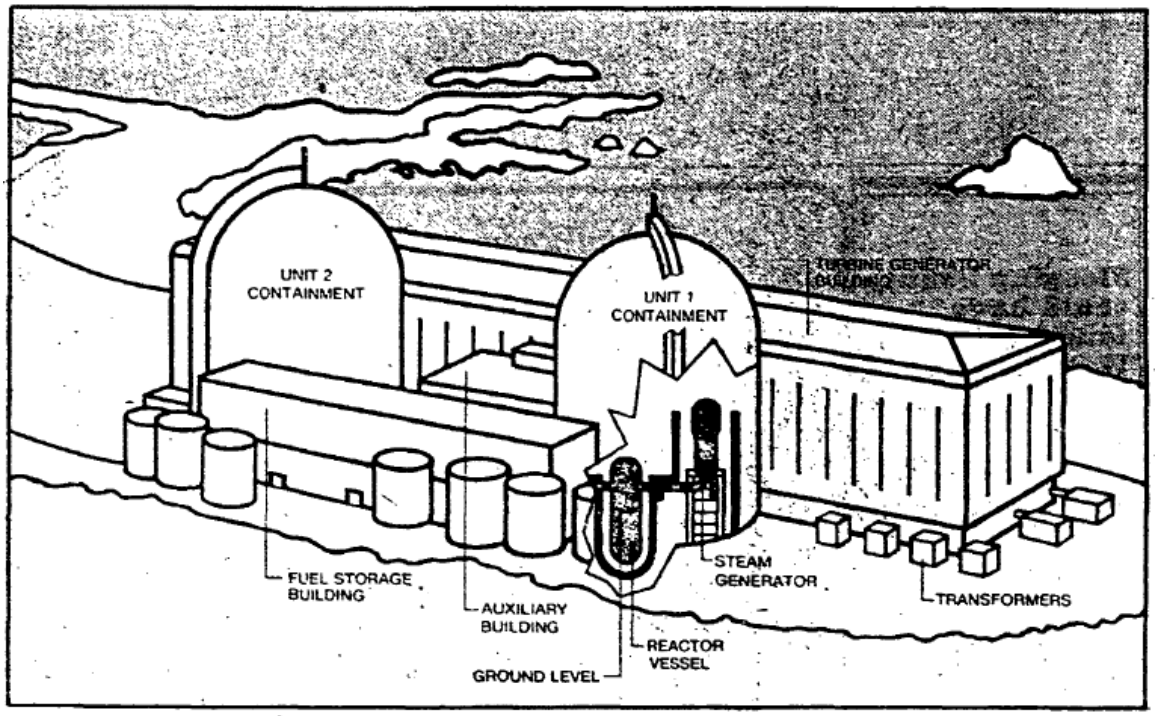


Figure 2. Diagram of the buildings and structures within the power block.
Source: "A Rare Glimpse of the Plant," *San Francisco Chronicle*, 12 November 1978: 1.

According to the site plan provided (Appendix A), upon reaching the plant site, the road forks into Shore Cliff Road and Reservoir Road. Shore Cliff Road leads to a large flat terrace along the rocky coastline of the Pacific Ocean that contains a majority of the plant's buildings and structures, including the main power generating facilities in the power block (**Figure 2**). Reservoir Road ascends

along the hillsides to the northwest of this terrace to a second higher terrace, containing additional support buildings, structures, and site features. The buildings on this upper terrace roughly align with the path of Diablo Canyon Creek, which runs through the plant site along the base of a ravine and through underground tunnels before emptying into Diablo Cove. Diablo Cove and a separate manmade cove, known as the Intake Cove, supply water for the plant's water systems.

Buildings by Decommissioning Zones

The following section contains a brief summary of the various areas that comprise main plant site, organized according to decommissioning zones established by PG&E **(Figure 3)**. Detailed views of each zone from the Revised Facilities Data site plan (SK-002-R1) are provided for reference. Dates of construction are based on the Facility Database provided by PG&E to Aspen Environmental Group, unless otherwise noted. Individual buildings and structures that were built in 1985 or earlier are highlighted on the zone site plans and DPR 523A forms with their physical descriptions are included in Appendix A.

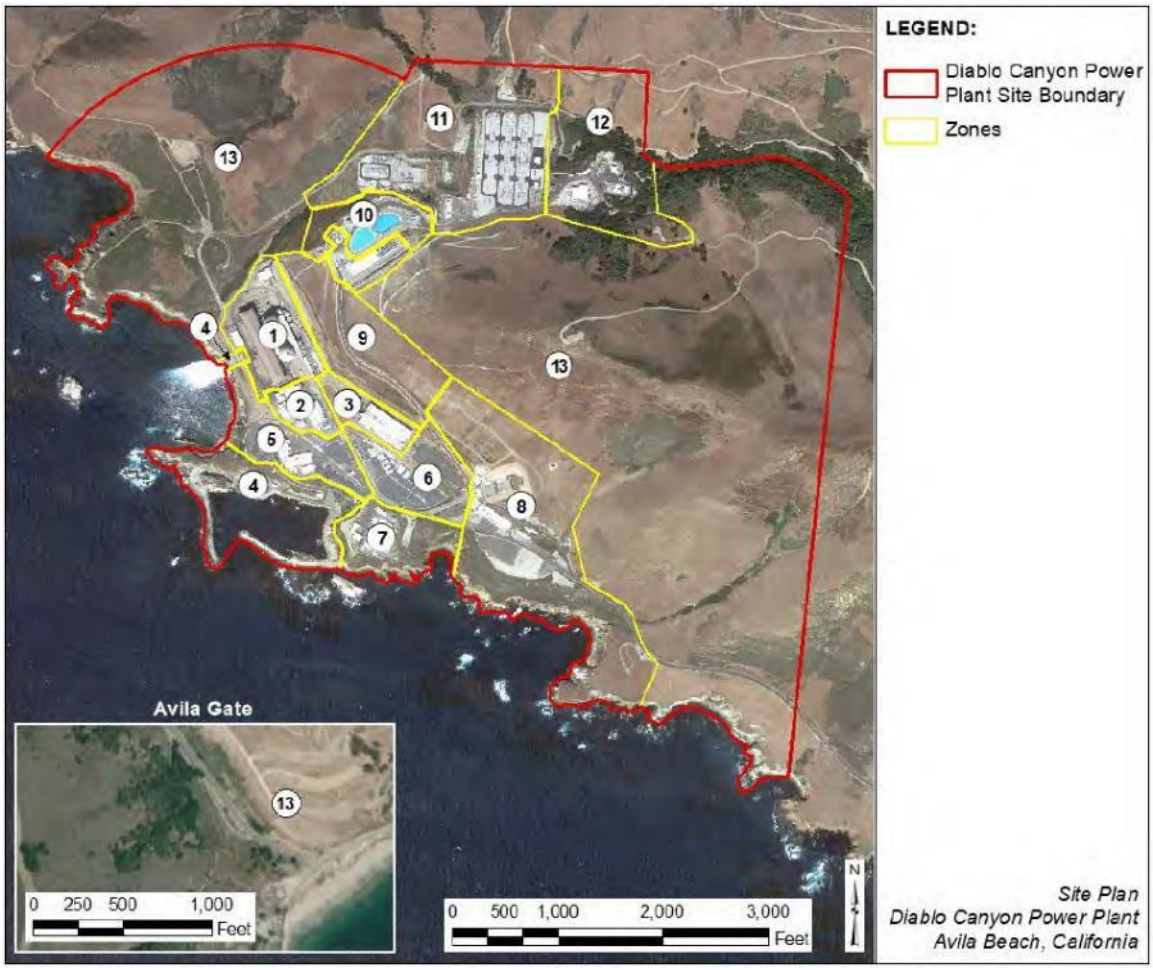
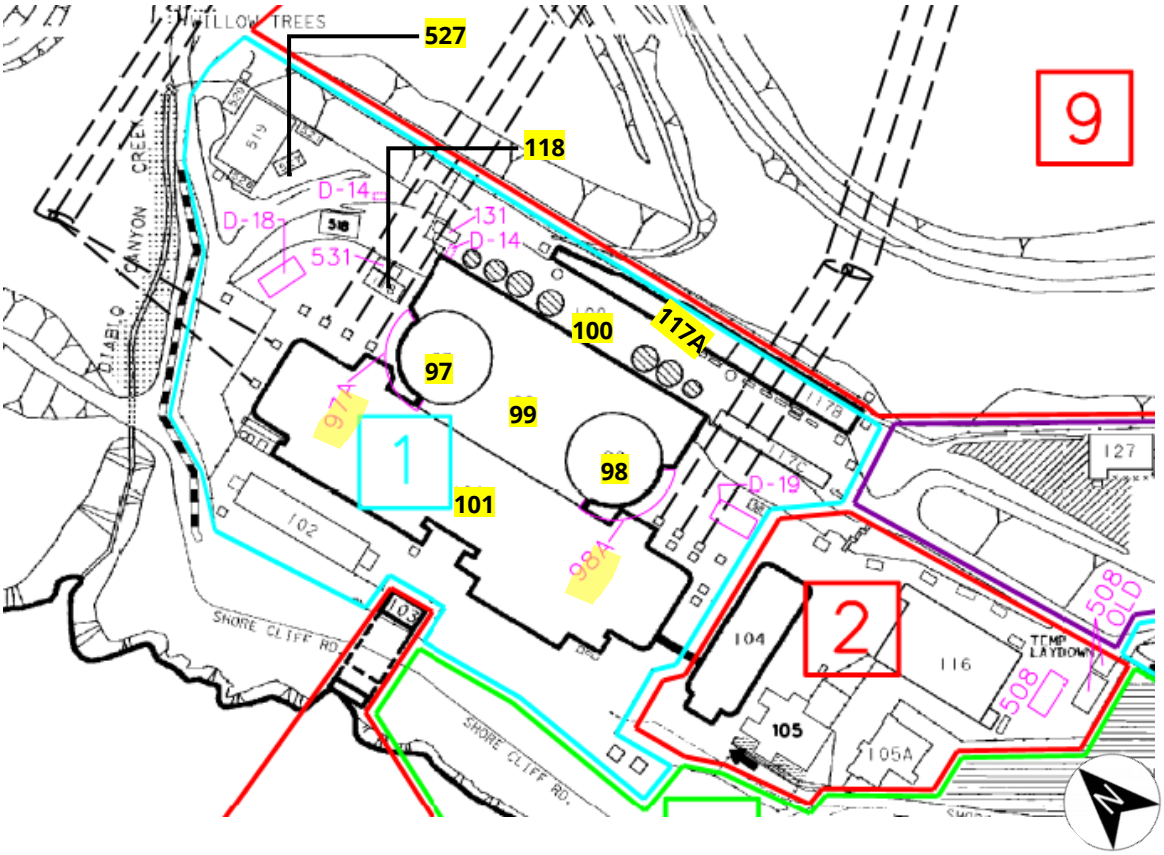


Figure 3. Boundaries for the 750-acre area that comprise the project site, with the 13 decommissioning zones shown. Source: Pacific Gas and Electric Company, 2021. County of San Luis Obispo Development Plan / Coastal Development Permit and Conditional Use Permit Application Package for the Diablo Canyon Power Plant Decommissioning Project (Amended Submittal). June 30. File: Project Description, Environmental & Alternatives Analyses (Revised).

ZONE 1

Zone 1 is located on the main terrace directly to the northwest of Diablo Cove. The zone contains the plant's primary power generating buildings and structures, also known as the power block. Two pressurized water nuclear reactors (Unit 1 and Unit 2) and their associated steam generators, feedwater systems, and cooling water systems are housed inside separate, but adjacent, containment domed structures (Buildings 097 and 098). The containment structures are behind a long Turbine Building (Building 101) that contains turbines and generators that convert steam produced in the containment domes into electricity. An Auxiliary Building (Building 099) – containing the plant's control room, emergency safety systems, and other support systems – connects to the Turbine Building and surrounds the two containment structures. A fuel handling building, radioactive waste storage building, medical facility, outdoor water storage tanks, maintenance warehouses, storage facilities, and other support buildings and structures surround the main power block buildings.



Not to Scale

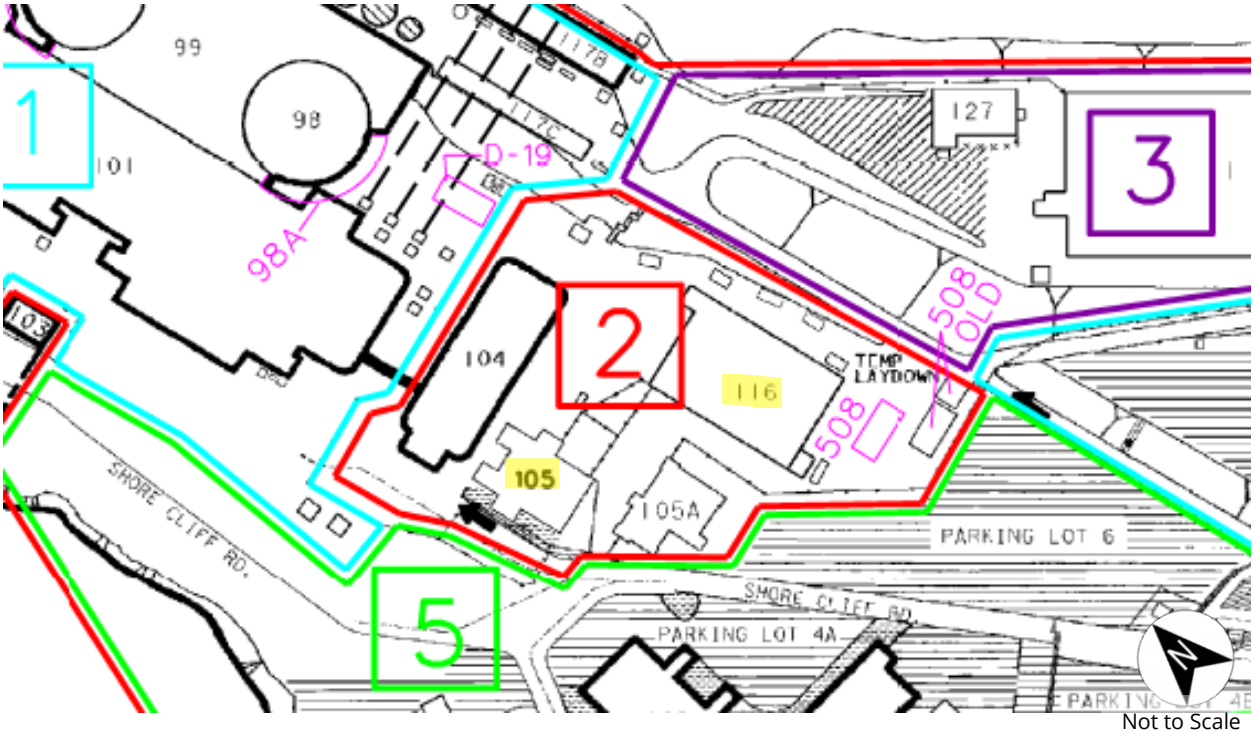
Zone 1			
Building #	**Building Name**	**Year Built**	**DPR 523A Form**
090	Service Air Building	1996	No
097	Unit 1 Containment	1972	Yes
097A	Unit 1 Pipe Rack Area	1972	Yes
098	Unit 2 Containment	1973	Yes
098A	Unit 2 Pipe Rack Area	1973	Yes
099	Auxiliary Building	1972-1973	Yes
100	Outdoor Water Storage Tanks	1973	Yes
101	Turbine Building	1972-1973	Yes
102	I&C/Medical Facility	1988	No
117A	RCA Laundry Facility	1975	Yes
117B	RCA Radwaste Storage	1990	No
117C	RCA Storage Building	2003	No
118	Aux Boiler Enclosure	1980	Yes
131	RCA Calibration Facility	2007	No
518	Craft Facility - Storage (Assembly Building)	1980*	No
519	Warehouse A	Not dated	No
527	Start-up – Instrumentation & Control Craft Shop	By 1981**	Yes
528	Toilet trailer	Not dated	No
531	Scaffold Storage Area (Hazardous Waste Handling Area)	Not dated	No
D-14	Abandoned Diesel Storage Tanks	Not dated	No
D-18	Unit 1 Transformer Yard Oil Retention Basin	Not dated	No
D-19	Unit 2 Transformer Yard Oil Retention Basin	Not dated	No

* According to PG&E Architect Al Clark's August 27, 2009 list of plant buildings.

** Confirmed by appearance in 1981 aerial photograph of the plant site.

ZONE 2

Zone 2 is located directly to the southeast of Zone 1 and contains several large buildings that primarily support the administration, security, and maintenance of the plant. Principal buildings include a six-story Administrative Building (Building 104), two security buildings used to screen workers and visitors to the power block (Buildings 105 and 105A), and a large maintenance warehouse (Building 116).



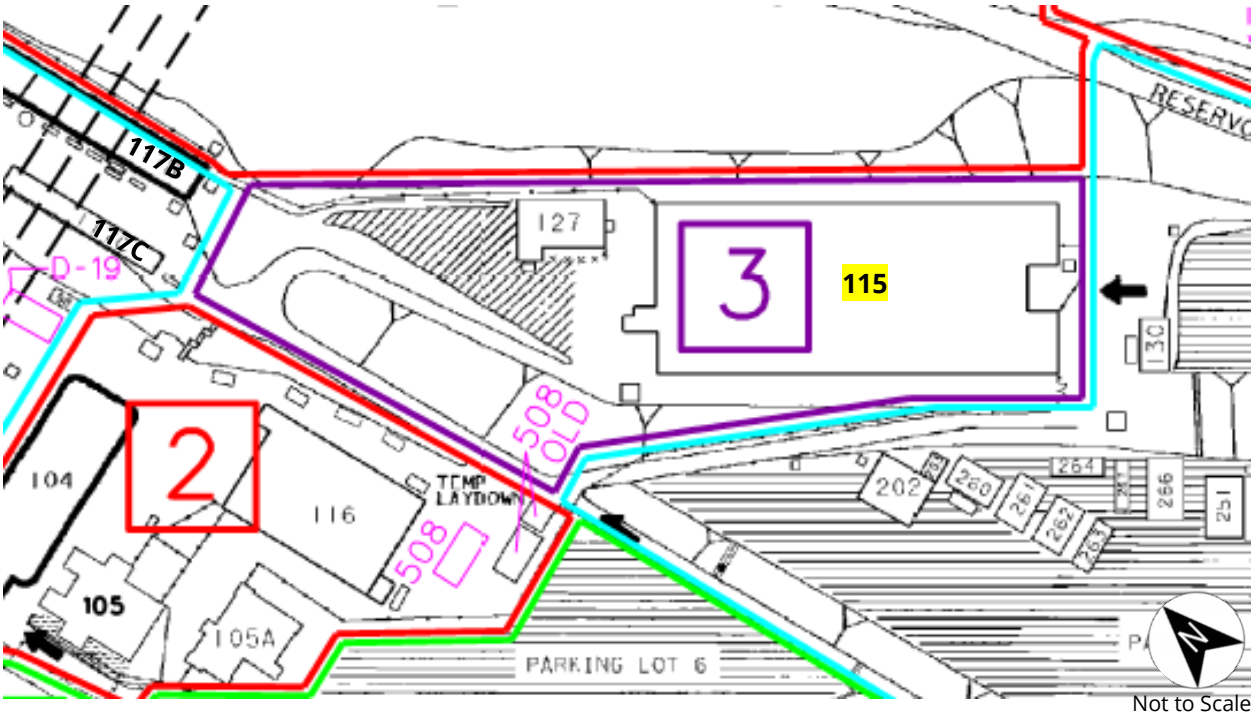
Not to Scale

Zone 2			
Building #	**Building Name**	**Year Built**	**DPR 523A Form**
104	Administration Building	1986*	No
105A	Protected Area Access Facility	2012	No
105	Security Office Building	1977, expanded 1988 and unknown date	Yes
116	Unit 2 Cold Machine Shop	1984	Yes
508	Office	Not dated	No
508 old	Office – condemned	Not dated	No

* PG&E confirmed date through Data Request Set 2.

ZONE 3

Located immediately to the northeast of Zones 1 and 2, Zone 3 provides additional maintenance and storage support for the plant. The zone's main building consists of the Main Warehouse (Building 115), a combined maintenance warehouse and office building that is nestled into the excavated hillsides of the Irish Hills.



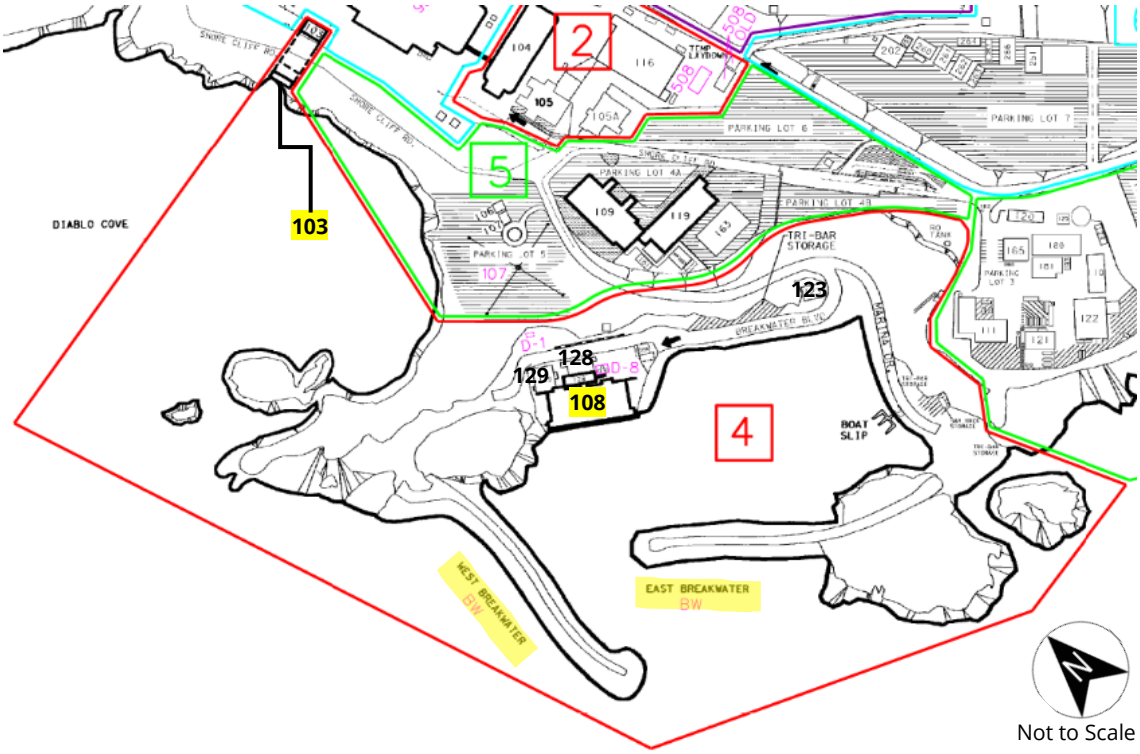
Not to Scale

Zone 3			
Building #	**Building Name**	**Year Built**	**DPR 523A Form**
115	Main Warehouse	1985	Yes
127	Liquids Storage	1988* or 1991	No

* According to PG&E Architect Al Clark's August 27, 2009 list of plant buildings.

ZONE 4

Zone 4 consists primarily of the plant's Discharge Structure (Building 103) and Intake Structure (Building 108) that draw seawater from the Pacific Ocean into the plant's tertiary cooling system and returns it into the ocean. It includes the manmade Intake Cove formed by two long breakwaters that shelters the Intake Structure and its adjacent support facilities, also in the zone, from the ocean. A small boat dock is within the Intake Cove. The Intake Cove area is accessed by a curving, paved road that descends from the main terrace to the shoreline and splits into one named Breakwater Boulevard and another named Marina Drive.



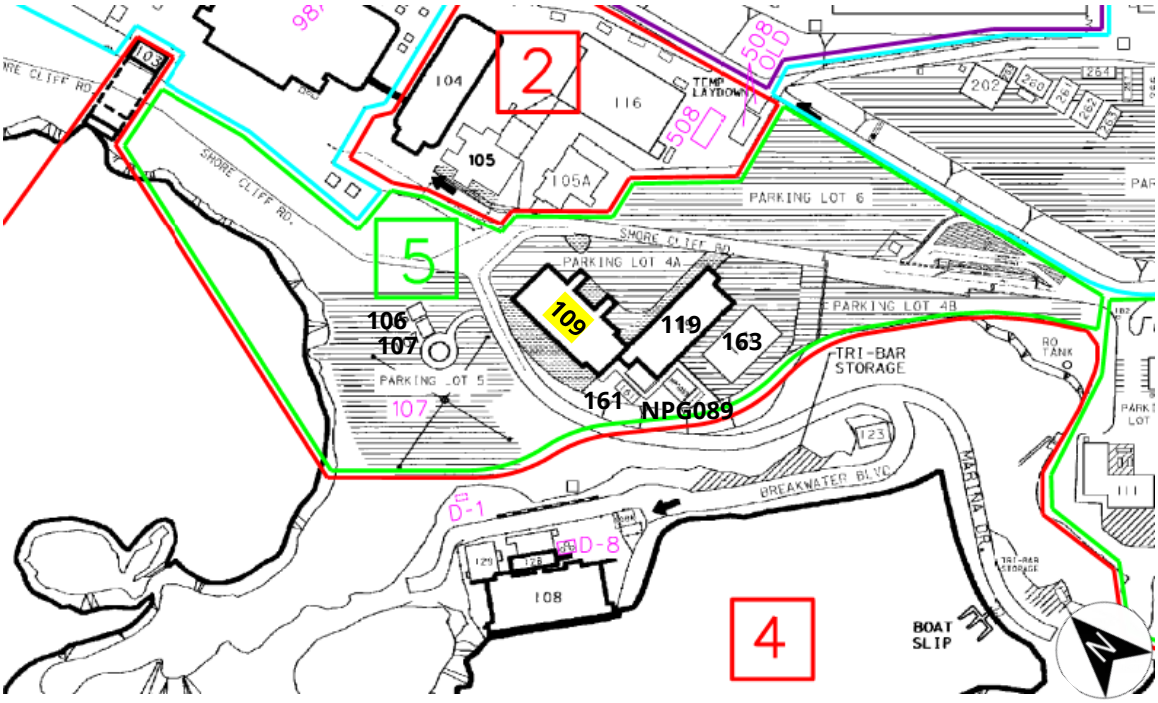
Not to Scale

Zone 4			
Building #	**Building Name**	**Year Built**	**DPR 523A Form**
103	Discharge Structure	1972	Yes
108	Intake Structure	1972	Yes
108A	Intake Access Facility	2012	No
123	TES Shower/Lab Facility	Not dated	No
128	Intake Control Building	1989	No
129	Intake Maintenance Shop	1989 / 1991*	No
BW	East and West Breakwater	1972	Yes
D-1	Underground Sewage Holding Tank/Lift	Not dated	No
D-8	Chemical Storage Tanks and Pad	Not dated	No

* According to PG&E Architect Al Clark's August 27, 2009 list of plant buildings.

ZONE 5

Zone 5 is located between Zones 2, 4, and 6. The zone contains personnel training facilities and several smaller support buildings concentrated on the south side of Shore Cliff Road, which bisects the zone. This cluster of buildings is surrounded by several large, paved parking lots, which previously had building around the plant's original construction that have since been demolished.



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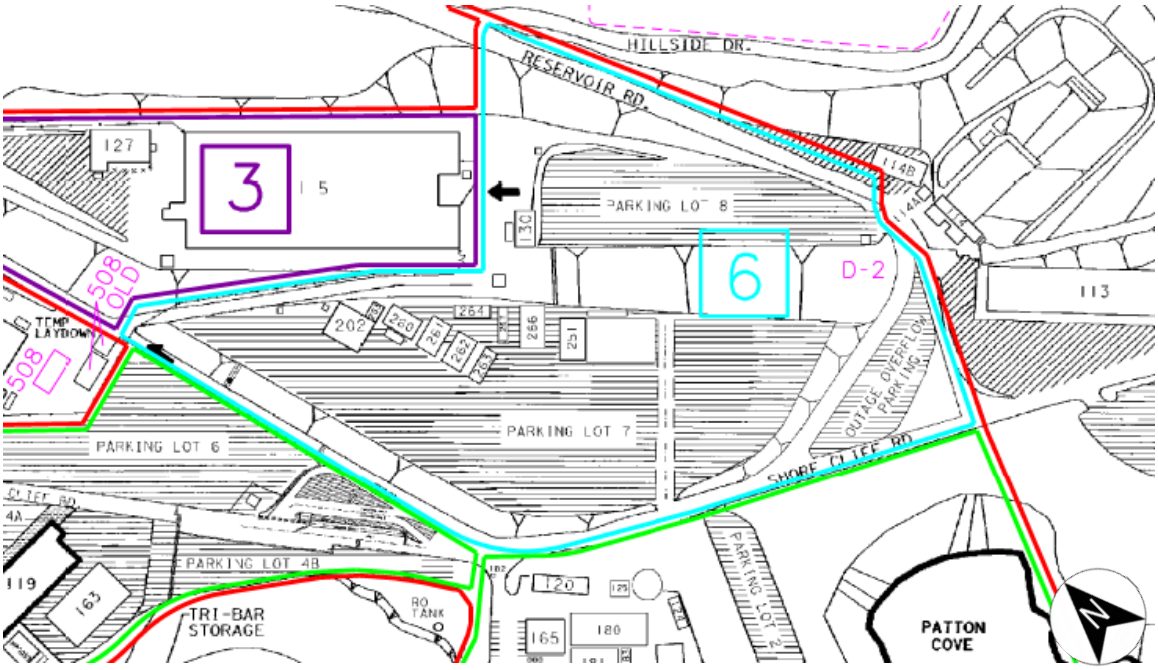
Zone 5			
Building #	**Building Name**	**Year Built**	**DPR 523A Form**
106	Telephone Terminal Building	1984*	No
107	Meteorological Tower No. 1 & Building	1981* / 1995	No
109	Training Building	1984**	Yes
119	Maintenance Shop Building	1986	No
161	Maintenance Shop Annex Building	1989	No
163	FFD/Access Building	2007	No
NPG089	Steam Generator Mock-up	Not dated	No

* According to PG&E Architect Al Clark's August 27, 2009 list of plant buildings.

** PG&E confirmed date through Data Request Set 2.

ZONE 6

Zone 6 is located to the northeast of Zone 5, where Diablo Canyon Road forks into Reservoir Road and Shore Cliff Road. It contains a group of one- and two-story modulars that are used as offices, storage facilities, and restrooms. The buildings are set inside a large, paved parking lot (Parking Lot 7). A second parking lot (Parking Lot 8) is to the south of Reservoir Road.



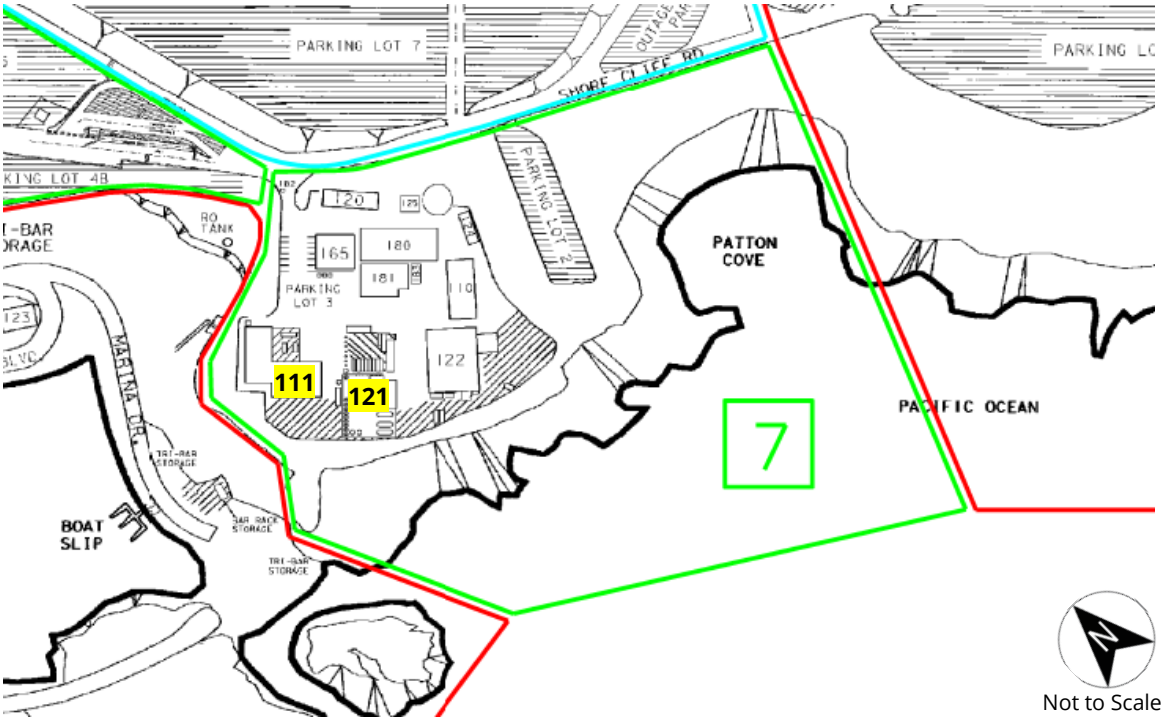
Not to Scale

Zone 6			
Building #	**Building Name**	**Year Built**	**DPR 523A Form**
130	Gas Cylinder Enclosure	1991	No
203	Telecommunications / SGI Vault Building	Not dated	No
251	Industrial Fire Operations Garage	approx. 2000	No
260	Steam Generator Maintenance	1986	No
261	Day-Zimmerman/Construction Field Engineering	1986	No
262	Facility Maintenance/Conference room/In-processing	1986	No
263	Fire Department	1986	No
264	Conference room/TCOM/Storage	1986	No
266	Offices	1986	No
267	Toilets	Not dated	No
D-2	Small Storage Building & Tank	Not dated	No

Note, Building 202 shown in the map had been demolished by the time of the site visit.

ZONE 7

Zone 7 consists of the area to the east of the Intake Cove. It contains various buildings and structures that comprise the plant's water desalination plant (Building 121), other water treatment facilities, and maintenance and support buildings.

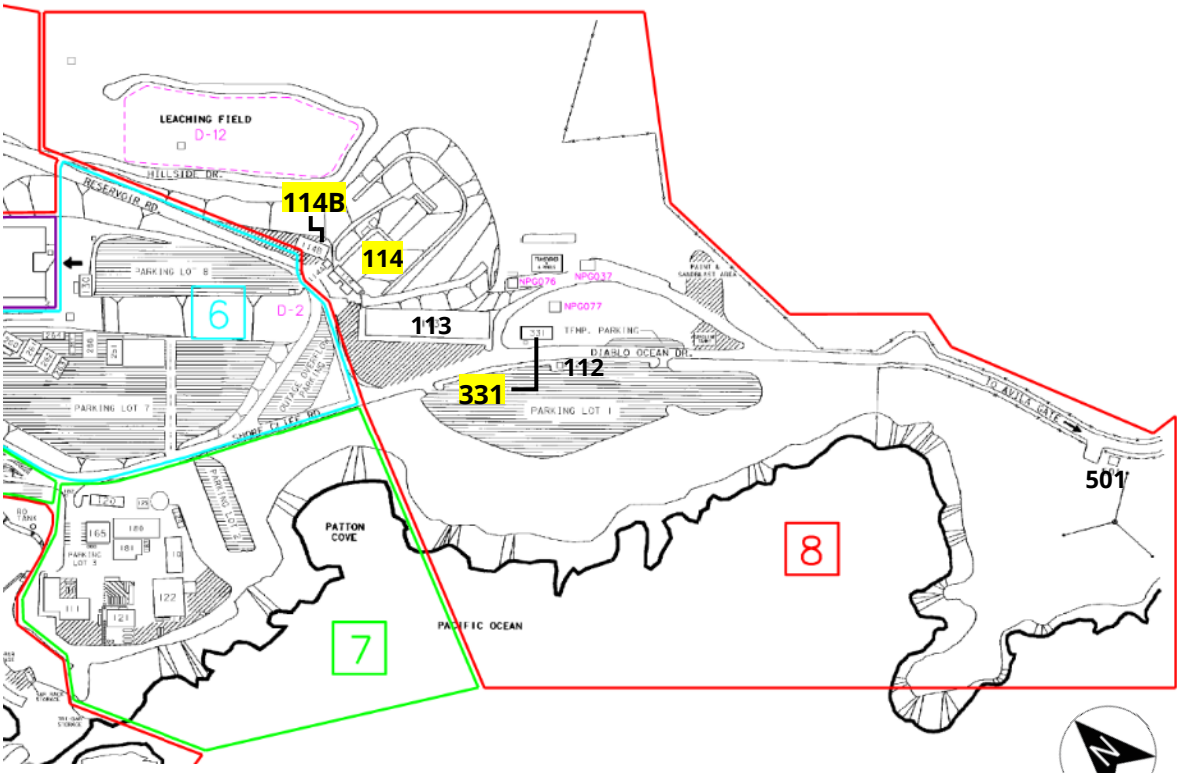


Zone 7			
Building #	**Building Name**	**Year Built**	**DPR 523A Form**
110	Sandblasting and Spray Paint Facility	1989	No
111	Turbine Generator and Rotor Equipment Warehouse	1982	Yes
121	Seawater Reverse Osmosis Facility	1985	Yes
120	Hazardous Waste Facility	1986	No
122	Fabrication Shop	1986	No
124	Sewage Treatment Plant	1987	No
125	Fire Water Tank and Pumphouse	1986	No
180	Modular Building	approx. 2015	No
181	Modular Building	approx. 2015	No
182	TCOM Building	approx. 2015	No
183	Modular Building	approx. 2015	No
165	Used Fuel Storage Project	Not dated	No

ZONE 8

Zone 8 is at the far east end of the Diablo Canyon Power Plant's main site, flanking Diablo Canyon Road where it approaches the main terrace. The zone contains a variety of buildings and structures on the north side of Diablo Canyon Road that serve different purposes. The first set of buildings as one enters the plant on Diablo Canyon Road consists of the remaining buildings and structures of the plant's concrete batch plant, such as the Soils Lab – Concrete Testing Lab (Building 331).

To the west of these buildings is a large former warehouse (Building 113) that now serves as a visitor screening facility, offices, and FLEX program storage. To the northwest of this building are a series of buildings and structures used to train the plant's security staff, including a large outdoor shooting range (Building 114) that is carved into the hillside to the north.



Not to Scale

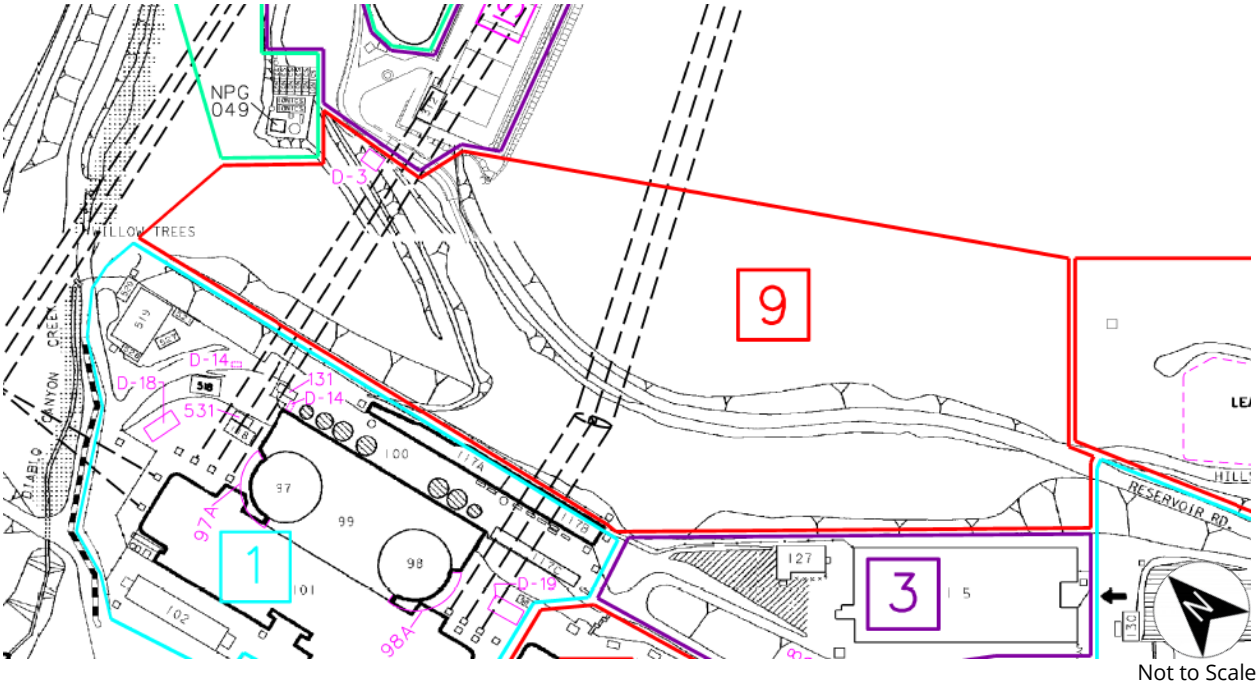
Zone 8			
Building #	**Building Name**	**Year Built**	**DPR 523A Form**
112	Equipment Shelter - Back-up Met Tower	1984*	No
113	Warehouse "B" Fukushima FLEX Equipment Storage	By 1981 / altered 2013**	No
114	Firing Range	1978	Yes
114A	Security Training Tower	2012	No
114B	Security Training Building	2004	No
331	Soils lab - Concrete Testing Lab	1970	Yes
501	Secondary Met Tower and Control Building	Not dated	No
D-12	Leach Field East of Lot 8, abandoned	Not dated	No
NPG037	Office/Paint Storage	Not dated	No
NPG076	Storage - Facilities Maintenance	Not dated	No
NPG077	Storage - Facilities Maintenance	Not dated	No

* According to PG&E Architect Al Clark's August 27, 2009 list of plant buildings.

** Building 113 appears in the 1981 aerial photograph of the plant site, but was significantly altered in 2013.

ZONE 9

Zone 9 is located to the north of the main power block buildings in Zone 1 and consists of a stretch of Reservoir Road as it heads uphill toward the upper terrace. The only buildings or structure inside this zone is an observation station overlooking the power block buildings in Zone 1 below.



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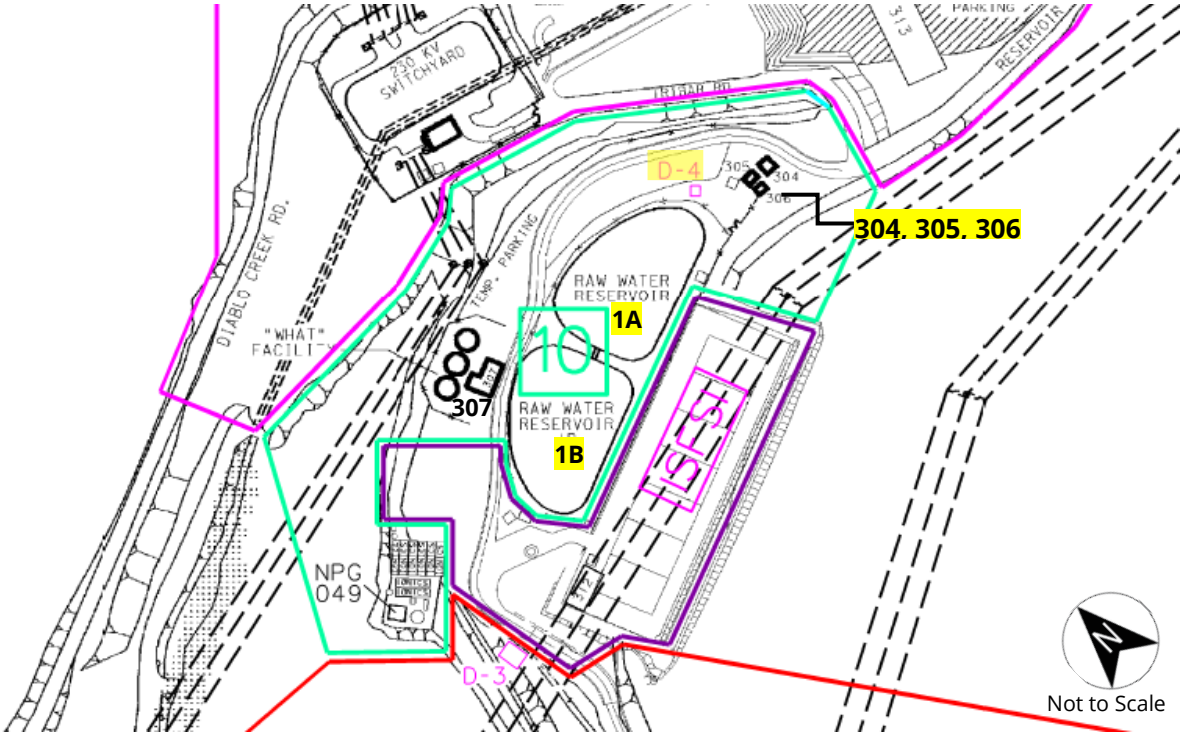
Zone 9			
Building #	**Building Name**	**Year Built**	**DPR 523A Form**
D-3	Site Overlook Facility	1989	No

ZONE 10

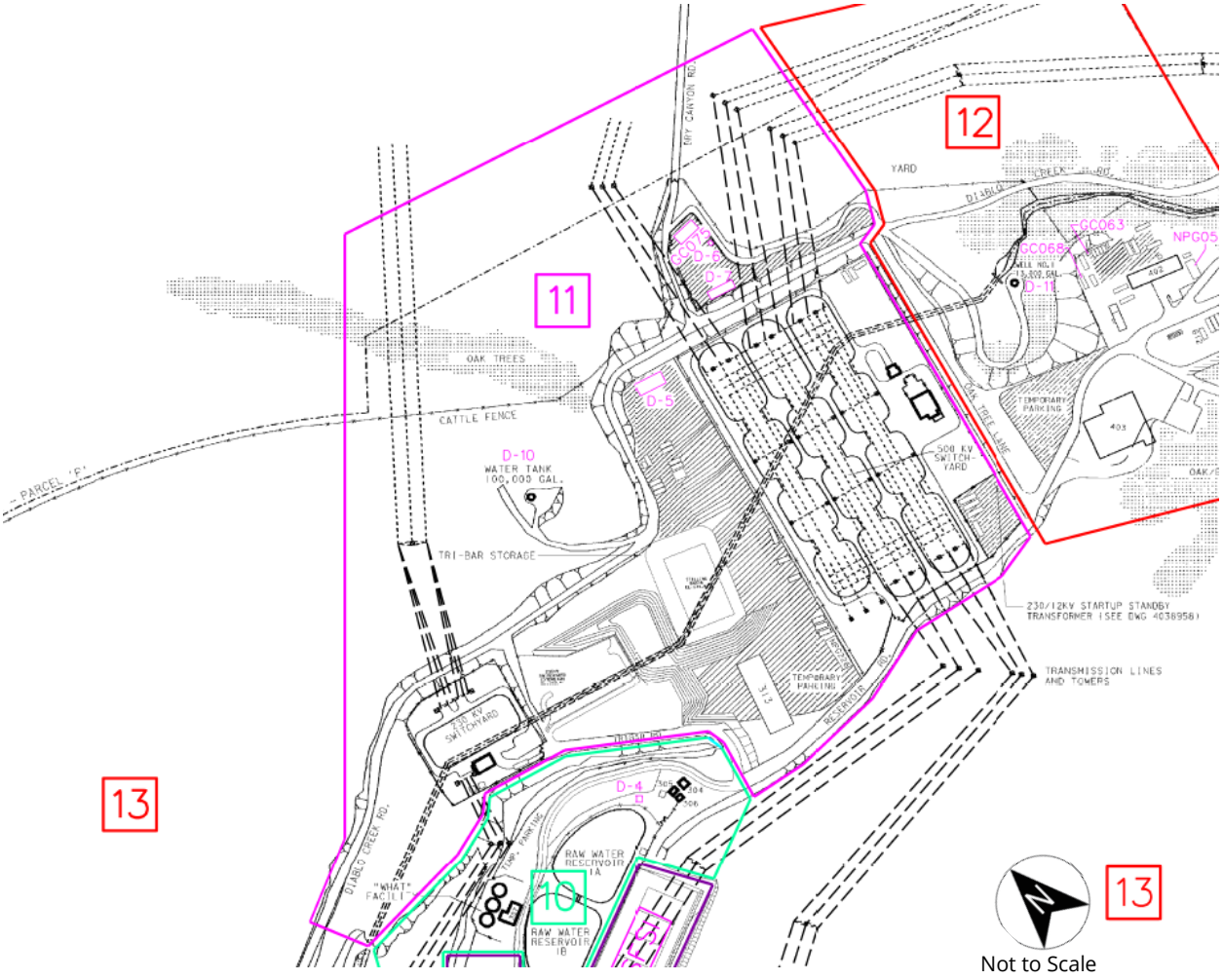
Zone 10 is located along Reservoir Road on the large, elevated terrace overlooking the power block in Zone 1. The zone contains two raw water reservoir ponds and several other water treatment structures and facilities.



Zone 10			
Building #	**Building Name**	**Year Built**	**DPR 523A Form**
1A	Raw Water Reservoir Pond - East	1972	Yes
1B	Raw Water Reservoir Pond - West	1972	Yes
304	Chlorination and Domestic Water	1985	Yes
305	Clarifier & Make-up Pre-Treatment Building	1985	Yes
306	Chemical Storage	1985	Yes
307	Wastewater Holding and Treatment Equipment Enclosure (WHAT)	1986	No
D-4	Long Term Cooling Water Pump Storage	1979	Yes
NPG049	Make-up Water Office	Not dated	No

ZONE 11

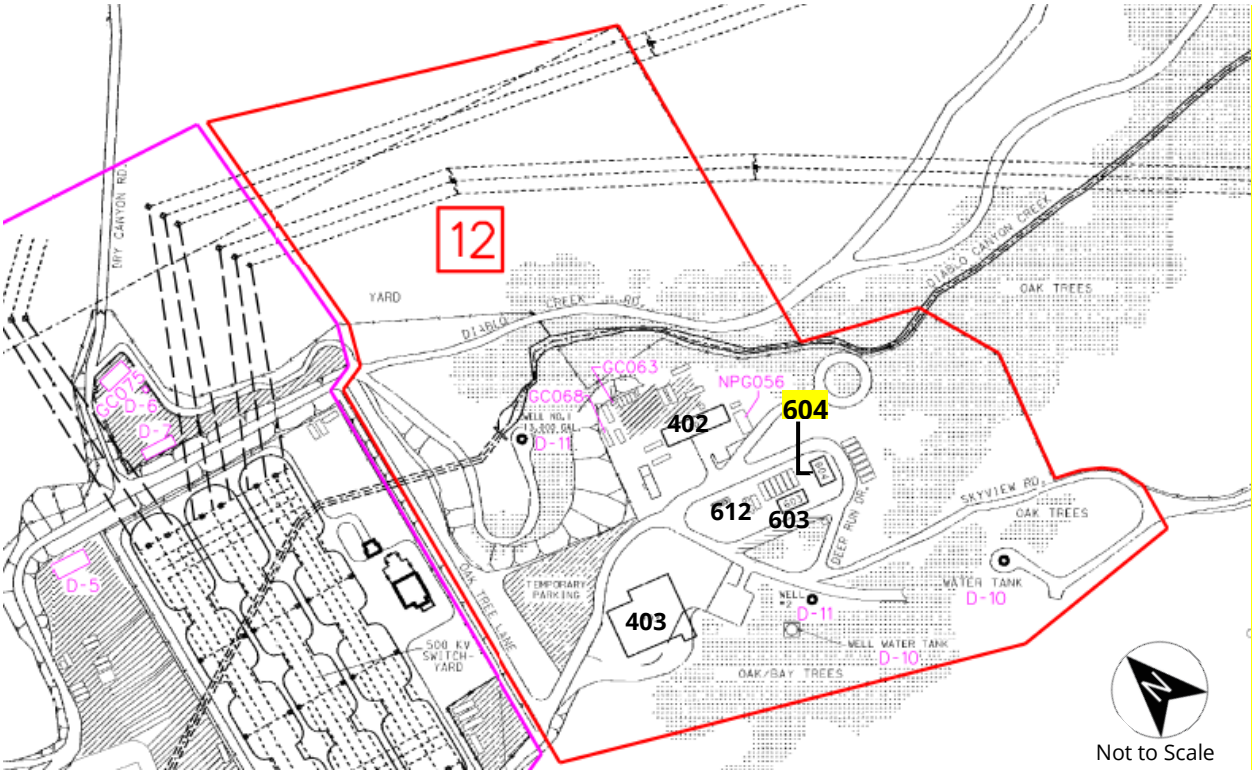
Zone is situated on the northwest side of Reservoir Road at the upper terrace and contains the electrical switchyards that provide power to the plant from the electrical grid and also transmit the power generated by the plant back into the grid.



Zone 11			
Building #	**Building Name**	**Year Built**	**DPR 523A Form**
313	Secondary FLEX Equipment Storage Facility	2015	No
D-5	Scaffold Storage Yard	Not dated	No
D-6	B-Gate Office	Not dated	No
D-7	B-Gate Shade Structure	Not dated	No
GC075	Intake Crew Storage - B-Gate	Not dated	No
NPG226	ISFSI office Trailer	Not dated	No

ZONE 12

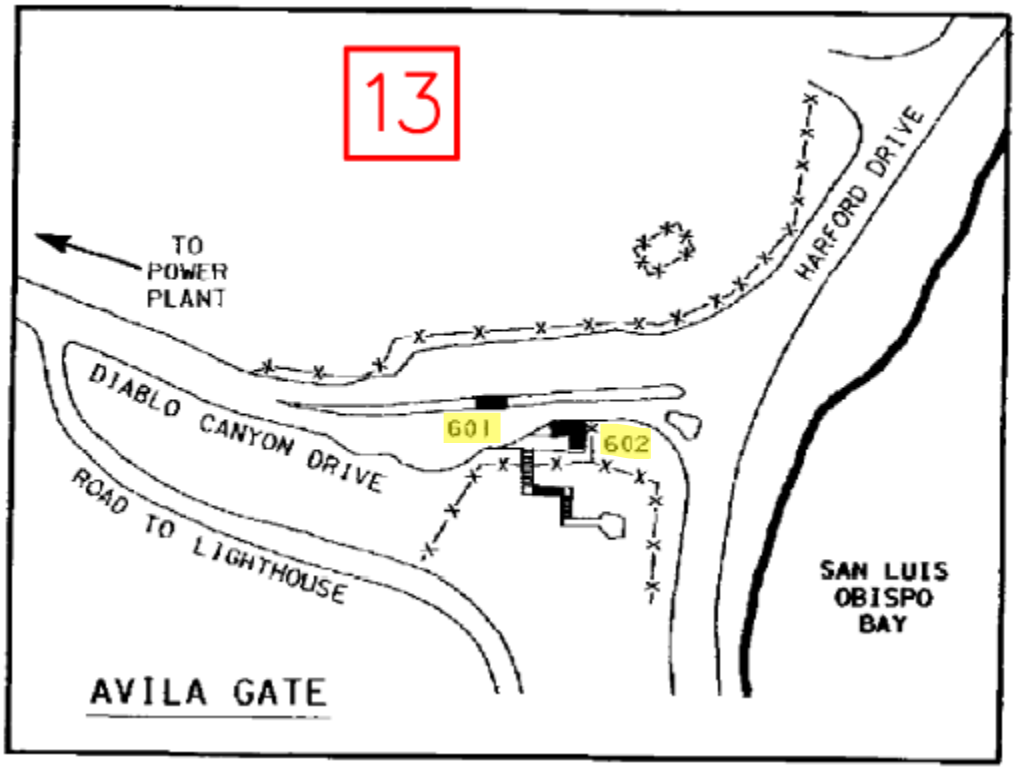
Zone 12 is at the far north end of the main plant site at the termination of Reservoir Road at the upper terrace. It contains several modular buildings and other small buildings and structures that are used for storage and plant maintenance, as well as remnants of the worker camp that was located in the area during the plant's original construction. A large new concrete building used to store the original, radioactive steam generators and reactor equipment from the containment units (since replaced) is located on the south side of Reservoir Road.



Zone 12			
Building #	**Building Name**	**Year Built**	**DPR 523A Form**
402	Vehicle Maintenance Shop	1986	No
403	Old Steam Generator Storage Facility (OSGSF)	2007	No
603	Document Storage Facility	1990	No
604	Warehouse Storage	1985	Yes
612	Toilet Trailer	Not dated	No
GC063	LB Break Room	Not dated	No
GC068	LB Break Room	Not dated	No
NPG056	Vehicle Maintenance Office	Not dated	No
NPG091	Fleet Services Break Trailer	Not dated	No

ZONE 13

Zone 13 comprises all of the areas outside of the plant's core area, including the entry structures at the plant's main entrance (Ávila Gate) and the access road (Diablo Canyon Road) that leads to the power plant site.



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Zone 13			
Building #	**Building Name**	**Year Built**	**DPR 523A Form**
601	Avila Gate Guard House	1970	Yes
602	Avila Gate Storage Building	1970	Yes
D-9	Underground Septic Tanks and Pump Stations	Not dated	No
D-10	Above ground Water Tanks	Not dated	No
D-11	Water Wells	Not dated	No
D-15	Security Structures - BBRE's and Crash Gates, VIS, VBS, etc.	Not dated	No
D-17	Circulating Water Tunnels, Units 1 & 2	Not dated	No

4. HISTORIC CONTEXT

San Luis Obispo County

PRE-CONTACT AND NATIVE PEOPLES

Prior to Father Junipero Serra founding Mission San Luis Obispo in 1772, the San Luis Obispo region was inhabited by the Chumash Indians. Archeological evidence indicates that the Chumash and their ancestors thrived along the California Coast for more than eleven thousand years. Chumash coastal life was highly connected to both marine and terrestrial habitats where the natural diversity and productivity of the land allowed for complex sociopolitical and technological culture. The Chumash suffered unprecedented changes to their lifestyle when Europeans began settling Alta California through the Mission system in 1769.[8] Through disease, depletion of Chumash land caused by Spanish cattle grazing, and colonial degradation, the Chumash people died by the thousands. Survivors often converted to Catholicism and worked at the mission and in the surrounding lands.

SPANISH AND MEXICAN PERIOD

Spanish explorers arrived in Mexico in the sixteenth century. In order to establish control over this new territory, they began using a system of missions and presidios to settle New Spain (present-day Mexico and Baja California). In 1768, King Carlos III decided to expand the mission program into Alta California (present-day California). Father Junipero Serra, a Catholic Priest, was sent to Alta California to build missions between 1769 and 1823. He began building missions in San Diego, working his way up the coast.[9] In 1772, he founded Mission San Luis Obispo de Tolosa in San Luis Obispo. Twenty-one Missions were ultimately established along California's coast.[10]

After Mexico achieved independence from Spain in 1822, Alta California became part of the Mexican Republic. The Mexican government began issuing land grants and created a system of large agricultural estates or ranchos. In 1834, Mexican authorities instated laws asserting governmental authority over mission lands. Through secularization, the Mexican government took land from the missions and began redistributing it through private land grants.[11]

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[8] Deanna Dartt-Newton and Jon M Erlandson, "Little Choice for the Chumash: Colonialism, Cattle, and Coercion in the Mission Period California," *American Indian Quarterly* 30 (2006): 416.
[9] "Spanish Viceroyalty [AD 1542/ 1769-1821]," Digital Commons, California State University Monterey Bay, accessed February 25, 2022, https://digitalcommons.csumb.edu/hornbeck_span/.
[10] "The California Missions Trail," California State Parks, accessed February 25, 2022, https://www.parks.ca.gov/?page_id=22722.
[11] Louise Pubols, *A Companion to Los Angeles*, ed. William Deverell and Greg Hise (Los Angeles: Blackwell Publishing Ltd, 2010), 20.

During the Mexican period, approximately thirty ranchos existed within San Luis Obispo County. Rancho San Miguelito encompassed the present site of the Diablo Canyon Power Plant and was granted to Miguel Ávila in 1842.[12]

GOLD RUSH AND EARLY AMERICAN SETTLEMENT

The discovery of gold in the foothills of the Sierra Nevada in 1848 brought miners and entrepreneurs to California from all over the world. This mass migration created demand for goods and services, especially cattle, thus boosting economic development for California ranchos. In 1848, the United States and Mexico signed the Treaty of Hidalgo, ending the Mexican American War. The treaty transferred Mexican land rights in Texas, California, and New Mexico to the United States. This change in nationality caused property rights problems for Mexican land grant holders in California, as the United States did not necessarily recognize agreements made between rancheros and the Mexican government.[13] In 1850, California became a state, and San Luis Obispo County was created as one of the state's original 27 counties. In 1851, Congress created the U.S. Land Commission to review the land ownership of all the 813 Mexican land grant recipients. As part of this process, much of the lands owned by Mission San Luis Obispo were divided into ranchos and redistributed to private owners. The City of San Luis Obispo, also serving as the county seat, was created from former mission land that was platted out into a town grid in 1874.[14]

The economy of San Luis Obispo County in the late nineteenth century centered around ranching, farming, and vineyards, much of which took place on the ranchos. Wheat and barley were the most important agricultural crops in the region, while wool, flour, and dairy products were also important income producers. From 1862 to 1864, a severe drought struck San Luis Obispo County. As a result, many of the area's cattle ranches were sold, and the local agricultural industry began to shift toward dairy farming.[15]

Until the late nineteenth century, San Luis Obispo County remained relatively isolated due to surrounding mountains that limited transportation to horseback, stagecoach and wagon. Wharves constructed in San Luis Bay at Avila Beach in the 1850s and 1860s enabled goods to be transported via steamship. Further transportation improvements in the late 19th century led to increased development. In 1873, businessman John Harford established the San Luis Obispo Railroad

[12] Historic Resources Group, "City of San Luis Obispo Citywide Historic Context Statement," 2013, 32.
[13] Tensions between the US Government and rancho owners brewed even before 1848. The renowned John C. Fremont clashed with several Arroyo Grande area ranchers during his 1846 march through California. In 1846, Freemont demanded hospitality from John. M Price of Pismo Rancho after surrounding the Price Adobe with his battalion. Fremont also tried to arrest several of the Chumash Indians that worked for Price. Madge Ditmas, *According to Madge* (Arroyo Grande: South County Historical Society, 1983), 67.
[14] Historic Resources Group, "City of San Luis Obispo Citywide Historic Context Statement," 35-36.
[15] Historic Resources Group, "City of San Luis Obispo Citywide Historic Context Statement," 37, 60.

Company and built a new wharf, Point Harford, at Point San Luis that was connected by a horse-drawn, narrow gauge railroad to San Luis Obispo Creek. The railroad allowed the region's farmers to more easily ship their goods from the port.[16] By 1876, passenger and freight service was also offered by the Pacific Coast Steamship Company, which operated at approximately 20 California ports.[17]

The expansion of rail service from northern and southern California through San Luis Obispo County enabled further growth. The Pacific Coast Railway was completed from Los Olivos in Santa Barbara County to San Luis Obispo in 1881. This was followed by the completion of the Southern Pacific Railway between San Francisco and Santa Margarita in San Luis Obispo County, just north of the City of San Luis Obispo, in 1886.[18] The coming of the railroads spurred a period of speculative development in the late 1880s and attracted workers from diverse background – including Japanese, Italian, and Swiss men and women – to the area.[19] With the arrival of the railroads, San Luis Obispo County and its principal towns and villages (San Luis Obispo, San Simeon, Cambria, Cayucos, Morro, Arroyo Grande, Los Berros, and Nipomo) were advertised as the perfect landscape for agriculture, minerals, dairy, climate, and health, attracting more residents to the area.[20]

EARLY 20TH CENTURY DEVELOPMENT AND THE GREAT DEPRESSION

Numerous factors influenced the development of San Luis Obispo County in the first half of the 20th century, including the founding of the California Polytechnic School (now California Polytechnic State University, aka Cal Poly San Luis Obispo), arrival of the automobile, introduction of oil drilling, establishment of military camps, and the Great Depression. The California Polytechnic School opened in 1903 as a school for agricultural and vocational training. Located at the northern outskirts of the City of San Luis Obispo, the school became an important driver in the city's growth as its population swelled with students, particularly following World War I.[21]

The primacy of the railroads began to wane in the early 20th century as the popularity of the automobile increased. In 1915, the Pacific Coast Highway (State Route 1), the first state highway in California, was completed through San Luis Obispo County, bringing automobile tourism to the region. Intended as a convenient stopover between Los Angeles and San Francisco, the first motel in California, the Milestone Mo-tel was completed along the route of the highway at the northern outskirts of San Luis Obispo in 1925.[22]

[16] Historic Resources Group, "City of San Luis Obispo Citywide Historic Context Statement," 63-64
[17] Page & Turnbull, "Historic Context Statement and Survey Report, City of Arroyo Grande, California," 2013, 30.
[18] Historic Resources Group, "City of San Luis Obispo Citywide Historic Context Statement," 64-65.
[19] Historic Resources Group, "City of San Luis Obispo Citywide Historic Context Statement," 63-66.
[20] Page & Turnbull, "Historic Context Statement, City of Arroyo Grande," 30-31
[21] Historic Resources Group, "City of San Luis Obispo Citywide Historic Context Statement," 74-75.
[22] Historic Resources Group, "City of San Luis Obispo Citywide Historic Context Statement," 76-77.

Much of the county's economy continued to revolve around ranching and agriculture. Primary agricultural crops during this period included flower seeds, winter peas, bush beans, pole beans, and celery. Many of these crops were grown by Japanese farmers, who established enclaves throughout the county. In spite of discrimination against them, by the 1930s, Japanese farmers had established themselves as a vital part of the county's agricultural industry.[23]

Oil drilling also became an important part of the economy of San Luis Obispo County during this period. Oil was transported from local oil wells, many of which were located to the south of the City of San Luis Obispo, to Port San Luis in San Luis Bay near Avila Beach. Port San Luis subsequently developed into the largest oil shipping port in the world and employed hundreds of workers from the surrounding area.[24]

The establishment of Camp San Luis Obispo also helped diversity the region's economy. The camp, founded in 1927 on the 2,000-acre Jack Ranch along State Route 1, was the first formal training camp for the California National Guard. The camp was renamed Camp Merriam in 1932. Many of the soldiers who trained at the camp settled in the area after they had completed their military service.

Thanks to its agricultural and economic diversity, San Luis Obispo County was spared from the worst effects of the Great Depression in the 1930s. Nevertheless, residential and commercial development was limited during this period. New Deal programs such as the Public Works Administration and Works Progress Administration funneled money to the construction of a new County courthouse, as well as local flood control and highway improvement projects, including the completion of State Route 1 between Morro Bay and Carmel.[25]

The completion of more reliable highways and roads not only improved transportation for commuters and tourists but also benefited the local agricultural industry. Refrigerated trucks increasingly replaced railcars as the primary means of transporting fresh produce to markets, enhancing the vitality of the local produce industry and contributing to the decline of the railroads. Reflecting the increasing shift toward automobile transportation, the Pacific Coast Railway closed in 1936.[26]

[23] Historic Resources Group, "City of San Luis Obispo Citywide Historic Context Statement," 92, 96; Page & Turnbull, "Historic Context Statement, City of Arroyo Grande," 48.
[24] Historic Resources Group, "City of San Luis Obispo Citywide Historic Context Statement," 92-93.
[25] Historic Resources Group, "City of San Luis Obispo Citywide Historic Context Statement," 98.
[26] Page & Turnbull, "Historic Context Statement, City of Arroyo Grande," 30.

WORLD WAR II AND MID-20TH CENTURY GROWTH

The entry of the United States into World War II brought San Luis Obispo County out of the Great Depression and boosted the region's economy. In the immediate lead up to the war, Camp Merriam was renamed back to Camp San Luis Obispo, and a county regional airport opened in 1939. Both were utilized by the federal government as part of the war effort. Camp San Luis Obispo was rapidly expanded to serve as the training base for multiple combat divisions deployed to Europe and the Pacific regions. At its peak during the war, Camp San Luis Obispo housed approximately 20,000 soldiers. A second base, the Baywood Park Training Camp, was established roughly 13 miles northwest of San Luis Obispo.[27] Additional military facilities developed during the war included a rest camp for ill and wounded soldiers between Grover Beach and Pismo Beach.[28] Employment opportunities at these military facilities attracted many former agricultural workers from the San Joaquin Valley and other farming areas to San Luis Obispo County.[29]

The war, however, had a devastating impact on the county's Japanese American community. With the signing of Executive Order 9066 in 1942, Japanese Americans living across the West Coast, including those living in San Luis Obispo County, were relocated into internment camps. While some Japanese American families and individuals returned to their properties after the war, many did not.[30]

After the war, the population of San Luis Obispo County expanded at a rapid pace, as returning veterans, many of whom had been stationed at one of the county's military bases decided to permanently settle in the area. Educational opportunities at Cal Poly San Luis Obispo also attracted veterans and their families to the area and contributed to the county's growth during the postwar period. As in many cities and counties across California, the postwar population boom resulted in a housing shortage. To meet the demand for new housing, large areas of farmland outside of existing cities and towns were developed into sprawling new subdivisions full of tract housing.[31]

Camp San Luis Obispo was returned to State control after the war in 1946, but was reactivated as a Signal Corps training center during the Korean War in the 1950s. In 1965, the camp was again returned to the California National Guard and subsequently developed into an academic complex for the California Military Academy. A portion of the camp was later deeded to San Luis Obispo County in 1972 as part of President Richard Nixon's "Legacy of Parks" program and developed into El

[27] Historic Resources Group, "City of San Luis Obispo Citywide Historic Context Statement," 100-101.
[28] Page & Turnbull, "Historic Context Statement, City of Arroyo Grande," 57.
[29] Historic Resources Group, "City of San Luis Obispo Citywide Historic Context Statement," 101.
[30] Page & Turnbull, "Historic Context Statement, City of Arroyo Grande," 58.
[31] Page & Turnbull, "Historic Context Statement, City of Arroyo Grande," 66.

Chorro Regional Park.[32] An additional recreation area for the south portion of the county was created in 1968 with the completion of the Lopez Dam and Recreation Project. In order to create a new water reservoir for the residents of the Arroyo Grande Valley, a portion of the Arroyo Grande Creek to the northwest of Arroyo Grande was dammed. The reservoir, known as Lake Lopez, was also developed to include a public outdoor recreation area.[33]

An increasing reliance on the automobile and the completion of major new highways and roadways also impacted the county's development in the mid-20th century. In 1958, U.S. Route 101 was completed along the California coast. The highway became one of the state's main north-south thoroughfares, linking cities and towns down the entire length of the state. The completion of U.S. Route 101 boosted San Luis Obispo County's status as a popular tourist destination, thanks to its convenient location roughly halfway between Los Angeles and San Francisco. Motels and hotels sprang up along the highway in the 1950s and 1960s to cater to motor tourists. The most prominent of these was the Madonna Inn, which was built in 1961, roughly one-half mile outside downtown San Luis Obispo.[34] The construction of new commercial developments followed a similar trend. Across the county, new shopping centers, restaurants, and auto-oriented businesses were completed along the routes of highways and major new thoroughfares constructed in the new subdivisions at the outskirts of traditional urban centers.[35]

[32] Historic Resources Group, "City of San Luis Obispo Citywide Historic Context Statement," 115.
[33] Page & Turnbull, "Historic Context Statement, City of Arroyo Grande," 67.
[34] Historic Resources Group, "City of San Luis Obispo Citywide Historic Context Statement," 125.
[35] Page & Turnbull, "Historic Context Statement, City of Arroyo Grande," 61.

Nuclear Energy and Commercial Nuclear Power in the U.S.

The discovery of radioactive matter by pioneers like Henri Becquerel and Marie Curie in the late 19th century spurred the study of the nucleus of atoms and the start of nuclear science. In 1934, Italian physicist Enrico Fermi observed that firing neutrons at an atom could split it into two smaller, lighter atoms of a different element. German scientists Otto Hahn and Fritz Strassman, in cooperation with Austrian physicist Lise Meitner, confirmed this process, known as nuclear fission, in 1938. Hahn, Strassman, and Meitner discovered that splitting an atom produced large amounts of energy in the form of heat. This discovery led to discussions about the possibility and potential of using nuclear fission to create self-sustaining chain reactions as a perpetual source of energy.[36]

Shortly thereafter, a group of scientists at the University of Chicago, led by Fermi, began developing the world's first nuclear reactor. Known as the Chicago Pile-1 (CP-1), the reactor was constructed on a squash court beneath the university's athletic stadium. It consisted of uranium, an element that fissions easily, placed in a cube-like lattice of graphite and rods of cadmium that could be added or withdrawn from within the reactor to control the speed of the chain reaction. The first successful self-sustaining nuclear reaction took place at Chicago Pile-1 in December 1942, announcing the start of the Atomic Age.[37]

Much of this early nuclear research took place during and in the build up to World War II. As a result, nuclear research projects, such as the Manhattan Project in New Mexico, initially focused on developing weapons of war.[38] The use of atomic bombs on Hiroshima and Nagasaki, Japan at the end of World War II revealed both the catastrophic horrors and tantalizing potential of nuclear energy. Debates about whether nuclear materials should remain in military or civilian hands ensued. Peace initially prevailed and, in 1946, Congress passed the Atomic Energy Act, which formed the United States Atomic Energy Commission (AEC) to facilitate the transition of government research to the public sector and to "control the peacetime development of atomic science and technology."[39]

In the late 1940s and 1950s, the AEC directed part of its efforts to developing nuclear energy to produce electricity for commercial use. The Experimental Breeder Reactor I, developed by the AEC at the National Reactor Testing Station in Idaho, became the first reactor to generate electricity from nuclear energy when it began operation in December 1951. A second early experimental reactor was completed at the Oak Ridge National Laboratory in Tennessee in the early 1950s.

[36] U.S. Department of Energy Office of Nuclear Energy, Science, and Technology, *The History of Nuclear Energy* (Washington, DC: U.S. Department of Energy), ii-5.
[37] U.S. Department of Energy Office of Nuclear Energy, Science, and Technology, *The History of Nuclear Energy*, 7-8.
[38] U.S. Department of Energy Office of Nuclear Energy, Science, and Technology, *The History of Nuclear Energy*, ii-8.
[39] Alice Buck, *The Atomic Energy Commission*, (Washington, DC: U.S. Department of Energy, July 1983) 1.

Until this point, nuclear research and development had been conducted exclusively and under strict secrecy by the U.S. federal government. The shift to private nuclear development began in 1953 with President Dwight D. Eisenhower's "Atoms for Peace" speech, during which he announced his desire that nuclear power should be turned toward the benefit of mankind, rather than toward its destruction. Eisenhower's proposal was formalized with the passage of an updated Atomic Energy Act in 1954. The law allowed for nuclear reactors to be privately owned and operated for the first time. The same year, the AEC announced a Five-Year Plan to test the design of different types of nuclear reactors by producing five experimental reactors within five years. The AEC subsequently began providing nuclear fuel and research to private industries, typically utilities consortiums, to help them develop reactors capable of producing commercial levels of electricity. One of these experimental reactors under the Five-Year Plan, a pressurized water reactor at Shippingport, Pennsylvania, became the first privately owned nuclear reactor to produce electricity for commercial use when it began operation in 1957.

In 1955, the AEC announced the Power Demonstration Reactor Program in order to encourage private companies to develop nuclear power plants, using nuclear fuel leased from the federal government. As a result of the Five-Year Plan and the demonstration program, by the end of 1957, seven experimental reactors were in operation in the United States, with several others under development. These early experimental reactors were spread out across all regions of the United States. Two of these early reactors were located in California at the Santa Susana Sodium Reactor Experiment in Ventura County and Vallecitos Nuclear Power Plant near Pleasanton, California.[40]

In spite of these early advancements, private development of nuclear power plants initially remained limited due to the high start-up cost and unproven nature of early reactors. Those that were commissioned by private companies during the 1950s and early 1960s were completed with the help of lucrative government subsidies and exemptions from antitrust review. By the mid-1960s, however, large private utilities companies with the resources to overcome the initial high capital costs began to see the economic viability of nuclear power plants as a way of scaling up their operations to meet increasing energy demands.[41]

Additional legislation in the mid-1960s cleared the way for the establishment of a fully fledged private nuclear power industry. In 1964, President Lydon B. Johnson signed the Private Ownership of Special Nuclear Materials Act, allowing private companies to own nuclear materials, such as

[40] Buck, *The Atomic Energy Commission*, 6-7.
[41] Thomas Raymond Wellock, *Critical Mass: Opposition to Nuclear Power in California, 1958-1978* (Madison, WI: University of Wisconsin Press, 1998), 29.

enriched uranium fuel, for the first time. The following year, most of the AEC's literature on reactor technology was declassified and made available to the public.[42]

PEAK AND DECLINE OF COMMERCIAL NUCLEAR POWER PLANTS

The construction of privately owned commercial nuclear power plants grew in the 1960s with the first round of orders for commercial nuclear reactors. A second, larger wave followed in the early 1970s.[43] However, the construction of nuclear power plants in the United States began to decline around 1972, and orders for new nuclear plants virtually stopped by 1978. While 231 new nuclear power plants were ordered through 1974, only 15 were ordered the following year, and none were ordered after 1978.[44]

Many different factors led to the decline of the U.S. nuclear power industry. Following the initial period of optimism and excitement surrounding nuclear power in the 1950s and 1960s, public and media scrutiny over the environmental impact and safety of nuclear power plants increased in the 1970s and 1980s. Concerns about radioactive fallout and, particularly in California, the safety of nuclear plants in case of an earthquake, increasingly called into question their construction and helped turn public sentiment against nuclear power. These concerns led to progressively stricter policies aimed at regulating the design, construction, siting, licensing process, and operation of new nuclear power plants.[45] Reflecting the desire for greater regulation, in 1974 President Gerald Ford signed the Energy Reorganization Act, which split the responsibilities of the Atomic Energy Commission into two new agencies: the Energy Research and Development Administration (later the Department of Energy) and the Nuclear Regulatory Commission (NRC).[46] The NRC took over the licensing and regulatory powers of the AEC.

This environment of increased public scrutiny and regulation was accompanied by an energy crisis in the 1970s. In 1973, the Organization of Petroleum Exporting Countries (OPEC) halted the export of crude oil to the United States and its allies in response to the United States giving military support to Israel during the Yom Kippur War. The embargo provoked a worldwide energy crisis and economic recession. In the United States, the price of oil quadrupled and the economy contracted, sending millions of Americans into unemployment. The 1970s recession and energy crisis forced Americans and elected officials to shift their focus toward energy conservation and renewable energy sources,

[42] Buck, *The Atomic Energy Commission*, 11.
[43] Marco Giugni, *Social Protest and Policy Change: Ecology, Antinuclear, and Peace Movements in Comparative Perspective* (Lanham, MD: Rowman & Littlefield Publishers, Inc., 2004), 83.
[44] Giugni, *Social Protest and Policy Change,* 85.
[45] Giugni, *Social Protest and Policy Change,* 86.
[46] Buck, *The Atomic Energy Commission*, 17.

such as wind and solar power.[47] The effects of the economic recession and conservation efforts led to a decline in electricity demands by the 1980s, lessening the need to construct new power plants. In addition, inflation caused by the recession made large-scale construction projects, such as power plants, economically infeasible. Nuclear power plants were hit the hardest of all, as increased regulatory costs and construction delays made them much more expensive to build than any other kind of power plant.[48]

In spite of increasing efforts to increase the safety of nuclear power plants, a series of highly publicized nuclear accidents in the 1970s and 1980s continued to raise public concerns against the use of nuclear power. On March 28, 1979, the nuclear power industry was dealt another blow when a partial meltdown occurred at one of the reactors at the Three Mile Island Nuclear Generating Station in Pennsylvania. The event was considered the worst nuclear accident in the history of the United States and instigated numerous additional policy changes and regulations to prevent a similar accident from occurring again. Investigations into the cause of the incident led to the creation of the Institute of Nuclear Power Operations (INPO), which established standards of performance against which nuclear plants were regularly measured.[49] This was followed by the Chernobyl accident in Ukraine in 1986. The event had a modest impact on public sentiment toward nuclear power in the U.S., compared to Three Mile Island, but nevertheless contributed to a general unease surrounding the use of nuclear power in the 1980s.[50]

The combination of decreased electricity demand, growing public anti-nuclear sentiment, increased reliance on natural gas, and high costs associated with nuclear power plants as a result of increased regulation led to a virtual halt in proposals for new nuclear power plants for a roughly thirty-year period, starting around 1978. Although essentially no new nuclear power plants were constructed between the late 1970s and early 2000s, the country's reliance on nuclear energy increased, as reactors approved before the late 1970s came online over the following decades. In 1980, American nuclear power plants produced approximately 11% of the country's electricity; by 2019, this had increased to nearly 20% of the country's electricity, roughly on par with coal. [51] However, older nuclear power plants were also being decommissioned after the late 1970s, as they were unable to meet increased regulations or their serviceable life came to an end.

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[47] Roger Eardley-Pryor, "Charles H. Warren and California Energy in the 'Era of Limits,'" Oral History Center, University of California Berkeley Library, January 30, 2019; accessed October 13, 2021, https://update.lib.berkeley.edu/2019/01/30/oral-history-center-from-the-archives-charles-h-warren/.
[48] Stephanie Dalquist, "Timeline: A Chronology of Public Opinion on Nuclear Power in the United States and United Kingdom," April 29, 2004, 7-12.
[49] "Nuclear Power in the USA," World Nuclear Association, accessed October 11, 2021, https://www.world-nuclear.org/information-library/country-profiles/countries-t-z/usa-nuclear-power.aspx.
[50] Dalquist, "Timeline," 11-12.
[51] "Nuclear Power in the USA."

In 2005, the Energy Policy Act offered several incentives aimed at stimulating the domestic nuclear power industry. This was followed by the announcement of plans to build new nuclear power plants. In 2013, construction began on Units 3 and 4 at the Vogtle Electrical Generating Plant in Georgia, the first construction of new nuclear power reactors since the 1970s **(Figure 4)**.[52]

Regulations surrounding the nuclear power industry continue to evolve. In March 2011, an accident at Japan's Fukushima nuclear plant showed the need for greater, more rapid outside assistance in case of a nuclear event. In response, the U.S. nuclear industry established the FLEX accident response strategy. The program resulted in the creation of 61 centers across the country with the capacity to respond to nuclear accidents anywhere within the country within 24 hours.[53]

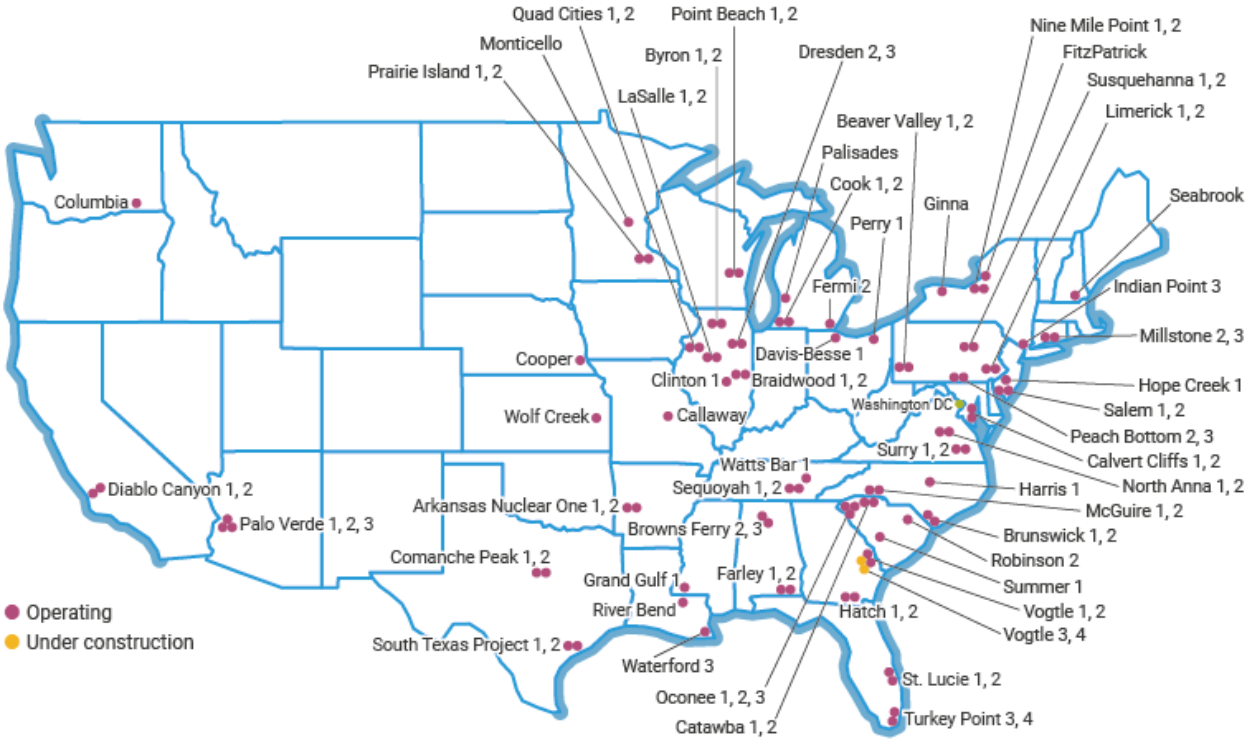

Figure 4. Map showing nuclear reactors in operation and under construction in the United States in 2020. Source: World Nuclear Association.

Nuclear Power in California

While few commercial nuclear power plants were constructed in California, the state has had an outsized role in the development and evolution of nuclear power in the United States. The state's

[52] "Nuclear Power in the USA."
[53] "Nuclear Power in the USA."

first two nuclear power plants went into operation in 1957. The Santa Susana Sodium Reactor Experiment (SRE), in Ventura County in Southern California, was one of the five prototype reactors authorized as part of the Atomic Energy Commission's Five-Year Plan to test the design of different types of nuclear reactors.[54] Built at the Santa Susana Field Laboratory, the experimental reactor used sodium as a coolant. The plant provided power to the City of Moorpark, becoming the first commercial nuclear power plant in the United States to provide electricity to the public. The SRE was closed in 1964, following a partial meltdown of the reactor core. Also in 1957, the Vallecitos Nuclear Power Plant went online to the east of San Francisco near Pleasanton (**Figure 5**). Built jointly by Pacific Gas & Electric (PG&E) and General Electric Company, it was the first privately funded nuclear power plant to supply commercial power at the scale of megawatts to the electrical grid.[55] After completing its planned series of experiments, the plant was shut down in 1967.[56] It remains a nuclear research facility.[57]

Figure 5. The Vallecitos Nuclear Power Plant (undated). Source: Pacific Gas and Electric Company.

Construction began on three additional nuclear power plants in California during the 1960s following this initial experimental phase of research and development, while planning for several

[54] Buck, *The Atomic Energy Commission*, 7,
[55] State of California Energy Commission, "Nuclear Power Reactors in California," March 2020, 7.
[56] John Miller, "Reactor Plant Still Aids Mankind," *Oakland Tribune*, 30 April 1967: 20.
[57] State of California Energy Commission, "Nuclear Power Reactors in California," 7.

others progressed. In 1963, PG&E opened the Humboldt Bay Nuclear Power Plant along the Northern California coast **(Figure 6)**. At the time, it was the seventh licensed nuclear power plant in the United States. One year after Humboldt Bay's reactor went online, construction began on Unit 1 of the San Onofre Nuclear Generating Station (SONGS). Located roughly halfway between Los Angeles and San Diego near San Clemente, SONGS was jointly owned by Southern California Edison, San Diego Gas & Electric, and the City of Riverside Utilities Department. The Unit 1 reactor at SONGS began operation in 1968. This was followed by the start of construction on Units 1 and 2 of PG&E's Diablo Canyon Power Plant near San Luis Obispo in 1969.[58]

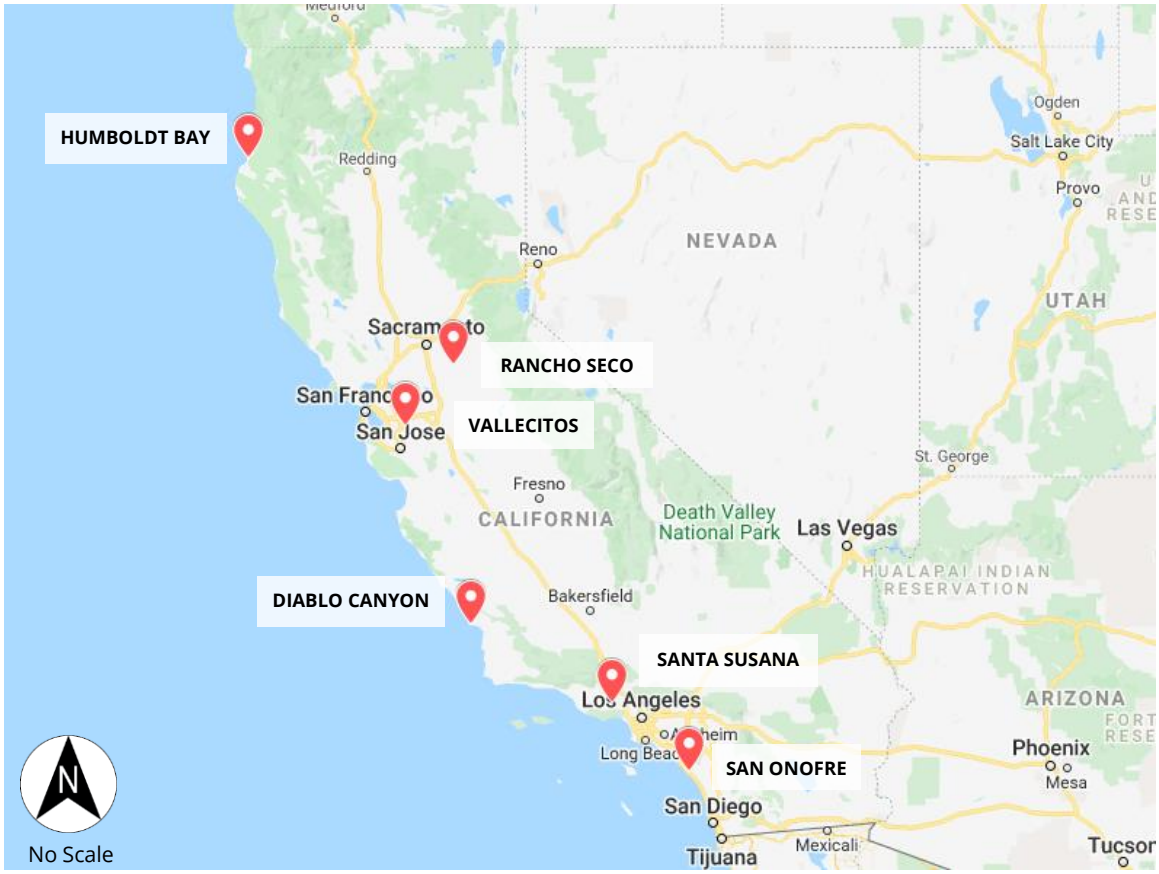

Figure 6. Map of nuclear power plants completed in California. Source: Google Maps, edited by Page & Turnbull.

HALT ON NEW NUCLEAR POWER PLANTS

Orders for commercial nuclear power plants in California peaked in the 1960s. Opposition to nuclear power in California began to grow around this time, largely because of concerns that were relatively unique to the state. The frequency of earthquakes in California called into question the siting and

[58] State of California Energy Commission, "Nuclear Power Reactors in California," 6.

seismic safety of nuclear power plants throughout the state. In 1961, PG&E announced plans to construct a nuclear power plant at Bodega Head near the scenic fishing village of Bodega Bay north of San Francisco. Foreshadowing the later role of the environmental movement in the demise of nuclear power in California, local residents and environmental groups opposed the plant, fearing it would destroy the area's natural beauty. To argue their case, however, opponents successfully used evidence of a seismic fault line running beneath the proposed site of the nuclear power plant to convince the AEC to deny a license for the plant.

As the 1960s came to a close, concerns about seismic safety led to the cancellation of plans to build three other nuclear power plants in California at Corral Canyon near Malibu, Point Arena on the Mendocino coast, and Tulare in San Joaquin Valley. Commercial operation of PG&E's nuclear power plant at Diablo Canyon, which had been substantially completed by the early 1970s, was delayed when a previously unknown fault was discovered near the plant in 1976, forcing PG&E to complete a costly seismic retrofit of the plant.[59] The discovery of active faults near other operating nuclear power plants also led to the permanent shut-down of nuclear reactors at Humboldt Bay in 1976 and Vallecitos in 1977.[60]

These growing safety and environmental concerns were soon accompanied by a national and state-wide energy crisis. In the early 1970s, several reports on California's energy consumption and future energy needs prompted the state legislature to begin reshaping its approach to energy development. In 1971, the state's major electric utilities companies issued a report, stating that California's energy demands due to population growth were increasing so rapidly that brownouts and blackouts of an indefinite duration would soon become inevitable unless immediate action was taken. To meet the demand, the utility companies planned to construct scores of new nuclear power plants across the state. A newly created legislative subcommittee – chaired by the leading Democrat in the State Assembly, Charles H. Warren – was formed to investigate the utility companies' forecast. In 1972, the subcommittee received a report from the Rand Corporation that confirmed the utility companies' warnings. The report indicated that California's electrical production would need to double every 10 years in order to avoid the anticipated blackouts.

Following a series of hearings on the findings of the Rand report in spring 1973, Warren realized that the utility companies' plan to endlessly construct more power plants, powered by dirty or increasingly expensive fuel sources, would be unsustainable and was devoted more toward maximizing profits than toward the best solution for their customers. In response, Warren began

[59] James C. Williams, *Energy and the Making of Modern California* (Akron, Ohio: The University of Akron Press: 1997), 305-307.
[60] State of California Energy Commission, "Nuclear Power Reactors in California," 2-8; Wallace Turner, "California Nuclear Reactor Closed," *New York Times*, 28 October 1977.

working to shift the state's energy policies toward conservation and the pursuit of alternative, clean energy sources. Warren and his pro-nuclear colleague in the State Senate, Alfred E. Alquist, began to draft legislation, hoping to resolve the conflict between energy production and environmental protection. The resulting Warren-Alquist Act was sent to Governor Ronald Reagan to sign in the fall of 1973. Although the governor vetoed this first iteration of the act, a second iteration, the Warren-Alquist State Energy Resources Conservation and Development Act, passed in 1974, after the 1973 OPEC oil embargo and resulting national energy crisis, laid bare the need to develop new, independent energy sources.[61]

The Warren-Alquist Act of 1974 was the first law to challenge the practices of the state's utility monopolies. The law laid out a new approach in California to energy and the environment, one that was characterized by a focus on energy conservation and diversified energy production that set a precedent for similar laws in other states. To meet these goals, the law established the California Energy Commission (CEC) as the state's primary energy policy and planning agency. [62] The agency was charged with assessing the environmental impact of electrical consumption and proposals, reviewing utility company energy forecasts and plans, approving the siting and certification of new power plants, and conducting research and development into alternative energy sources.[63]

Nuclear power sat at the nexus of the debate surrounding the environment and energy production, as the state government attempted to balance the two competing interests. It was in front of this backdrop of increasing regulation, what Governor Jerry Brown later called the "era of limits," that California's last nuclear power plants were completed.[64] Construction on Units 2 and 3 of the San Onofre Nuclear Generating Station began in 1974. The Rancho Seco Nuclear Plant, owned by the Sacramento Municipal Utilities District (SMUD), began operation in 1975. Unlike most of the other nuclear power plants in California, which had been strategically located with access to the cooling waters of the Pacific Ocean, Rancho Seco was located inland, roughly 25 miles southeast of the city of Sacramento, and featured two massive cooling towers to cool the reactors.[65]

Additional laws passed in 1976 spelled the end of the nuclear power expansion in California. That year, environmentalists placed Proposition 15, known as the Nuclear Power Plants Initiative, on the state ballot. The initiative proposed placing stringent regulations on nuclear power plants to prevent nuclear accidents and require for the safe disposal of radioactive waste. Fearing that the measure would halt all nuclear power development in California, state legislators passed three less draconian

[61] Eardley-Pryor, "Charles H. Warren and California Energy;" Williams, *Energy and the Making of Modern California,* 309-311.
[62] Eardley-Pryor, "Charles H. Warren and California Energy."
[63] Williams, *Energy and the Making of Modern California,* 311.
[64] Eardley-Pryor, "Charles H. Warren and California Energy."
[65] State of California Energy Commission, "Nuclear Power Reactors in California," 6.

amendments to the Warren-Alquist Act just before the election in June 1976. Although Proposition 15 did not pass, the amendments to the Warren-Alquist Act placed a moratorium on the construction and licensing of new nuclear plants in California until the federal government implemented a solution for the disposal of radioactive waste. As a solution has yet to be found, the amendments effectively ended the construction of new nuclear plants in California, as pro-nuclear legislators had feared.[66] Due to the substantial work and funding that had already gone into completing the new reactors at San Onofre and Diablo Canyon, however, these plants were specifically exempted from the moratorium and were allowed to continue construction. They both went into full commercial operation in the early to mid-1980s. [67] Plans for a two-unit Sundesert plant in Riverside County were denied by the CEC in 1978, making San Onofre Units 2 and 3 and the two units at the Diablo Canyon Power Plant the last nuclear reactors to go online in California.[68]

DECOMMISSIONING

Since the moratorium, California's remaining nuclear power plants have been gradually shut down and decommissioned. The plant at Humboldt Bay was shut down in 1976 and placed into inactive safe storage (SAFTOR) status in 1988. Rancho Seco was closed by public referendum in 1989. San Onofre Unit 1 ceased operation in 1992, due to the high costs necessary to seismically retrofit the reactor. San Onofre Units 2 and 3 were closed in 2013 after it was discovered that steam generators that had been replaced a few years prior were showing premature signs of wear. Diablo Canyon Units 1 and 2, the last nuclear reactors in operation in California, are set to be shut down in 2024 and 2025, respectively, as part of a proposal by PG&E to phase out nuclear energy and focus on energy efficiency, renewable energy sources, and energy storage.[69]

[66] Williams, *Energy and the Making of Modern California,* 303-307.
[67] *Statutes of California, 1975-76 Regular Session*, Chapters 194-196, 374-380.
[68] Williams, *Energy and the Making of Modern California,* 312-314.
[69] State of California Energy Commission, "Nuclear Power Reactors in California," 2-6; PG&E, "Diablo Canyon Power Plant, Bridging to California's Energy Future," accessed October 13, 2021, https://www.pge.com/en_US/safety/how-the-system-works/diablo-canyon-power-plant/energy-bridge/energy-bridge.page.

California Environmentalism Movement

THE CONSERVATION MOVEMENT AND THE SIERRA CLUB

The roots of the environmental movement in California go back to the nineteenth century, with the founding of wilderness conservation organizations and hiking groups, such as the Sierra Club, that were dedicated to preserving and providing public access to areas of pristine natural beauty. Founded in 1892 by Scottish American naturalist John Muir, the Sierra Club's early accomplishments included defeating a proposal to reduce the size of Yosemite National Park and supporting the creation of several additional national parks. In the first decades of the 20th century, the club campaigned against damming the Hetch Hetchy Valley in Yosemite to provide drinking water for the city of San Francisco **(Figure 7)**. Although the campaign was ultimately unsuccessful, it increased the Sierra Club's political clout and brought further public attention to the conservationist cause.[70]

Figure 7. John Muir and a Sierra Club group on a trail to Hetch Hetchy, ca. 1909.
Source: Holt-Atherton Special Collections, University of the Pacific Library.

[70] "Hetch Hetchy." Sierra Club accessed October 25, 2021, https://vault.sierraclub.org/ca/hetchhetchy/history.asp.

Conservation was a mainly patrician endeavor through the mid-twentieth century, led by well-educated, affluent white individuals, usually men, with time and money to devote to recreational activities, such as hiking and conservation campaigns.[71] Conservation supporters typically campaigned for their causes by lobbying or negotiating compromises with local elected officials and business leaders.[72]

In the 1950s, the Sierra Club, which had developed into the largest and most influential conservation organization in the country, began to expand its scope of activities beyond aesthetic preservation. During the period, the club mounted successful campaigns against proposals to dam portions of the Colorado River that flowed through the Grand Canyon and Dinosaur National Monument in Utah.[73] Toward the end of the decade and into the 1960s, the club joined grassroots opposition against PG&E's plans to build a nuclear power plant at Bodega Head near the scenic fishing village of Bodega Bay a few miles north of San Francisco. The Sierra Club's efforts revealed an emerging philosophical rift between old-line members, who preferred the club's traditional strategy of negotiating with corporations and elected officials, and newer, more progressive members who preferred aggressive and direct forms of action, such as protest and civil disobedience, that did not require compromising with their opponent.[74]

These philosophical differences came to a head in the Sierra Club's response to PG&E's plans to build a new nuclear power plant at Diablo Canyon near San Luis Obispo. The organization's response split the organization apart and reflected a general shift away from conservation, as it had been practiced since the nineteenth century, toward what is termed environmentalism. In the aftermath, the Sierra Club fundamentally altered its philosophy from strict wilderness preservation to a broader environmental and anti-nuclear viewpoint that included issues of environmental safety and industrial impacts. Due to the Sierra Club's large membership and reputation as the country's most powerful conservation group, its conversion helped nationalize the ideas of the environmental and anti-nuclear movements while also influencing California energy policy.[75]

[71] Berkeley Art Center Association, *The Whole World's Watching: Peace and Social Justice Movements of the 1960s & 1970s* (Berkeley: Berkeley Art Center Association, 2001), 127.
[72] Susan R. Schrepfer, "Diablo Canyon and the Transformation of the Sierra Club, 1965-1985, *California History* LXXI, No. 2 (Summer 1992), 222.
[73] Wellock, *Critical Mass,* 25, 41, 70.
[74] Wellock, *Critical Mass,* 31-33.
[75] Wellock, *Critical Mass,* 69-71.

THE TRANSITION FROM CONSERVATION TO ENVIRONMENTALISM

The Sierra Club's conversion also reflected the forces that led to the broad evolution of the conservation movement into the environmental movement that occurred across the country in the 1960s and 1970s, influenced by the growing sense of distrust toward the federal government, large corporate establishments, and the unbridled use of modern technologies in the aftermath of the civil rights movement, Vietnam War and anti-war movement, and the Watergate scandal.[76] Major cultural events, such as the publishing of Rachel Carson's bestselling book, *Silent Spring*, in 1962, which exposed the adverse effects of pesticides, sparked concerns about new issues related to the environment and human health. These movements and events expanded the traditional conservation cause beyond wilderness preservation to embrace a broader and more diverse range of concerns for the natural environment, including the impacts of air and water pollution, pesticides, and nuclear radiation **(Figure 8)**.[77]

Figure 8. A demonstrator at a pollution protest at San Jose State College, 1967.
Source: San Jose State College Library.

[76] John Wills, *Conservation Fallout: Nuclear Protest at Diablo Canyon* (Reno, NV: University of Nevada Press, 2006), 76-77.
[77] Wills, *Conservation Fallout,* 185-186.

This new broad-based form of environmentalism incorporated many of the tactics and approaches of the civil rights and anti-war movements. Both movements introduced a generation of Americans to the power of opposition through direct actions, such as sit-ins and peaceful protests. The tactics of civil disobedience and democratic operation by consensus became key components of the modern environmentalism movement in the 1960s and 1970s. The civil rights and anti-war movements also set a precedent for offering positions of leadership to women, people of color, and non-elites that helped the environmental movement become more diverse and inclusive than its conservationist predecessors.[78] The expansion of issues included under the environmentalism umbrella, populist approach to leadership, and new-found inclusiveness resulted in a decentralized movement comprised of numerous smaller single-issue environmental groups.[79]

The Anti-Nuclear Movement

The anti-nuclear movement was an outgrowth of the broad-based environmental movement that also emerged in the 1960s and 1970s. Opposition to the use of nuclear power had roots in the anti-war movement spurred by the United States' involvement in the Vietnam War. Anti-nuclear activists feared that nuclear power plants could be used to build nuclear weapons for future wars.[80]

This general opposition to war and the proliferation of weapons naturally expanded to include concerns about nuclear safety and the effects of radiation on human health and the natural environment. Unlike the conservationists of the nineteenth and early twentieth centuries, those in the anti-nuclear movement were primarily concerned with the preservation of human life, rather than the preservation of pristine landscapes.[81]

MAJOR ENVIRONMENTAL EVENTS AND POLICIES

The first major catalyst that led to the creation of the modern environmental movement occurred in January 1969 when a blow-out at one of Union Oil's wells off the coast of Santa Barbara released roughly three million gallons of petroleum across the California coastline from Santa Barbara to San Diego. It was the largest oil spill in the nation's history up to that time.[82] The event awakened many Americans to the dangers of unchecked industrial development to the environment and sparked nationwide grassroots and governmental efforts to improve environmental protections. Motivated by the Santa Barbara oil spill, the first Earth Day was held on April 22, 1970. The event attracted more than 20 million people across the country. The Santa Barbara oil spill and nationwide public

[78] Wills, *Conservation Fallout,* 185-186.
[79] Wellock, *Critical Mass,* 31, 38, 61.
[80] Wills, *Conservation Fallout,* 76-77.
[81] Wills, *Conservation Fallout,* 72, 83.
[82] Williams, *Energy and the Making of Modern California,* 300.

display of support for the environmental cause stimulated passage of the National Environmental Protections Act (NEPA) in 1969. California followed quickly behind, passing its own state-level version of NEPA, the California Environmental Quality Act (CEQA), in 1970. The laws required that the environmental impacts of major construction projects be analyzed prior to approval.[83]

The Santa Barbara oil spill, along with intensifying private development of wealthy enclaves such as Sea Ranch in Northern California and Malibu in Southern California that cut off public access to large portions of the coastline, motivated the creation of legislation specifically designed to protect the California coast from development. In 1972, California voters approved Proposition 20. The initiative created the California Coastal Zone Conservation Commission, the predecessor of the California Coastal Commission, which was charged with regulating development along the California coast. The initiative also paved the way for passage of the 1976 California Coastal Act, which prioritized the preservation of public access to the coast and the conservation of natural resources. The act established the requirement for a permit for coastal development, with approval by the California Coastal Commission, that continues to regulate and development along the California's coast.[84]

DIABLO CANYON AND THE ENVIRONMENTAL MOVEMENT

Under construction from the late 1960s to the mid-1980s at a secluded location on the California coast, PG&E's nuclear power plant at Diablo Canyon became a rallying point for the various branches of the modern environmentalism movement that emerged in California. The first wave of opposition to the plant came from traditional conservationists, including prominent members of the Sierra Club, who hoped to protect the undisturbed stretch of the California coast from development. When PG&E first proposed in 1963 to build a new plant at the ecologically unique site of Nipomo Dunes, in the southern part of San Luis Obispo County, opposition from the Sierra Club persuaded the utility company to explore alternative sites or risk another debacle like they had experienced at Bodega Bay a few years earlier. PG&E instead proposed an undeveloped and relatively unknown coastal site in the middle of the county, west of the City of San Luis Obispo, known as Diablo Canyon.

Viewing this as a suitable compromise to save Nipomo Dunes, the board of the Sierra Club, representing a traditional conservation viewpoint, initially approved PG&E's plan in 1966. However, the club's membership was internally deeply divided over the decision.[85] Executive director and prominent environmentalist David Brower and his supporters resigned in opposition and formed

[83] Williams, *Energy and the Making of Modern California,* 300.
[84] Jordan Diamond et al., "The Past, Present, and Future of California's Coastal Act: Overcoming Division to Comprehensively Manage the Coast" (August 2017), 5.
[85] Wills, *Conservation Fallout,* 39-43

their own organization, the Friends of the Earth, a more progressive group based on moral environmentalism. The resulting schism pushed the Sierra Club away from traditional conciliatory conservation toward the modern environmental movement. As questions about the safety of nuclear power plants to the environment and human health increased in the 1970s, the Sierra Club began to campaign against nuclear power development. Shortly after the Three-Mile Island incident in 1979, the club voted to oppose licensing the Diablo Canyon Power Plant, formally revoking its initial support for the project.

The second wave of opposition to the Diablo Canyon nuclear power plant came from anti-nuclear groups. The most prominent of these groups was the Mothers for Peace. Originally founded as a local anti-war group, the Mothers for Peace opposed the nuclear plant at Diablo Canyon out of a concern for the effects of nuclear radiation on the surrounding community. The Mothers for Peace became the primary opposition group to the plant in 1973, following the discovery of the Hosgri earthquake fault.[86] The group used concerns about the seismic safety of the plant as its main weapon against PG&E in AEC hearings. Their efforts brought renewed attention to the Diablo Canyon project and led many members of the local community to question nuclear safety for the first time.[87]

The third wave of opposition was comprised of environmental protest groups that were a direct reflection of the modern environmental movement. The most notable of these groups in the fight against Diablo Canyon was the Abalone Alliance. The group was inspired by the Clamshell Alliance, a collection of citizen and environmental groups formed in 1976 to oppose a planned nuclear plant in Seabrook, New Hampshire. The Abalone Alliance was founded in San Luis Obispo in 1977, after initial testing of the cooling system at the Diablo Canyon plant killed large numbers of abalone in Diablo Cove. The alliance consisted of a network of anti-nuclear groups across California and had offices in San Luis Obispo and San Francisco, where nuclear opposition was strongest. Similar to the Clamshell Alliance, the Abalone Alliance's primary actions against the nuclear power plant at Diablo Canyon consisted of a series of planned nonviolent protests.

As completion of the plant marched forward, the alliance's membership grew from seven member groups in 1977, to 24 by 1979, to more than 60 at its peak in 1981. Reflecting the decentralized character of the modern environmental movement, these member groups managed their own individual anti-nuclear campaigns but periodically united in the San Luis Obispo area for protest actions.[88] Unlike opposition from the Sierra Club and Mothers for Peace, the Abalone Alliance's

[86] Wills, *Conservation Fallout,* 70-72.
[87] Wills, *Conservation Fallout,* 75
[88] Wills, *Conservation Fallout,* 87-89.

position was not limited to concerns about the environment or nuclear radiation but also included layers of social criticism, such as antiauthoritarianism, anti-militarism, and a general distrust of the government and corporations.[89]

The Abalone Alliance planned a series of public rallies and protests at the Diablo Canyon plant throughout the late 1970s, as the power-producing facilities were substantially completed but the nuclear reactors had not yet been activated, pending retrofits and upgrades to address the Hosgri fault, the cooling system's effect on the abalone, and other issues. The organization's first blockade took place in August 1977. Forty-seven people were arrested at the time. One year later, the organization conducted a second blockade that led to 487 arrests.[90]

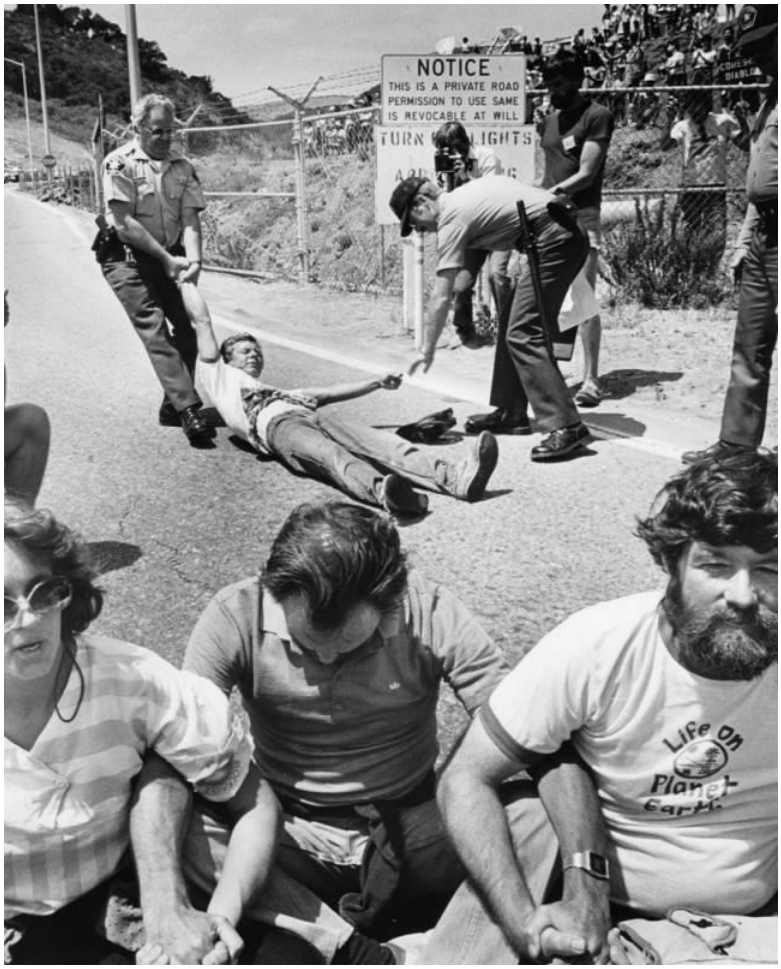

Figure 9. Demonstrators protesting the Diablo Canyon power plant, 1981. Source: Los Angeles Public Library.

[89] Wills, *Conservation Fallout,* 97-98.
[90] Giugni, *Social Protest and Policy Change,*44; Wills, *Conservation Fallout,* 89.

In 1979, the blockbuster anti-nuclear film*, The China Syndrome*, and the nuclear accident at Three-Mile Island brought increased public scrutiny to nuclear power plants across the country and helped to provoke two large protest events against Diablo Canyon.[91] Spurred by these events, 25,000 people attended a "Stop Diablo Canyon" protest outside the San Francisco's city hall that year.[92] In June 1979, between 35,000 and 40,000 demonstrators descended upon Avila Beach, just outside the gates to the Diablo Canyon site.[93] The largest protest events in Diablo Canyon's history took place in 1981, after a low-level operating permit was granted to the plant **(Figure 9)**. The two-week event attracted Governor Jerry Brown, musicians Jackson Brown, Graham Nash, and Bonnie Raitt, and resulted in over 1,000 arrests. Local newspapers described it as the largest anti-nuclear civil disobedience campaign in the nation's history.[94]

In spite of the scale of environmental opposition to the Diablo Canyon plant, protests delayed but did not stop the plant from going into full operation. After 1981, protests decreased in scale, reflecting a general decline in anti-nuclear sentiment across California by the mid-1980s.[95] After the first nuclear reactor at the plant went into operation in 1984, many of the groups that had formed in opposition to it, including the Abalone Alliance, disbanded.[96] Participants, however, used the organizing techniques they had used at Diablo Canyon for protests against nuclear weapons development in the early 1980s.[97]

[91] Wills, *Conservation Fallout,* 91.
[92] Wills, *Conservation Fallout,* 91.
[93] Wills, *Conservation Fallout,* 103.
[94] Giugni, *Social Protest and Policy Change,* 45; Richard F. Harris, "Diablo Canyon's 'green light' means more protests to come," *San Francisco Examiner*, 14 September 1983.
[95] Schrepfer, "Diablo Canyon and the Transformation of the Sierra Club;" Wills, *Conservation Fallout,* 115.
[96] Wills, *Conservation Fallout,* 120.
[97] Berkeley Art Center Association, *The Whole World's Watching,* 128.

Property Type: Nuclear Power Plants

Nuclear power plants, also known as nuclear generating stations, are a type of industrial facility used to generate electric power. Like coal, oil, natural gas, and other thermal power stations, nuclear power plants generate electricity through the production of high amounts of heat. This heat, or thermal energy, is most commonly used to convert water into steam, which turns a turbine and generator to produce electricity. Nuclear power plants differ from other types of thermal power plants in that their heat source comes from continuous, controlled nuclear fission reactions.[98] These nuclear fission reactions occur inside a nuclear reactor. The reactor is the heart of a nuclear power plant, around which all other features are designed and operated. Each individual reactor is connected to its own assigned turbine and generator, which together form a single "unit." Nuclear power plants may contain more than one reactor, and therefore, may be composed of more than one "unit."[99]

Although several different kinds of reactors are used in nuclear power plants around the world, all nuclear reactors share certain essential components: a fuel source, moderator, coolant, control rods, pressure vessel or tubes, and a containment structure. The most common type of fuel consists of rods of uranium that are bundled together. During a fission reaction, neutrons fired at the uranium fuel rods cause the uranium atoms to split into new atoms, producing more neutrons that create a continuous chain reaction. The process of splitting atoms releases energy in the form of heat, which is ultimately used to generate electricity via the turbine-generator. In order to slow the neutrons in the reactor down so that they are more likely to collide with the uranium fuel, the fuel rods are submerged in a moderator, usually consisting of water.[100]

The reactor vessel is housed inside a large, typically domed and cylindrical structure with reinforced concrete walls and an inner steel lining, known as a containment building. The containment building's primary function is to protect the nuclear reactor and prevent the release of nuclear radiation in the event of an accident.

The turbines, generators, condensers, pumps, and other parts of the water and electrical generating systems are located in separate buildings immediately adjacent to the containment building.[101] The

[98] "How Nuclear Power Works," Howstuffworks, accessed October 26, 2021, https://science.howstuffworks.com/nuclear-power3.htm.
[99] American Nuclear Society, "'Building Nuclear,' – A Guide for Writers," Nuclear Newswire, February 1, 2017, accessed October 27, 2021, https://www.ans.org/news/article-1918/building-nuclear-a-guide-for-writers/.
[100] World Nuclear Association, "Nuclear Power Reactors," July 2021, accessed October 26, 2021, https://world-nuclear.org/information-library/nuclear-fuel-cycle/nuclear-power-reactors/nuclear-power-reactors.aspx; U.S. Department of Energy, Office of Nuclear Energy, "Nuclear 101: How Does a Nuclear Reactor Work?," March 29, 2021, accessed October 26, 2021, https://www.energy.gov/ne/articles/nuclear-101-how-does-nuclear-reactor-work.
[101] World Nuclear Association, "Nuclear Power Reactors."

building that contains the turbines and generators usually has a long and narrow form and an open interior plan to accommodate the massive industrial machinery housed inside. Additional equipment and control rooms used to monitor and control the reactor are contained in an auxiliary building. Together, the containment, turbine-generator, and auxiliary buildings comprise the "power block" of a nuclear power plant.[102]

PRESSURIZER WATER REACTORS

The primary difference between the various kinds of nuclear reactors are the type of fuel, moderator, and coolant that are used to power and control the fission reactions. Most reactors in use around the world are light water reactors, such as boiling water reactors (BWRs) and pressurized water reactors (PWRs), that use ordinary water as both the moderator and coolant. PWRs are the most common type of reactor, making up roughly 70 percent of all of the nuclear reactors in the world.[103] BWRs produce steam directly by boiling coolant water in the reactor core, which is sent directly to the turbines. While the simplest type of reactor, this open system is less efficient than other designs and results in radioactive steam being used to turn the turbine.

In contrast, PWRs produce steam indirectly using two or more separate closed water circuits and steam generators **(Figure 10)**. The primary circuit contains coolant water that is circulated through the reactor. As water in this primary, closed-loop circuit is heated, high pressure prevents it from boiling. This heated pressurized water is carried to steam generators within the containment building, where the heat from the primary (radioactive) circuit is used to convert water in a secondary (non-radioactive) water circuit into steam. The steam in the secondary water circuit is used to turn the turbine in the turbine building to generate electricity. After the steam has been used to turn the turbine, condensers convert it back into liquid water, so that it can be recirculated through the secondary water circuit to repeat the process.[104]

The condensers are supplied by a third circuit of cold water, which is typically pulled from a large nearby body of water, such as an ocean, river, lake, or manmade reservoir. For this reason, PWRs are often located on the coast or near large natural sources of water, with intake and discharge structures, drawing water in from the water source and then returning back, as part of the tertiary water circuit. Some pressurized water reactors, particularly those that are inland with smaller

[102] American Nuclear Society, "'Building Nuclear,' – A Guide for Writers."
[103] World Nuclear Association, "Are there different types of nuclear reactors?" accessed September 8, 2021, https://world-nuclear.org/nuclear-essentials/are-there-different-types-of-reactors.aspx.
[104] World Nuclear Association, "Are there different types of nuclear reactors?"

sources of nearby water, feature large concrete cooling towers to help cool water in this third circuit.[105]

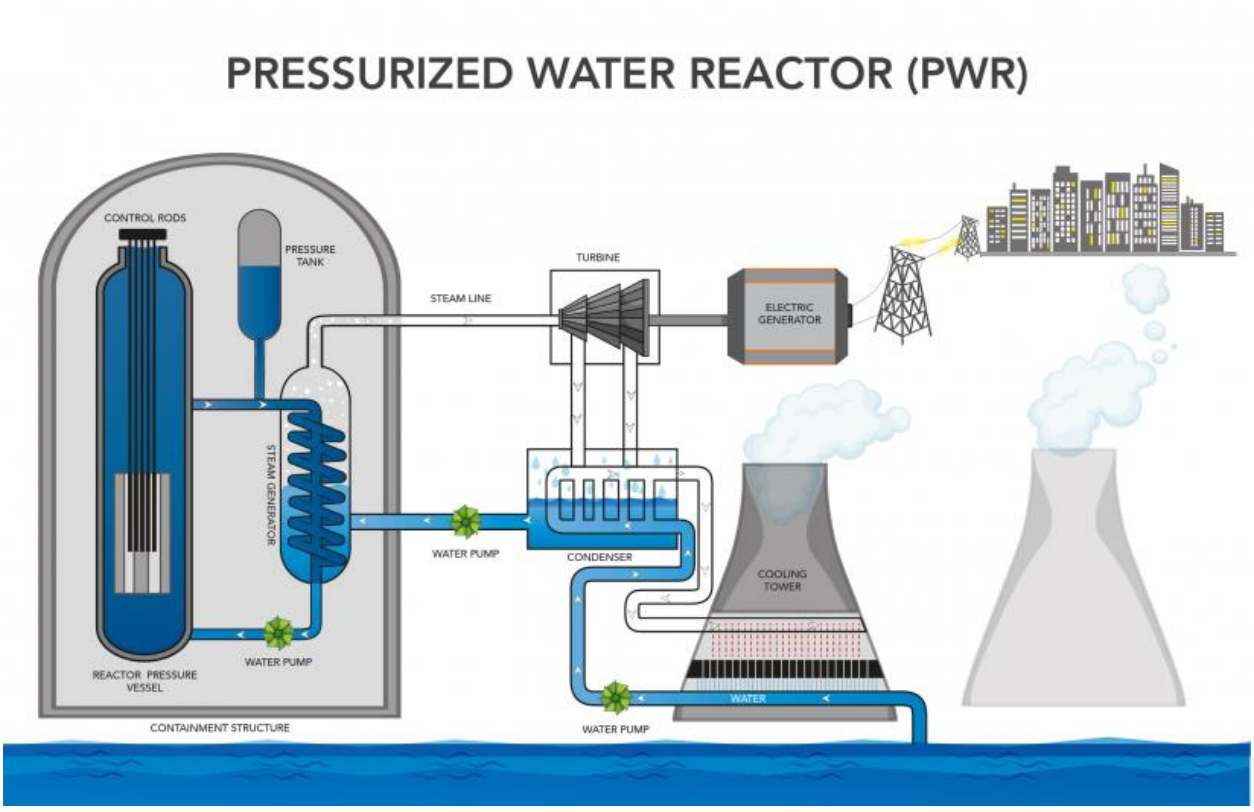

Figure 10. Diagram of how energy is generated with pressurized water reactors. Source: Graphic by Sarah Harman, U.S. Department of Energy, Nuclear 101, https://www.energy.gov/ne/articles/nuclear-101-how-does-nuclear-reactor-work.

SUPPORT FACILITIES

Outside of the power block, nuclear power plants include many additional ancillary buildings that support the overall function and operation of the plant. Electricity generated in the power block is transmitted over transmission lines that connect the turbine-generator building to electrical switchyards, then to the utility company's power grid. The transmission lines and switchyards connected to the main power grid also serve as the primary source of electricity that powers the

[105] Duke Energy, "Why don't all nuclear plants have cooling towers?" Duke Energy Nuclear Information Center, November 13, 2013, accessed October 26, 2021, https://nuclear.duke-energy.com/2013/11/13/why-don-t-all-nuclear-plants-have-cooling-towers.

nuclear power plant during normal operation.[106] Separate diesel generators stored on site are used as backup power sources in case of an accident.[107]

Due to the essential role water plays in the operation of many nuclear power plants, most plants feature several facilities, infrastructural elements, and other features that contribute to the plant's water systems. These often include intake and discharge structures and tunnels that transport water from a nearby water source to the power block for use in the condensers as part of the electricity generation process, water desalination and treatment facilities to purify water for use in the plant and drinking water, as well as tanks and reservoirs to store treated water.[108]

Buildings used to oversee the plant's overall operation and provide for the needs of workers generally include a main administrative building, medical facilities, and various smaller office buildings. The sensitive nature of nuclear power plants also requires stringent safety and security systems that are supported by buildings used to screen workers and visitors prior to entering the plant; training facilities for plant operators, maintenance staff, and security guards; as well as guard towers, fences, and barricades to monitor and control access to various areas of the plant.[109]

The presence of hazardous radioactive nuclear materials necessitates separate, specially designed facilities for the treatment, disposal, and storage of radioactive waste. These may include pools to cool and temporarily store spent nuclear fuel, dry casks for long-term, on-site storage of spent nuclear fuel, and separate buildings to store decommissioned radioactive equipment from the reactor.[110] Additional buildings and structures on site support the ongoing maintenance of the plant. These include warehouses, fabrication shops, and equipment storage facilities.

NUCLEAR POWER PLANTS IN CALIFORNIA

California has had a total of six nuclear power plants throughout its history. The first plant in operation in the state, the Santa Susana Sodium Reactor Experiment, was an experimental 6.5-megawatt sodium-cooled reactor that used sodium, rather than water as the coolant. All of the other nuclear plants that have existed in the state have been either boiling water reactors (BWR) or

[106] International Atomic Energy Agency, "IAEA Nuclear Energy Series No. NG-T-3.8, Electric Grid Reliability and Interface with Nuclear Power Plants," 2012, 1-4.
[107] International Atomic Energy Agency, "IAEA Nuclear Energy Series No. NG-T-3.8," 8.
[108] Duke Energy, "The Mysterious 'Hot Hole,'" Duke Energy Nuclear Information Center, May 21, 2015, accessed October 28, 2021, https://nuclear.duke-energy.com/2015/05/21/the-mysterious-hot-hole.
[109] Joseph Gonyeau, "Key Areas and Buildings at the Nuclear Power Plant Site," Nuclear Tourist, December 8, 2005, accessed October 27, 2021, http://www.nucleartourist.com/areas/areas.htm.
[110] World Nuclear Association, "Storage and Disposal of Radioactive Waste," May 2021, accessed October 27, 2021, https://world-nuclear.org/information-library/nuclear-fuel-cycle/nuclear-waste/storage-and-disposal-of-radioactive-waste.aspx.

pressurized water reactors (PWR). The Vallecitos Nuclear Power Plant, which began operation in 1957 around the same time as Santa Susana, was a 30-megawatt BWR.[111] The Humboldt Bay Nuclear Power Plant, which began operation in the 1960s, had a unique design. The 63-megawatt BWR featured the world's first pressure suppression system, which became the model for future BWR plants in the United States. Unlike most nuclear power plants, both the reactor and suppression system at Humboldt Bay were located in an underground concrete and steel chamber. The design required less concrete, had fewer seams, provided better radiation shielding, and was less visible than other designs.[112]

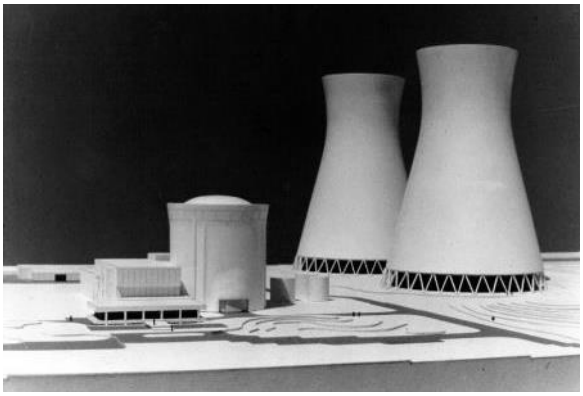

Figure 11. Model of the Rancho Seco nuclear power plant in Sacramento County, 1969 with cooling towers. Source: Los Angeles Public Library.'

Figure 12. San Onofre Nuclear Generating Station Units 2 and 3 Containment Buildings, 1985. Source: Huntington Digital Library.

After the late 1960s, all of the plants that went online in California were PWRs with larger generating capacities. The Rancho Seco Nuclear Power Plant, a 913-megawatt PWR, featured a design similar to that of the Three-Mile Island nuclear plant and was the only nuclear power plant in California that featured cooling towers due to its inland location far from a major body of water **(Figure 11)**. Unit 1 of the San Onofre Nuclear Generating Station was a 450-megawatt PWR, while Units 2 and 3 were larger approximately 1,000 megawatt PWRs **(Figure 12)**. Diablo Canyon Units 1 and 2 are both 1,100-megawatt PWRs.[113]

[111] State of California Energy Commission, "Nuclear Power Reactors in California," 7.
[112] Rand Herbert, "Humboldt Bay Power Plant, Photographs Written Historical and Descriptive Data Field Records," Historic American Engineering Record, 2012, 16.
[113] State of California Energy Commission, "Nuclear Power Reactors in California," 2-6.

5. MODERN SITE HISTORY – BUILT ENVIRONMENT

Rancho San Miguelito, 1842-1882

During the Mexican and Spanish periods, the site of the Diablo Canyon Power Plant was part of Rancho San Miguelito, a 22,000-acre Mexican land grant comprised of former Mission San Luis Obispo lands. In 1842, the Mexican government granted Rancho San Miguelito to Miguel Ávila. Ávila was awarded an additional league of land in 1846 on the condition that a portion of his land along the coast remain open to the public in order to preserve access to San Luis Bay, which contained the area's only seaport. Ávila raised cattle on the land and made a living from the sale of cattle hides and tallow. He built two houses on the rancho, one on the hill above San Luis Bay and a second near the shore. After the Mexican-American War, Ávila was elected alcalde (mayor) of San Luis Obispo; however, he resigned after only a year of service, due to the difficulty of traveling to town from his rancho. After the deaths of Ávila and his wife, the Rancho San Miguelito was divided between the couple's surviving children. Their son, Juan Vidal Ávila, inherited the largest portion of the former rancho. In 1867, Juan Ávila participated in the subdivision and sale of lots in the town of Avila Beach, named after his father. After some initial successes, Ávila's fortunes began to decline, forcing him to mortgage and gradually sell off the land he had inherited from his parents piece by piece. He sold off the last of his land holdings by the 1920s and died in 1930.[114]

Marre Ranch, 1882-1969

In 1882, Juan Ávila sold 6,000 acres of the former Rancho San Miguelito to Italian immigrant, rancher, and entrepreneur Luigi Marre. Marre used the lands to raise cattle for beef. In addition to the ranchland acquired from Juan Ávila, Marre also purchased the Ocean Hotel and waterfront property in Avila Beach from John Harford and turned it into the successful Hotel Marre. After Marre's death in 1903, his property passed to his sons, Louie and Gaspar. Like their father, they continued to raise beef cattle on the ranch lands near Avila Beach. Around 1930, the brothers constructed a Spanish Colonial Revival duplex, designed by regional architect Louis Noire Crawford, on the hill overlooking San Luis Bay. During World War II, the Marre Ranch was used by the United States Armed Forces, including the Coast Guard and Army, who were stationed at Camp San Luis Obispo nearby.

The Marre family continued to use the land for cattle ranching after the war until the mid-1960s, when they began to look to diversify their activities. The family demolished the remaining ranch buildings on the north side of San Luis Creek below the Marre house and built the Avila Beach Golf

[114] Post/Hazeltine Associates, "Historic Resources Report for APN 076-176-009 San Luis Obispo County, California," 2017, 8-10.

Course and San Luis Inn in their place. In order to raise money for the project, the Marre family began leasing off portions of its ranch lands.[115]

PG&E and Selection of the Diablo Canyon Power Plant Site

Meanwhile, Pacific Gas & Electric Company (PG&E) was in search of a site for a new nuclear power plant in the San Luis Obispo area. Having received opposition from the Sierra Club and other local conservationists to their first planned site at Nipomo Dunes, PG&E proposed a coastal site at Diablo Canyon as an alternative. In spite of substantial opposition from the Sierra Club's membership, including executive director David Brower, the club's board of directors voted to endorse PG&E's plan to site its nuclear plant at Diablo Canyon in June 1966.[116] Plans to build the plant progressed rapidly following the Sierra Club's vote.

In September 1966, PG&E agreed to lease more than 1,000 acres of the Marre Ranch from the Marre Land and Cattle Company for its new nuclear power plant. The lease included 585 acres for the plant site, 420 acres for transmission lines, and an additional 50 acres for a road to the plant. In return, PG&E agreed to underwrite a $6.4 million loan to aid the Marre family's development plans. The lease agreement was backed by a lien on an additional 1,300 acres of the Marre family's lands, which PG&E would acquire if the Marre Land and Cattle Company defaulted on its payments.[117]

In November 1966, PG&E announced that the contract to provide the nuclear reactors, turbine-generator, nuclear fuel, and other plant components for its new $150-million plant had been awarded to Westinghouse Electric Corporation.[118] Shortly afterward, PG&E submitted an application to the California Public Utilities Commission (CPUC) for permission to construct a 1,060,000-kilowatt (1,060 megawatts) nuclear reactor at Diablo Canyon; a formal application for a permit to build the single reactor and plant was submitted to the federal Atomic Energy Commission (AEC) nearly one month later in January 1967.[119]

The applications to the CPUC and AEC launched 20 days of public hearings with the CPUC in the spring of 1967. At hearings in both San Luis Obispo County and San Francisco, members of the public, including Sierra Club member and leader of the Scenic Shoreline Preservation Conference Fred Eissler, expressed concerns about the preservation of California's coastal lands and the

[115] Post/Hazeltine, "Historic Resources Report for APN 076-176-009," 14-18.
[116] "Sierra Club Endorses PG&E Site," *San Francisco Chronicle*, 28 June 1966, 1.
[117] "A-Plant And PG&E Power Rates," *San Francisco Chronicle*, 13 May 1967: 34.
[118] "PG&E A-Power Contract," *San Francisco Chronicle*, 18 November 1966: 63.
[119] "PG&E Proposes Nuclear Plant Near San Luis," *San Francisco Chronicle*, 24 December 1966: 5; "PG&E's Formal Application for A-Plant Permit," *San Francisco Chronicle*, 19 January 1967: 5.

environmental impacts of the nuclear plant.[120] Despite this opposition, the CPUC unanimously approved plans for the Diablo Canyon plant in November 1967, citing public need and testimony that the proposed plant posed no threat to animal or human life. At the time, PG&E anticipated that the plant would be operational and supplying power to Kern, Santa Barbara, San Luis Obispo, Kings, and Tulare counties by the spring of 1972.[121]

Construction of the Diablo Canyon Power Plant Begins

On April 23, 1968, the AEC's Atomic Safety and Licensing Board authorized PG&E's plans for the Diablo Canyon plant and granted a construction permit for the project.[122] Some preparation had already begun in anticipation of the AEC's approval. By February 1968, a new bridge that was strong enough to carry the heavy industrial equipment for the plant had already been completed between Avila Beach and Port San Luis.[123] In June, construction started on a new access road from Avila Beach along the coast to the plant site.[124] Now known as Diablo Canyon Road, the road was designed to be wide and flat, with gentle turns and grades to safely transport the plant equipment and fuel to the construction site.[125] Excavation work at the plant site began in August 1968 and continued into 1969 (**Figure 13**). This included regrading and trenching the area selected for the power block buildings (the Containment Buildings, Turbine Building, and Auxiliary Building in Zone 1), a large parking lot (roughly Zone 6), as well as leveling an area of the hillside to the northeast of the power block, for a pair of switchyards, worker camp, and raw water reservoir ponds (Zones 10, 11, and 12).[126]

[120] "PUC Hears Opposition to Nuclear Plant," *San Francisco Chronicle*, 12 May 1967: 38.
[121] "PG&E A-Plant Wins State OK," *San Francisco Chronicle*, 8 November 1967: 10.
[122] "Coast Atom Plant Wins Approval," *San Francisco Chronicle*, 24 April 1968: 11.
[123] "This is the Year PG&E Plans to Start Building Atom-Plant at Diablo Canyon," *The Arroyo Grande Valley Herald Recorder*, 29 February 1968: 88.
[124] Walt Reil, "Pacific Gas & Electric Company, Diablo Canyon Power Plant Construction Timeline through Commercial Operation," 2000, 1.
[125] Conversations with Scott Maze and Al Clark during September 23-24, 2021 site visit.
[126] Historic photographs from PG&E; Reil, "Diablo Canyon Power Plant Construction Timeline."

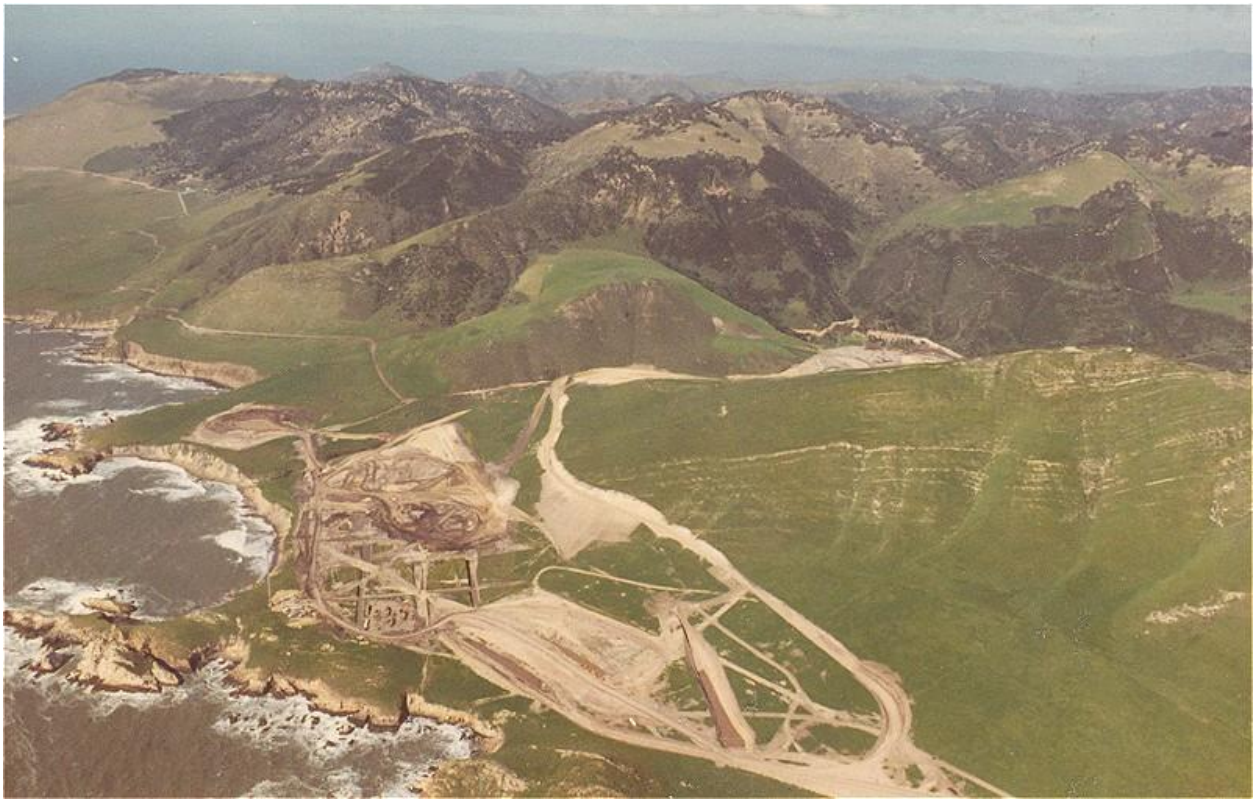

Figure 13. Aerial photograph showing site excavation work to create the flat terrace just above sea level and the leveled plateau (upper terrace) in the hillside above to construct the Diablo Canyon Power Plant in March 1969. Source: Pacific Gas and Electric Company.

The Diablo Canyon Power Plant was originally planned to have six reactors. In March 1969, the CPUC authorized an application from PG&E to construct a second rector unit at the Diablo Canyon plant.[127] Unit 1 was expected to be in operation in early 1973, while the Unit 2 was expected to go online in mid-1974.[128] By May 1969, construction began on the first buildings on the site for Unit 1. A concrete batch plant (Building 331) at the south end of the planned campus (Zone 8), used to produce concrete to construct various buildings and structures of the plant, was one of the first buildings completed (**Figure 14**). This enabled construction to begin on the plant's core buildings. A large warehouse (Building 519, Zone 1) for equipment storage followed shortly after. By the end of 1969, construction of the Unit 1 Containment Building (Building 97) and portions of the Turbine Building (Building 101) and Auxiliary Building (Building 99) associated with the Unit 1 reactor were underway (**Figure 15**).[129]

[127] "2nd Nuclear Plant OKd for Diablo," *San Francisco Chronicle*, 26 March 1969: 40.
[128] "Controversial Power Plant," *San Francisco Chronicle*, 28 January 1969: 38.
[129] Historic photographs from PG&E; Reil, "Diablo Canyon Power Plant Construction Timeline."

Figure 14. Undated photograph of the concrete batch plant. Building 331 is on the far left.
Source: Pacific Gas and Electric Company.

The Unit 1 Containment Building, or "reactor dome," was reportedly designed by well-known modernist architect Pietro Belluschi.[130] It appears Belluschi was a consultant to PG&E along with the San Francisco-based architecture firm of Wurster Bernardi & Emmons (WBE).[131] However, recent scholars on Belluschi's work have noted that while Belluschi was involved with the design of many different building types in the late 1960s, including the Diablo Canyon Power Plant, "in some his participation was critical; in others he appears to have lent no more than his name."[132] To date, research has not confirmed the extent of Belluschi's or WBE's contributions to the design of the containment buildings or any other buildings or structures at the Diablo Canyon Power Plant.[133]

[130] Gerald Adams, "Inside A Nuclear Reactor," *San Francisco Examiner*, 4 November 1973: 38.
[131] Meredith L. Clausen, *Pietro Belluschi: Modern American Architect* (Cambridge, MA: The MIT Press, 1999), 421.
[132] Clausen, *Pietro Belluschi*, 326.
[133] Access to Belluschi's archives at the Oregon Historical Society Research Library was not available due to renovations and COVID-19 restrictions. Email inquiries in December 2021 to the William Wurster Collection at the Environmental Design Archives, UC Berkeley revealed that drawings for the Turbine Building were sent to WBE by PG&E though without title blocks or much information to indicate the purpose of the exchanges.

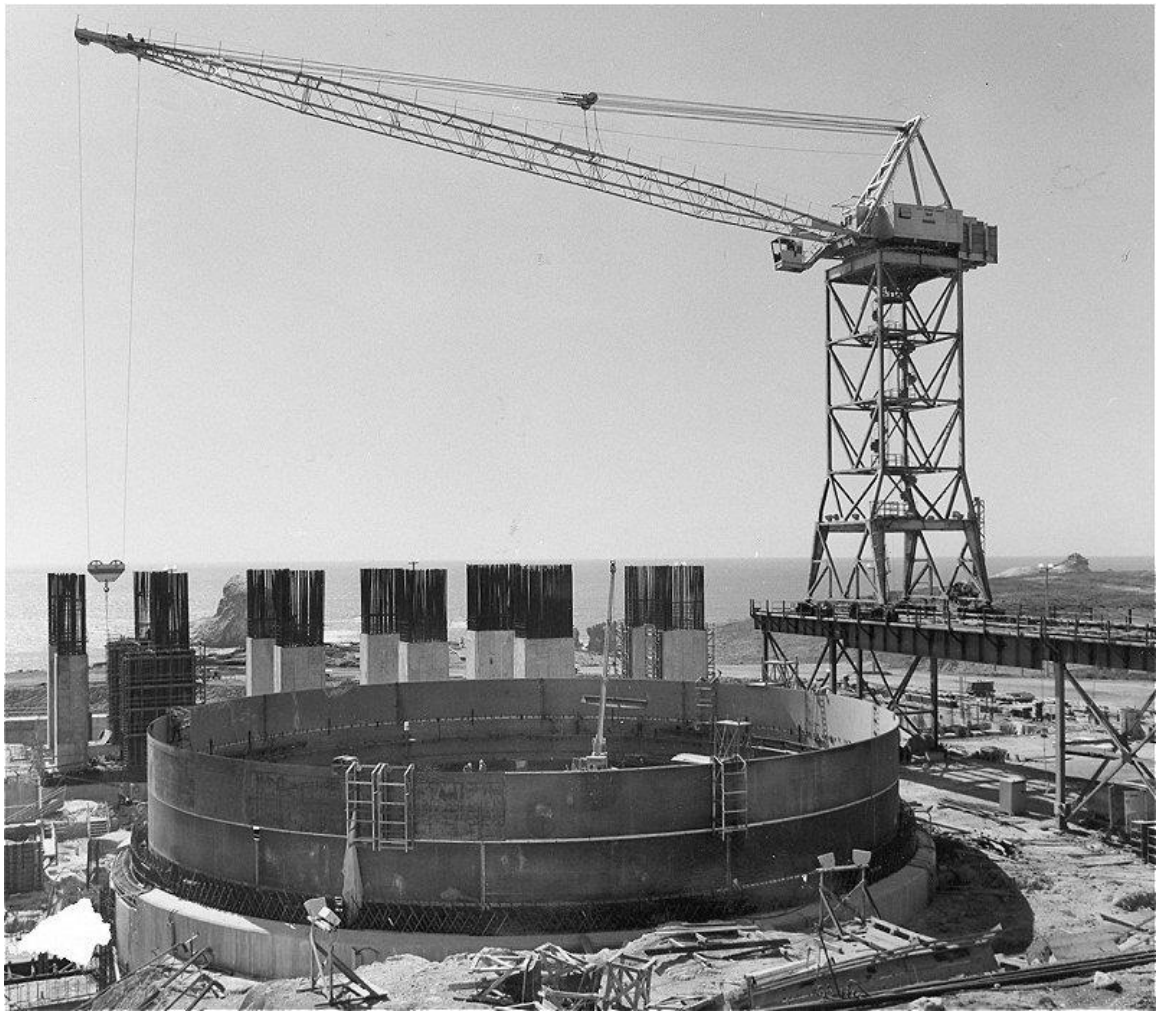

Figure 15. Early progress on the Unit 1 Containment Building and concrete pedestal for the Unit 1 portion of the Turbine Building in April 1970. Source: Pacific Gas and Electric Company.

From 1969 through much of 1971, progress on the Diablo Canyon Power Plant focused primarily on completing the main buildings and infrastructure necessary for the operation of Unit 1. While construction of the Unit 1 power block buildings continued, structural work on the underground concrete cooling water discharge and intake tunnels began in Fall 1969 (**Figure 16**).[134] Transmission lines to relay power generated by the turbines to the power grid were erected in June 1970.[135] By this time, local newspapers reported that while the total amount of work needed to bring the plant online was considered only 14 percent complete, the plant's buildings and structures were nearly 40 percent complete.[136]

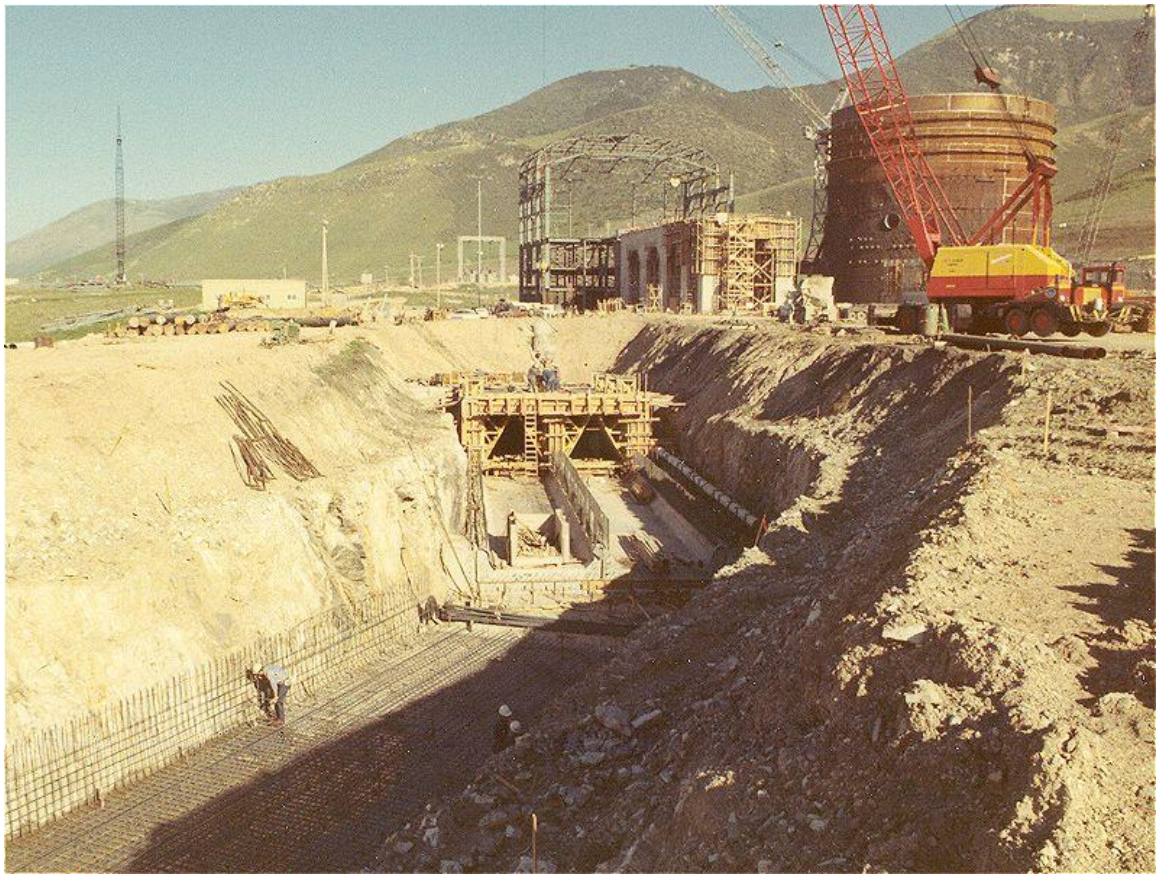

Figure 16. The intake and discharge channels under construction in January 1971. Progress on the Unit 1 Containment Building and half of the Turbine Building are visible in the background.
Source: Pacific Gas and Electric Company.

[134] Historic photographs from PG&E.
[135] "Nuclear Plant Rising Fast at Diablo Canyon," *San Francisco Examiner*, 7 June 1970: 23.
[136] "Huge Generators Arrive for PG&E Atom Plant," *Five Cities Times-Press-Recorder*, 16 July 1970: 1.

The first components of the nuclear reactors started to arrive on site in the summer of 1970. Beginning their journey at Westinghouse's factories on the East Coast, the reactor components were shipped by barge through the Panama Canal to Port San Luis.[137] To prepare for their arrival, a new barge landing was constructed at Port San Luis near Avila Beach. The four steam generators for the Unit 1 reactor reached Port San Luis in July 1970 and were the first reactor components unloaded at the new barge landing.[138] The Unit 1 reactor vessel arrived in September 1970 (**Figure 17**).[139] The equipment shipped to the barge landing was loaded onto special truck trailers and driven over Diablo Canyon Road to the plant site.[140]

Figure 17. Arrival of the reactor vessel for Unit 1 at the barge landing at Port San Luis in September 1970. Source: Pacific Gas and Electric Company.

In December 1970, PG&E received authorization from the AEC to install a second reactor at Diablo Canyon. The decision cleared the way for construction to begin on the buildings and structures associated with the Unit 2 reactor.[141]

[137] "Nuclear Plant Rising Fast at Diablo Canyon."
[138] "Huge Generators Arrive for PG&E Atom Plant."
[139] Historic photographs from PG&E.
[140] "Huge Generators Arrive for PG&E Atom Plant."
[141] "Second Nuclear Reactor At Diablo Canyon OKd," *San Francisco Chronicle*, 10 December 1970: 6.

Meanwhile, construction on various support buildings and structures commenced outside the power block area. A small gatehouse (the Ávila Gate) used to screen visitors was built at the entrance to Diablo Canyon Road, approximately seven miles from the power block area not far from Port San Luis. From approximately spring 1970 to winter 1971, two long breakwaters began to take shape off the coast next to the power plant site to create a new manmade cove (**Figure 18**). To create the breakwaters, hundreds of tons of rock and multi-ton concrete tribars were dropped into the ocean. Once completed, the manmade cove, also known as the intake cove, served as a sheltered location from which seawater could be drawn into the plant through a massive concrete Intake Structure (Building 108) to cool steam used to turn the turbine-generators. This cooling water would be released back into the ocean through a concrete Discharge Structure (Building 103) located in Diablo Cove, a natural cove directly to the north of the intake cove and just below the Turbine Building, after it had circulated through the plant.[142]

As the breakwaters were taking shape, construction began on the Intake Structure and Discharge Structure in the summer of 1971 (**Figure 19**). Both structures were erected by building coffer dams in the intake cove and Diablo Cove to temporarily remove seawater from the areas during construction. Both were complete or nearly complete by early 1973 (**Figure 20** and **Figure 21**).[143]

By spring 1971, at least a dozen utilitarian support buildings and structures of varying sizes had been erected in a fabrication yard to the east and southeast of the power block and not far from the intake cove (the triangular-shaped Parking Lot 6 in Zone 5 and Parking Lot 7 in Zone 6)) (**Figure 22** and **Figure 23**). The buildings in this area continued to evolve over the course of construction and into the early years of the plant's operation (most of these early support buildings are no longer extant).[144]

[142] Historic photographs from PG&E.
[143] Historic photographs from PG&E.
[144] Historic photographs from PG&E.

Figure 18. One of the breakwaters under construction in June 1971. Source: Pacific Gas and Electric Company.

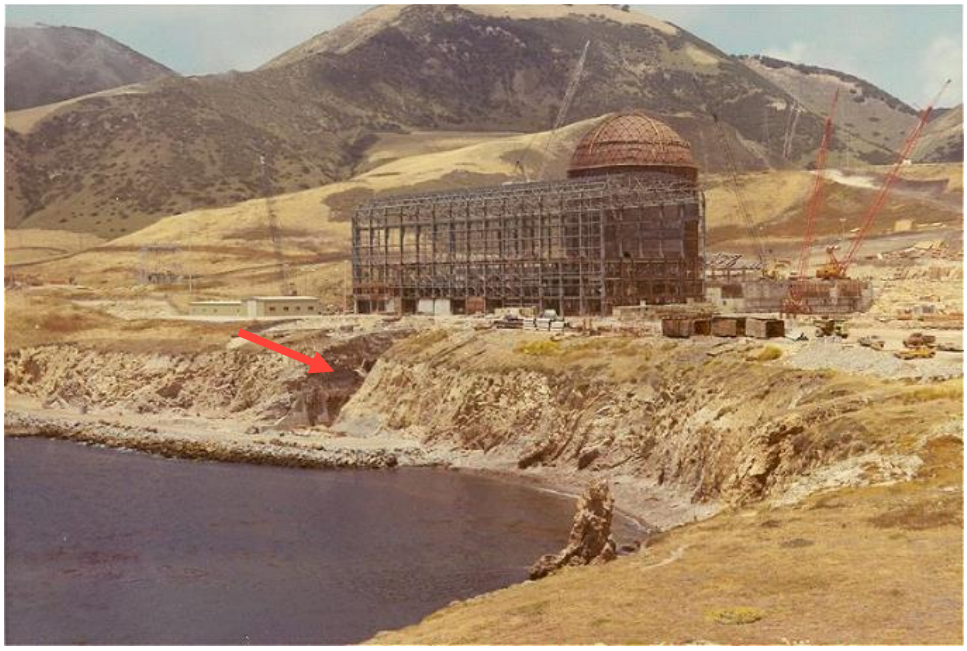

Figure 19. An excavated area of the cliffside adjacent to Diablo Cove (indicated by red arrow) shows progress on the Discharge Structure in June 1971. The Unit 1 Containment Building (with dome) and half of the Turbine Building (for Unit 1) are under construction behind. Source: Pacific Gas and Electric Company.

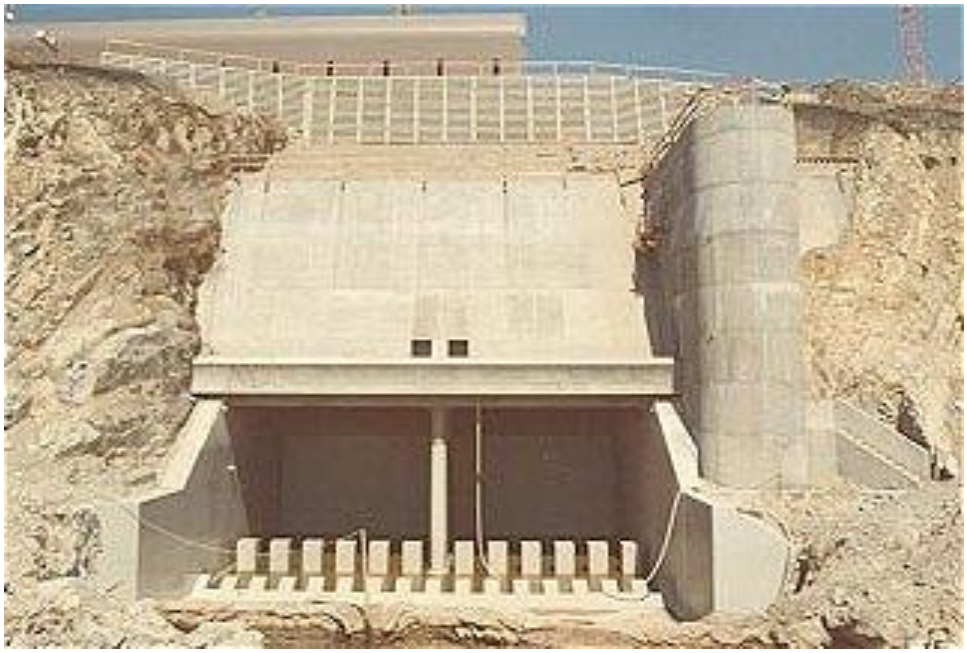

Figure 20. The nearly completed Discharge Structure in August 1972. The Unit 1 half of the Turbine Building is visible in the background. Source: Pacific Gas and Electric Company.

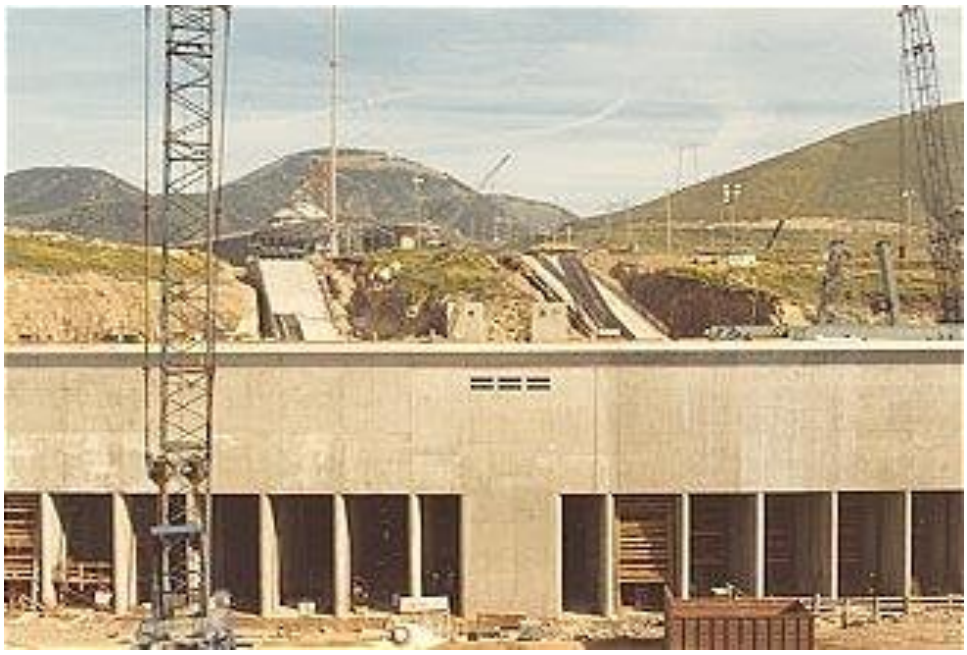

Figure 21. The Intake Structure during construction in February 1973. The dome of the Unit 1 Containment Building is just visible in the background. Source: Pacific Gas and Electric Company.

Figure 22. Support buildings and structures in the fabrication yard in April 1971 (currently Parking Lot 6 in Zone 5). In the background, the breakwaters are under construction in the intake cove. Source: Pacific Gas and Electric Company.

Figure 23. Support buildings and structures in the fabrication yard adjacent to the intake cove, circa late 1971-early 1972, with the triangular-shaped area corresponding to Parking Lot 6 in Zone 5 and the two larger buildings (demolished) in the foreground at present-day Parking Lot 7 in Zone 6. The completed breakwaters and coffer dam for construction of the Intake Structure are visible in the intake cove. Source: Pacific Gas and Electric Company.

Delays and Modifications

Although Diablo Canyon Power Plant Units 1 and 2 were originally scheduled to be in operation by 1973 and 1974, respectively, numerous unforeseen issues delayed the plant's completion for more than a decade. The first delay occurred in February 1972 when the AEC ordered a partial suspension of construction, pending review of an environmental impact study requested by the Scenic Shoreline Preservation Conference under the recently enacted National Environmental Policy Act (NEPA).[145] By June 1972, the AEC ruled that work could continue at Diablo Canyon pending completion of the studies.[146] It is unclear what impact the temporary halt had on the progress of construction at the Diablo Canyon Power Plant, as historic photographs indicate that a significant amount of construction continued throughout much of the site during this period, including at the Unit 1 and 2 power block buildings and Intake and Discharge Structures (**Figure 24**). Foundations were also laid for two large raw water reservoir ponds (Buildings 1A and 1B) on the upper terrace to the northeast of the power block during this time (**Figure 25**). The Unit 1 reactor vessel was installed inside the Unit 1 Containment Building in the first few months of 1973 (**Figure 26**). The Unit 2 reactor vessel arrived at Port San Luis approximately one year later (**Figure 27**).[147] In May 1973, the AEC ruled that the Diablo Canyon project had cleared environmental review. By this time, the start of operation of Units 1 and 2 had been pushed back to 1975 and 1976, respectively.[148]

[145] Richard F. Harris, "Diablo Canyon's 'Green Light' Means More Protests to Come," *San Francisco Examiner*, 14 September 1983: 25.
[146] "PGE Gets OK for Work on A-Plant," *San Francisco Examiner,* 09 June 1972: 59.
[147] Historic photographs from PG&E.
[148] "Atom Power Plant Gets Another OK," *San Francisco Chronicle*, 1 June 1973: 45; Harris, "Diablo Canyon's 'Green Light' Means More Protests to Come."

Figure 24. Construction progress on the power block in February 1973. The more complete Unit 1 Containment Building with its dome in place, raw water tanks, and portions of the Turbine Building and Auxiliary Building are on the right. Construction has begun on the Unit 2 Containment Building and portions of the Turbine Building and Auxiliary Building on the left. Source: Pacific Gas and Electric Company.

Figure 25. The raw reservoir ponds under construction in November 1972 at the upper terrace above the containment buildings. Source: Pacific Gas and Electric Company.

Figure 26. Installation of the Unit 1 reactor vessel within Unit 1 Containment Building in early 1973. Source: Pacific Gas and Electric Company.

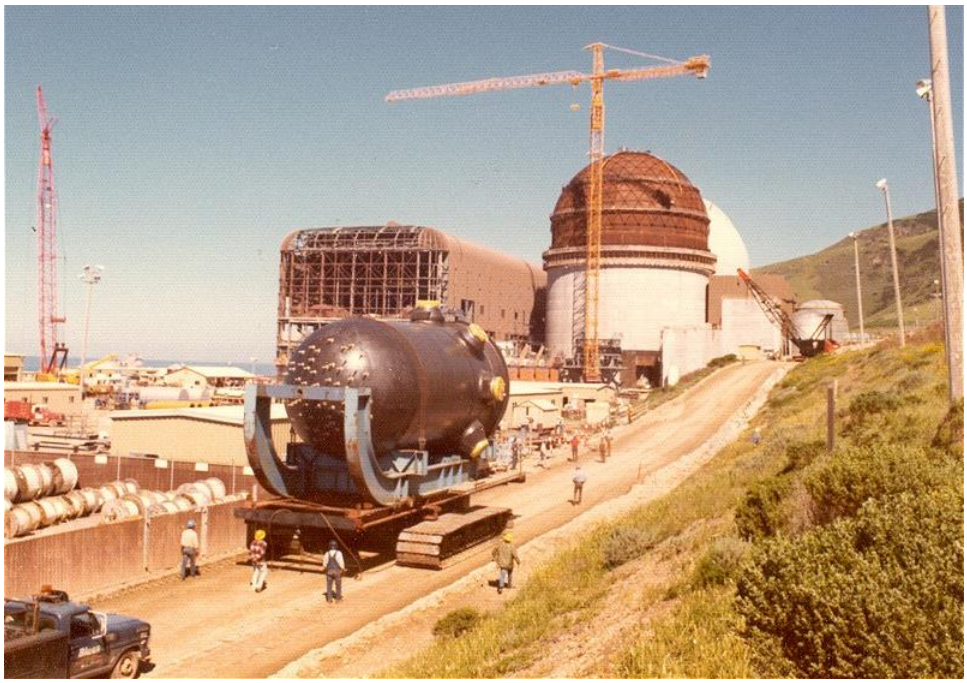

Figure 27. The Unit 2 reactor vessel arrives on site in April 1974. Source: Pacific Gas and Electric Company.

Perhaps the most impactful event in the plant's development occurred at the end of 1973, when a study by the United States Geological Survey (USGS) confirmed that an active seismic fault, named the Hosgri Fault, ran off the coast approximately three miles from the Diablo Canyon Power Plant site.[149] Studies suggested that the fault could produce a magnitude 7.5 earthquake.[150] Licensing of the plant was initially delayed for at least six months while the USGS and Nuclear Regulatory Commission, which had by this time replaced the AEC as the federal regulatory agency in charge of nuclear licensing, analyzed the potential effects of the fault on the Diablo Canyon Power Plant.[151]

While the implications of the Hosgri Fault were being debated, another hurdle emerged in 1975. Following initial tests of the plant's cooling water intake and discharge system in the summer of 1974, staff and biologists from the California Department of Fish and Wildlife and PG&E discovered hundreds of dead abalone in Diablo Cove. By 1975, estimates of the number of abalone killed had risen to the thousands. According to a report released by the California Department of Fish and Wildlife, the abalone deaths were the result of toxins produced by a reaction between salt in the seawater and copper alloy tubing used in the plant's cooling system.[152] Completion of the plant was stalled while PG&E replaced the roughly six million feet of copper alloy tubing in the cooling system with titanium tubing **(Figure 28)**.[153] To address environmental concerns about the impacts of the nuclear plant on the ecology of the intake and discharge coves, a biological testing lab was also added on a small spit of land where the east breakwater met the coastline. This lab remained in use until the 1990s and was demolished in the 2000s, though some concrete remnants, including steps to the ocean, remain.[154]

[149] Pacific Gas & Electric Company, "Diablo Canyon Power Plant, "Diablo from Groundbreaking to Start-up."
[150] David Perlman, "Safety of Atomic Plant Challenged," *San Francisco Chronicle*, 15 January 1976.
[151] David Perlman, "New A-Plant Delays – U.S. Quake Study," *San Francisco Chronicle*, 25 March 1976: 3.
[152] "A-Plant Outflow Poisons Abalone," *San Francisco Chronicle*, 24 January 1975: 5; Harris, "Diablo Canyon's 'Green Light' Means More Protests to Come."
[153] Dale Champion, "PG&E to Replace copy A-Tubing to Save Abalone," *San Francisco Chronicle*, 4 June 1975: 6.
[154] Conversations with Scott Maze and Al Clark during September 23-24, 2021 site visit.

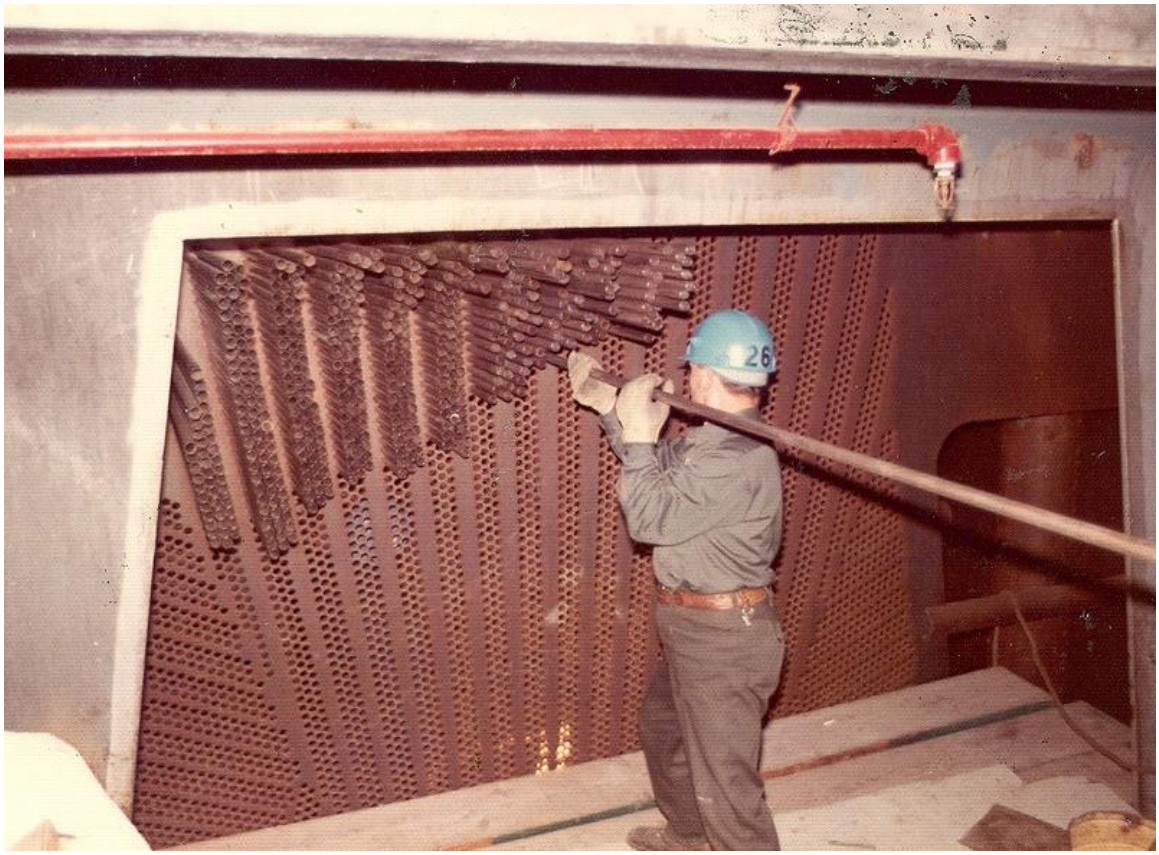

Figure 28. Undated photograph of the copper tubing in the Turbine Building that was replaced with titanium tubing to prevent toxins resulting from the chemical reaction between the copper and salt water. Source: Pacific Gas and Electric Company.

In April 1976, the NRC issued its decision on the question of the seismic safety of the Diablo Canyon Power Plant, as originally designed, and announced that the plant would need to be seismically retrofitted in order to be considered safe for operation.[155] Several years of modifications followed, including adding concrete buttresses along the west side of the Turbine Building; the buttresses were then enclosed in what appears as two one-story additions along the Turbine Building's west façade . The discovery of the Hosgri Fault prompted the first demonstration against completion of the Diablo Canyon Power Plant. In February 1976, eight demonstrators, on a march to Washington, D.C. to protest nuclear power, were arrested at the Diablo Canyon plant site.[156]

Meanwhile, PG&E's property holdings surrounding the Diablo Canyon Power Plant suddenly expanded in the latter half of the 1970s. In 1974, Robert Marre declared bankruptcy and defaulted

[155]Reil, "Diablo Canyon Power Plant Construction Timeline;" "US Halts Nuclear Power Licensing," *Sacramento Bee*, 14 August 1976: 7.
[156] Harris, "Diablo Canyon's 'Green Light' Means More Protests to Come."

on the loan that PG&E had underwritten in 1967 as part of the original lease agreement for the plant. In 1977, a federal court granted PG&E a 99-year lease on the original 585 acres that PG&E had leased from the Marre family, as well as an additional 3,800 acres of Marre family land that surrounded it.[157]

In July 1978, the NRC decided that seismic retrofit work at the Diablo Canyon Power Plant had been completed to a satisfactory level and that the plant was safe to operate. In addition to the buttresses, seismic modifications included replacing floor grating with steel plates and reinforcing roof bracing at the Turbine Building, among other changes.[158] In spite of this ruling, the plant still needed to be licensed by the NRC Safety and Licensing Board before it could begin commercial operation.[159]

Seemingly just as the plant was back on track, another major stumbling block appeared. On March 28, 1979, the worst nuclear accident in the United States' history occurred when one of the reactors at the Three Mile Island Nuclear Generating Station in Pennsylvania experienced a partial meltdown. In response, California Governor Jerry Brown asked the NRC to immediately halt the licensing of the Diablo Canyon Power Plant so that studies of what had happened at Three Mile Island could be completed and continuing concerns about the safety of the Diablo Canyon plant could be addressed.[160] Due to safety questions that had been raised by the Three Mile Island incident, the NRC ordered a temporary moratorium on the licensing of all nuclear power plants in the United States in November 1979.[161] Once new safety regulations and emergency standards were adopted, the moratorium was lifted, and licensing was allowed to continue. In February 1981, the NRC announced that licensing for the Diablo Canyon plant would be delayed at least until March 1982 while the agency reviewed an emergency plan that had been prepared for the plant in response to the Three Mile Island incident.[162]

[157] Wills, *Conservation Fallout,* 86. Research did not clarify how PG&E's original lien on 1,300 acres of the Marre family's land relates to the 3,800 acres they acquired from the family in 1977.
[158] Alan Cline, "A Hard Look – Diablo Canyon: Ready and Waiting," *San Francisco Chronicle*, 12 November 1978.
[159] "2 A-Plants Are Safe, Panel Says," *San Francisco Chronicle*, 12 July 1978
[160] John Balzar, "Brown Asks Delay for Nuclear Plant," *San Francisco Chronicle*, 5 May 1979: 6.
[161] Harris, "Diablo Canyon's 'Green Light' Means More Protests to Come."
[162] David Perlman, "A New Delay for Diablo Canyon A-Plant," *San Francisco Chronicle*, 7 February 1981.

Figure 29. Historic aerial photograph of the Diablo Canyon Power Plant (1981). Source: HistoricAerials.com.

A historic aerial photograph taken in 1981 reveals the extent of construction that had been completed at the Diablo Canyon Power Plant up to this point (**Figure 29**). The main power block buildings were complete. A security building (Building 105) by Garretson-Elmedorf-Zinov-Reibin and used to screen visitors, had been erected immediately to the southeast of the Turbine Building.[163]

[163] PG&E response to HIS-36 in Data Request 2 noted architect Paul Zinov from the firm of Garretson-Elmendorf-Zinov-Reibin was on the original drawings. The firm is now GEZ Architects and Engineers in San Francisco. Research uncovered little about Zinov, the firm, or their work from this period.

More than a dozen support buildings and structures of varying sizes were clustered in a wedge-shaped area further to the south in Zones 2 and 5, most of which are no longer extant. Two large warehouses were located to the east of this wedge of buildings in Zone 6 (no longer extant). At the far southeast edge of the plant campus (Zone 8), an outdoor firing range and large warehouse (Building 113, altered) had been built to the northwest of the concrete batch plant.

The west breakwater was partially destroyed during storms in 1981. The damaged breakwater is visible in the 1981 aerial photograph. Coastal engineer Omar Lillevang was hired to help redesign and update the east and west breakwaters to withstand future storms. Lillevang had also worked on the coastal design aspects of several other nuclear power plants, including the San Onofre Nuclear Generating Station. Using Lillevang's innovative physical model studies, the breakwaters were successfully rebuilt.[164]

In September 1981, the NRC certified the seismic retrofit work and issued a license for low-level testing at the plant. The license would allow for nuclear fuel to be loaded into the reactors to begin testing the plant at five percent capacity, below the level to generate commercial power.[165] Then, during an NRC sanctioned review of the plant, it was discovered that the wrong blueprints had been used to build supports for the plant's cooling pipe system. Apparently, blueprints for Unit 2, still under construction, had been used to build safety structures for Unit 1. The NRC ordered exhaustive studies to review the plant's safety structures and systems, since some elements of the two units are the same while others are mirror images.[166] PG&E hired Bechtel Power Corp, which had constructed over half of the nuclear reactors in the United States to that date, to complete this review and oversee necessary modifications. During the review process, Bechtel discovered hundreds of errors, mainly related to earthquake proofing. Modifications to fix the errors were completed in the summer of 1983.[167]

Diablo Canyon Power Plant Comes Online

In April 1984, the NRC authorized a second low-level testing license. Although opponents challenged the decision and continued to lobby to stop full licensing for the plant, testing proceeded.[168] Following several months of testing the plant's systems at low power, the NRC finally issued a full-power operating license for the Unit 1 reactor on August 2, 1984.[169] A full-power operating license

[164] Melissa McGann, "Omar J. Lillevang papers," Online Archive of California, accessed November 5, 2021, https://oac.cdlib.org/findaid/ark:/13030/tf6j49n9h8/entire_text/.
[165] "Diablo Canyon For Test Runs," *Sacramento Bee*, 22 September 1981: A1, A12.
[166] John Fogarty, "A Report on Diablo Error," *San Francisco Chronicle*, 1 October 1981: 7.
[167] Harris, "Diablo Canyon's 'Green Light' Means More Protests to Come."
[168] Reil, "Diablo Canyon Power Plant Construction Timeline."
[169] John Fogarty, "Opponents Vow a New Court Fight," *San Francisco Chronicle*, 3 August 1984: 1.

for the Unit 2 reactor followed almost exactly one year later on August 26, 1985. Both units went into full commercial operation the following year, respectively, thus ending an 18-year saga to complete the plant. The finished plant cost $5.6 billion dollars to complete.[170]

A large number of support buildings and facilities were added to the Diablo Canyon Power Plant campus around 1985 and 1986, immediately after the plant's operating licenses were issued. These included a multi-story Administration Building (Building 104), attributed to PG&E designers and built in 1986 with offices for the plant's staff directly to the south of the Turbine Building; the Cold Machine Shop (Building 116) in 1985 near the Administration Building, and the Main Warehouse (Building 115) in 1985 to the northeast of the power block in Zone 3.[171] The architect who signed the drawings on the Main Warehouse and Cold Machine Shop was James M. Leefe, an architect with experience in large-scale industrial facilities and who was Principal of Urban Design at Bechtel Corporation's Commercial and Industrial organization.[172]

As part of the plant's response to the Three Mile Island incident, robust training facilities were constructed to the southeast of the power block in Zone 5. These included a large Training Building (Building 109), attributed to PG&E designers, which featured a full-scale replica of the reactor control room to help train plant operators, as well as a Maintenance Shop Building (Building 119), also attributed to PG&E designers, with facilities for training the plant's maintenance staff.[173]

Several water treatment facilities were also installed during this period. A seawater reverse osmosis water desalination plant (Building 121) was added north of the east breakwater (Zone 7). This was accompanied by the completion of additional water treatment facilities (Buildings 304, 305, and 307) adjacent to the raw water reservoirs on the upper terrace to the north of the power block (Zone 10). These water treatment facilities provided fresh water for use by the staff at buildings throughout the property, as well as purified feedwater for use in some of the plant's water systems. At the north side of Parking Lot 7 (Zone 6), a series of modular buildings (Buildings 260, 261, 262, 263, 264, and 266) were constructed to provide additional offices, conference rooms, and storage.[174]

[170] John Fogarty, "Diablo Canyon's Unit 2 Reactor Granted Full-Power," *San Francisco Chronicle*, 2 August 1985.
[171] Dates confirmed by PG&E Response to HIS-36 in Data Request Set 2, which also noted the plans for the Administration Building were by designer R. Hau and stamped by Richard V. Bettinger, the chief civil engineer for PG&E.
[172] PG&E Response to HIS-36 in Data Request Set 2; "6 Bay Area Architects Honored by AIA," *San Francisco Examiner,* 9 April 1978.
[173] Conversations with Scott Maze and Al Clark during September 23-24, 2021 site visit. PG&E Response to HIS-36 in Data Request Set 2 noted that the plans for the Training Building (Building 109) were by designer V. Neal and plans for the Maintenance Shop Building (Building 119) were by designer R. Hau. Both plans were stamped by Richard V. Bettinger, the chief civil engineer for PG&E.
[174] Facility Database for Aspen, provided by PG&E.

Additional Development

The Diablo Canyon Power Plant has continued to be modified and adapted over the decades since it first went online in order to address evolving regulations and world events. In spite of its high profile in the media, the Chernobyl nuclear accident in 1986 did not result in any major physical changes to the Diablo Canyon Power Plant; rather, changes were primarily administrative and procedural in nature. The plant continued to expand in the late 1980s with the addition of more warehouses, storage, and maintenance facilities.

A historic aerial photograph shows that by 1994, many of the older support buildings, constructed in the fabrication yard east and southeast of the power block, had been demolished and Parking Lot 6 (Zone 5) and part of Parking Lot 7 (Zone 6) had been completed (**Figure 30**). The biological testing lab ceased operation in the 1990s and was demolished in the 2000s. Around 1997, an early phase of security modifications was carried out. More extensive security alterations took place in the decade following the September 11, 2001 terrorist attacks, including the construction of security towers and a modern Security Building (Building 105A) in 2012. In 2008, the original steam generators inside the containment buildings were replaced and stored inside a specially constructed concrete building (Building 403) on the upper terrace to the northeast of the power block.

In 2011, a nuclear accident at the Fukishima Daiichi Nuclear Power Plant in Japan prompted the creation of a nationwide FLEX program. The program resulted in the establishment of centers across the United States to respond to nuclear accidents anywhere within the country within 24 hours. In response, Building 113 (Zone 8) was gutted and remodeled, and several new storage facilities were added to house necessary equipment in case of such a situation.[175]

In 2016, PG&E announced a Joint Proposal with several labor and environmental organizations to begin phasing out nuclear power and increase its investment in energy efficiency, renewable energy sources, and energy storage. As part of the proposal, PG&E announced that it would not renew the federal operating licenses for the Diablo Canyon Power Plant when they were set to expire in 2024 and 2025, respectively. The CPUC approved PG&E's proposal in 2018, beginning the process of decommissioning the plant.[176]

[175] Conversations with Scott Maze and Al Clark during September 23-24, 2021 site visit.
[176] PG&E, "Diablo Canyon Power Plant, Bridging to California's Energy Future," accessed October 13, 2021, https://www.pge.com/en_US/safety/how-the-system-works/diablo-canyon-power-plant/energy-bridge/energy-bridge.page.

Figure 30. 1994 aerial photograph of the main built-up area. Source: HistoricAerials.com.

6. EVALUATION

National Register and California Register Evaluation

The following section examines the eligibility of the Diablo Canyon Power Plant for listing in the National Register and California Register:

- **Criterion A/1 (Events):** Resources that are associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States.

- **Criterion B/2 (Persons):** Resources that are associated with the lives of persons important to local, California, or national history.

- **Criterion C/3 (Architecture):** Resources that embody the distinctive characteristics of a type, period, region, or method of construction, or represent the work of a master, or possess high artistic values.

- **Criterion D/4 (Information Potential):** Resources or sites that have yielded or have the potential to yield information important to the prehistory or history of the local area, California, or the nation.

- **Criteria Consideration G:** Resources of exceptional importance that have achieved significance within the last 50 years.

Criterion A/1 (Events)

None of the individual buildings or structures, nor the Diablo Canyon Power Plant as a whole appear to be associated with any significant events, trends, or patterns in the history of San Luis Obispo County, California, or the United States. Although the Diablo Canyon Power Plant is the last nuclear power plant that remains in operation in California and is one of only six nuclear power plants that were completed over the state's history, research did not indicate that it influenced the construction or development of other nuclear power plants in California or the United States. The Diablo Canyon Power Plant was first authorized in the mid- to late-1960s, after the initial experimental nuclear power plants of the late 1950s and the pioneering commercial nuclear power plants of the early 1960s had been placed into service. It, along with Units 2 and 3 of the San Onofre Nuclear Generating Station also authorized around the same time, was undertaken during a time when nuclear power generation was touted as the way to meet California's increased energy demands, but was no longer considered groundbreaking. While these plants were still being completed, the

California State Legislature enacted a moratorium on the construction and licensing of new nuclear power plants that resulted in the plants at Diablo Canyon and San Onofre becoming the last to be completed in California. As such, the Diablo Canyon plant did not influence the development of later plants in California.

This statewide moratorium, and the general decline of the nuclear power industry in California and across the United States, were not directly caused by events at the Diablo Canyon Power Plant. Rather, they were the result of growing widespread concern about the safety of nuclear power and radioactive waste that arose in the 1960s and 1970s. The most potent argument against nuclear power in California proved to be their safety in the event of an earthquake. While the seismic safety of the Diablo Canyon Power Plant was the most common argument against it, questions about the seismic safety of nuclear power plants preceded the Diablo Canyon plant and were first raised in protests against a planned PG&E nuclear power plant near Bodega Bay in the early 1960s. The same argument was subsequently used to stop or protest against other planned plants and to end the operation of several existing nuclear power plants in California. Though widely covered in the media, the Diablo Canyon plant was one of many that were called into question between the 1960s and 1980s, as scrutiny toward the safety of nuclear power increased across the country.

The roughly 30-year halt in the construction of new nuclear power plants in the United States after 1978 also was not directly caused by events at the Diablo Canyon Power Plant. Rather, it was caused by numerous overlapping and complicated factors, including decreased electricity demand following the 1970s energy crisis, increased reliance on natural gas, growing nationwide anti-nuclear sentiment, and the high costs of constructing nuclear power plants due to increased regulation and inflation. While the Diablo Canyon Power Plant is representative of all of the factors that led to the decline of the development of nuclear power in California and the United States, research did not indicate that it played a major role in this decline.

Nor does the Diablo Canyon Power Plant appear to be individually significant for its association with the environmental movement in California or the United States. Questions about the safety of the Diablo Canyon Power Plant were one of many factors that contributed to rising nationwide concerns about the impact of development and industry on the environment; however, they do not appear to have been the most influential or important causes for this increased awareness. During the protracted process to bring the Diablo Canyon nuclear power plant online, the plant became a lightning rod for the various environmental concerns that were emerging throughout California and the United States because of the unique combination of its scenic location, seismic issues, and timing within the broader development of the environmental movement. As a result, Diablo Canyon became one of many factors, albeit one of the more high-profile, that contributed to a general increase in anti-nuclear sentiment in the United States from the late 1960s to the early 1980s.

Furthermore, in spite of the scale of environmental opposition to the plant, none of the protests or demonstrations appear to have directly resulted in any major policy changes or actions at the local, state, or national level. At nearly every turn, major milestones in the construction or licensing process for the Diablo Canyon Power Plant spurred environmental protests that delayed, but did not ultimately stop, the plant from going into full operation or lead to demonstrable policy changes. Other events, such as the publishing of Rachel Carson's book *Silent Spring* in 1962, 1969 Santa Barbara oil spill, and the first Earth Day in 1970 – are frequently cited as the main influences for major pieces of environmental legislation, including the National Environmental Policy Act and California Environmental Quality Act. The California Coastal Act and increased protections for the California coast were more strongly influenced by the Santa Barbara oil spills and high-profile residential developments in places such as Sea Ranch and Malibu. Meanwhile, major shifts in California energy policy, such as the Warren-Alquist Act of 1974, were passed primarily in response to the 1970s energy crisis. Therefore, research did not indicate that the Diablo Canyon Power Plant is considered the primary cause for any consequential environmental legislation.

Lastly, opposition to the construction of the Diablo Canyon Power Plant is often cited as the cause for a major schism within the Sierra Club that contributed to the organization's shift away from traditional wilderness conservation toward modern environmentalism. Although the Sierra Club was then and remains the most powerful environmental organization in the United States, the historical impact of this shift beyond the organization remains unclear. Further research and information may warrant a reevaluation of the historic significance of Diablo Canyon's role in the evolution of the Sierra Club, and any subsequent contributions to the broad patterns of history, in the future.

In summary, Diablo Canyon Power Plant, proposed in 1966, was among the later group of commercial nuclear power plants authorized in the nation and in California, and did not contribute significantly to the development of the industry. Its construction was a focal point of much protest and scrutiny on the safety of nuclear power and impacts to the environment, but it was one among many such targets in the anti-nuclear and early environmental movements. The protests of Diablo Canyon Power Plant, though a reflection of the shift in public opinion away from nuclear power and of the growing environmental awareness, did not result in significant changes to these movement, to new legislation, nor to the decline of commercial nuclear power plants in the United States or California.

Thus, the Diablo Canyon Power Plant does <u>not</u> meet Criterion A/1 (Events) for listing in the National Register or California Register.

Criterion B/2 (Persons)

Research did not reveal a direct association between the Diablo Canyon Power Plant, or any specific building or structure, and any historically significant individuals. No major leader or figure in the development of the plant emerged in connection to PG&E. Similarly, while several opposition groups were closely associated with the plant over the course of its development, including the Sierra Club, Mothers for Peace, and Abalone Alliance, no major leaders or figures involved with these groups have a strong connection to the Diablo Canyon plant or appear to have changed the course local, state, or national history through their activism. The Sierra Club's executive director David Brower emerged as a prominent figure in the early period of the plant's development and ultimately resigned from the organization in opposition to its endorsement of the project. Although Brower subsequently founded the environmental organization Friends of the Earth, the historic significance of this organization has not yet been established. Brower's contributions to the environmental movement are better represented by other properties.

Thus, the Diablo Canyon Power Plant does not meet Criterion B/2 (Persons) for listing in the National Register or California Register.

Criterion C/3 (Architecture)

The Diablo Canyon Power Plant is an example of a nuclear power plant that generates power using a specific type of nuclear reactor known as a pressurized water reactor (PWR). All of the nuclear power plants in the United States contain either PWRs or boiling water reactors (BWRs), with PWRs making up approximately 70 percent of all nuclear power plants in the United States. Following an early unique and experimental sodium cooled reactor at Santa Susana Sodium Reactor Experiment, the first phase of commercial nuclear power plants in California – including the Vallecitos Nuclear Power Plant and Humboldt Bay Nuclear Power Plant – were BWRs. The rest of the nuclear power plants completed in California – including the Rancho Seco Nuclear Power Plant, San Onofre Nuclear Generating Station, and Diablo Canyon Power Plant – used PWRs. Whereas the BWR at Humboldt Bay introduced an innovative underground design that influenced the design of later nuclear reactors, and the plant at Rancho Seco was the only nuclear plant in California to be built inland and include large cooling towers, the design of the reactors and support buildings at the Diablo Canyon Power Plant are not particularly unique or innovative to PWRs or nuclear power plants in general. The containment buildings at Diablo Canyon are very similar in appearance to those of Units 2 and 3 at the San Onofre Nuclear Generating Station, which were constructed during the same period.

Research did not uncover significant architectural designs or engineering achievements associated with Diablo Canyon Power Plant. It appears that many buildings and structures were designed in-house by PG&E staff, including the Training Building (Building 109), Administration Building (Building

104), and Maintenance Shop Building (Building 119), where the drawings were signed by PG&E's chief civil engineer. Where research revealed the involvement of outside architects and engineers, their contributions have not been recognized as particularly significant. Modernist architect Pietro Belluschi and architecture firm Wurster Bernardi and Emmons (WBE) were consultants to PG&E for the design of the plant's initial power block buildings. However, the project was not published in design journals of the time, nor where the architects' involvement highly touted in newspaper coverage of the plant. Existing scholarship on Belluschi and WBE do not recognize Diablo Canyon Power Plant as among either's significant works, and additional research was unable to confirm the extent of their contributions to a sufficient degree to attribute the design of any specific buildings or structures to Belluschi or WBE. Innovative coastal engineer Omar Lillevang was hired to redesign the breakwaters after one of them failed during storms in 1981. He is credited with designing more than 20 breakwaters over the course of his career, and research did not reveal the importance of the breakwaters at the Diablo Canyon Power Plant within his portfolio of work.

The plans for the two large warehouses from around 1985, the Main Warehouse (Building 115) and Cold Machine Shop (Building 116) were signed by architect James M. Leefe, who was associated with Bechtel Corporation, the firm that conducted the review of Diablo Canyon Power Plant's safety structures and systems in the early 1980s, and that had constructed other nuclear reactors in the United States. Research did not uncover the extent of Leefe's involvement in the design of these two warehouses, or any significance of their design or engineering. Thus, the plant's buildings and structures are not currently considered the work of a master architect or builder and are not significant for their architectural design or construction.

Thus, the Diablo Canyon Power Plant does not meet Criterion C/3 (Architecture) for listing in the National Register or California Register.

Criterion D/4 (Information Potential)

The "potential to yield information important to the prehistory or history of California" typically relates to archeological resources, rather than built resources. The analysis of resources for eligibility under Criterion D/4 is addressed in a separate report.

Criterion Consideration G (Achieved Significance within 50 Years)

The power generation core of Diablo Canyon Power Plant – the containment domes for the two nuclear reactors, the turbine and auxiliary buildings, and the intake and discharge structures – were mostly complete by about 1973, approximately 50 years ago. However, as modifications were made over a decade to address design flaws and additional safety concerns, the plant was not substantially completed until 1985, when the Unit 2 reactor was licensed for full commercial

operation by the Nuclear Regulatory Commission. During the decade-long delay, other buildings were constructed at the site that are also less than 50 years of age. Research did not find that Diablo Canyon Power Plant, or any of the individual buildings or structures constructed by the time the plant was licensed for commercial operation met any significance criteria to be eligible for the National Register or California Register. As such, evaluation for exceptional significance under Criteria Consideration G is not necessary.

7. CONCLUSION

The Diablo Canyon Power Plant was originally developed between 1968 and 1985, and both units of the plant went into full commercial operation within the following year. Although the plant attracted substantial attention while it was under construction, it does not appear to meet any criteria for listing in the National Register of Historic Places or the California Register of Historical Resources. The property is not significant in the development of nuclear power in California or the United States or the modern environmental movement, nor are there other known significant historic events associated with the property (Criterion A/1). Research did not identify any individual important in local, state, or national history that has a significant association with the property to meet Criterion B/2. An example of one of many nuclear power plants designed around pressurized water reactors, the Diablo Canyon Power Plant and its supporting buildings and structures are not notable for their design and do not rise to the level to meet National Register and California Register eligibility under Criterion C/3. The only master architects or builders identified with the site were architect Pietro Belluschi and architecture firm Wurster, Bernardi, and Emmons. Existing scholarship has not identified Diablo Canyon Power Plant as a significant work of either Bellluschi or Wurster Bernardi, and Emmons, and additional research did not confirm the extent of their involvement with the design of the plant. As such none of the plant's buildings or structures are considered to be the work of a master architect or builder.

As the Diablo Canyon Power Plant does not meet any criteria for listing in the National Register or California Register, the property is not considered a historic resource for the purposes of the California Environmental Quality Act (CEQA).

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9. APPENDICES

Appendix A – Site Plan and Individual Building Descriptions

Attached for reference is the Revised Facilities Data site plan (SK-002-R1), dated October 10, 2018, and provided by PG&E showing the different buildings and structures within each decommissioning zone.

Page & Turnbull prepared California Department of Parks and Recreation Primary Record (DPR 523A) forms for the buildings and structures listed in the Facilities Database provided by PG&E, and confirmed through Data Request Set 2, with a Year Built date of 1985 or earlier. The 1985 date corresponds to when Diablo Canyon Power Plant's Unit 2 reactor was licensed for full commercial operation by the Nuclear Regulatory Commission, and the plant was considered functionally complete.

Although none of the individual buildings or structures, nor the group collectively, were found to meet the criteria for national or state historic listing, the DPR 523A forms serves to document the physical characteristics of those buildings and structures that remain from this early period of development at Diablo Canyon Power Plant.

DPR 523A forms prepared for the 30 buildings and structure listed below follow in order by Building Number:

Building #	Building Name	Year Built	Decom. Zone
1A	Raw Water Reservoir Pond - East	1972	10
1B	Raw Water Reservoir Pond - West	1972	10
097	Unit 1 Containment	1972	1
097A	Unit 1 Pipe Rack Area	1972	1
098	Unit 2 Containment	1973	1
098A	Unit 2 Pipe Rack Area	1973	1
099	Auxiliary Building	1972-1973	1
100	Outdoor Water Storage Tanks	1973	1
101	Turbine Building	1972-1973	1
103	Discharge Structure	1972	4
105	Security Office Building	1977, expanded 1988 and unknown date	2
108	Intake Structure	1972	4
109	Training Building	1984*	5
111	Turbine Generator and Rotor Equipment Warehouse	1982	7

Building #	Building Name	Year Built	Decom. Zone
114	Firing Range	1978	8
115	Main Warehouse	1985	3
116	Unit 2 Cold Machine Shop	1984	2
117A	RCA Laundry Facility	1975	1
118	Aux Boiler Enclosure	1980	1
121	Seawater Reverse Osmosis Facility	1985	7
304	Chlorination and Domestic Water	1985	10
305	Clarifier and Make-up Pre-Treatment Building	1985	10
306	Chemical Storage	1985	10
331	Soils lab - Concrete Testing Lab	1970	8
527	Start-up – Instrumentation & Control Craft Shop	By 1981**	1
601	Avila Gate Guard House	1970	13
602	Avila Gate Storage Building	1970	13
604	Warehouse Storage	1985	12
D-4	Long Term Cooling Water Pump Storage	1979	10
BW	East and West Breakwater	1972	4

* PG&E confirmed date through Data Request Set 2.

** Confirmed by appearance in 1981 aerial photograph of the plant site.

FACILITIES DATA

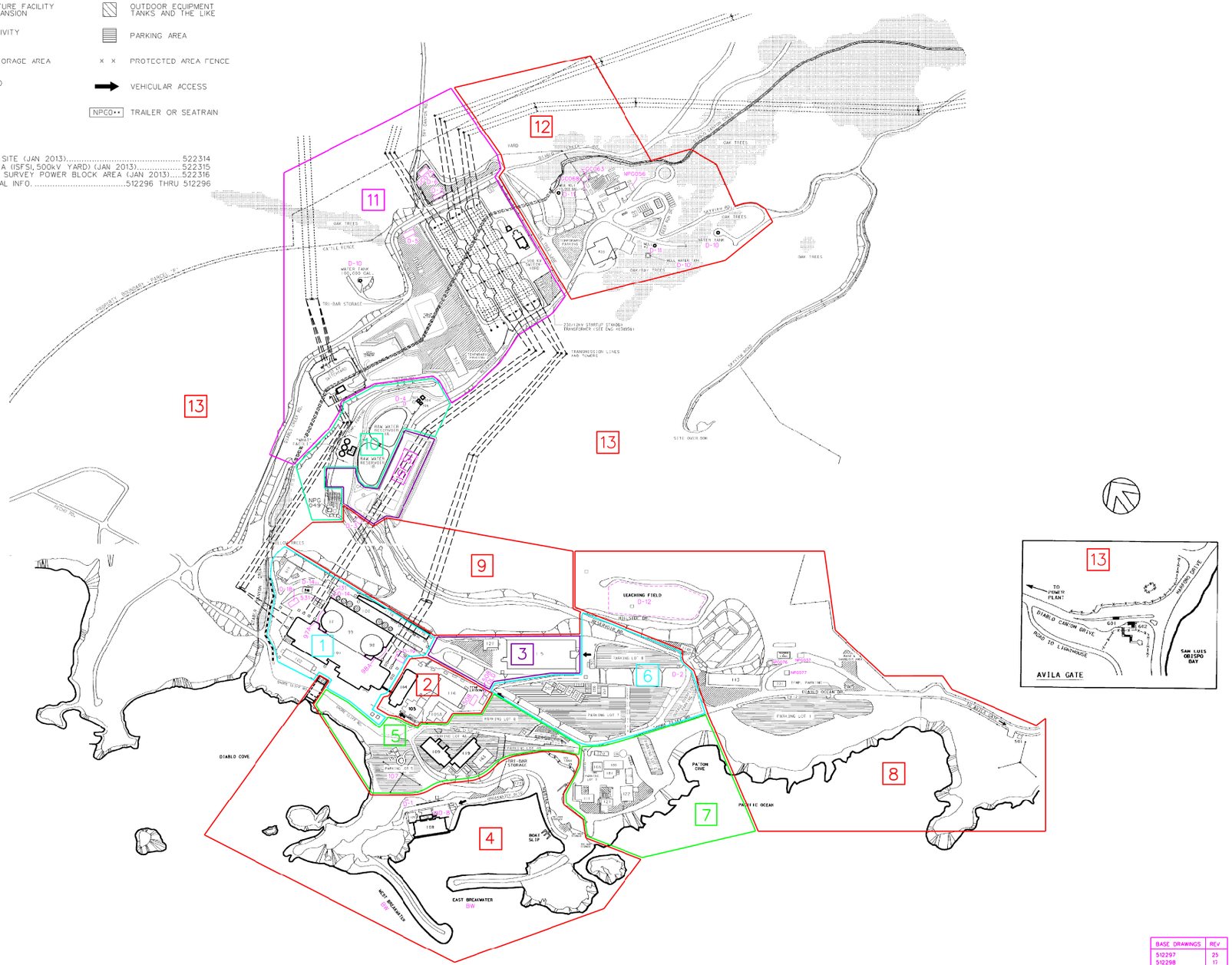
BLDG. No.	DESCRIPTION	ZONE No.
090	SERVICE AIR BUILDING	1
097	CONTAINMENT BUILDING UNIT 1	1
097A	UNIT 1 PIPE RACK AREA	1
098	CONTAINMENT BUILDING UNIT 2	1
098A	UNIT 2 PIPE RACK AREA	1
099	AUXILIARY BUILDING	1
100	RCA - OUTDOOR WATER STORAGE TANKS	1
101	TURBINE BUILDING UNITS 1 & 2	1
102	I& C/MEDICAL FACILITY	1
103	DISCHARGE STRUCTURE	4
104	ADMINISTRATION BUILDING	2
105	SECURITY OFFICE BUILDING	2
105A	PROTECTED AREA ACCESS FACILITY	2
106	TELEPHONE TERMINAL BUILDING	5
107	METEOROLOGICAL TOWER NO. 1 & BUILDING	5
108	UNIT 1 & 2 INTAKE STRUCTURE	4
108A	INTAKE ACCESS FACILITY	4
109	TRAINING BUILDING	5
110	SANDBLASTING & SPRAY PAINT FACILITY	7
111	TURBINE GENERATOR AND ROTOR EQUIP. WAREHOUSE	7
112	EQUIPMENT SHELTER - BACK-UP MET TOWER	8
113	WAREHOUSE "B" FUKUSHIMA FLEX EQUIP STORAGE	8
114A	SECURITY TRAINING TOWER	8
114B	SECURITY TRAINING BUILDING	8
115	DCPP MAIN WAREHOUSE	3
116	UNIT 2 COLD MACHINE SHOP	2
117A	RCA LAUNDRY FACILITY	1
117B	RCA RADWASTE STORAGE	1
117C	RCA BUILDING	1
118	AUX. BOILER ENCLOSURE	1
119	MAINTENANCE SHOP BUILDING	5
120	HAZARDOUS WASTE FACILITY	7
121	SEAWATER REVERSE OSMOSIS FACILITY	7
122	FABRICATION SHOP	7
123	TES SHOWER/LAB FACILITY	4
124	SEWAGE TREATMENT PLANT	7
125	FIREWATER TANK & PUMPHOUSE	7
127	LIQUIDS STORAGE	3
128	INTAKE CONTROL BUILDING	4
129	INTAKE MAINTENANCE SHOP	4
130	GAS CYLINDER ENCLOSURE	6
131	RCA CALIBRATION FACILITY	1
161	MAINTENANCE SHOP ANNEX BUILDING	5
163	HU/ACCLESS BUILDING	5
165	USED FUEL STORAGE PROJECT	7
180	MODULAR BUILDING	7
181	MODULAR BUILDING	7
182	TCOM BUILDING	7
183	MODULAR BUILDING	7
202	STORAGE	6
203	TELECOMMUNICATIONS/SGI VAULT BUILDING	6
251	INDUSTRIAL FIRE OPERATIONS GARAGE	6
260	STEAM GENERATOR MAINTENANCE	6
261	DAY-ZIMMERMAN/CONSTRUCTION FIELD ENGINEERING	6
262	FACILITY MAINT./CONFERENCE ROOM/IN-PROCESSING	6
263	FIRE DEPARTMENT	6
264	CONFERENCE ROOM/TCOM/STORAGE	6
266	OFFICES	6
267	TOILETS	6
304	CLORINATION & DOMESTIC WATER	10
305	CLARIFIER & MAKE-UP PRE-TREATMENT BUILDING	10
306	CHEMICAL STORAGE	10
307	WASTEWATER HOLDING & TREATMENT EQUIPMENT ENCLOSURE	10
313	SECONDARY FLEX EQUIPMENT STORAGE FACILITY	11
331	SOILS LAB - CONCRETE TESTING LAB	8
402	VEHICLE MAINTENANCE SHOP	8
403	OLD STEAM GENERATOR STORAGE FACILITY (OSGSF)	2
501	SECONDARY MET TOWER AND CONTROL BUILDING	2
508	OFFICE	1
508-OLD	OFFICE - CONDEMNED	1
518	CRAFT FACILITY - STORAGE (ASSEMBLY BUILDING)	1
519	WAREHOUSE A	1
520	PAINT DEPARTMENT	1
521	CSRP OUTAGE OFFICE	1
527	START-UP - I& C CRAFT SHOP	1
528	TOILET TRAILER	13
531	SCAFFOLD STORAGE AREA (HAZ WASTE HANDLING AREA)	13
601	AVILA GATE GUARD HOUSE	12
602	AVILA GATE STORAGE BUILDING	12
603	DOCUMENT STORAGE FACILITY	12
604	WAREHOUSE STORAGE	12
612	TOILET TRAILER	12
NPG037	OFFICE/PAINT STORAGE	8
NPG049	MAKE-UP WATER	10
NPG056	VEHICLE MAINTENANCE OFFICE	12
NPG076	STORAGE - FACILITIES MAINTENANCE	8
NPG077	STORAGE - FACILITIES MAINTENANCE	8
NPG089	STEAM GENERATOR MOCK-UP	5
NPG091	FLEET SERVICES BREAK TRAILER	12
NPG226	ISFSI OFFICE TRAILER	11
GC063	LABORER BREAK ROOM	12
GC068	LABORER BREAK ROOM/OFFICE	12
GC075	INTAKE CREW STORAGE - B-GATE	11
BW	EAST AND WEST BREAKWATER	4
D-1	UNDERGROUND SEWAGE HOLDING TANK/LIFT	4
D-2	SMALL STORAGE BUILDING & TANK	6
D-3	SITE OVERLOOK FACILITY	9
D-4	LONG TERM COOLING WATER PUMP STORAGE	10
D-5	SCAFFOLD STORAGE YARD	11
D-6	B-GATE OFFICE	11
D-7	B-GATE SHADE STRUCTURE	11
D-8	CHEMICAL STORAGE TANKS AND PAD	4
D-9	UNDERGROUND SEPTIC TANKS AND PUMP STATIONS	13
D-10	ABOVE GROUND WATER TANKS	11, 12
D-11	WATER WELLS	12
D-12	LEACH FIELD EAST OF LOT 8 (ABANDONED)	8
D-14	ABANDONED DIESEL STORAGE TANKS	1
D-15	SECURITY STRUCTURES - BBRES AND CRASH GATES	13
D-17	CIRCULATING WATER TUNNELS, UNITS 1 & 2	13
D-18	U-1 TRANSFORMER YARD OIL RETENTION BASIN	1
D-19	U-2 TRANSFORMER YARD OIL RETENTION BASIN	1
1A	RAW WATER RESERVOIR POND - EAST	10
1B	RAW WATER RESERVOIR POND - WEST	10

LEGEND

- 104 — PERMANENT FACILITY OCCUPIED OR AVAILABLE FOR OCCUPANCY
- SPACE RESERVED FOR FUTURE FACILITY OR EXISTING FACILITY EXPANSION
- MAJOR CONSTRUCTION ACTIVITY AREA
- OUTDOOR LAYDOWN OR STORAGE AREA
- EXISTING NATIVE TREES TO BE PRESERVED
- RETAINING WALL
- INTENSIVE LANDSCAPED AREA INCLUDING PAVED AREAS
- OUTDOOR EQUIPMENT TANKS AND THE LIKE
- PARKING AREA
- x x PROTECTED AREA FENCE
- VEHICULAR ACCESS
- NPG•• — TRAILER OR SEATRAIN

REFERENCE DRAWINGS:

1. AERIAL SURVEY MAIN PLANT SITE (JAN 2013)..... 522314
2. AERIAL SURVEY CANYON AREA (ISFSI, 500kV YARD) (JAN 2013)..... 522315
3. HI-RESOLUTION TOPOGRAPHY SURVEY POWER BLOCK AREA (JAN 2013)..... 522316
4. SITE MASTER PLAN-HISTORICAL INFO. ..... 512296 THRU 512296



BASE DRAWINGS	REV
512297	25
512298	17

UNIT 1 & 2

DATE	
10/10/18	
D.D.	CF
R.E.	SXM9
I.V.	SXM9
P.E.	N/A

REVISION DESCRIPTION
REVISED FACILITIES DATA

DCPP DECOMMISSIONING BUILDING DEMOLITION

DIABLO CANYON POWER PLANT
PACIFIC GAS AND ELECTRIC COMPANY
SAN FRANCISCO, CALIFORNIA

DWG SCALE: N.T.S.			
BILL OF MATL:			
SUPSDS:			
SUPSD BY:			
DRAWING	SHEET	PAGE	REV
SK-002-R1	1	1	1

RASTER- SK-001.tif, SK-001a.tif
DGN SK-002-R1.dgn
CAD User:
Date:

State of California ♉ The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code
Other Listings
Review Code Reviewer Date

Page 1 **of** 1 ***Resource Name or #:** (Assigned by recorder) Raw Water Reservoir - East (Building 1A)
P1. Other Identifier:

*P2. **Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County** San Luis Obispo, CA
***b. USGS 7.5' Quad** Port San Luis **Date** 2018
c. Address 3890 Diablo Canyon Road City Avila Beach Zip 93424
d. UTM: Zone 10S , 695569.87 mE/ 3898966.95 mN
e. Other Data: Within DCPP Decommissioning Zone 10

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
Raw Water Reservoir - East (Building 1A) is an approximately 40,000 square foot ovoid pool. It is one of two 2.5 million gallon-capacity reservoirs in the DCPP Decommissioning Zone 10; the Raw Water Reservoir-West (Building 1B) is adjacent to the west and mirrored. Both are located north of the Independent Spent Fuel Storage Installation (ISFSI) and south of the 230 KV Switchyard. . The poured concrete reservoir is is lined with a white polymer membrane. The paired reservoirs are surrounded by chain-link fencing. Pumping equipment is between the two reservoirs.

PG&E documents estimate the structure was constructed in 1972. The two reservoirs are part of the site's Raw Water System. The Raw Water System receives water primarily from the property's Sea Water Reverse Osmosis system, which processes seawater into fresh water. The Raw Water Reservoir may also receive water from the Pretreatment System.

P5a. Photograph or Drawing

***P3b. Resource Attributes:** HP11 Engineering Structure

☐ Building ☒ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other
P5b. Description of Photo:
Oblique view of subject property, looking east. September 23, 2021

***P6. Date Constructed/Age and Source:** ☒ Historic ☐ Prehistoric ☐ Both
1972 estimated, Facility Database for Aspen provided by PG&E

***P7. Owner and Address:**
Eureka Energy Co. (subsidiary of Pacific Gas and Electric Company)
77 Beale Street, 32nd Floor
San Francisco, CA 94177

***P8. Recorded by:**
Page & Turnbull, Inc.
170 Maiden Lane, 5th Floor
San Francisco, CA 94104

***P9. Date Recorded:**
December 8, 2021

***P10. Survey Type:** Intensive

***P11. Report Citation**: Black & Veatch Corporation, BHI Power Services and Haley Aldrich, "Diablo Canyon Power Plant Historical Site Assessment Report," prepared for Pacific Gas & Electric Company, June 2018.

***Attachments:** ☒NONE ☐Location Map ☐Continuation Sheet ☐Building, Structure, and Object Record
☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record
☐Artifact Record ☐Photograph Record ☐ Other (List):

State of California ♘ The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code

Other Listings
Review Code Reviewer Date

Page 1 **of** 1 ***Resource Name or #:** (Assigned by recorder) Raw Water Reservoir - West (Building 1B)
P1. Other Identifier:

*P2. **Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County** San Luis Obispo, CA
***b. USGS 7.5' Quad** Port San Luis **Date** 2018
c. Address 3890 Diablo Canyon Road City Avila Beach Zip 93424
d. UTM: Zone 10S , 695501.62 mE/ 3898924.43 mN
e. Other Data: Within DCPP Decommissioning Zone 10

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
Raw Water Reservoir - West (Building 1B) is an approximately 40,600 square foot ovoid pool. It is one of two 2.5 million gallon-capacity reservoirs in the DCPP Decommissioning Zone 10; the Raw Water Reservoir-East (Building 1A) is adjacent to the east and mirrored. Both are located north of the Independent Spent Fuel Storage Installation (ISFSI) and south of the 230 KV Switchyard. The poured concrete reservoir is lined with a white polymer membrane. The paired reservoirs are surrounded by chain-link fencing. Pumping equipment is between the two reservoirs.

PG&E documents estimate the structure was constructed in 1972. The two reservoirs are part of the site's Raw Water System. The Raw Water System receives water primarily from the property's Sea Water Reverse Osmosis system, which processes seawater into fresh water. The Raw Water Reservoir may also receive water from the Pretreatment System.

P5a. Photograph or Drawing

***P3b. Resource Attributes:** HP11 Engineering Structure

☐ Building ☒ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other

P5b. Description of Photo:
Oblique view of subject property, looking east. September 23, 2021

***P6. Date Constructed/Age and Source:** ☒ Historic ☐ Prehistoric ☐ Both
1972 estimated, Facility Database for Aspen provided by PG&E

***P7. Owner and Address:**
Eureka Energy Co. (subsidiary of Pacific Gas and Electric Company)
77 Beale Street, 32nd Floor
San Francisco, CA 94177

***P8. Recorded by:**
Page & Turnbull, Inc.
170 Maiden Lane, 5th Floor
San Francisco, CA 94104

***P9. Date Recorded:**
December 8, 2021

***P10. Survey Type:** Intensive

***P11. Report Citation**: Black & Veatch Corporation, BHI Power Services and Haley Aldrich, "Diablo Canyon Power Plant Historical Site Assessment Report," prepared for Pacific Gas & Electric Company, June 2018, 5-6.
***Attachments:** ☒NONE ☐Location Map ☐Continuation Sheet ☐Building, Structure, and Object Record
☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record
☐Artifact Record ☐Photograph Record ☐ Other (List):

State of California ♦ The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code
Other Listings
Review Code Reviewer Date

Page 1 **of** 1 ***Resource Name or #:** (Assigned by recorder) Unit-1 Containment (Building 097)
P1. Other Identifier:

*P2. **Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County** San Luis Obispo, CA
***b. USGS 7.5' Quad** Port San Luis **Date** 2018
c. Address 3890 Diablo Canyon Road City Avila Beach Zip 93424
d. UTM: Zone 10S , 695245.00 mE/ 3898689.00 mN
e. Other Data: Within DCPP Decommissioning Zone 1

***P3a. Description:**
Unit 1 Containment (Building 097) for the Diablo Canyon Nuclear Power Plant is a 215-foot tall and 147-foot diameter dome-shaped reinforced concrete structure. It is located on the east side of the Turbine Building (Building 101) and north of the similar Unit 2 Containment (Building 098). Both Unit 1 Containment (Building 097) and Unit 2 Containment (Building 098) are bounded to the east and in between the two containment structures by the lower Auxiliary Building (Building 099). The subject structure is accessed through a hatch in the Auxiliary Building (Building 099), which was not visible during the site visit.

Unit 1 Containment sits on a 16,972 square foot concrete slab-on-grade foundation. The structure exterior is three-foot thick, unpainted concrete. An externally mounted sheet metal duct is on the structure's northeast side, which begins at the base and ends at the top of the dome in a conical structure. The dome is lined on the interior in steel as it houses the nuclear reactor and associated systems, such as reactor cavity and sump, reactor coolant system pumps and piping, refueling machine, fuel transfer system up-ender, regenerative heat exchangers, containment recirculation sump, etc. A four-story rigid steel frame structure of catwalks and ladders is also inside the dome.

P5a. Photograph or Drawing

***P3b. Resource Attributes:** HP11 Engineering Structure

☐ Building ☒ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other

P5b. Description of Photo:
View of subject property, looking south September 23, 2021.

***P6. Date Constructed/Age and Source:** ☒ Historic ☐ Prehistoric ☐ Both
1972 estimated, Facility Database for Aspen provided by PG&E

***P7. Owner and Address:**
Eureka Energy Co. (subsidiary of Pacific Gas and Electric Company)
77 Beale Street, 32nd Floor
San Francisco, CA 94177

***P8. Recorded by:**
Page & Turnbull, Inc.
170 Maiden Lane, 5th Floor
San Francisco, CA 94104

***P9. Date Recorded:**
December 8, 2021

***P10. Survey Type:** Intensive

***P11. Report Citation**: Black & Veatch Corporation, BHI Power Services and Haley Aldrich, "Diablo Canyon Power Plant Historical Site Assessment Report," prepared for Pacific Gas & Electric Company, June 2018..

***Attachments:** ☒NONE ☐Location Map ☐Continuation Sheet ☐Building, Structure, and Object Record
☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record
☐Artifact Record ☐Photograph Record ☐ Other (List):

State of California ♦ The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

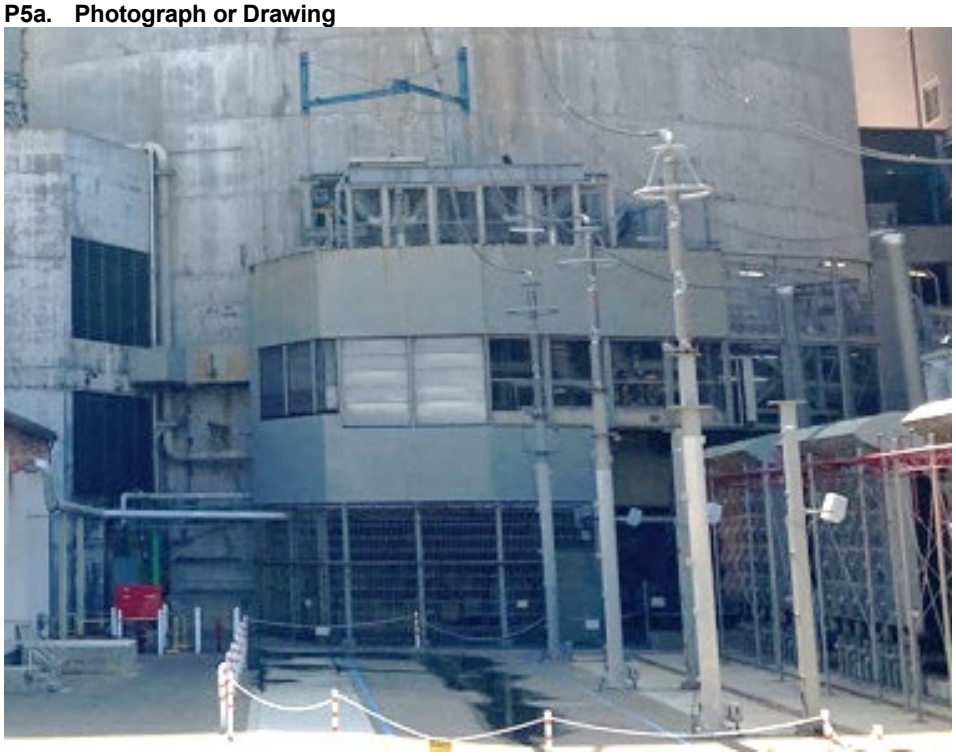
Primary #
HRI #
Trinomial
NRHP Status Code
Other Listings
Review Code Reviewer Date

Page 1 **of** 1 ***Resource Name or #:** (Assigned by recorder) Unit 1 Pipe Rack Area (Building 097A)
P1. Other Identifier:

*P2. **Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County** San Luis Obispo, CA
***b. USGS 7.5' Quad** Port San Luis **Date** 2018
c. Address 3890 Diablo Canyon Road City Avila Beach Zip 93424
d. UTM: Zone 10S , 695211.00 mE/ 3898695.00 mN
e. Other Data: Within DCPP Decommissioning Zone 1

***P3a. Description:**
The Pipe Rack Area for Unit-1 (Building 097A) for the Diablo Canyon Nuclear Power Plant is a pipeway structure that appears as a two-story, steel frame, curved, partial enclosure attached to the outside northwest quadrant of Unit 1 Containment building (Building 097). It has steel spandrel panels and metal louvers creating the partial enclosure around the exterior piping. The structure is on a 9,165 square foot concrete slab, originally constructed in 1972.

P5a. Photograph or Drawing



***P3b. Resource Attributes:** HP11 Engineering Structure
***P4. Resources Present:**
☐ Building ☒ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other
P5b. Description of Photo:
Oblique view of subject property, looking southeast. September 23, 2021
***P6. Date Constructed/Age and Source:** ☒ Historic ☐ Prehistoric ☐ Both
1972 estimated, Facility Database for Aspen provided by PG&E

***P7. Owner and Address:**
Eureka Energy Co. (subsidiary of Pacific Gas and Electric Company)
77 Beale Street, 32nd Floor
San Francisco, CA 94177

***P8. Recorded by:**
Page & Turnbull, Inc.
170 Maiden Lane, 5th Floor
San Francisco, CA 94104

***P9. Date Recorded:**
December 8, 2021

***P10. Survey Type:** Intensive

***P11. Report Citation**: Black & Veatch Corporation, BHI Power Services and Haley Aldrich, "Diablo Canyon Power Plant Historical Site Assessment Report," prepared for Pacific Gas & Electric Company, June 2018.
***Attachments:** ☒NONE ☐Location Map ☐Continuation Sheet ☐Building, Structure, and Object Record
☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record
☐Artifact Record ☐Photograph Record ☐ Other (List):

State of California ♿ The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code
Other Listings
Review Code Reviewer Date

Page 1 **of** 1 ***Resource Name or #:** (Assigned by recorder) Unit 2 Containment (Building 098)
P1. Other Identifier:

*P2. **Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County** San Luis Obispo, CA
***b. USGS 7.5' Quad** Port San Luis **Date** 2018
c. Address 3890 Diablo Canyon Road City Avila Beach Zip 93424
d. UTM: Zone 10S , 695290.00 mE/ 3898595.00 mN
e. Other Data: Within DCPP Decommissioning Zone 1

***P3a. Description:**
Unit 2 Containment (Building 098) for the Diablo Canyon Nuclear Power Plant is a 215-foot tall and 147-foot diameter dome-shaped reinforced concrete structure. It is located on the east side of the Turbine Building (Building 101) and south of the similar Unit 1 Containment (Building 097). Both Unit 2 Containment (Building 098) and Unit 1 Containment (Building 097) are bounded to the east and in between the two containment structures by the lower Auxiliary Building (Building 099). The subject structure is accessed through a hatch in the Auxiliary Building (Building 099), which was not visible during the site visit.

Unit 2 Containment sits on a 16,972 square foot concrete slab-on-grade foundation. The structure exterior is three-foot thick, unpainted concrete. An externally mounted sheet metal duct is on the structure's southeast side, which begins at the base and ends at the top of the dome in a conical structure. The dome is lined on the interior in steel as it houses the nuclear reactor and associated systems, such as reactor cavity and sump, reactor coolant system pumps and piping, refueling machine, fuel transfer system up-ender, regenerative heat exchangers, containment recirculation sump, etc. A four-story rigid steel frame structure of catwalks and ladders is also inside the dome.

P5a. Photograph or Drawing

***P3b. Resource Attributes:** HP11 Engineering Structure

☐ Building ☒ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other
P5b. Description of Photo: Oblique view of subject property, September 23, 2021
***P6. Date Constructed/Age and Source:** ☒ Historic ☐ Prehistoric ☐ Both
1973 estimated, Facility Database for Aspen provided by PG&E

***P7. Owner and Address:**
Eureka Energy Co. (subsidiary of Pacific Gas and Electric Company)
77 Beale Street, 32nd Floor
San Francisco, CA 94177

***P8. Recorded by:**
Page & Turnbull, Inc.
170 Maiden Lane, 5th Floor
San Francisco, CA 94104
***P9. Date Recorded:**
December 8, 2021

***P10. Survey Type:** Intensive

***P11. Report Citation**: Black & Veatch Corporation, BHI Power Services and Haley Aldrich, "Diablo Canyon Power Plant Historical Site Assessment Report," prepared for Pacific Gas & Electric Company, June 2018.
***Attachments:** ☒NONE ☐Location Map ☐Continuation Sheet ☐Building, Structure, and Object Record
☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record
☐Artifact Record ☐Photograph Record ☐ Other (List):

State of California ♉ The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

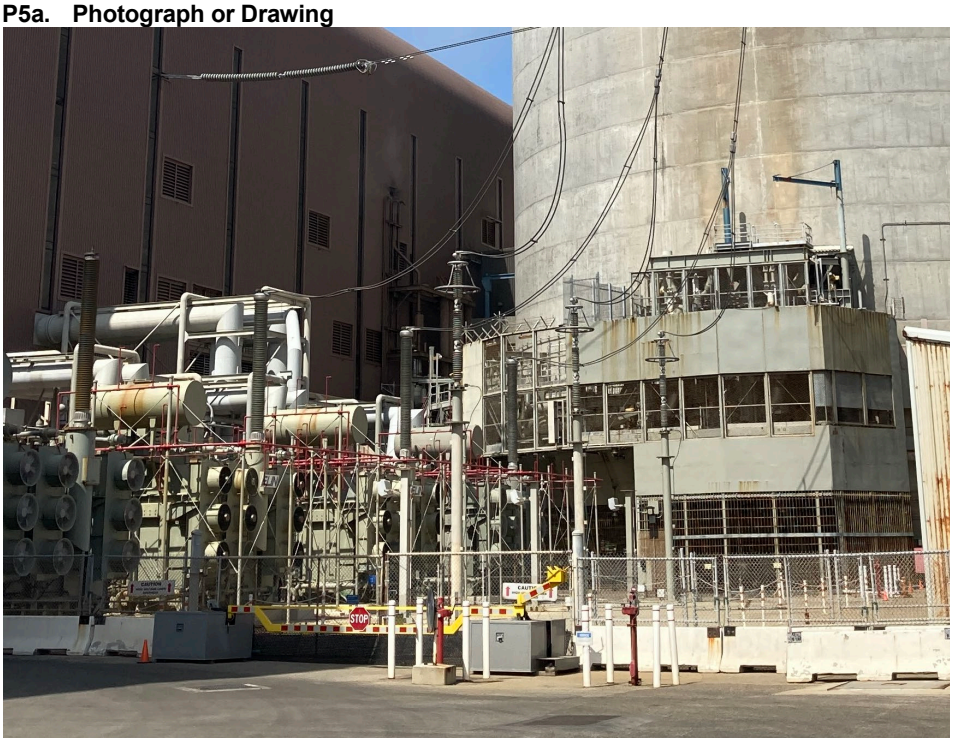
Primary #
HRI #
Trinomial
NRHP Status Code
Other Listings
Review Code Reviewer Date

Page 1 **of** 1 ***Resource Name or #:** (Assigned by recorder) Unit-2 Pipe Rack Area (Building 098A)
P1. Other Identifier:

*P2. **Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County** San Luis Obispo, CA
***b. USGS 7.5' Quad** Port San Luis **Date** 2018
c. Address 3890 Diablo Canyon Road City Avila Beach Zip 93424
d. UTM: Zone 10S , 695282.00 mE/ 3898559.00 mN
e. Other Data: Within DCPP Decommissioning Zone 1

***P3a. Description:**
The Pipe Rack Area for Unit-2 (Building 98A) for the Diablo Canyon Nuclear Power Plant is a pipeway structure that appears as a two-story, steel frame, curved, partial enclosure attached to the outside southwest quadrant of Unit 2 Containment building (Building 098). It has steel spandrel panels and metal louvers creating the partial enclosure around the exterior piping. The structure is on a 9,165 square foot concrete slab, originally constructed in 1973.

P5a. Photograph or Drawing



***P4. Resources Present:**
☐ Building ☒ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other
P5b. Description of Photo:
Oblique view of subject property, September 23, 2021
***P6. Date Constructed/Age and Source:** ☒ Historic ☐ Prehistoric ☐ Both
1973 estimated, Facility Database for Aspen provided by PG&E

***P7. Owner and Address:**
Eureka Energy Co. (subsidiary of Pacific Gas and Electric Company)
77 Beale Street, 32nd Floor
San Francisco, CA 94177

***P8. Recorded by:**
Page & Turnbull, Inc.
170 Maiden Lane, 5th Floor
San Francisco, CA 94104

***P9. Date Recorded:**
December 8, 2021

***P10. Survey Type:** Intensive

***P11. Report Citation**: Black & Veatch Corporation, BHI Power Services and Haley Aldrich, "Diablo Canyon Power Plant Historical Site Assessment Report," prepared for Pacific Gas & Electric Company, June 2018.
***Attachments:** ☒NONE ☐Location Map ☐Continuation Sheet ☐Building, Structure, and Object Record
☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record
☐Artifact Record ☐Photograph Record ☐ Other (List):

State of California ◆ The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code
Other Listings
Review Code Reviewer Date

Page 1 **of** 1 ***Resource Name or #:** (Assigned by recorder) Auxiliary Building (Building 099)
P1. Other Identifier:

*P2. **Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County** San Luis Obispo, CA
***b. USGS 7.5' Quad** Port San Luis **Date** 2018
c. Address 3890 Diablo Canyon Road City Avila Beach Zip 93424
d. UTM: Zone 10S , 695253.00 mE/ 3898633.00 mN
e. Other Data: Within DCPP Decommissioning Zone 1

***P3a. Description:**
The Auxiliary Building (Building 099) for the Diablo Canyon Nuclear Power Plant is a five-story reinforced concrete building, with a roughly T-shaped footprint on an approximately 70,660 square foot concrete slab on grade foundation. The building is in the DCPP Decomissioning Zone 1 and located on the east side of the Turbine Building (101), extending between and around Unit 1 and 2 Containment domes (Building 097 & Building 098). The exterior walls are made of finished concrete with a central area sheathed in a vertically mounted corrugated metal rainscreen. No windows were visible on the exterior during the site visit.

The building includes the control rooms for Unit 1 and Unit 2 reactors, as well as auxiliary systems for operation and safe shutdown of the reactors. The building was constructed in two parts; the north half, in service of Unit 1 reactor was completed in 1972, and the south half, in service of Unit 2 reactor was completed in 1973. Each half of the building is a mirror of the other, including the control rooms. Although the Auxuilary Building is separated from the Turbine Building, the gap between which they are separated is enclosed and not visible from the exterior. From the Turbine Building, access is available at two areas, one for each unit's control room, bridging across the gap between the two buildings.

P5a. Photograph or Drawing

***P3b. Resource Attributes:** HP8 - Industrial Building

☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other

P5b. Description of Photo: Oblique view of subject property, September 23, 2021

***P6. Date Constructed/Age and Source:** ☒ Historic ☐ Prehistoric ☐ Both
1972-1973 estimated, Facility Database for Aspen provided by PG&E

***P7. Owner and Address:**
Eureka Energy Co. (subsidiary of Pacific Gas and Electric Company)
77 Beale Street, 32nd Floor
San Francisco, CA 94177

***P8. Recorded by:**
Page & Turnbull, Inc.
170 Maiden Lane, 5th Floor
San Francisco, CA 94104

***P9. Date Recorded:**
December 8, 2021

***P10. Survey Type:** Intensive

***P11. Report Citation**: Black & Veatch Corporation, BHI Power Services and Haley Aldrich, "Diablo Canyon Power Plant Historical Site Assessment Report," prepared for Pacific Gas & Electric Company, June 2018.

***Attachments:** ☒NONE ☐Location Map ☐Continuation Sheet ☐Building, Structure, and Object Record
☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record
☐Artifact Record ☐Photograph Record ☐ Other (List):

State of California ♿ The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code

Other Listings
Review Code Reviewer Date

Page 1 **of** 1 ***Resource Name or #:** (Assigned by recorder) Outdoor Water Storage Tanks (Building 100)
P1. Other Identifier:

*P2. **Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County** San Luis Obispo, CA
***b. USGS 7.5' Quad** Port San Luis **Date** 2018
c. Address 3890 Diablo Canyon Road City Avila Beach Zip 93424
d. UTM: Zone 10S , 695300.30 mE/ 3898678.36 mN
e. Other Data: Within DCPP Decommissioning Zone 1

***P3a. Description:**
The Outdoor Water Storage Tanks (Building 100) for the Diablo Canyon Nuclear Power Plant is group of seven tanks of varying sizes with the tallest at approximately three stories. The tanks are located in the DCPP Decommissioning Zone 1, on the east side of the Auxiliary Building (Building 99). Four of the tanks are grouped together at the north end, while three are grouped at the south end. The tanks are continuous poured concrete structures on a 9,418 square foot concrete slab, originally constructed in 1973. They are used for the storage of raw water for use in the reactors. Access hatches were not visible at the time of survey.

P5a. Photograph or Drawing

***P3b. Resource Attributes:** HP11 Engineering Structure

☐ Building ☒ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other

P5b. Description of Photo:
Oblique view of subject property, September 23, 2021

***P6. Date Constructed/Age and Source:** ☒ Historic ☐ Prehistoric ☐ Both
1973 estimated, Facility Database for Aspen provided by PG&E

***P7. Owner and Address:**
Eureka Energy Co. (subsidiary of Pacific Gas and Electric Company)
77 Beale Street, 32nd Floor
San Francisco, CA 94177

***P8. Recorded by:**
Page & Turnbull, Inc.
170 Maiden Lane, 5th Floor
San Francisco, CA 94104

***P9. Date Recorded:**
December 8, 2021

***P10. Survey Type:** Intensive

***P11. Report Citation**: Black & Veatch Corporation, BHI Power Services and Haley Aldrich, "Diablo Canyon Power Plant Historical Site Assessment Report," prepared for Pacific Gas & Electric Company, June 2018.

***Attachments:** ☒NONE ☐Location Map ☐Continuation Sheet ☐Building, Structure, and Object Record
☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record
☐Artifact Record ☐Photograph Record ☐ Other (List):

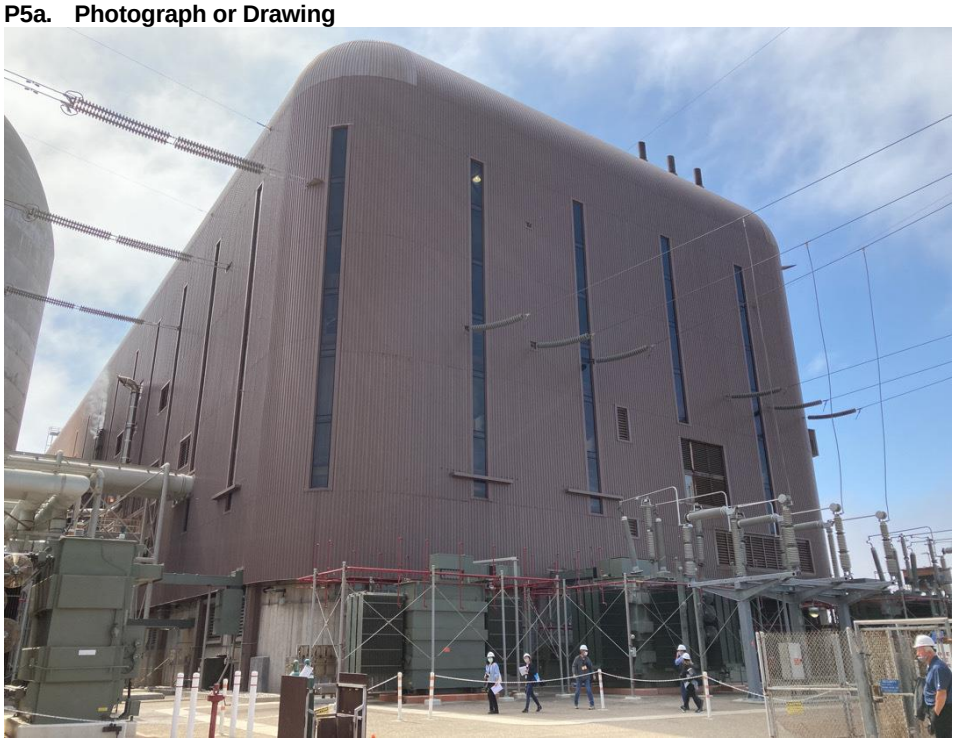
State of California ♉ The Resources Agency Primary #
DEPARTMENT OF PARKS AND RECREATION HRI #
PRIMARY RECORD
Trinomial
NRHP Status Code
Other Listings
Review Code Reviewer Date

Page 1 **of** 3 ***Resource Name or #:** (Assigned by recorder) Turbine Building (Building 101)
P1. Other Identifier:

*P2. **Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County** San Luis Obispo, CA
***b. USGS 7.5' Quad** Port San Luis **Date** 2018
c. Address 3890 Diablo Canyon Road City Avila Beach Zip 93424
d. UTM: Zone 10S , 695224.00 mE/ 3898609.00 mN
e. Other Data: Within DCPP Decommissioning Zone 1

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
The Turbine Building (Building 101) is a four-level rectangular building with two basement levels. The building has an irregular footprint of 102,874 square feet, built atop a concrete foundation with footings. The core structure of the building is reinforced concrete, and the shell is supported on a rigid steel structure. It has concrete five structural bays from east to west (short ends) and 27 from north to south (long sides). The Turbine Building is located in the DCPP Decommissioning Zone 1, west of the Unit 1 and Unit 2 Containment domes (Building 097 and Building 098) and the Auxiliary Building (Building 099). The building's exterior walls and continuous flat roof were originally Galbestos panels, which, according to site personnel, have been covered over on the exterior with similar metal panels to match. Narrow, vertical slotted windows are centered in each structural bay and light each level above the ground level. The slotted windows are steel with glass spandrel panels. Entrances are through partially glazed metal doors at the west and north façades of the building at grade as well as at the fourth level bridge that connects to the Administrative Building (Building 104) to the south. The building does not have standard building "floors"; instead, building levels are referred to as elevations above sea level. (See Continuation Sheet, page 2)

P5a. Photograph or Drawing



***P3b. Resource Attributes:** HP8 - Industrial Building
***P4. Resources Present:**
☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other
P5b. Description of Photo:
Oblique view of subject property, September 23, 2021
***P6. Date Constructed/Age and Source:** ☒ Historic ☐ Prehistoric ☐ Both
1972 estimated, Facility Database for Aspen provided by PG&E
***P7. Owner and Address:**
Eureka Energy Co. (subsidiary of Pacific Gas and Electric Company)
77 Beale Street, 32nd Floor
San Francisco, CA 94177

***P8. Recorded by:**
Page & Turnbull, Inc.
170 Maiden Lane, 5th floor
San Francisco, CA 94104

***P9. Date Recorded:**
December 8, 2021

***P10. Survey Type:** Intensive

***P11. Report Citation**: Black & Veatch Corporation, BHI Power Services and Haley Aldrich, "Diablo Canyon Power Plant Historical Site Assessment Report," prepared for Pacific Gas & Electric Company, June 2018.
***Attachments:** ☐NONE ☐Location Map ☒Continuation Sheet ☐Building, Structure, and Object Record
☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record
☐Artifact Record ☐Photograph Record ☐ Other (List):

***P3a. Description (Continued)**

The industrial building is used to convert steam energy into electrical energy and houses eight turbine-generators (four for each unit). It contains steam system piping and other facilities to move steam generated in the Unit 1 and Unit 2 Containment buildings (secondary water system) to the turbine-generators. It also includes the systems to cool and condense the steam back into water using seawater transported from the Intake Structure (Building 108) though through underground concrete tunnels, circulated within the lower levels of the Turbine Building, and released back into the ocean at the Discharge Structure (Building 103) that is located below the Turbine Building at sea level (**Figure 1**).

The Turbine Building was constructed in two halves, each corresponding with the construction of the two reactors. As shown in PG&E construction photos, the north half of the building corresponding to the Unit 1 reactor was substantially complete in approximately 1972, along with the Unit 1 Containment Building (Building 097) and the Unit 1 half of the Auxiliary Building (Building 099). The southern half for Unit 2 was already under construction and substantially completed in 1973, along with the Unit 2 Containment Building (Building 098) and the Unit 2 half of the Auxiliary Building (Building 099 (**Figure 2**)). The distinction between the two halves is not readily apparent on the building's exterior (**Figure 3**).

The turbines were mounted on the reinforced concrete core structures, built with separate foundations from the rest of the building to isolate the vibrations from the turbines. The top level of the core structures (140 feet above sea level) had a 10-foot-thick concrete deck that matched the upper (fourth) level of the Turbine Building to maximize access to the turbines and their pipes.

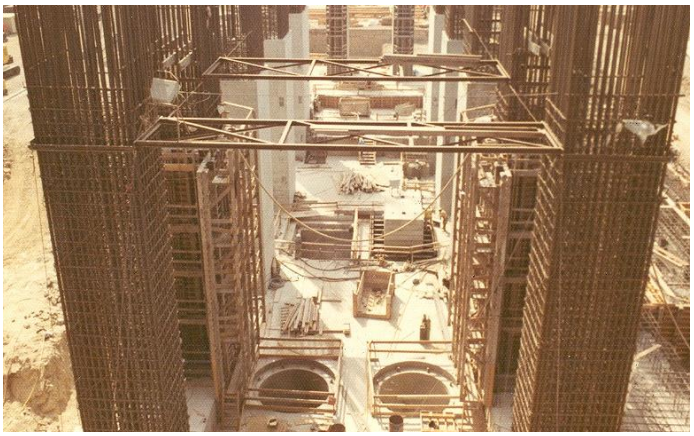


Figure 1: 1972 photo of the ground level of Unit 2 turbine structure under construction, visible are the openings for the intake and discharge tunnels, looking south. Source: PG&E.

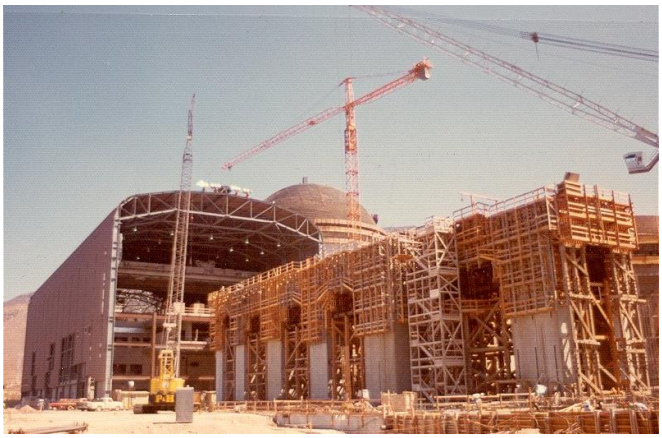


Figure 2: 1972 photo of completed north half of Turbine Building for Unit 1 (left) and the south half for Unit 2 (right, foreground) under construction. Source: PG&E.

After a 1974 test of the plant's cooling system, California Department of Fish and Wildlife determined that toxins from a chemical reaction between the salt in the seawater and the plant's copper tubing had caused the deaths of thousands of Red and Black Abalone.[1] To protect the ecology of Diablo Cove, 6 million feet of copper tubing were substituted for non-corrosive titanium piping in the condensers within the Turbine Building (**Figure 4**).

In 1976, PG&E announced the redesign of the plant structure to address the seismic concerns related to the submarine Hosgri Fault near the plant.[2] The pedestal structures for the turbines were reinforced with concrete buttresses at the ground level of the Turbine Building; these buttresses are enclosed within what appears as one-story additions on the west façade of the Turbine Building (**Figure 5**). Other changes to the building included the addition of the steel grating floor panels with checker plate steel and the replacement of roof bolts.[3] Projecting security enclosed platform were added to the exterior corners after 2001. (See Continuation Sheet, page 3)

[1] Richard F. Harris, "Diablo Canyon's 'green light' means more protests to come," *San Francisco Examiner,* 14 September 1983.
[2] "Diablo from Groundbreaking to Start-up," *The Telegram-Tribune*, 11 August 1984.
[3] "Diablo Canyon: Ready and Waiting," *San Francisco Chronicle*, 12 November 1978: 1.

***P3a. Description (Continued)**

Figure 3: Undated construction photo of south half of Turbine Building nearing completion, looking northeast. Source: PG&E.

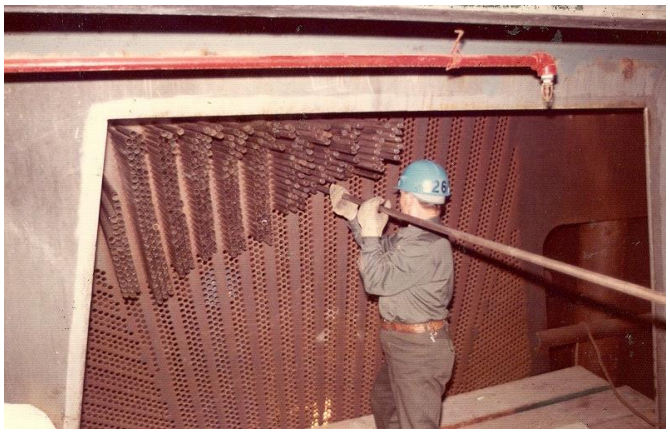


Figure 4: 1972 photo of installation of copper tubing for condenser for Unit 1. Source: PG&E.

Figure 5: One of two one-story additions at the west façade of the Turbine Building enclosing the structural buttress reinforcements and additional equipment, looking south. Source: Page and Turnbull, 2021.

State of California ♿ The Resources Agency Primary #
DEPARTMENT OF PARKS AND RECREATION HRI #
PRIMARY RECORD
Trinomial
NRHP Status Code
Other Listings
Review Code Reviewer Date

Page 1 **of** 2 ***Resource Name or #:** (Assigned by recorder) Discharge Structure (Building 103)
P1. Other Identifier:

*P2. **Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County** San Luis Obispo, CA
***b. USGS 7.5' Quad** Port San Luis **Date** 2018
c. Address 3890 Diablo Canyon Road City Avila Beach Zip 93424
d. UTM: Zone 10S , 695118.00 mE/ 3898568.00 mN
e. Other Data: Within DCPP Decommissioning Zone 4

***P3a. Description:**
The Discharge Structure (Building 103) for the Diablo Canyon Nuclear Power Plant is a reinforced concrete structure on a 12,544 square foot concrete slab foundation with perimetral footings. The rectilinear structure is located in DCPP Decommissioning Zone 4 on the west shoreline of Diablo Cove, directly west and below the Turbine Building (Building 101). It is the discharge point for the tertiary circulating water system within the power block (Containment Buildings, Auxiliary Building, and Turbine Building) that uses seawater collected from the Intake Structure (Building 108) to help cool and condense the steam from the secondary circulating water system used to generate electricity through the turbines in the Turbine Building (Building 101).

Most of the Discharge Structure (Building 103) is below the water level of the cove and not visible. Based on historic construction photos, the structure is an 85-foot tall rectilinear and sloped concrete structure with its highest level at the grade level of the Turbine Building (Building 101) and with its lowest level in Diablo Cove. The only visible part at grade west of the Turbine Building is a low, rectangular concrete structure with four protruding booms for the control gates on the discharge tunnels, below grade (**Figure 1**). The roof of this visible part has two linear ventilation openings along the width each covered with metal grating.

(See Continuation Sheet, page 2)

P5a. Photograph or Drawing

***P3b. Resource Attributes:** HP11 Engineering Structure
***P4. Resources Present:**
☐ Building ☒ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other
P5b. Description of Photo:
View of subject property, looking east. September 23, 2021
***P6. Date Constructed/Age and Source:** ☒ Historic ☐ Prehistoric ☐ Both
1972 estimated, Facility Database for Aspen provided by PG&E
***P7. Owner and Address:**
Eureka Energy Co. (subsidiary of Pacific Gas and Electric Company)
77 Beale Street, 32nd Floor
San Francisco, CA 94177
***P8. Recorded by:**
Page & Turnbull, Inc.
170 Maiden Lane, 5th Floor
San Francisco, CA 94104

***P9. Date Recorded:**
December 8, 2021

***P10. Survey Type:** Intensive

***P11. Report Citation**: Black & Veatch Corporation, BHI Power Services and Haley Aldrich, "Diablo Canyon Power Plant Historical Site Assessment Report," prepared for Pacific Gas & Electric Company, June 2018.
***Attachments:** ☒NONE ☐Location Map ☐Continuation Sheet ☐Building, Structure, and Object Record
☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record
☐Artifact Record ☐Photograph Record ☐ Other (List):

***P3a. Description (Continued)**

The water is discharged through two large openings or spillways at the level of the cove bed and currently submerged. Poured concrete walls on the north and south sides of the spillways. These openings are protected beneath a sloped concrete slab which acts as a retaining wall. South of these openings, there is a rectangular concrete tower with a base at the level of the cove bed and a top flush with the retaining wall. This tower likely contains a stair for access to the cove floor for maintenance (**Figure 2**).

Figure 1: Top of Discharge Structure at ground level looking south. Source: Page and Turnbull, 2021.

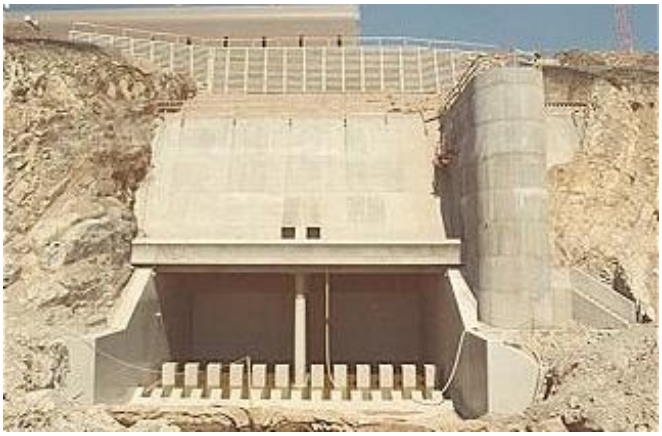


Figure 2: Undated photo of the Discharge Structure's outlet under construction, looking northeast at cove bed with the north half of the Turbine Building visible above. The outlet is currently submerged. Source: PG&E.

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PRIMARY RECORD
Trinomial
NRHP Status Code
Other Listings
Review Code Reviewer Date

Page 1 **of** 1 ***Resource Name or #:** (Assigned by recorder) Security Office (Building 105)
P1. Other Identifier:

*P2. **Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County** San Luis Obispo, CA
***b. USGS 7.5' Quad** Port San Luis **Date** 2018
c. Address 3890 Diablo Canyon Road City Avila Beach Zip 93424
d. UTM: Zone 10S , 695282.00 mE/ 3898432.00 mN
e. Other Data: Within DCPP Decommissioning Zone 2

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
The Security Office Building (Building 105) is a one-story building with an irregular footprint of 9,418 square feet, located south of the Administration Building (Building 104), in the DCPP Decommissioning Zone 2. Built in 1977, the building was the secure entrance for plant personnel, controlling access to the critical plant infrastructure (the containment and turbine buildings).

The Security Office Building sits atop a concrete foundation with a flat built-up membrane roof. A rectangular dark aluminum and glass light monitor is on the roof of the original, center portion. The original portion of the building, along with the 1988 north addition (per San Luis Obispo County permit records), have a top band of vertically scored, exposed aggregate concrete above concrete walls where the same vertical, exposed concrete scoring continues down the lower wall at every other score line. The south, T-shaped addition, constructed at an unknown date, has corrugated metal exterior walls. Windows and doors are dark brown anodized aluminum frame with dark colored glass. The building has entrances at the south and north façades and secondary entrances with metal doors on all façades. With its security screening functions replaced by Protected Area Access Facility (Building 105A) in 2012, the Security Office Building currently contains offices and conference rooms for the security staff.

P5a. Photograph or Drawing

***P3b. Resource Attributes:** HP6 -3 Story Commercial Building

***P4. Resources Present:**
☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other

P5b. Description of Photo:
Oblique view of subject property, looking northwest. September 23, 2021

***P6. Date Constructed/Age and Source:** ☒ Historic ☐ Prehistoric ☐ Both
1977 estimated, Facility Database for Aspen provided by PG&E

***P7. Owner and Address:**
Eureka Energy Co. (subsidiary of Pacific Gas and Electric Company)
77 Beale Street, 32nd Floor
San Francisco, CA 94177

***P8. Recorded by:**
Page & Turnbull, Inc.
170 Maiden Lane, 5th Floor
San Francisco, CA 94104

***P9. Date Recorded:**
December 8, 2021

***P10. Survey Type:** Intensive

***P11. Report Citation**: Black & Veatch Corporation, BHI Power Services and Haley Aldrich, "Diablo Canyon Power Plant Historical Site Assessment Report, prepared for Pacific Gas & Electric Company, June 2018."

***Attachments:** ☒NONE ☐Location Map ☐Continuation Sheet ☐Building, Structure, and Object Record
☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record
☐Artifact Record ☐Photograph Record ☐ Other (List):

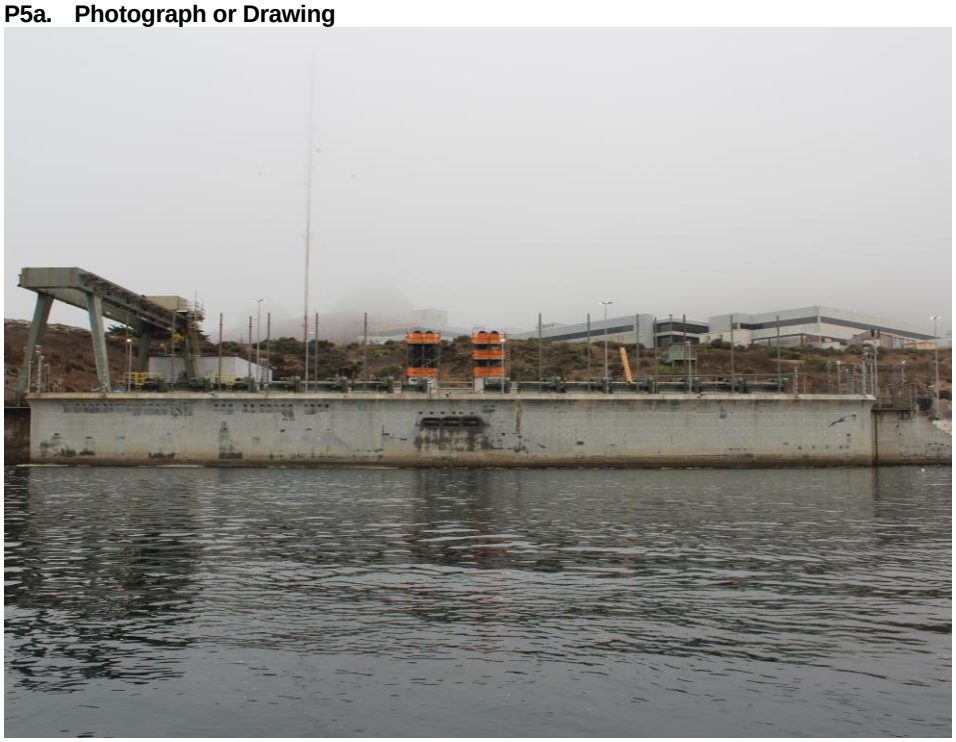
State of California ♿ The Resources Agency Primary #
DEPARTMENT OF PARKS AND RECREATION HRI #
PRIMARY RECORD
Trinomial
NRHP Status Code
Other Listings
Review Code Reviewer Date

Page 1 **of** 2 ***Resource Name or #:** (Assigned by recorder) Intake Structure (Building 108)
P1. Other Identifier:

*P2. **Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County** San Luis Obispo, CA
***b. USGS 7.5' Quad** Port San Luis **Date** 2018
c. Address 3890 Diablo Canyon Road City Avila Beach Zip 93424
d. UTM: Zone 10S , 695179.00 mE/ 3898206.00 mN
e. Other Data: Within DCPP Decommissioning Zone 4

***P3a. Description:**
The Intake Structure (Building 108) for the Diablo Canyon Nuclear Power Plant is a reinforced concrete structure on a 22,547 square foot concrete slab foundation with perimetral footings. The rectilinear structure is located at the manmade Intake Cove, formed by the two breakwaters, in the DCPP Decommissioning Zone 4 and directly west and below the Training Building (Building 109) and the Maintenance Shop Building (Building 119). It is the intake point for the tertiary circulating water system that uses seawater to help cool and condense the steam used to generate electricity through the turbine-generators in the Turbine Building (Building 101). Much of the Intake Structure (Building 108) is below the water level of the cove and not visible. The structure is protected from heavy surf by the breakwaters. Based on historic construction photos, the structure is approximately 40 feet tall with a rectangular concrete structure. Its top portion is at the grade level of the shoreline and the intake openings are at the floor of Intake Cove. The visible part of the structure has a concrete roof with 12 protruding booms for the control doors on the intake gates that are submerged (**Figure 1**). Seawater enters through the 12 gates, which currently have rolling grates over each opening to prevent sea life from passing into the cooling system. Four funnel vents, constructed since 2011 on top of the roof, help prevent tidal back flows. (See Continuation Sheet, page 2)

P5a. Photograph or Drawing



***P3b. Resource Attributes:** HP11 Engineering Structure
***P4. Resources Present:**
☐ Building ☒ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other
P5b. Description of Photo:
View of subject property, looking east. September 23, 2021
***P6. Date Constructed/Age and Source:** ☒ Historic ☐ Prehistoric ☐ Both
1972 estimated, Facility Database for Aspen provided by PG&E
***P7. Owner and Address:**
Eureka Energy Co. (subsidiary of Pacific Gas and Electric Company)
77 Beale Street, 32nd Floor
San Francisco, CA 94177

***P8. Recorded by:**
Page & Turnbull, Inc.
170 Maiden Lane, 5th Floor
San Francisco, CA 94104

***P9. Date Recorded:**
December 8, 2021

***P10. Survey Type:** Intensive

***P11. Report Citation**: Black & Veatch Corporation, BHI Power Services and Haley Aldrich, "Diablo Canyon Power Plant Historical Site Assessment Report," prepared for Pacific Gas & Electric Company, June 2018.
***Attachments:** ☐NONE ☐Location Map ☒Continuation Sheet ☐Building, Structure, and Object Record
☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record
☐Artifact Record ☐Photograph Record ☐ Other (List):

***P3a. Description (Continued)**

Seawater from the Intake Structure are transported to the Turbine Building (building 101) through two large tunnels that are behind (north) the structure and are now below surface cover (**Figure 2**).

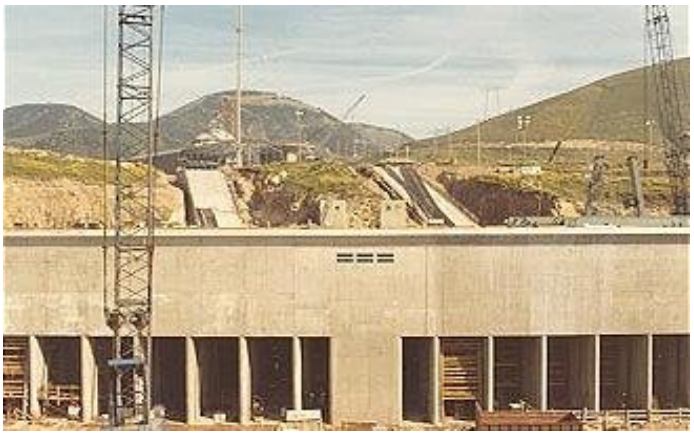


Figure 1: Undated photo of Intake Structure under construction, looking northeast. The openings are the intake gates that are now submerged. The six vents in the center is visible above the waterline. Source: PG&E.

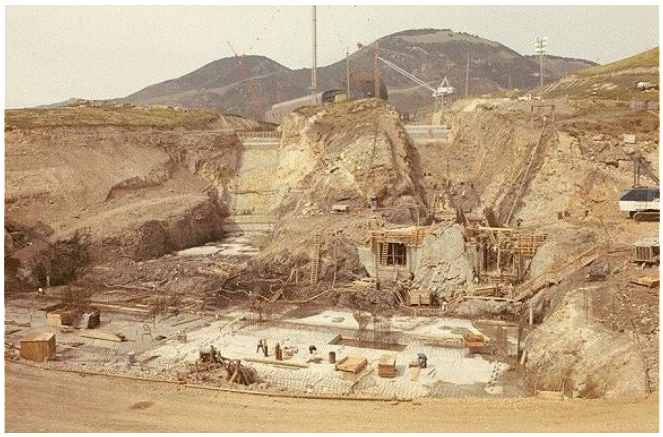


Figure 2: Undated photo of Intake Structure and the tunnels within it construction, looking northeast at cove bed. The north half of the Turbine Building (Building 101) is visible in the background. Source: PG&E Archives.

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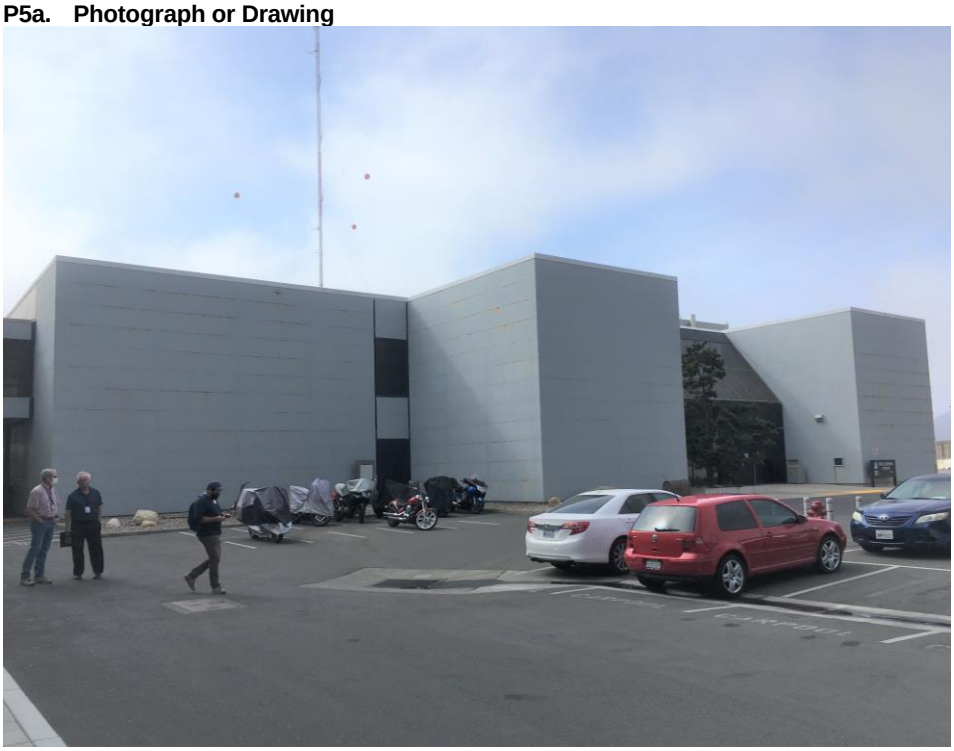
Page 1 **of** 1 ***Resource Name or #:** (Assigned by recorder) Training Building (Building 109)
P1. Other Identifier:

*P2. **Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County** San Luis Obispo, CA
***b. USGS 7.5' Quad** Port San Luis **Date** 2018
c. Address 3890 Diablo Canyon Road City Avila Beach Zip 93424
d. UTM: Zone 10S , 695274.14 mE/ 3898313.96 mN
e. Other Data: Within DCPP Decommissioning Zone 5

***P3a. Description:**
The Training Building (Building 109) for the Diablo Canyon Nuclear Power Plant is a rectilinear two-story steel frame building on an approximately 21,562 square foot concrete slab on grade foundation. The E-shaped building is located on the west side of Shore Cliff Road, adjacent to Parking Lot 4A in the DCPP Decommissioning Zone 5 and overlooks Intake Cove. The Training Building (Building 109) is north of and perpendicular to the Maintenance Shop Building (Building 119). The two buildings share a partially enclosed exterior breezeway toward their west ends. The Training Building has large classrooms for staff training, as well as numerous office spaces for the training department. It also houses the DCPP control room simulator, a full-size, complete mock-up of the Unit 1 control room, both in form and function. The simulator is used for operator training and performance of Nuclear Regulatory Commission (NRC) exams.

The flat-roof building is clad in painted metal panels and typical windows are vertically-oriented, fixed aluminum frame with tinted glass at a few locations. The main entrance is on the east façade, facing Parking Lot 4A, at a glass-enclosed, shed-roof lobby between the two legs of the E. The paired entrance doors are glass and set within the dark aluminum and glass wall. At least one other entrance is on the south façade in the partially glazed breezeway shared with Maintenance Shop Building (Building 119).

P5a. Photograph or Drawing



***P3b. Resource Attributes:** HP6 - Commercial Building Less than 3 Stories
***P4. Resources Present:**
☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other
P5b. Description of Photo:
Oblique view of the subject building, looking northwest. September 23, 2021
***P6. Date Constructed/Age and Source:** ☒ Historic ☐ Prehistoric ☐ Both
1984, provided by PG&E through data request.
***P7. Owner and Address:**
Eureka Energy Co. (subsidiary of Pacific Gas and Electric Company)
77 Beale Street, 32nd Floor
San Francisco, CA 94177
***P8. Recorded by:**
Page & Turnbull, Inc.
170 Maiden Lane, 5th Floor
San Francisco, CA 94104
***P9. Date Recorded:**
December 8, 2021
***P10. Survey Type:** Intensive

***P11. Report Citation**: Black & Veatch Corporation, BHI Power Services and Haley Aldrich,"Diablo Canyon Power Plant Historical Site Assessment Report," prepared for Pacific Gas & Electric Company, June 2018.
***Attachments:** ☒NONE ☐Location Map ☐Continuation Sheet ☐Building, Structure, and Object Record
☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record
☐Artifact Record ☐Photograph Record ☐ Other (List):

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Review Code Reviewer Date

Page 1 **of** 1 ***Resource Name or #:** (Assigned by recorder) Turbine Generator and Rotor Equipment Warehouse (Building 111)
P1. Other Identifier:

*__P2. Location:__ ☐ **Not for Publication** ☒ **Unrestricted** ***a. County** San Luis Obispo, CA
***b. USGS 7.5' Quad** Port San Luis **Date** 2018
c. Address 3890 Diablo Canyon Road City Avila Beach Zip 93424
d. UTM: Zone 10S , 695480.50 mE/ 3898069.65 mN
e. Other Data: Within DCPP Decommissioning Zone 7

***P3a. Description:**
The Turbine Generator and Rotor Equipment Warehouse (Building 111) for the Diablo Canyon Nuclear Power Plant is a tall one-story steel frame building on an approximately 9,070 square foot concrete slab on grade foundation. Constructed in 1982, the L-shaped building is located on the southwest side of Shore Cliff Road in the northernmost part of the DCPP Decommissioning Zone 7, with other buildings at the flatten plateau overlooking the south shore of the Intake Cove and the Pacific Ocean. The warehouse is used to store the Hi-TRAC equipment and several large turbine related components. The north half is used to store reactor coolant pump-related components, such as a pump impeller, rotating assembly, and motor.

The building has low-pitched side gable roofs on each wing clad in corrugated metal and drain to gutters on the east and west edges. The building's exterior is corrugated metal. It has large roll-up doors on the south façade of the north wing and east façade of the west wing facing the open spaced formed by the two wings. A single person door is on the west façade of the west wing, facing the ocean. The building has no windows. There is a ladder at the north façade of the west wing for roof access.

P5a. Photograph or Drawing

***P4. Resources Present:**
☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other
P5b. Description of Photo:
Oblique view of the subject property, looking west. September 23, 2021
***P6. Date Constructed/Age and Source:** ☒ Historic ☐ Prehistoric ☐ Both
1982 estimated, Facility Database for Aspen provided by PG&E
***P7. Owner and Address:**
Eureka Energy Co. (subsidiary of Pacific Gas and Electric Company)
77 Beale Street, 32nd Floor
San Francisco, CA 94177

***P8. Recorded by:**
Page & Turnbull, Inc.
170 Maiden Lane, 5th Floor
San Francisco, CA 94104
***P9. Date Recorded:**
December 8, 2021

***P10. Survey Type:** Intensive
***P11. Report Citation**: Black & Veatch Corporation, BHI Power Services and Haley Aldrich,"Diablo Canyon Power Plant Historical Site Assessment Report," prepared for Pacific Gas & Electric Company, June 2018.
***Attachments:** ☒NONE ☐Location Map ☐Continuation Sheet ☐Building, Structure, and Object Record
☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record
☐Artifact Record ☐Photograph Record ☐ Other (List):

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NRHP Status Code
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Review Code Reviewer Date

Page 1 **of** 2 ***Resource Name or #:** (Assigned by recorder) Firing Range (Building 114)
P1. Other Identifier:

*P2. **Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County** San Luis Obispo, CA
***b. USGS 7.5' Quad** Port San Luis **Date** 2018
c. Address 3890 Diablo Canyon Road City Avila Beach Zip 93424
d. UTM: Zone 10S , 695838.15 mE/ 3898191.38 mN
e. Other Data: Within DCPP Decommissioning Zone 8

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
The Firing Range (Building 114) consists of a one-story wood framed building constructed atop a concrete slab foundation of 2,061 square feet and a large, open outdoor shooting range built into the hillside. The complex is located northeast of the Warehouse "B" Fukushima FLEX Equipment Storage Building (Building 113) in the DCPP Decommissioning Zone 8. A four-story Security Training Tower (Building 114A) was added to on the north side of the Firing Range building in 2012 with windows facing the range.

The Firing Range building has three sides, with its east side open to the outdoor range **(Figure 1 and Figure 2)**. It has a shed roof that angles down (like a partial gable) at the open side and is clad with corrugated metal. Exterior walls are wood board cladding, windows are aluminum frame sliding sash, and metal doors are partially glazed. The building is primarily accessed through a metal door on the west façade of the building with a secondary sheltered entrance at the southwest corner of the building, accessed by a concrete stair. (See Continuation Sheet, page 2)

P5a. Photograph or Drawing

***P3b. Resource Attributes:** HP39 - Other
***P4. Resources Present:**
☒ Building ☒ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other
P5b. Description of Photo:
Oblique view of subject property, looking northeast. September 23, 2021
***P6. Date Constructed/Age and Source:** ☒ Historic ☐ Prehistoric ☐ Both
1978 estimated, Facility Database for Aspen provided by PG&E
***P7. Owner and Address:**
Eureka Energy Co. (subsidiary of Pacific Gas and Electric Company)
77 Beale Street, 32nd Floor
San Francisco, CA 94177
***P8. Recorded by:**
Page & Turnbull, Inc.
170 Maiden Lane, 5th Floor
San Francisco, CA 94104

***P9. Date Recorded:**
December 8, 2021

***P10. Survey Type:** Intensive

***P11. Report Citation**: None

***Attachments:** ☐NONE ☐Location Map ☒Continuation Sheet ☐Building, Structure, and Object Record
☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record
☐Artifact Record ☐Photograph Record ☐ Other (List):

***P3a. Description (Continued)**

The outdoor range is an elongated, U-shaped bowl built into the hillside **(Figure 3)**. It has two flat, paved levels each with 10 firing lanes **(Figure 4)**. Additional targets are set into the hillside, where the earth serves as the backstop. Another target area is set higher up in the hill. A few small storage sheds are at the periphery, along with a paved pedestrian path at the north end connecting the two levels. Concrete block walls and chain-link fencing secure the complex.

PG&E documents estimate the complex was constructed in 1978. The Firing Range is used for regular tactical training of security personnel.

Figure 1: Oblique view of the rear (east) open side of the Firing Range building, the later added tower is visible in the background, looking northeast. Source: Page and Turnbull, 2021.

Figure 2: View of exposed interior of Firing Range building, looking north. Source: Page and Turnbull, 2021.

Figure 3: View of the outdoor range with two levels of firing lanes and hillside beyond, looking southeast. Source: Page and Turnbull, 2021.

Figure 4: Detailed view of backstop at firing lanes. Source: Page and Turnbull, 2021.

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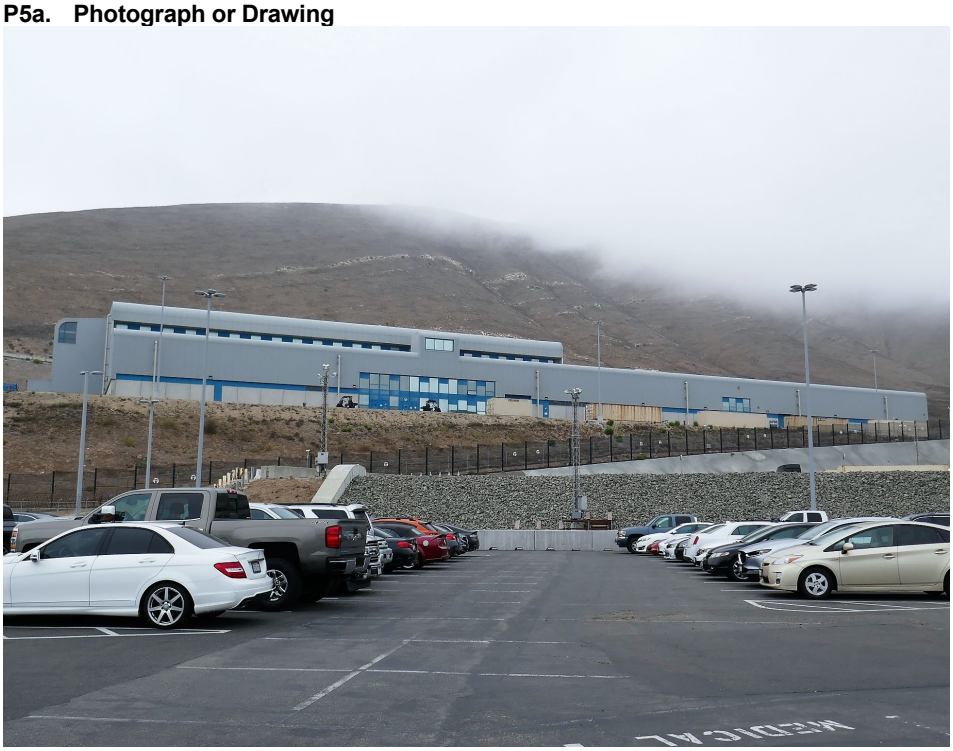
Page 1 **of** 1 ***Resource Name or #:** (Assigned by recorder) Main Warehouse (Building 115)
P1. Other Identifier:

*P2. **Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County** San Luis Obispo, CA
***b. USGS 7.5' Quad** Port San Luis **Date** 2018
c. Address 3890 Diablo Canyon Road City Avila Beach Zip 93424
d. UTM: Zone 10S , 695570.00 mE/ 3898383.00 mN
e. Other Data: Within DCPP Decommissioning Zone 3

***P3a. Description:**
The Main Warehouse (Building 115) for the Diablo Canyon Nuclear Power Plant is a rectilinear two story with mezzanine steel frame building on an approximately 99,278 square foot concrete slab on grade foundation. The building is located on an elevated plateau above Parking Lot 7 and north of Parking Lot 8, in DCPP Decommissioning Zone 3. It is used as a large warehousing facility to support the plant, containing multiple racks and storage bins for parts and other materials. The second floor and intermediate mezzanine contain office space, currently housing engineering staff. The second floor is only on the northwestern quadrant of the building and is set back from the ground level's west façade. The flat-roof building has curved edges at the roofline in the long direction. The base of the building is clad in concrete-fiber panels, and the upper portions are sheathed in corrugated metal panels. At the north façade is an entrance for the warehouse space with a roll-up door. The main entrance to the mezzanine and second floor is at a projecting section housing the stairwell and an elevator, which has a curved window toward the top on the east and west sides. Two single person doors are set into a recessed metal and glass window wall to access the upper floors. Secondary doors are found on the other façades. Typical windows on the building are fixed steel windows. A section of the west façade, toward the center, has a metal and glass window wall. At the second story, windows for the offices are a continuous, recessed strip.

P5a. Photograph or Drawing



***P3b. Resource Attributes:** HP8 - Industrial Building

☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other

P5b. Description of Photo:
Oblique view of the subject property, looking northeast. September 23, 2021

***P6. Date Constructed/Age and Source:** ☒ Historic ☐ Prehistoric ☐ Both
1985 estimated, Facility Database for Aspen provided by PG&E

***P7. Owner and Address:**
Eureka Energy Co. (subsidiary of Pacific Gas and Electric Company)
77 Beale Street, 32nd Floor
San Francisco, CA 94177

***P8. Recorded by:**
Page & Turnbull, Inc.
170 Maiden Lane, 5th Floor
San Francisco, CA 94104

***P9. Date Recorded:**
December 8, 2021

***P10. Survey Type:** Intensive

***P11. Report Citation**: Black & Veatch Corporation, BHI Power Services and Haley Aldrich,"Diablo Canyon Power Plant Historical Site Assessment Report," prepared for Pacific Gas & Electric Company, June 2018.

***Attachments:** ☒NONE ☐Location Map ☐Continuation Sheet ☐Building, Structure, and Object Record
☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record
☐Artifact Record ☐Photograph Record ☐ Other (List):

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PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code
Other Listings
Review Code Reviewer Date

Page 1 **of** 2 ***Resource Name or #:** (Assigned by recorder) Unit 2 Cold Machine Shop (Building 116)
P1. Other Identifier:

*P2. **Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County** San Luis Obispo, CA
***b. USGS 7.5' Quad** Port San Luis **Date** 2018
c. Address 3890 Diablo Canyon Road City Avila Beach Zip 93424
d. UTM: Zone 10S , 695371.00 mE/ 3898425.00 mN
e. Other Data: Within DCPP Decommissioning Zone 2

***P3a. Description:**
The Unit 2 Cold Machine Shop (Building 116) for the Diablo Canyon Nuclear Power Plant is a rectilinear tall, two-story steel frame and tilt-up concrete building on an approximately 27,282 square foot concrete slab on grade foundation. Constructed in 1984, the building is located south of the Administration Building (Building 104) and east of the Protect Area Access Facility (Building 105A) in DCPP Decommissioning Zone 2. It is used primarily for the repair and maintenance of mechanical components onsite and contains maintenance offices. The second story appears to only be at the south end of the building.

The building is composed of three volumes; exterior walls on the east and west volumes are finished concrete with score lines or reveals creating a panelized appearance while the central volume is sheathed in corrugated metal panels. At the south façade, a metal and glass window wall, with a band of operable hopper window at each floor, is at the central volume under the corrugate roof element, and a projecting one-story, metal and glass volume with a curved roof is attached, which appears to be an entrance vestibule or stairwell. The central volume has a low-pitched front gable roof with two curved light monitors at the east and west edges running along the length of the volume. The light monitors face each other across the volume's roof and feature both glazed and vented openings. (See Continuation Sheet, page 2)

P5a. Photograph or Drawing

***P3b. Resource Attributes:** HP8 - Industrial Building

☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other

P5b. Description of Photo:
Oblique view of the subject property, looking southwest. September 23, 2021

***P6. Date Constructed/Age and Source:** ☒ Historic ☐ Prehistoric ☐ Both
1984 estimated, Facility Database for Aspen provided by PG&E

***P7. Owner and Address:**
Eureka Energy Co. (subsidiary of Pacific Gas and Electric Company)
77 Beale Street, 32nd Floor
San Francisco, CA 94177

***P8. Recorded by:**
Page & Turnbull, Inc.
170 Maiden Lane, 5th Floor
San Francisco, CA 94104

***P9. Date Recorded:**
December 8, 2021

***P10. Survey Type:** Intensive

***P11. Report Citation**: Black & Veatch Corporation, BHI Power Services and Haley Aldrich,"Diablo Canyon Power Plant Historical Site Assessment Report," prepared for Pacific Gas & Electric Company, June 2018.

***Attachments:** ☒NONE ☐Location Map ☐Continuation Sheet ☐Building, Structure, and Object Record
☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record
☐Artifact Record ☐Photograph Record ☐ Other (List):

***P3a. Description (Continued)**

The roofs of the west and east volume are flat and lower than the light monitors. The east volume also has a curved, linear corrugated metal canopy over a work area and loading zone along the east façade. A large rolling door opens the entire north façade of the central volume. The east and west volumes are accessed by sixteen-foot-tall roll-up steel doors on their north façade. Windows on the east and west volumes are large metal frame openings filled with glass block; a metal spandrel is between window assemblies that span the two floors.

Figure 1: South (left) and east (foreground) façades of the Cold Machine Shop (Building 116), looking northwest. Source: Page and Turnbull, 2021.

Figure 2: North façade of the Cold Machine Shop (Building 116) with roll-up doors at the three volumes, looking southeast. Source: Page & Turnbull, 2021.

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Primary #
HRI #
Trinomial
NRHP Status Code

Other Listings
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Page 1 **of** 1 ***Resource Name or #:** (Assigned by recorder) RCA Laundry Facility (Building 117A)
P1. Other Identifier:

*P2. **Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County** San Luis Obispo, CA
***b. USGS 7.5' Quad** Port San Luis **Date** 2018
c. Address 3890 Diablo Canyon Road City Avila Beach Zip 93424
d. UTM: Zone 10S , 695341.07 mE/ 3898639.44 mN
e. Other Data: Within DCPP Decommissioning Zone 1

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
The Radiation Controlled Area (RCA) Laundry Facility (Building 117A) is a two-story linear reinforced concrete structure with footprint of 12,795 square feet, built atop a concrete slab foundation. The building is located in the DCPP Decommissioning Zone 1, east of the Auxiliary Building (Building 099) and Outdoor Water Storage Tanks (Building 100). The roof appears to be flat or a low-pitch side gable roof. Exterior walls are made of corrugated metal; windows and doors were not visible during a site visit. A partially enclosed metal stair is at the south façade of the building. The lower level may be partially open as well.

PG&E documents estimate the building was constructed in 1975. The RCA Laundry Facility contains protective clothing washers and dryers, as well as facilities for the decontamination of tools and equipment. To the south is the RCA Radwaste Building (Building 117B, estimated construction in 1990) that is used for preparing, packaging, and storage of radioactive waste, though some of these functions may also be at the lower level of the RCALaundry Facility (Building 117A).

P5a. Photograph or Drawing

***P3b. Resource Attributes:** HP8 - Industrial Building

☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other

P5b. Description of Photo:
Oblique view of subject property, looking north. September 23, 2021

***P6. Date Constructed/Age and Source:** ☒ Historic ☐ Prehistoric ☐ Both
1975 estimated, Facility Database for Aspen provided by PG&E

***P7. Owner and Address:**
Eureka Energy Co. (subsidiary of Pacific Gas and Electric Company)
77 Beale Street, 32nd Floor
San Francisco, CA 94177

***P8. Recorded by:**
Page & Turnbull, Inc.
170 Maiden Lane, 5th Floor
San Francisco, CA 94104

***P9. Date Recorded:**
December 8, 2021

***P10. Survey Type:** Intensive

***P11. Report Citation**: Black & Veatch Corporation, BHI Power Services and Haley Aldrich, "Diablo Canyon Power Plant Historical Site Assessment Report," prepared for Pacific Gas & Electric Company, June 2018.

***Attachments:** ☒NONE ☐Location Map ☐Continuation Sheet ☐Building, Structure, and Object Record
☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record
☐Artifact Record ☐Photograph Record ☐ Other (List):

State of California ♿ The Resources Agency Primary #
DEPARTMENT OF PARKS AND RECREATION HRI #
PRIMARY RECORD
Trinomial
NRHP Status Code
Other Listings
Review Code Reviewer Date

Page 1 **of** 1 ***Resource Name or #:** (Assigned by recorder) Auxiliary Boiler Enclosure (Building 118)
P1. Other Identifier:

*P2. **Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County** San Luis Obispo, CA
***b. USGS 7.5' Quad** Port San Luis **Date** 2018
c. Address 3890 Diablo Canyon Road City Avila Beach Zip 93424
d. UTM: Zone 10S , 695233.00 mE/ 3898726.00 mN
e. Other Data: Within DCPP Decommissioning Zone 1

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
Auxiliary Boiler Enclosure (Building 118) is a rectangular one-story steel frame structure built atop a concrete slab foundation of 1,841 square feet. The building is located north of the Auxiliary Building (Building 099) and Unit 1 Containment (Building 097) in the DCPP Decommissioning Zone 1. Exterior walls and flat roof are corrugated metal; windows were not visible during the site visit. The building is primarily accessed by a large roll-up door on the north façade. The west façade has large square ventilation grills with metal louvers. There is a large exhaust stack protruding from the roof and attached to the north wall of the Auxiliary Building (Building 099).

PG&E documents estimate the building was constructed in 1980. The building houses the auxiliary boiler for the plant.

P5a. Photograph or Drawing

***P3b. Resource Attributes:** HP8 - Industrial Building
***P4. Resources Present:**
☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other
P5b. Description of Photo:
Oblique view of subject property, looking south. September 23, 2021
***P6. Date Constructed/Age and Source:** ☒ Historic ☐ Prehistoric ☐ Both
1980 estimated, Facility Database for Aspen provided by PG&E
***P7. Owner and Address:**
Eureka Energy Co. (subsidiary of Pacific Gas and Electric Company)
77 Beale Street, 32nd Floor
San Francisco, CA 94177

***P8. Recorded by:**
Page & Turnbull, Inc.
170 Maiden Lane, 5th Floor
San Francisco, CA 94104

***P9. Date Recorded:**
December 8, 2021

***P10. Survey Type:** Intensive

***P11. Report Citation**: Black & Veatch Corporation, BHI Power Services and Haley Aldrich, "Diablo Canyon Power Plant Historical Site Assessment Report," prepared for Pacific Gas & Electric Company, June 2018.
***Attachments:** ☒NONE ☐Location Map ☐Continuation Sheet ☐Building, Structure, and Object Record
☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record
☐Artifact Record ☐Photograph Record ☐ Other (List):

State of California ♦ The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code
Other Listings
Review Code Reviewer Date

Page 1 **of** 1 ***Resource Name or #:** (Assigned by recorder) Seawater Reverse Osmosis Facility (Building 121)
P1. Other Identifier:

*P2. **Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County** San Luis Obispo, CA
***b. USGS 7.5' Quad** Port San Luis **Date** 2018
c. Address 3890 Diablo Canyon Road City Avila Beach Zip 93424
d. UTM: Zone 10S , 695520.03 mE/ 3898035.10 mN
e. Other Data: Within DCPP Decommissioning Zone 7

***P3a. Description:**
The Seawater Reverse Osmosis Facility (Building 121) for the Diablo Canyon Nuclear Power Plant consists of a rectilinear one-story steel frame building on an approximately 3,500 square foot concrete slab on grade foundation, as well as seawater reverse osmosis (SWRO) equipment on a 5,200 square-foot concrete pad to the east and various water tanks, pipes, and other equipment directly to the west of the building. The facility is located on the southwest side of Shore Cliff Road in DCPP Decommissioning Zone 7, between the Turbine Generator and Rotor Equipment Warehouse (Building 111) to the north and the Fabrication Shop (Building 122) to the south, overlooking the coastline. The facility creates potable water from seawater for use throughout the plant.

The building has a low-pitched gable roof and is clad in corrugated metal panels. It has no windows and access is through metal doors on the east and west façades along with large roll-up doors on the south and east facades. There is a ladder on the north façade for roof access.

P5a. Photograph or Drawing

***P3b. Resource Attributes** HP8 - Industrial Building

☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other

P5b. Description of Photo:
Oblique view of the subject property, looking northwest. September 23, 2021

***P6. Date Constructed/Age and Source:** ☒ Historic ☐ Prehistoric ☐ Both
1985 estimated, Facility Database for Aspen provided by PG&E

***P7. Owner and Address:**
Eureka Energy Co. (subsidiary of Pacific Gas and Electric Company)
77 Beale Street, 32nd Floor
San Francisco, CA 94177

***P8. Recorded by:**
Page & Turnbull, Inc.
170 Maiden Lane, 5th Floor
San Francisco, CA 94104

***P9. Date Recorded:**
December 8, 2021

***P10. Survey Type:** Intensive

***P11. Report Citation**: Black & Veatch Corporation, BHI Power Services and Haley Aldrich,"Diablo Canyon Power Plant Historical Site Assessment Report," prepared for Pacific Gas & Electric Company, June 2018.

***Attachments:** ☒NONE ☐Location Map ☐Continuation Sheet ☐Building, Structure, and Object Record
☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record
☐Artifact Record ☐Photograph Record ☐ Other (List):

State of California ♘ The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code
Other Listings
Review Code Reviewer Date

Page 1 **of** 1 ***Resource Name or #:** (Assigned by recorder) Chlorination & Domestic Water (Building 304)
P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County** San Luis Obispo, CA
***b. USGS 7.5' Quad** Port San Luis **Date** 2018
c. Address 3890 Diablo Canyon Road City Avila Beach Zip 93424
d. UTM: Zone 10S , 695661.99 mE/ 3898982.10 mN
e. Other Data: Within DCPP Decommissioning Zone 10

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
The Chlorination & Domestic Water (Building 304) is a one-story, steel frame building built on an approximately 1,376 square concrete slab foundation. The building is located in the DCPP Decomissioning Zone 10, east of the East Raw Water Reservoir (Building 1B). It is in a cluster with Clarifier & Make-up Pre-Treatment Building (Building 305) and Chemical Storage (Building 306). The walls of the building are corrugated metal while the gable roof appears to be a standing seam metal roof. No doors or windows were visible during a site visit. There is storage tank on the north side of the building.

PG&E documents estimate the building was constructed in 1985, as were the Clarifier & Make-up Pre-Treatment Building (Building 305) and Chemical Storage (Building 306). The building houses chlorination and domestic water treatment for the plant.

P5a. Photograph or Drawing

***P3b. Resource Attributes:** HP8 - Industrial Building

☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other

P5b. Description of Photo:
View of subject building (behind Building 305), looking east, indicated with arrow. September 23, 2021

***P6. Date Constructed/Age and Source:** ☒ Historic ☐ Prehistoric ☐ Both
1985 estimated, Facility Database for Aspen provided by PG&E

***P7. Owner and Address:**
Eureka Energy Co. (subsidiary of Pacific Gas and Electric Company)
77 Beale Street, 32nd Floor
San Francisco, CA 94177

***P8. Recorded by:**
Page & Turnbull, Inc.
170 Maiden Lane, 5th Floor
San Francisco, CA 94104

***P9. Date Recorded:**
December 8, 2021

***P10. Survey Type:** Intensive

***P11. Report Citation**: Black & Veatch Corporation, BHI Power Services and Haley Aldrich, "Diablo Canyon Power Plant Historical Site Assessment Report," prepared for Pacific Gas & Electric Company, June 2018.
***Attachments:** ☒NONE ☐Location Map ☐Continuation Sheet ☐Building, Structure, and Object Record
☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record
☐Artifact Record ☐Photograph Record ☐ Other (List):

State of California ♘ The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code
Other Listings
Review Code Reviewer Date

Page 1 **of** 1 ***Resource Name or #:** (Assigned by recorder) Clarifier & Make-up Pre-Treatment Building (305)
P1. Other Identifier:

*P2. **Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County** San Luis Obispo, CA
***b. USGS 7.5' Quad** Port San Luis **Date** 2018
c. Address 3890 Diablo Canyon Road City Avila Beach Zip 93424
d. UTM: Zone 10S , 695651.00 mE/ 3898983.40 mN
e. Other Data: Within DCPP Decommissioning Zone 10

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
Clarifier & Make-up Pre-Treatment Building (Building 304) is a one-story, steel frame building built on an approximately 480 square concrete slab foundation. The building is located in the DCPP Decommissioning Zone 10, east of the East Raw Water Reservoir (Building 1B). It is in a cluster with Chlorination & Domestic Water Building (Building 304) and Chemical Storage (Building 306). The walls of the gable-roofed building are corrugated metal, and no doors or windows were visible during the site visit. There is a small treatment plant on the north side of the building.

PG&E documents estimate the building was constructed in 1985, as were the Chlorination & Domestic Water Building (Building 304) and Chemical Storage (Building 306). The building contains a multimedia filter and chlorination injection to minimize algae growth in the water that is then stored in the Raw Water Reservoirs; also prevents fouling of filters in the Raw Water System with slime.

P5a. Photograph or Drawing

***P3b. Resource Attributes:** HP8 - Industrial Building

☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other

P5b. Description of Photo:
View of subject building, looking east, indicated with arrow. September 23, 2021

***P6. Date Constructed/Age and Source:** ☒ Historic ☐ Prehistoric ☐ Both
1985 estimated, Facility Database for Aspen provided by PG&E

***P7. Owner and Address:**
Eureka Energy Co. (subsidiary of Pacific Gas and Electric Company)
77 Beale Street, 32nd Floor
San Francisco, CA 94177

***P8. Recorded by:**
Page & Turnbull, Inc.
170 Maiden Lane, 5th Floor
San Francisco, CA 94104

***P9. Date Recorded:**
December 8, 2021

***P10. Survey Type:** Intensive

***P11. Report Citation**: Black & Veatch Corporation, BHI Power Services and Haley Aldrich, "Diablo Canyon Power Plant Historical Site Assessment Report," prepared for Pacific Gas & Electric Company, June 2018.
***Attachments:** ☒NONE ☐Location Map ☐Continuation Sheet ☐Building, Structure, and Object Record
☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record
☐Artifact Record ☐Photograph Record ☐ Other (List):

State of California ♉ The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code
Other Listings
Review Code Reviewer Date

Page 1 **of** 1 ***Resource Name or #:** (Assigned by recorder) Chemical Storage (Building 306)
P1. Other Identifier:

*P2. **Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County** San Luis Obispo, CA
***b. USGS 7.5' Quad** Port San Luis **Date** 2018
c. Address 3890 Diablo Canyon Road City Avila Beach Zip 93424
d. UTM: Zone 10S , 695651.96 mE/ 3898974.58 mN
e. Other Data: Within DCPP Decommissioning Zone 10

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
Chemical Storage (Building 306) is a one-story, steel frame building built on an approximately 480 square concrete slab foundation. The building is located in the DCPP Decomissioning Zone 10, east of the East Raw Water Reservoir (Building 1B). It is in a cluster with the Chlorination & Domestic Water Building (Building 304) and Clarifier & Make-up Pre-Treatment Building (Building 305). The walls of the gable-roof building are corrugated metal, and no doors or windows were visible during the site visit.

PG&E documents estimate the building was constructed in 1985, as were the Chlorination & Domestic Water Building (Building 304) and Clarifier & Make-up Pre-Treatment Building (Building 305). The building is used for storage of chemicals for the production of make-up water and domestic water for the plant.

P5a. Photograph or Drawing

***P3b. Resource Attributes:** HP8 - Industrial Building

☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other

P5b. Description of Photo:
View of subject building, looking east indicated with arrow. September 23, 2021

***P6. Date Constructed/Age and Source:** ☒ Historic ☐ Prehistoric ☐ Both
1985 estimated, Facility Database for Aspen provided by PG&E

***P7. Owner and Address:**
Eureka Energy Co. (subsidiary of Pacific Gas and Electric Company)
77 Beale Street, 32nd Floor
San Francisco, CA 94177

***P8. Recorded by:**
Page & Turnbull, Inc.
170 Maiden Lane, 5th Floor
San Francisco, CA 94104

***P9. Date Recorded:**
December 8, 2021

***P10. Survey Type:** Intensive

***P11. Report Citation**: Black & Veatch Corporation, BHI Power Services and Haley Aldrich, "Diablo Canyon Power Plant Historical Site Assessment Report," prepared for Pacific Gas & Electric Company, June 2018.
***Attachments:** ☒NONE ☐Location Map ☐Continuation Sheet ☐Building, Structure, and Object Record
☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record
☐Artifact Record ☐Photograph Record ☐ Other (List):

State of California ♿ The Resources Agency Primary #
DEPARTMENT OF PARKS AND RECREATION HRI #
PRIMARY RECORD
Trinomial
NRHP Status Code
Other Listings
Review Code Reviewer Date

Page 1 **of** 1 ***Resource Name or #:** (Assigned by recorder) Soils and Concrete Testing Lab (Building 331)
P1. Other Identifier:

*P2. **Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County** San Luis Obispo, CA
***b. USGS 7.5' Quad** Port San Luis **Date** 2018
c. Address 3890 Diablo Canyon Road City Avila Beach Zip 93424
d. UTM: Zone 10S , 695959.00 mE/ 3898075.00 mN
e. Other Data: Within DCPP Decommissioning Zone 8

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
Soils and Concrete Testing Lab (Building 331) is a rectangular one-story steel frame building with a side gable roof constructed atop a concrete slab foundation of 1,824 square feet. The building is located south of the Warehouse "B" Fukushima FLEX Equipment Storage Building (Building 113), on the east side of Diablo Canyon Drive and across from Parking Lot 1 in DCPP Decommissioning Zone 8. The exterior walls are clad in corrugated metal and the roof is clad in metal as well. The building is primarily accessed through a double door on the center of the west façade, with a secondary double door entrance on the south façade. The metal doors are partially glazed. Punched window openings in a regular pattern have metal sliding sashes. On the west façade, a round exhaust fan is mounted in a previous window opening. There are gutters along the east and west edges of the roof.

Constructed around 1970, the building is among the oldest extant buildings at the site. It has housed concrete strength and soils testing since the original construction of the plant, when it was testing the quality of the concrete being mixed and manufactured adjacent to the building on site. It continues to house the testing facilities.

P5a. Photograph or Drawing

***P3b. Resource Attributes:** HP8 - Industrial Building
***P4. Resources Present:**
☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other
P5b. Description of Photo:
Oblique view of subject property, looking northeast, September 23, 2021
***P6. Date Constructed/Age and Source:** ☒ Historic ☐ Prehistoric ☐ Both
1970 estimated, Facility Database for Aspen provided by PG&E
***P7. Owner and Address:**
Eureka Energy Co. (subsidiary of Pacific Gas and Electric Company)
77 Beale Street, 32nd Floor
San Francisco, CA 94177

***P8. Recorded by:**
Page & Turnbull, Inc.
170 Maiden Lane, 5th Floor
San Francisco, CA 94104

***P9. Date Recorded:**
December 8, 2021

***P10. Survey Type:** Intensive

***P11. Report Citation**: None

***Attachments:** ☒NONE ☐Location Map ☐Continuation Sheet ☐Building, Structure, and Object Record
☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record
☐Artifact Record ☐Photograph Record ☐ Other (List):

State of California ♉ The Resources Agency Primary #
DEPARTMENT OF PARKS AND RECREATION HRI #
PRIMARY RECORD
Trinomial
NRHP Status Code
Other Listings
Review Code Reviewer Date

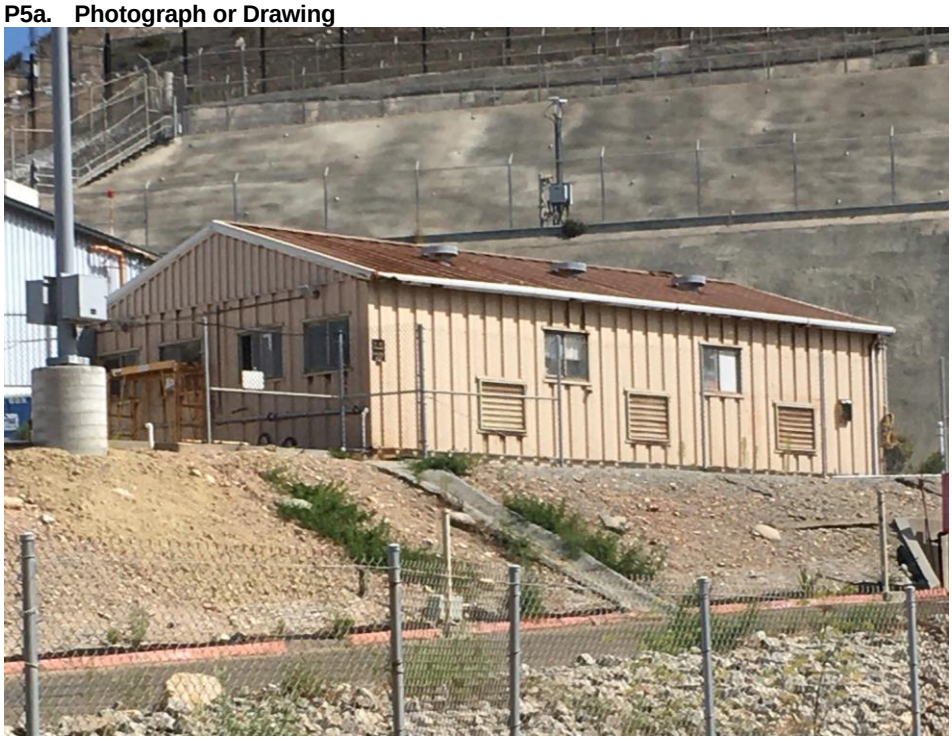
Page 1 **of** 1 ***Resource Name or #:** (Assigned by recorder) Start-Up – I&C Craft Shop (Building 527)
P1. Other Identifier:

*P2. **Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County** San Luis Obispo, CA
***b. USGS 7.5' Quad** Port San Luis **Date** 2018
c. Address 3890 Diablo Canyon Road City Avila Beach Zip 93424
d. UTM: Zone 10S , 695224.00 mE/ 3898795.00 mN
e. Other Data: Within DCPP Decommissioning Zone 1

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
The Start-Up – Instrumentation and Controls (I&C) Craft Shop (Building 527) is a one-story, steel frame building with a rectangular footprint of 1,056 square feet, built atop a concrete slab foundation. The building is located in the DCPP Decommissioning Zone 1, on a small plateau north of the Unit 1 Containment (Building 097) and Auxiliary Building (Building 099), with a group of other small buildings around Warehouse A (Building 519). Exterior walls and gable roof are clad with corrugated metal panels. The building is entered at the front (east) and north façades through partially glazed double doors. Similar-sized windows openings are on all four sides in different numbers; the windows are metal frame sliding sashes. The north and south façades have large square ventilations grilles with metal louvers. There are gutters along the top of the north and south façades.

A 1981 aerial photograph shows the building in its current location. No other documentation has a construction date for the building. The building currently houses Instrumentation and Controls operations, a Motor Controls Center electrical panel, and small fabrication facilities.

P5a. Photograph or Drawing



***P3b. Resource Attributes:** HP8 - Industrial Building
***P4. Resources Present:**
☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other
P5b. Description of Photo:
Oblique view of subject property, looking northeast September 23, 2021
***P6. Date Constructed/Age and Source:** ☒ Historic ☐ Prehistoric ☐ Both
By 1981, according to aerial photograph, HistoricAerials.com
***P7. Owner and Address:**
Eureka Energy Co. (subsidiary of Pacific Gas and Electric Company)
77 Beale Street, 32nd Floor
San Francisco, CA 94177

***P8. Recorded by:**
Page & Turnbull, Inc.
170 Maiden Lane, 5th Floor
San Francisco, CA 94104

***P9. Date Recorded:**
December 8, 2021

***P10. Survey Type:** Intensive

***P11. Report Citation**: Black & Veatch Corporation, BHI Power Services and Haley Aldrich, "Diablo Canyon Power Plant Historical Site Assessment Report," prepared for Pacific Gas & Electric Company, June 2018.
***Attachments:** ☒NONE ☐Location Map ☐Continuation Sheet ☐Building, Structure, and Object Record
☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record
☐Artifact Record ☐Photograph Record ☐ Other (List):

State of California ♿ The Resources Agency Primary #
DEPARTMENT OF PARKS AND RECREATION HRI #
PRIMARY RECORD
Trinomial
NRHP Status Code
Other Listings
Review Code Reviewer Date

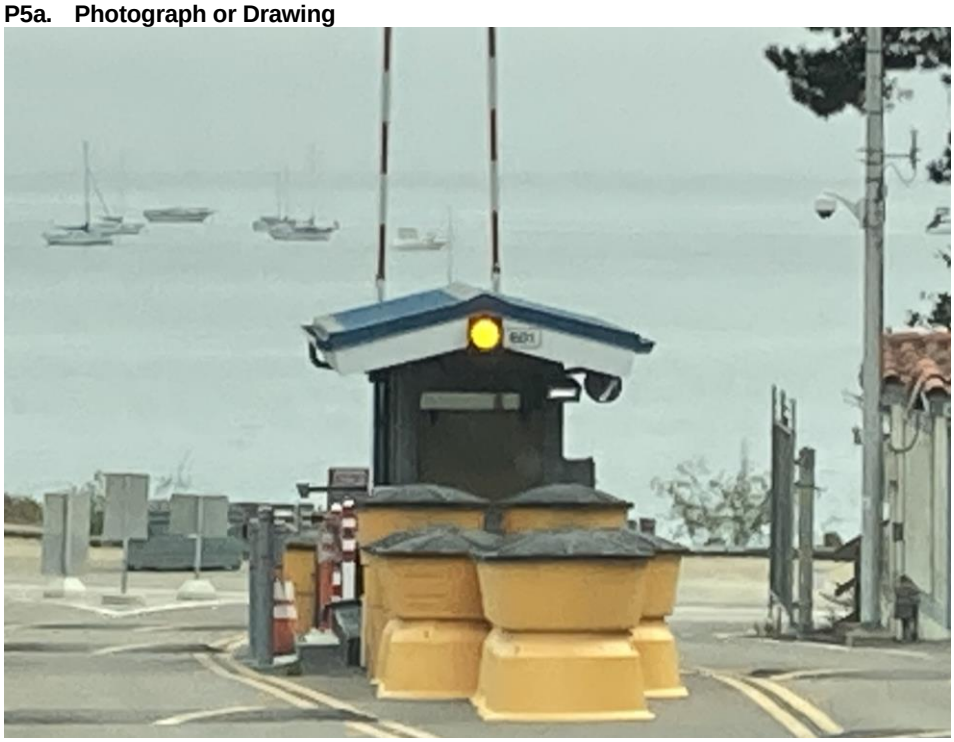
Page 1 **of** 1 ***Resource Name or #:** (Assigned by recorder) Avila Gate Guard House (Building 601)
P1. Other Identifier:

*P2. **Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County** San Luis Obispo, CA
***b. USGS 7.5' Quad** Port San Luis **Date** 2018
c. Address 3890 Diablo Canyon Road City Avila Beach Zip 93424
d. UTM: Zone 10S , 704354.00 mE/ 3894779.00 mN
e. Other Data: Within DCPP Decommissioning Zone 13

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
Avila Gate Guard House (Building 601) is a one-story building on an approximately 41 square-foot rectangular concrete slab foundation. It is located in DCPP Decommissioning Zone 13 at the Avila Gate entrance to the Diablo Canyon Nuclear Power Plant from Avila Beach Drive. It is within a median of Diablo Canyon Road (or Drive) where the road starts. The guard house is wood frame with painted stucco walls. The gable roof is corrugated metal with gutters on the east and west edges. The building is accessed through a partially glazed door on the north façade. Metal windows are on all the other sides. According to online street view maps, the building had red clay tile roofing until at least 2019.

PG&E documents estimate the building was constructed in 1970. The building is used for the controlled entry to the plant campus.

P5a. Photograph or Drawing



***P3b. Resource Attributes:** HP4 - Ancillary Building
***P4. Resources Present:**
☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other
P5b. Description of Photo:
view of subject property, looking southeast. September 23, 2021
***P6. Date Constructed/Age and Source:** ☒ Historic ☐ Prehistoric ☐ Both
1970 estimated, Facility Database for Aspen provided by PG&E
***P7. Owner and Address:**
Eureka Energy Co. (subsidiary of Pacific Gas and Electric Company)
77 Beale Street, 32nd Floor
San Francisco, CA 94177

***P8. Recorded by:**
Page & Turnbull, Inc.
170 Maiden Lane, 5th Floor
San Francisco, CA 94104

***P9. Date Recorded:**
December 8, 2021

***P10. Survey Type:** Intensive

***P11. Report Citation**: None
***Attachments:** ☒NONE ☐Location Map ☐Continuation Sheet ☐Building, Structure, and Object Record
☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record
☐Artifact Record ☐Photograph Record ☐ Other (List):

State of California ♿ The Resources Agency Primary #
DEPARTMENT OF PARKS AND RECREATION HRI #
PRIMARY RECORD
Trinomial
NRHP Status Code
Other Listings
Review Code Reviewer Date

Page 1 **of** 1 ***Resource Name or #:** (Assigned by recorder) Avila Gate Storage Building (Building 602)
P1. Other Identifier:

*P2. **Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County** San Luis Obispo, CA
***b. USGS 7.5' Quad** Port San Luis **Date** 2018
c. Address 3890 Diablo Canyon Road City Avila Beach Zip 93424
d. UTM: Zone 10S , 704371.75 mE/ 3894763.22 mN
e. Other Data: Within DCPP Decommissioning Zone 13

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
Avila Gate Storage Building (Building 602) is a one-story wood framed building on an approximately 96 square-foot concrete slab foundation. The L-shaped building is in DCPP Decommissioning Zone 13 at the Avila Gate entrance to Diablo Canyon Nuclear Power Plant. It is at the southwest corner of Avila Beach Drive and Diablo Canyon Road (or Drive). The storage building consists of two volumes separated by an open-air area and connected by a solid wall the partially encloses the storage yard. The larger, rectangular volume is on the southwest side, while the smaller, square volume is at the northwest side and may be partially open. Both have red clay tiles on gable roofs. The walls are painted stucco. The enclosed portion of the southwest building is accessed through a metal double door on the north façade.

PG&E documents estimate the building was constructed in 1970. The building is used for storage in support of the controlled entry to the plant.

P5a. Photograph or Drawing

***P3b. Resource Attributes:** HP4 - Ancillary Building
***P4. Resources Present:**
☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other
P5b. Description of Photo:
view of subject property, looking southeast, indicated with arrow. September 23, 2021

***P6. Date Constructed/Age and Source:** ☒ Historic ☐ Prehistoric ☐ Both
1970 estimated, Facility Database for Aspen provided by PG&E

***P7. Owner and Address:**
Eureka Energy Co. (subsidiary of Pacific Gas and Electric Company)
77 Beale Street, 32nd Floor
San Francisco, CA 94177

***P8. Recorded by:**
Page & Turnbull, Inc.
170 Maiden Lane, 5th Floor
San Francisco, CA 94104

***P9. Date Recorded:**
December 8, 2021
***P10. Survey Type:** Intensive

***P11. Report Citation**: None

***Attachments:** ☒NONE ☐Location Map ☐Continuation Sheet ☐Building, Structure, and Object Record
☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record
☐Artifact Record ☐Photograph Record ☐ Other (List):

State of California ♿ The Resources Agency Primary #
DEPARTMENT OF PARKS AND RECREATION HRI #
PRIMARY RECORD
Trinomial
NRHP Status Code
Other Listings
Review Code Reviewer Date

Page 1 **of** 1 ***Resource Name or #:** (Assigned by recorder) Warehouse Storage (Building 604)
P1. Other Identifier:

*P2. **Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County** San Luis Obispo, CA
***b. USGS 7.5' Quad** Port San Luis **Date** 2018
c. Address 3890 Diablo Canyon Road City Avila Beach Zip 93424
d. UTM: Zone 10S , 696268.24 mE/ 3899065.95 mN
e. Other Data: Within DCPP Decommissioning Zone 12

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
Warehouse Storage (Building 604) is a one-story, steel frame building built on an approximately 2,408 rectangular concrete slab foundation. The building is located in the area east of the 500 KV Switchyard, in the DCPP Decommissioning Zone 12. The walls and gable roof are corrugated metal. The building is primarily accessed through a partially glazed metal door on the west façade and has a roll-up garage door on the north façade. No windows were noted during the site visit.

PG&E documents estimate the building was constructed in 1985. The building is used for storage of old project files for the plant.

P5a. Photograph or Drawing

***P3b. Resource Attributes:** HP8 - Industrial Building
***P4. Resources Present:**
☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other
P5b. Description of Photo:
Oblique view of subject property, looking southeast. September 23, 2021
***P6. Date Constructed/Age and Source:** ☒ Historic ☐ Prehistoric ☐ Both
1985 estimated, Facility Database for Aspen provided by PG&E
***P7. Owner and Address:**
Eureka Energy Co. (subsidiary of Pacific Gas and Electric Company)
77 Beale Street, 32nd Floor
San Francisco, CA 94177
***P8. Recorded by:**
Page & Turnbull, Inc.
170 Maiden Lane, 5th Floor
San Francisco, CA 94104

***P9. Date Recorded:**
December 8, 2021

***P10. Survey Type:** Intensive

***P11. Report Citation**: None

***Attachments:** ☒NONE ☐Location Map ☐Continuation Sheet ☐Building, Structure, and Object Record
☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record
☐Artifact Record ☐Photograph Record ☐ Other (List):

State of California ♦ The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code
Other Listings
Review Code Reviewer Date

Page 1 **of** 1 ***Resource Name or #:** (Assigned by recorder) Long Term Cooling Water Pump Storage (Building D-4)
P1. Other Identifier:

*P2. **Location:** ☐ **Not for Publication** ☒ **Unrestricted** ***a. County** San Luis Obispo, CA
***b. USGS 7.5' Quad** Port San Luis **Date** 2018
c. Address 3890 Diablo Canyon Road City Avila Beach Zip 93424
d. UTM: Zone 10S , 695632.96 mE/ 3898990.79 mN
e. Other Data: Within DCPP Decommissioning Zone 10

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
Long Term Cooling Water Pump Storage (Building D-4) is a one-story, steel frame building built on an approximately 144 square concrete slab foundation. The building is located in the DCPP Decomissioning Zone 10, east of the East Raw Water Reservoir Building 1B). The walls and flat roof are corrugated metal, and no doors or windows were visible during the site visit.

PG&E documents estimate the building was constructed in 1979. The building houses a cooling water pump.

P5a. Photograph or Drawing

***P3b. Resource Attributes:** HP8 - Industrial Building

☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other

P5b. Description of Photo:
view of subject property, looking east, indicated with arrow. September 23, 2021

***P6. Date Constructed/Age and Source:** ☒ Historic ☐ Prehistoric ☐ Both
1979 estimated, Facility Database for Aspen provided by PG&

***P7. Owner and Address:**
Eureka Energy Co. (subsidiary of Pacific Gas and Electric Company)
77 Beale Street, 32nd Floor
San Francisco, CA 94177

***P8. Recorded by:**
Page & Turnbull, Inc.
170 Maiden Lane, 5th Floor
San Francisco, CA 94104

***P9. Date Recorded:**
December 8, 2021

***P10. Survey Type:** Intensive

***P11. Report Citation**: None

***Attachments:** ☒NONE ☐Location Map ☐Continuation Sheet ☐Building, Structure, and Object Record
☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record
☐Artifact Record ☐Photograph Record ☐ Other (List):

State of California ♿ The Resources Agency Primary #
DEPARTMENT OF PARKS AND RECREATION HRI #
PRIMARY RECORD
Trinomial
NRHP Status Code
Other Listings
Review Code Reviewer Date

Page 1 **of** 2 ***Resource Name or #:** (Assigned by recorder) East & West Breakwaters
P1. Other Identifier:

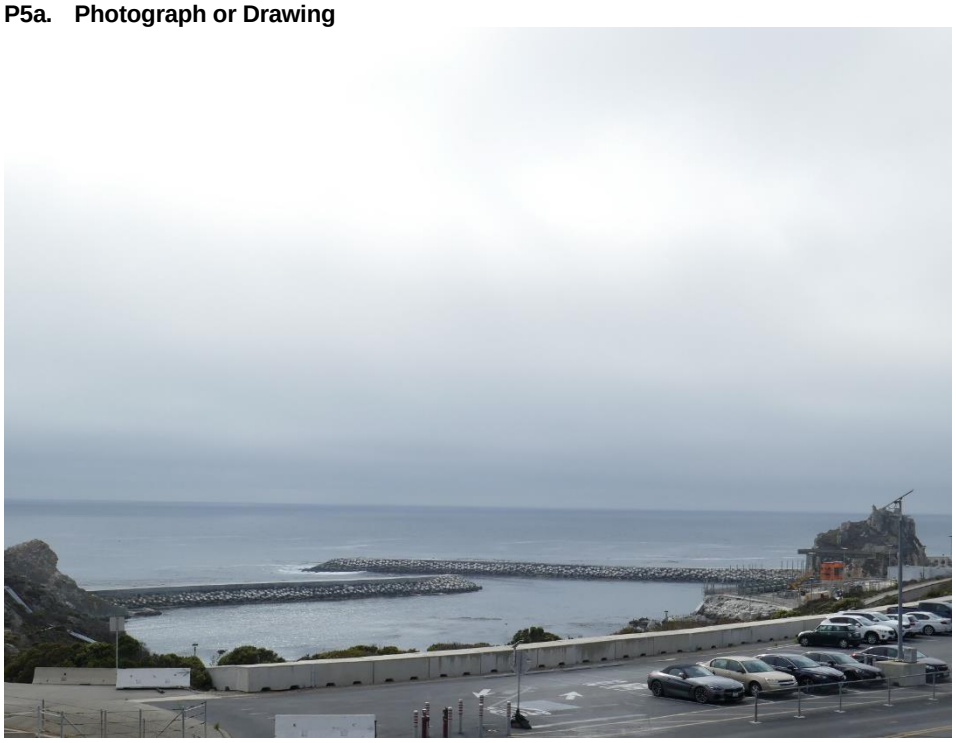
*__P2. Location:__ ☐ **Not for Publication** ☒ **Unrestricted** ***a. County** San Luis Obispo, CA
***b. USGS 7.5' Quad** Port San Luis **Date** 2018
c. Address 3890 Diablo Canyon Road City Avila Beach Zip 93424
d. UTM: Zone 10S , 695157.00 mE/ 3898060.00 mN
e. Other Data: Within DCPP Decommissioning Zone 4

***P3a. Description:**
The East & West Breakwaters for the Diablo Canyon Nuclear Power Plant are two structures of approximately a combined 280,000 square feet. The curvilinear structures form the man-made Intake Cove on the west shoreline of the DCPP Decommissioning Zone 4. They protect the Units 1 & 2 Intake Structure (Building 108) from large waves and allows it to intake seawater from a calm cove.

Most of the East & West Breakwaters are below the water level and not visible. The East & West Breakwaters are made of prefabricated concrete tribar units over a boulder mound. Their highest level are at the grade level of the shoreline with their lowest level are at the floor of Intake Cove (**Figure 1 to Figure 3**). At their highest level, the East & West Breakwaters are capped with a flat concrete slab to provide access for plant personnel.

Construction on the breakwaters started in 1970 and were completed around 1972, according to PG&E documents. The west breakwater was partially destroyed during storms in 1981. Both were re-designed and rebuilt to withstand future storms.
(See Continuation Sheet, page 2)

P5a. Photograph or Drawing



***P3b. Resource Attributes:** HP11 Engineering Structure
***P4. Resources Present:**
☐ Building ☒ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other
P5b. Description of Photo:
View of structure, looking west. September 23, 2021
***P6. Date Constructed/Age and Source:** ☒ Historic ☐ Prehistoric ☐ Both
1972 estimated, Facility Database for Aspen provided by PG&E
***P7. Owner and Address:**
Eureka Energy Co. (subsidiary of Pacific Gas and Electric Company)
77 Beale Street, 32nd Floor
San Francisco, CA 94177

***P8. Recorded by:**
Page & Turnbull, Inc.
170 Maiden Lane, 5th Floor
San Francisco, CA 94104

***P9. Date Recorded:**
December 8, 2021

***P10. Survey Type:** Intensive

***P11. Report Citation**: None

***Attachments:** ☐NONE ☐Location Map ☒Continuation Sheet ☐Building, Structure, and Object Record
☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record
☐Artifact Record ☐Photograph Record ☐ Other (List):

***P3a. Description (Continued)**

The area around the East & West Breakwaters includes an access road and a small dock on the southern edge of the Intake Cove for plant maintenance craft. There are large sea rocks at the north and south sides of the cove; these have been incorporated into the structure and design of the East & West Breakwaters. There is a small stair on the southwest side of the East Breakwater. Accounts by plant staff indicate this stair was used for access to the water for biologists studying the coastal ecology (**Figure 4**).

Figure 1: East Breakwater from Intake Cove, with visible concrete tribars, looking west.

Figure 2: Stored concrete tribar at west side of Intake Cove, looking north.

Figure 3: 1971 photo of West Breakwater under construction, looking south. Source: PG&E Archives.

Figure 4: Concete stairs for ocean side access on south side of East Breakwater, looking southwest.

Appendix B – Preparer Qualifications

This Historic Built Environment Evaluation Report was prepared by Page & Turnbull of San Francisco, California. Page & Turnbull staff responsible for this report include: Ruth Todd, FAIA, Principal-in-charge; Flora Chou, Associate Principal and Project Manager; Clare Flynn, Cultural Resources Planner and primary author, all of whom meet or exceed the Secretary of the Interior's Professional Qualification Standards for Historic Architecture, Architectural History, or History. Intern Jeronimo Roldan also assisted with the project.

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