CULTURAL RESOURCES

Beverly E. Bastian

SUMMARY OF CONCLUSIONS

Staff has concluded that the Humboldt Bay Repowering Project (HBRP) would have no impact on known significant archaeological or ethnographic resources, but would have a significant direct impact on three (possibly four) contributing elements of a significant historical resource, the Humboldt Bay Power Plant Historic District (HBPPHD), and a significant indirect impact on all additional contributing elements (except Unit 3 and associated structures) of that same significant historical resource. These significant impacts on the HBPPHD would require mitigation to reduce them to a less-than-significant level. The adoption and implementation of proposed Conditions of Certification **CUL-1** through **CUL-9** would mitigate significant impacts to known and as-yet-undiscovered archaeological, ethnographic, and historical resources.

INTRODUCTION

This cultural resources assessment identifies the potential impacts of the HBRP to cultural resources. Cultural resources are defined under state law as buildings, sites, structures, objects, and historic districts. Three kinds of cultural resources are considered in this assessment: prehistoric, historic, and ethnographic.

Prehistoric archaeological resources are those materials relating to prehistoric human occupation and use of an area. These resources may include sites and deposits, structures, artifacts, rock art, trails, and other traces of Native American human behavior. In California, the prehistoric period began over 10,000 years ago and extended through the eighteenth century until 1769, the time when the first Europeans settled in California.

Historic-period resources are those materials, archaeological and architectural, usually associated with Euro-American exploration and settlement of an area and the beginning of a written historical record. They may include archaeological deposits, sites, structures, traveled ways, artifacts, or other evidence of human activity. Under federal and state requirements, historical cultural resources must be greater than fifty years old to be considered of potential historic importance. A resource less than fifty years of age may be historically important if the resource is of exceptional importance.

Ethnographic resources are those materials important to the heritage of a particular ethnic or cultural group, such as Native Americans or African, European, or Asian immigrants. They may include traditional resource collecting areas, ceremonial sites, topographic features, cemeteries, shrines, or ethnic neighborhoods and structures.

For the Humboldt Bay Repowering Project, staff provides an overview of the environmental setting and history of the project area, an inventory of the cultural resources identified in the project vicinity, and an analysis of the potential impacts from the proposed project using criteria from the California Environmental Quality Act (CEQA). The primary concern is to ensure that all potential impacts are identified and

that conditions are set forth that ensure that impacts are mitigated below the level of significance.

If cultural resources are identified, staff determines whether there may be a project-related impact to them. If the cultural resources cannot be avoided, staff determines whether any of the impacted resources are eligible for the California Register of Historical Resources (CRHR). If impacted resources are eligible for the register, staff recommends mitigation measures that ensure that impacts to the identified cultural resources are reduced to a less than significant level.

LAWS, ORDINANCES, REGULATIONS, AND STANDARDS

Projects licensed by the California Energy Commission (Energy Commission) are reviewed to ensure compliance with all applicable laws. For this project, in which there is no federal involvement,[1] the applicable laws are primarily state laws (Cultural Resources Table 1).

CULTURAL RESOURCES Table 1
Laws, Ordinances, Regulations, and Standards

Applicable Law	Description
State	
Public Resources Code, section 21083.2	The lead agency may require reasonable steps to preserve a unique archaeological resource in place. Otherwise, the project applicant is required to fund mitigation measures to the extent prescribed in this section. This section also allows a lead agency to make provisions for archaeological resources unexpectedly encountered during construction, which may require the project applicant to fund mitigation and delay construction in the area of the find (CEQA).
California Code of Regulations, Title 14, section 15064.5, subsections (d), (e), and (f)	Subsection (d) allows the project applicant to develop an agreement with Native Americans on a plan for the disposition of remains from known Native American burials impacted by the project. Subsection (e) requires the landowner [possibly the project applicant] to rebury Native American remains elsewhere on the property if other disposition cannot be negotiated within 24 hours of accidental discovery and required construction stoppage. Subsection (f) directs the lead agency to make provisions for historical or unique archaeological resources that are accidentally discovered during construction, which may require the project applicant to fund mitigation and delay construction in the area of the find (CEQA Guidelines).

1 Cultural resources are indirectly protected under provisions of the federal Antiquities Act of 1906 (Title 16, United States Code, Section 431 et seq.) and subsequent related legislation, policies, and enacting responsibilities, e.g., federal agency regulations and guidelines for implementation of the Antiquities Act.

Applicable Law	Description
State	
California Code of Regulations, Title 14, section 15126.4(b)	This section describes options for the lead agency and for the project applicant to arrive at appropriate, reasonable, enforceable mitigation measures for minimizing significant adverse impacts from a project. It prescribes the manner of maintenance, repair, stabilization, restoration, conservation, or reconstruction as mitigation of a project's impact on a historical resource; discusses documentation as a mitigation measure; and advises mitigation through avoidance of damaging effects on any historical resource of an archaeological nature, preferably by preservation in place, or by data recovery through excavation if avoidance or preservation in place is not feasible. Data recovery must be conducted in accordance with an adopted data recovery plan (CEQA Guidelines).
Public Resources Code 5024.1	The California Register of Historic Resources (CRHR) is established and includes properties determined eligible for the National Register of Historic Places (NRHP)(criteria: A. events, B. important persons, C. distinctive construction, and D. data), State Historic Landmark No. 770 and subsequent numbered landmarks, points of historical interest recommended for listing by the State Historic Resources Commission, and historical resources, historic districts, and landmarks designated or listed by a city or county under a local ordinance. CRHR criteria are 1) events, 2) important persons, 3) distinctive construction, and 4) data.
Public Resources Code 5020.1 (h)	"Historic district" means a definable unified geographic entity that possesses a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development.
California Health and Safety Code, Section 7050.5	This code makes it a misdemeanor to disturb or remove human remains found outside a cemetery. This code also requires a project owner to halt construction if human remains are discovered and to contact the county coroner.
Local	
Humboldt County General Plan, Section 3500	The Humboldt County General Plan includes measures to provide for the identification and protection of archaeological sites and historic structures.
Humboldt County Local Coastal Plan, Goal 3.18	This goal provides for the protection of archaeological resources.

SETTING

REGIONAL SETTING

The project area is located on the eastern shore of Humboldt Bay approximately three miles south of the city of Eureka in an unincorporated area of Humboldt County,

California. The Humboldt Bay region is in the Coast Ranges Physiographic Province of California, within the Eel River sedimentary basin. The local terrain, consisting of alluvium over estuarine and marine deposits, is fairly flat, except where relatively young underlying rocks have been tilted up by the numerous active faults in the area, producing, for example, Buhne Hill, located on the 143-acre PG&E Humboldt Bay Power Plant (HBPP) property. The HBPP, on part of which the proposed HBRP site is proposed, is on the north end of a small peninsula named Buhne Point (PG&E 2006a, p. 8.4-1–8.4-2).

PROJECT, SITE, AND VICINITY DESCRIPTION

The proposed site is on a filled marsh on the northeast side of Buhne Hill. The project site elevation ranges from 8 to 12 feet above mean sea level (PG&E 2006a, p. 2-28, pp. 8.4-1–8.4-2). The town of King Salmon occupies the southwestern part of the Buhne Point peninsula, sharing it with the HBPP, located to the northeast (PG&E 2006a, p. 8.6-1; fig. 2). The HBPP property has been used for industrial purposes since the late 1950s, but surrounding land use is mostly agricultural and rural residential. The HBPP property is bounded by Humboldt Bay to the north, by the town of King Salmon to the southwest, by Northwestern Pacific Railroad tracks to the east, and by King Salmon Avenue to the south (PG&E 2006a, p. 8.6-1).

The proposed HBRP project would consist of a 163-megawatt (MW) power-generating facility to be constructed on a 5.4-acre parcel in the east-central part of the existing HBPP property at 1000 King Salmon Avenue, owned by the applicant, PG&E. The new generating equipment would allow the decommissioning of the existing natural-gas-fired Units 1 and 2 (combined capacity of 105-MW) and the two diesel-fired Mobile Emergency Power Plants (MEPPs) (15-MW each) that currently produce all of the HBPP's power. A non-functional nuclear-powered generating facility, Unit 3, is also located on the HBPP property, but it is currently being decommissioned under a federal program. According to the applicant, the demolition of Units 1 and 2, the decommissioning of Unit 3, and the removal of the MEPPs are not part of the HBRP (PG&E 2006a, p. 2-2), but several structures that currently occupy the parcel proposed for the HBRP would have to be removed (PG&E 2006a, p. 2-1), including:

- Decommissioning Program project office buildings (temporary);
- Painting and Sandblasting Building;
- Two storage sheds;
- A 115-kV transmission tower;
- A railroad spur;
- Diesel tanks for the two MEPPs;
- Oily water separator?
- Steam-cleaning station?
- Low-volume waste facility? [these appear, comparing AFC fig. 2.3-2 and PAR fig. 4, to also need to be removed; only the separator (1954) is old enough to matter; 10/24/07, Data Request about this.]

- Underground piping; and
- Infrastructure (no details provided).

The new HBRP facility would intertie with PG&E's transmission system at the Humboldt Substation via the existing on-site Humboldt Bay Power Plant Substation and existing off-site 60-kV and 115-kV transmission lines (PG&E 2006a, pp. 5-1–5-2). The principal elements of the proposed project (PG&E 2006a, pp. 1-1–1-2, 2-1, 2-5–2-6, 2-19, fig. 2.3-1, 5-2, 6-1–6-2) include the construction, installation, or use of:

- Ten dual-fuel (natural gas and diesel) Wartsila reciprocating engine-generator sets and associated equipment, with a combined nominal output of 163 megawatts (MW) (diesel would be used only in the event of natural gas curtailment or supply interruption);
- A 40-unit radiator air-cooling array;
- Ten exhaust gas silencing stacks;
- Selective catalytic reduction system;
- Three step-up and three auxiliary transformers;
- Tanks for storage of 634,000 gallons of emergency diesel fuel (four days' supply);
- Three new tie lines to existing on-site transmission facilities, including two new 500-foot-long, 60-kV connections and one new 700-foot-long, 115-kV connection;
- Three new take-off structures;
- Three new steel poles;
- Replacement of three circuit breakers (two 60-kV, one 115-kV) at the HBPP Substation;
- A 10-inch-diameter natural-gas pipeline connection to existing on-site service;
- A new 10-inch ultrasonic gas meter in the existing gas regulation site;
- A 6-inch-diameter water pipeline connection to an existing groundwater well (PG&E Well No. 2), for process water and irrigation;
- A 1,200-foot-long, 4-to-6-inch-diameter connection to a Humboldt Community Services District (HCSD) main in King Salmon Avenue, for potable water;
- A 4-inch-diameter sewer pipeline connection to the on-site sanitary lift station No. 3, for wastewater disposal to the HCSD;
- A temporary construction laydown area east of the existing cooling water discharge canal and north of the proposed project site;
- A temporary construction parking area southeast of the existing cooling water intake canal and southwest of the existing switchyard;
- A temporary construction access road running from King Salmon Avenue along the southeast side of the existing cooling water intake canal, southeast of the temporary construction parking area, southeast of the existing switch yard, and on to the proposed project site;

- A temporary remote parking area at the far west end of the HBPP property;
- A construction worker pedestrian access trail from the remote parking area, around the western fence line, across the cooling water intake canal, to the temporary construction road; and
- A short-term delivery parking area on the west side of King Salmon Avenue, about halfway between the temporary construction access road and the temporary remote parking area.

The final HBRP elevation would be 13 feet above mean sea level to avoid the 100-year flood level. Achieving this grade would require applying layers of engineered fill to the project site after the topsoil has been removed (PG&E 2006a, p. 2-34). The applicant anticipates using a commercial borrow site to obtain the necessary fill, but could select a non-commercial site (PG&E 2006a, Data Response no. 26).

Prehistoric Setting

The north coastal region of California has three archaeological zones: the Northwest Coast Subregion, the Eel River Subregion, and the Russian River Subregion (Fredrickson 1984, p. 472). The proposed project site is located in the Northwest Coast Subregion, for which virtually only sites of the late prehistoric period, identified as the archaeological remains of the villages of the local Tolowa, Yurok, and Wiyot Native American groups, have been well explored. The earliest radiocarbon date for this subregion is 2,260 ± 210 years B.P. (before the present). That date was obtained from hearths at the base of the historic Tolowa village of *Taiga'n*, a large site at Point St. George, north of Crescent City, possibly depopulated by a cholera epidemic very early in the European contact period. The dated hearths, however, were not associated with the Tolowa occupation, but appeared to be the remains of a much earlier, temporary camp for Native Americans seeking and processing chert and agate cobbles from the bluffs and beach as raw materials for tools (Fredrickson 1984, pp. 490-491).

So to date there is no evidence in the Northwest Coast archaeological Subregion for the earlier prehistoric periods, present in other parts of the Southwest and California, such as the Big Game Hunting Tradition (Moratto 1984, pp. 81), dating from before 10,000 years B.P.; and the Western Pluvial Lakes Tradition, dating between 10,000-7,000 years B.P. (Moratto 1984, pp. 90-103). There is only marginally better evidence for the period some archaeologists call the Archaic, the long period (7,000-1,000 years B.P.) during which technological adaptations became increasingly localized and specialized to particular environments, of which there were many in California.

Sites of the late prehistoric period, then, dating after 1,100 years B.P., are the best known for the Northwest Coast archaeological Subregion, including a large mound known to have been the ethnographic Wiyot village of *Tolowot*, on Gunther Island[2] in Humboldt Bay, about seven miles north of the proposed HBRP site. Starting in 1918, archaeologists conducted a number of test excavations at the site, designated archaeological site CA-HUM-67. The earliest date for the village is a radio-carbon date of 1,050 ± 200 years B.P., taken from the peat at the base of the mound. The village was abandoned after the 1860 massacre of many of its Wiyot inhabitants by American

[2] The name of the town is also transcribed as *Tuluwat*. Gunther Island is also known as Indian Island.

settlers. Artifacts recovered from CA-HUM-67 are the basis for the definition of the Gunther Pattern, which archaeologists identify with the settlement of the Northwest Coast Subregion by the Wiyot and Yurok peoples. The Gunther Pattern includes assemblages of bone and antler harpoon points, woodworking tools, *Dentalium* shells, abalone shell ornaments, net weights, steatite vessels, baked-clay and ground-stone figurines, ceremonial obsidian bifaces, and distinctive barbed arrow points (Fredrickson 1984, pp. 484-487).

Ethnographic Background

The Native American California northwest coastal peoples primarily exploited fish for food, and so settled on the banks and at the mouths of the major rivers, particularly the Klamath and Trinity, and on ocean lagoons. They also used mountain resources such as acorns and basketry materials, but did not build villages there. Culturally the California northwest coast area resembled the “Northwest Coast” culture of Oregon, Washington, and British Columbia (Fredrickson 1984, p. 473).

At the time of European contact, Native American groups on California’s northwest coast spoke 11 dialects representing 3 major linguistic groups (Fredrickson 1984, p. 477). Linguistic study of these groups suggests multiple migrations by numerous groups, but no certain details have emerged on the origins or sequence of migrations or the time depth involved in the peopling of this area. Archaeological studies also contribute little, with the earliest radiocarbon date for the region inhabited by the Wiyot, in which the HBRP project site is located, coming in relatively recently at 900 A.D. (Elsasser 1978, p. 155). The language spoken by the Wiyot belonged to the Algic superfamily. Their neighbors to the north, the Yurok, also spoke a language of the Algic superfamily, but the common ancestor of the two languages was in the dim past, interpreted by students of historical linguistics to mean that the arrivals of the Wiyot and the Yurok in northwestern California were greatly separated in time (Fredrickson 1984, p. 473). The mystery of two neighboring groups having very similar lifeways but speaking languages that are related, but only distantly—with some 2,300 years separating them, may never be solved (Elsasser 1978, p. 155).

Historically, Wiyot territory included the coast from south of the Little River to north of the Bear River Ridge and inland to the crest of the first mountain range, totaling about 300 square miles. This territory was almost entirely redwood forest. The Wiyot used the ocean very little for either food or travel, preferring to fish the still waters of Humboldt Bay and the mouths of the Eel and Mad Rivers. Fact-based estimates of the pre-contact Wiyot population have ranged from 1,000 to 3,300. Fish, mostly salmon, dominated their diet, but they also made use of mollusks, deer, and other game animals. The Wiyot constructed rectangular houses of vertical split redwood planks, with pitched roofs of the same material, where two or more families resided. Each village had a men’s sweathouse constructed in the same way. The Wiyot made many items associated with fishing, including dugout redwood boats. The Wiyot had no clans or formal status differences among individuals other than wealth. They had an elaborate system of fines and compensation for interpersonal, economic, and societal offenses, including for murder. They did not hold slaves, and the behavior of women was less restricted among the Wiyot than in other northwest California groups (Elsasser 1978, pp. 156-159; fig. 1; Crandell 2005, p. 6).

When the Americans came, in the 1850s, the Wiyot were occupying the only flat land adjacent to a good harbor between San Francisco and Humboldt Bay. Elsasser suggests this may be why the Wiyot were rapidly displaced by white settlers, often with violence. In February 1860, American settlers massacred a large number of Wiyots at the village of *Tolowot*. By the early twentieth century, and continuing up through 1968, fewer than 200 persons identified as Wiyot could be counted in the Humboldt Bay area (Elsasser 1978, p. 156; 1986; Forsyth 2006).

Historic Setting

European Exploration

Europeans had explored the northern California coast by sea as early as the fifteenth century, with the first landing made at Patrick's Point in 1775 by Juan Francisco de Bodega to claim the country for the King of Spain (PG&E 2006a, p. 8.3-3). Captain Jonathan Winship and a large party of Aleut hunters on the ship, *Ocean*, made the first recorded entry into Humboldt Bay by sea in June, 1806, while working for a Russian-American fur trading company headquartered in Sitka, Alaska. Afterward the bay was seemingly forgotten until Gold Rush days (PG&E 2006a, p. 8.3-3; Historic Record Co. 1915, chap. III).

American Settlement

In 1848, gold was found in the Trinity River, and the search began for a suitable port for further exploration of the northwest coast region. In 1849, Dr. Josiah Gregg led an expedition by land and rediscovered Humboldt Bay. Several subsequent sea expeditions from San Francisco followed, searching out the seaward entrance to the bay. One such expedition, led by members of the Laura Virginia Association sailing on the schooner *Laura Virginia*, rediscovered the entrance to the bay in 1850. They established the first town on Humboldt Bay at Buhne Point, which they named for H. H. Buhne, the pilot of the *Laura Virginia* who had successfully maneuvered the ship over the sand bar at the mouth of the bay. The settlers named their new town Warnersville. The town, as platted, was about one mile wide and extended along 3 to 4 miles of shoreline, including the HBPP property. Only some 12 houses were ever built in the town, however, and the town site was abandoned by the late 1800s. A 1950 aerial photograph shows no remaining standing structures on the HBPP property. It is assumed that any archaeological remains of the town were destroyed when the HBPP was constructed in the late 1950s (PG&E 2006a, p. 8.3-3; Forsyth, 2007; PAR 2003, p. 10; Historic Record Co. 1915, chap. III).

In the early 1850s, two towns were established on Humboldt Bay to provide for the needs of the many miners who came to take gold from the region's rivers. Supply ships entered the bay over the treacherous sand bar and off-loaded goods and supplies at Eureka and Union (renamed Arcata in 1860). Miners soon gave way to lumbermen, and after only four years in existence, Eureka had seven lumbermills. Ships began carrying lumber out of the Humboldt Bay ports to California's growing coastal cities to the south (Anon n.d.; Historic Record Company 1915, chap. XIII). Some settlers took up cattle-raising on unforested land. Relations with the local Native Americans were uneasy due to the encroachments of the whites on resources long owned and used by the Wiyot. Cattle-stealing by the Native Americans exacerbated the situation. Remote or isolated

miners and lumberjacks feared attacks, although Indian-instigated violence against whites was rare.

Fort Humboldt was established by the U.S. Army near Eureka in 1852, with the purpose, originally, to protect settlers from the Native Americans, but soon the military found itself playing the role of protector of the Indians, although ineffectually. As the hostility towards Native Americans escalated, the Army came under increasing pressure from the white settlers, especially from the influential large landowners in the area, to move the Native Americans as far away as possible. The Army's failure to do this resulted in the raising of civilian "militias" in many settlements in northwest California, to "protect property rights." One of these, the "Humboldt Volunteers," attacked the Wiyot village of *Tolowot* in the early morning hours of February 26, 1860, during the Wiyot traditional, annual World Renewal Ceremony. The whites killed some 200 people, including women, children, and elders. The northern California "Indian Wars" of the early 1860s followed this event. Native Americans from all over the northwestern region were rounded up, imprisoned at Fort Humboldt, and eventually removed to reservations (Crandell 2005, pp. 12-15; 30). Fort Humboldt is recorded as California State Historical Landmark No. 154 (California Landmarks 2004).

With control of forest lands thus assured, the regional logging industry found the means to gain access to the more remote and rugged timber stands—the logging railroad. First powered by draft animals, then by steam, these variously-gauged railroads connected the woods to the mills and shipping facilities on Humboldt Bay. But except for the commerce via shipping, the region remained unconnected with the wider world for a comparatively long time. The Transcontinental Railroad tied Sacramento to the rest of the nation in 1869, and Los Angeles got its connection in 1876, but it was not until 1915 that the Northwest Pacific Railroad (NWPRR) connected the northwest coast region with the rest of California and the country. It was constructed between 1907 and 1914, running from Sausalito, in the San Francisco Bay area, to Arcata, at the north end of Humboldt Bay. The NWPRR became part of the Southern Pacific (SP) system in 1929, but struggled for profitability due to the high cost of maintaining the track in the face of heavy annual rainfall and flooding, unstable geology, and seismic activity. In 1983, SP shut down the line north of Willets, but an independent company was formed and served the line north of Willets for several years as the Eureka Southern Railroad before succumbing to bankruptcy. The Humboldt Bay region finally lost its rail connection to San Francisco permanently in 1992 when an earthquake and landslide at Scotia Bluff crumpled and buried the tracks (NWPRHS 2000; EPIC 2000). The old NWPRR tracks run along the southeast side of the HBPP, immediately adjacent to the proposed HBRP site. A spur line, long disused, runs southwest from the old tracks onto the HBPP.

Electrification in Humboldt County was directly tied to the lumber industry. The machines in the mills were, at first, steam-powered, but so were the available electrical generators of the late nineteenth century. Installing a steam-powered generator to produce electricity for lighting the mill buildings was a natural progression at the mills. The fuel used by mill steam plants was the waste from the timber processing. Mills soon found they produced more electricity than they needed and so made a profit by supplying neighboring residential and downtown business districts first with street lighting, then with interior lighting. After a number of small local electric companies, either independents or offshoots of mills, competed and merged in the various cities of

Humboldt County, the Western States Gas and Electric Company of Chicago bought and consolidated all of them in 1911. PG&E took over the Western States system in 1927 (Anon 1970). Except for the intensified demand for electrical power during WWII, when industrial production in the region increased to meet wartime needs, local electrical production at PG&E's single steam generator plant in Eureka and transmission from the Sacramento Valley satisfied regional demand. After the war, however, regional demand for power for expanding and new mills shot up, due to the postwar boom in the housing industry across the country. The power available for PG&E to distribute was insufficient. To rapidly bridge the gap, PG&E acquired the salvaged stern of the *DonBass III*, a World War II tanker, with an operative 4.8-MW generator and steam plant. The partial ship was towed to Eureka, beached, and put into service generating electricity in December, 1946 (Anon 1970; PAR 2003, pp. 11-12). To meet long-term growth needs, PG&E planned to replace its two steam-powered generating plants at Eureka with two oil-fueled units at Buhne Point. PG&E also planned to construct a 115-kV transmission line to connect to the state's electrical grid in the Sacramento Valley. The new Buhne Point facilities, Unit 1, Unit 2, and the associated transmission lines [data request on age of 115-kV line to which the project is connecting provided but not responsive], were constructed and in service by 1958 (PG&E 2006a, pp. 8.3-3 to 8.3-4; PAR 2003, p. 11-12; Anon 1970).

Beginning in 1951, PG&E was a founding member of a consortium of electric companies, the Nuclear Power Group, committed to the design and construction of nuclear power plants. By 1956, PG&E and other companies of the group were participating in the construction of nine nuclear power plants, mostly located in the eastern United States and subsidized by federal funding. In 1959, PG&E, General Electric, and Bechtel Corporation partnered to build a small (5-MW) experimental nuclear plant called Vallecitos near Livermore. This was the first nuclear power plant in California and the first privately-funded plant in the United States. PG&E partially funded Vallecitos, provided the turbine generator that produced the power, and distributed the power produced. In addition, PG&E personnel gained invaluable experience at the Vallecitos facility. This experience, the positive outcome of the Vallecitos project, and the zealous commitment of PG&E's management to the development of profitable commercial nuclear power, motivated PG&E to undertake the building of the first economically feasible nuclear power plant in the nation. So the company began looking for the right place to build it (PAR 2003, pp. 15-19; 48).

In the 1950s, the costs of constructing a conventionally designed nuclear plant, with its large steel and concrete containment dome, made nuclear plants non-competitive against fossil-fuel plants in the commercial production of electricity in most parts of the country. But Humboldt County presented a situation where the use of fossil fuels to produce electricity was so expensive, due to the cost of transporting the fuels, that a nuclear plant could be as, if not more, economic as a fossil-fuel plant. Humboldt County also had a growing electricity market that PG&E was already, in the late 1950s, taxed to meet with its existing fossil-fuel-fired facilities, Units 1 and 2, at the HBPP. A Unit 3 had been planned for HBPP all along, and PG&E decided to make Unit 3 nuclear-fueled (PAR 2003, pp. 19-20).

In a move that made the proposed HBPP Unit 3 even more economical, PG&E's engineers greatly reduced the cost of constructing the plant by designing a new, unique,

and innovative containment system to replace the expensive dome of the previous nuclear power plant designs. Called “a pressure suppression system,” the new design entailed building an airtight, underground, concrete and steel chamber that could be partially filled with water to suppress steam condensation and release in the event of an accident. This suppression system subsequently became the industry standard for boiling water reactors (BWRs). Another PG&E innovation placed Unit 3’s suppression chamber 90 feet underground without any excavation, which further reduced the construction cost. This was achieved by forming the chamber on the ground surface and shaping its edges like vertical blades. Water jets were placed under it and aimed straight down at the soil. As the water jets softened the soil, the chamber slowly sank of its own weight (PAR 2003, pp. 20-22).

With an Atomic Energy Commission (AEC) license to produce 52 MW, Unit 3 began producing commercial power on August 1, 1963. To national fanfare, the plant was dedicated on September 23, 1963 (PAR 2003, p. 30). It was the first nuclear plant “constructed and privately subsidized by one company based on electrical demand and competitive economics as a profit-making venture, rather than [on] research and development of a new technology” (PAR 2003, p. 48). Its reliability, with a 92% availability rating, caused the AEC to upgrade its license to 70 MW in 1965 (PAR 2003, p. 30).

With the success of Unit 3 at HBPP, PG&E began planning a major expansion into nuclear power generation, choosing for its next nuclear plant a site on Bodega Bay. Spurred by the discovery of a minor fault in the rocks underlying the proposed site, public protests in Santa Rosa in 1963 against PG&E’s Bodega Bay nuclear plant initiated what would become an escalating public resistance to nuclear power. A contamination problem at HBPP Unit 3, caused by defective fuel rod cladding, resulted in only an insignificant radiation release, but the leakage fed the rising anti-nuclear flames. Protesters called Unit 3 “the dirtiest nuclear plant in the country,” a label which stuck permanently and sullied PG&E’s reputation, despite the company’s correction of the fuel rod problem. In October 1964, PG&E announced that it was abandoning its plans for Bodega Bay, but would continue its commitment to nuclear power, concentrating on a site near Diablo Canyon in San Luis Obispo County (PAR 2003, pp. 30-31).

In the late 1960s and early 1970s, with 15 commercial nuclear plants operating and many more planned or being built, utility companies across the country were enthusiastic about the future of nuclear power. But the protest movement was also growing. First a minor accident at the Brown’s Ferry nuclear plant in Alabama in 1975, and then a major accident at the Three Mile Island nuclear plant in Pennsylvania in 1979, galvanized the anti-nuclear-power movement. The Nuclear Regulatory Commission (NRC), created in 1974, responded to the accidents, and to the growing public concern, with more stringent regulations for new nuclear plants and with requirements for significant upgrades at existing plants, which would be very costly to install (PAR 2003, pp. 31-32).

In the early 1970s, PG&E had learned that the Little Salmon Fault, over which Unit 3 at HBPP had been built, was an active fault. When the plant had been constructed, geologists had thought the fault was dormant. PG&E began its own seismic studies and

made plans to upgrade Unit 3 for greater seismic safety. The plant was shut down for refueling and seismic retrofitting in 1976, but while this work was in progress, the NRC told PG&E it would not support restarting Unit 3 until the seismic issues were resolved. PG&E stopped the work at Unit 3. Then the Three Mile Island accident occurred, and the NRC suspended all licensing reviews while they reevaluated the entire nuclear industry. Issued in 1980, the subsequent new NRC regulations, with their costly upgrade requirements, forced PG&E to consider its options for Unit 3. The company could complete the retrofitting work originally planned, plus additional upgrades to meet the new standards; they could convert Unit 3 to use fossil fuel; or they could decommission it. In July 1983, based on its financial analysis, PG&E announced that it had decided on the latter option (PAR 2003, pp. 32-33).

For decommissioning Unit 3, PG&E chose one of three NRC alternative processes called SAFSTOR. This entails maintaining and monitoring a nuclear reactor while its radioactivity decays, then dismantling it. Unit 3 entered SAFSTOR status in 1988 and can remain in this status until 2015, when the U.S. Department of Energy would assume responsibility for the disposition of the fuel. Unit 3's 250-foot-tall concrete vent stack was removed in 1998 to eliminate the earthquake danger it posed and to dispose of its radioactive materials (PAR 2003, p. 33).

Even in its decommissioning, Unit 3 achieved another nuclear industry "first." All of Unit 3's spent fuel was removed from the reactor and stored in the adjacent spent fuel pool. Thus Unit 3 was the first commercial nuclear plant to be decommissioned while keeping spent fuel on site. This method was extensively studied, and, to date, 14 other nuclear plants in the United States are using this process pioneered by PG&E at Unit 3. PG&E has also provided assistance to the NRC in updating the regulations for the future decommissioning of nuclear plants, based on the experience at Unit 3. PG&E is currently planning to remove Unit 3's spent fuel to another on-site storage facility, the Independent Spent Fuel Storage Installation (ISFSI) (PAR 2003, p. 34), beginning in the spring of 2008.

Resources Inventory

Methods: Literature/Records Search and Native American Contacts

The applicant submitted a records search request to the California Historic Resources Information System (CHRIS), North Coastal Information Center, on May 4, 2006, requesting information on all sites and previous surveys located within one mile of the project area (PG&E 2006a, p. 8.3-4). On June 30, 2006, the applicant sent a letter to the Humboldt County Historical Society seeking information regarding any known archaeological sites (both historic and prehistoric) or historic structures present within the project area (PG&E 2006a, Appendix 8.3F).

Also on May 4, 2006, the applicant contacted the Native American Heritage Commission and requested that they search their files to determine if any sacred sites or traditional cultural properties are known for the project area. In addition, the applicant requested that the NAHC provide a list of and contact information for Native Americans who may have an interest in, and knowledge of, the project area. On May 5, 2006, the NAHC sent the applicant a list, with contact information, of Native Americans who might have knowledge of the project area. The NAHC recommended that the applicant

contact all of the people on the list. On May 16, 2006, the applicant sent letters to each person identified on the NAHC list asking for information regarding known cultural resources within the project area (PG&E 2006a, Appendix 8.3E).

On November 1, 2006, staff sent a letter to the NAHC requesting that they provide a list of Native Americans with an interest in, and knowledge of, the project area. On November 2, 2006, the NAHC responded with a list of Native Americans and their contact information. On November 27, 2006, staff sent a letter to the seven Native Americans on the list, informing them of the proposed HBRP.

Methods: Field Surveys

An archaeological field survey was conducted by the HBRP applicant that included coverage of Units 1 and 2, the construction laydown area, two temporary construction parking areas, a temporary construction access road, and a new water pipeline alignment (PG&E 2006a, Figures 2.3-1 and 8.3-1). William Shapiro, a qualified archaeologist, conducted this field survey on April 10, 2006, using transects at 20-meter intervals. Ground visibility in much of the project area was obscured due to the presence of dense vegetation and paving (PG&E 2006a, 8.3-6).

Also on April 10, 2006, Shapiro completed the architectural field reconnaissance of the HBPP plant site, of the proposed HBRP construction site, and of adjacent parcels, including the community of King Salmon, seeking to identify any standing potentially historic structures. Shapiro found that some structures in King Salmon were older than 50 years, but did not record them because the proposed HBRP was not expected to have a significant impact on them. Under the direction of qualified architectural historian, Jessica Feldman, Shapiro prepared Department of Parks and Recreation (DPR) 523 “Primary” and “District” forms for the entire HBPP, recorded as Resource PL-1, a historic district inclusive of the entire HBPP, and “Primary” forms for three (possibly four) HBPP elements (a transmission line tower, a storage building, the spur rail line which runs from the NWPRR onto the HBPP site, and possibly the oily water separator), which would be demolished to accommodate the proposed HBRP. Feldman and Shapiro did not evaluate the historical significance of the Humboldt Bay Power Plant Historic District (HBPPHD) at that time (PG&E 2006a, 8.3-9; Appendix 8.3D).

In response to staff’s Data Request No. 27 (CEC 2006b), asking that a qualified architectural historian justify and evaluate the HBPPHD, Jessica Feldman updated the DPR 523 “District” form for the HBPPHD on October 12, 2006. She augmented the discussion of the significance of the resource, adding “Continuation Sheets” listing all the elements of the HBPPHD with their dates of construction and alteration, and illustrating HBPP elements in photographs (taken in the field in October, 2006) and in copies of historic architectural plans. As a further response, Feldman submitted a technical memorandum, dated December 21, 2006, justifying the identification of the HBPP as a National Register of Historic Places (NRHP) historic district and evaluating its significance (CH2MHILL 2007a, Response to Data Request No. 27).

In Data Response Workshop Query No. 11, staff asked that additional HBPP land proposed for project use be surveyed for cultural resources. The additional 30 acres that needed to be surveyed had been proposed as either wetland mitigation land or as a trail between the proposed worker parking area and the HBRP site. William Shapiro and

Nichol Jordan surveyed these areas on March 6, 2007. The newly surveyed area was in dense vegetation or covered by standing water, so the ground visibility was poor. The surveyors walked twenty-meter transects and employed periodic trowel tests to observe soils. No cultural resources were identified (CH2MHill 2007f, Attachment WSQ11-1).

Findings: Archaeological Resources Identified and Evaluated

The CHRIS record search indicated that the PG&E property had been inventoried by PAR Environmental Services in 2003 for cultural resources for the ISFSI construction project that is currently underway to complete the decommissioning of Unit 3. The PAR survey included survey of the areas north of Units 1, 2, and 3, but did not include areas planned for HBRP use, including the laydown area, temporary access road, construction parking area, or power plant site. No archaeological deposits were identified in the PAR study (PAR 2003, p. 40).

The CHRIS record search also indicated three previously recorded ethnographic village sites within 0.5 miles of the project area: CA-Hum-79/*Djorokegochkok*, CA-Hum-80/*Norolrok,* and CA-Hum-83/*Dolawotkok*. Two other village sites, CA-Hum-81 and CA-Hum-82, are recorded within one mile of the project area. Only the recorded location of CA-Hum-79 is close to the HBPP, and it has apparently been mostly destroyed (PG&E 2006a, p. 8.3-5; PAR 2003, p. 40). Its potential for yielding data important in history and prehistory have not been evaluated, so its eligibility for the CRHR has not been determined. The number of archaeological/ethnographic village sites near the project area indicates that the location would have a relatively high archaeological sensitivity if it were not for the considerable ground disturbance that has occurred in connection with the development of the peninsula.

The area history indicates that in the 1850s, the town of Warnersville, consisting of perhaps 12 houses, was established in the project area, and a farmstead of undetermined age occupied some part of the HBPP site before PG&E purchase the property to build the power plant. Archaeological remains of these historic-period occupations could be present in the soils of the project site, but PG&E records indicate that extensive cutting and filling were done at the plant site in 1955 to create a finish grade for the power plant (PAR 2003, p. 6). One estimate suggests that two to six feet of fill were laid on the site of the proposed HBRP (PG&E 2006a, p. 8.3-3). It is possible that excavations for piping, duct banks, and foundations could reach native soils, so potentially significant archaeological remains of either or both the prehistoric and historic period could be encountered during construction.

The April 10, 2006, archaeological field survey of the HBPP identified no archaeological resources (PG&E 2006a, p. 8.3-6), and the subsequent March 6, 2007 survey of 30 acres of wetland mitigation land and a worker access trail also identified no cultural resources (CH2MHill 2007f, Attachment WSQ11-1).

Findings: Standing Structures Identified and Evaluated

The HBRP-associated architectural reconnaissance of the project site and the parcels around the HBPP found that some standing structures in the community of King Salmon were older than 50 years. The CHRIS records search returned no information on these structures, and the applicant did not record or evaluate them for eligibility for listing on

the CRHR because the applicant concluded that the proposed project would have no impacts on them (PG&E 2006a, 8.3-9). So these resources have not been evaluated for potential historical significance. Staff agrees that the proposed project would have no impact on standing structures of King Salmon because it would not affect them either physically or perceptually.

The applicant's discussion of the railroad spur that is an element of the HBPPHD (PG&E 2006a, p. 8.3-13) raised the possibility that the NWRR grade and tracks, to which the spur connects northeast of the proposed HBRP site, could be a cultural resource. With its construction between 1907 and 1914, the railroad grade and trackage are of sufficient age to be potentially eligible for the NRHP/CRHR, but this historic structure has not been recorded or evaluated by a cultural resources specialist. Staff, however, has assessed that the proposed project would have no impact on this resource because no HBPP construction activities are proposed that would affect the tracks or grade.

No information regarding historic sites or structures within the project area was documented in Humboldt County Historical Society archives (PG&E 2006a, Appendix 8.3F). The CHRIS records search returned information on one report, PAR 2003, which in part covered a historic architectural survey of the HBPP and documented Unit 3 as a potentially significant historical resource.

The PAR report provided an extensive and thorough history of HBPP and of power generation on the northwest coast of California and a state and national historic context for the development of nuclear power. The report related PG&E's construction of HBPP Unit 3 to the post-World War II collaboration of the federal government and the nation's electrical power industry in harnessing the nuclear reaction developed for weaponry during World War II to produce commercial power, as discussed in the historical background, above.

The PAR report called out the many innovations and engineering achievements evidenced in HBPP Unit 3's history to argue for its eligibility for the NRHP on the basis of both Criterion A (associated with events that have made a significant contribution to the broad patterns of our history), at a national level of significance, and Criterion C (embodying the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic values), also at a national level of significance, with Criteria Consideration G (exceptional significance required for a resource less than 50 years of age) applying (PAR 2003, p. 48). The applicant agreed that Unit 3 is probably eligible for the NRHP (PG&E 2006a, p. 8.3-13).

The applicant, however, rejected Units 1 and 2 as being potentially eligible for the NRHP/CRHR, saying the two fossil-fuel-burning, turbine-generator plants are typical and common in the context of the development of the electricity-producing and electricity-distributing industries in California. Consequently, the applicant argued that the historic district that the applicant identified, the HBPPHD, consisting of Units 1, 2, and 3, is not eligible for the NRHP/CRHR, and consequently is not a significant resource under CEQA (CH2MHILL 2007a, Response to Data Request No. 27). Staff disagrees.

As a first step in building an argument for rejecting the historical significance of the HBPPHD, the applicant considers whether or not the HBPP is a historic district. The applicant quotes language from the guidance provided by the National Park Service (NPS 2002) for evaluating the significance of historic properties, specifically, in this case, historic districts (CH2MHILL 2007a, Attachment DR27-1, p. 4):

> A district possesses a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development.
>
> A district derives its importance from being a unified entity, even though it is often composed of a wide variety of resources. The identity of a district results from the interrelationship of its resources, which can convey a visual sense of the overall historic environment or be an arrangement of historically or functionally related properties.

The applicant considers that, by this definition and description, PG&E's HBPP could constitute a district, saying (CH2MHILL 2007a, Attachment DR27-1, p.4):

> Within approximately seventy acres, the Humboldt Bay Power Plant contains a significant concentration of structures all associated with the production of energy for the Humboldt County Region of northern California, and these structures are linked by a plan by PG&E that began in 1956 and concluded in 1963 for this sole purpose.

In the same light, the applicant also says (CH2MHILL 2007a, Attachment DR27-1, p. 4):

> The Humboldt Bay Power Plant does meet this definition, as all of the buildings and structures convey both the visual and physical feeling of an operating power plant (despite the fact that Unit 3 is not currently operable).

Regarding the geographical boundaries required for a historic district, the applicant again refers to National Register requirements:

> A district must be a definable geographic area that can be distinguished from surrounding properties by changes such as density, scale, type, age, style of sites, buildings, structures, and objects, or by documented differences in patterns of historic development or associations. The boundaries must be based upon a shared relationship among the properties constituting the district.

The applicant goes on to acknowledge that the boundaries of a potential HBPP historic district are distinguishable and would include the entire built environment within the HBPP fenced area (CH2MHILL 2007a, Attachment DR27-1, p. 5).

Regarding the quality or character of the features present in a historic district, the applicant again quotes National Register guidance:

> A district can comprise both features that lack individual distinction and individually distinctive features that serve as focal points. It may even be considered eligible if all of the components lack individual distinction, provided that the grouping achieves significance as a whole within its historic context. In either case, the majority of the components that add to the district's historic character, even if they are individually undistinguished, must possess integrity, as must the district as a whole.

The applicant does not discuss the features of the HBPPHD. Rather, the applicant dismisses the need to do so with the expectation that it will be established that the HBPPHD is not significant (CH2MHILL 2007a, Attachment DR27-1, p. 5).

So, as to whether or not the HBPP constitutes a historic district by the measures of the National Register, the applicant acknowledges that it does, and staff agrees. Staff asserts, moreover, that an additional linkage unites the "significant concentration of structures" that even further augments the identification of the HBPP as a historic district. In addition to being linked by planning and function, as the applicant stated, the components of the HBPP are linked as a logical technological progression for the development of electrical generation in California, going from the use of liquid fossil fuels, through the use of natural gas, to the use of nuclear fuel. This progression is exemplified in the HBPP. Units 1 and 2 are, as the applicant assessed, "typical and common," and in being so they typify the post-World War II expansion of the electrical generation industry in California, utilizing a coastal location and once-through cooling, burning fuel oil or diesel stored on-site in large tanks, then converting to use natural gas for fuel; Unit 3 exemplifies the development of economic commercial nuclear power, with a cost-saving design and construction method, and, additionally, exemplifies the decline of the nuclear power industry in being made uneconomic by more stringent federal regulations, in the wake of deepening public safety concerns, and in developing an innovative mode of storing spent fuel during the decommissioning process.

Having established that the HBPPHD is a historic district, the applicant next builds a justification for rejecting its historical significance. The applicant first provides National Register guidance on significance in historic districts, as follows:

> A district must be significant, as well as being an identifiable entity. It must be important for historical, architectural, archaeological, engineering, or cultural values. Therefore, districts that are significant will usually meet the last portion of Criterion C [represent a significant and distinguishable entity whose components may lack individual distinction], plus Criterion A [are associated with events that have made a significant contribution to the broad patterns of our history], Criterion B [are associated with the lives of significant persons in our past], other portions of Criterion C [embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic values], or Criterion D [likely to yield information important in history or prehistory].

Then, because the NRHP guidelines require the evaluator to define a "period of significance," at or during which the resource attained the characteristics or associations which qualify it as significant, the applicant considers how best to define a period of

significance for the HBPPHD, discussing two possible periods of significance. One hypothetical period of significance suggested by the applicant would be 1956-1958, which would encompass those components or features of the HBPP that are now 50 or more years old, or will be by the time the HBRP is completed (CH2MHILL 2007a, Attachment DR27-1, p. 5).

For this period of significance, the applicant indicated that the HBPPHD would include most of the major buildings and structures of the HBPP except Unit 3, the Assembly Building, the 60/12-kV substation, the transmission tower identified by the applicant as having been built exclusively to convey the power output of Unit 3 to the HBPP switchyard, and all of the buildings and structures associated with the decommissioning of Unit 3. An HBPPHD having a 1956-1958 period of significance would have to qualify as significant under Criterion C, particularly under the last part of Criterion C (CH2MHILL 2007a, Attachment DR27-1, p. 5), as the NRHP guidelines state (above). While the applicant does not say that the HBPPHD fails to qualify under Criterion C, as "a significant and distinguishable entity whose components may lack individual distinction," that failure seems to be implied. The only apparent reason for a hypothetical 1956-1958 HBPPHD failing to qualify as significant under the last part of Criterion C, since it is plainly "distinguishable" and possessed of "components lacking individual distinction," is that the applicant considers it not significant. If staff has interpreted the applicant's discussion correctly, what the applicant is saying is that a hypothetical 1956-1958 HBPPHD has to be significant in order to be significant—a tautology.

The applicant is more explicit about a hypothetical 1956-1958 HBPPHD failing to qualify as significant under the other two parts of Criterion C. Relying on the specific history of the HBPP (PAR 2003) and on a general history of steam-electric generating plants in California (Herbert and Walters 2006), the applicant states: "In evaluating Humboldt Bay Power Plant against Criterion C, the Humboldt Bay Power Plant, as a whole, does not embody the distinctive characteristics of a type, period, or method of construction, it does not represent the work of a master, nor does it possess high artistic value" (CH2MHILL 2007a, Attachment DR27-1, p. 5). The applicant justifies this conclusion by asserting, from the cited sources, that the 1956-1958–era HBPP was similar in design and construction to many post-World War II power plants in California and that it also resembled other 1950s and 1960s power plants in being built near load centers, near a water supply, near fuel supplies, and mostly in coastal locations. Citing an Energy Commission compilation, the applicant adds that at present there are 34 steam turbine power plants in California. The gist of the applicant's argument seems to be that, like the South Bay Power Plant evaluated in Herbert and Walters (2006), the HBPP is typical, not unique, and common, not rare or special. The applicant goes on to reject a hypothetical 1956-1958 HBPPHD being significant under either Criterion A or Criterion B (associated with events that have made a significant contribution to the broad patterns of our history or associated with the lives of significant persons in our past) (CH2MHILL 2007a, Attachment DR27-1, p. 6). In the South Bay case, staff found persuasive the "typical and common" argument for a 1950s-era, steam-driven-turbine, power-generating plant not being historically significant under Criterion C, and so staff agrees with the applicant's analysis of the significance of a hypothetical 1956-1958 HBPPHD, despite the tautological reasoning about "a significant and distinguishable entity whose components may lack individual distinction."

The other hypothetical period of significance that the applicant considers for the HBPPHD is 1956-1963, inclusive of Units 1, 2, and 3, and all of their appurtenances. With this hypothetical period of significance, to which Unit 3, at only 44 years old, is a major contributor, the applicant states that the HBPPHD would have to be evaluated under Criteria Consideration G, which addresses the potential significance of resources that have achieved significance within the last 50 years.

National Register Bulletin No. 15 provides two sets of examples of resources whose significance may be evaluated under Criteria Consideration G. The first set of examples consists of resources that "MUST [sic] meet Criteria Consideration G," and the second set of examples consists of resources that "DO NOT [sic] need to meet Criteria Consideration G (NPS 2002, p. 41). The applicant quotes two of the latter examples as matching the HBPPHD: "a resource whose construction began over fifty years ago, but the completion overlaps the fifty year period by a few years or less;" and "a historic district in which a few properties are newer than fifty years old, but the majority of properties and the most important Period of Significance are greater than fifty years old." The applicant then states, on the basis of the quoted examples, that the HBPPHD does not meet Criteria Consideration G (CH2MHILL 2007a, Attachment DR27-1, p. 5). Since no further discussion is provided, it appears that the applicant concluded that since Criteria Consideration G does not apply to the HBPPHD, the HBPPHD cannot be significant.

Staff believes that the applicant has misinterpreted what the guidelines say about the second set of examples. Rather than having to match at least one of the examples in the second set of examples to be considered significant under Criteria Consideration G, staff understands the guidelines to mean that a resource that matches at least one of the examples would be exempt from having to be evaluated under Criteria Consideration G. That means a hypothetical 1956-1963 HBPPHD would have to be evaluated for significance in the same way as a resource 50 years of age or older. Staff believes the HBPPHD, if evaluated for a hypothetical period of significance of 1956-1963 and as a resource 50 years of age or older, would certainly qualify for listing on the NRHP as significant under both Criterion A and Criterion C at the national level, and probably at the state level as well, as PAR's national historic context for nuclear power development and PAR's history of the role of the HBPP in the state and region solidly prove (2003).

Staff, however, thinks that the HBPPHD best matches one of the examples in the first set of examples (resources that must meet Criteria Consideration G): "a property that is more than fifty years old and had no significance until a period less than fifty years before the nomination" (NPS 2002, p. 41). Staff believes the HBPPHD easily meets Criteria Consideration G on the strength of the exceptional significance of Unit 3, with Units 1 and 2 being major contributors to the district. Staff believes the period of significance for the HBPPHD, as a match for the example just cited, is 1956-1988, beginning with the completion of Unit 1 and ending with Unit 3 entering SAFSTOR status in 1988.

Because the integrity of a historic resource is not considered until it is established that the resource is historically significant, the applicant did not address the integrity of any

of the HBPPHD components except Unit 3, probably because the applicant concluded that the HBPPHD was not significant (CH2MHILL 2007a, Attachment DR27-1, p. 5).

Staff, believing the HBPPHD is a significant historic resource, must consider the integrity of the HBPPHD. National Register Bulletin No. 15 guidance on integrity for a historic district says (p. 52):

> For a district to retain integrity as a whole, the majority of the components that make up the district's historic character must possess integrity even if they are individually undistinguished. In addition, the relationships among the district's components must be substantially unchanged since the period of significance.

The PAR report assessed excellent integrity, in all seven aspects (location, design, setting, materials, workmanship, feeling, and association) for Unit 3 (2003, p. 50), despite the removal of its vent stack, but neither the PAR report nor the applicant addressed the integrity of any other components of the HBPPHD. The applicant, however, did briefly summarize information on alterations made to all HBPP components in a component table added to the DPR 523 "District" record as a result of staff Data Request No. 27 (see Cultural Resources Appendix 1, which is a transcription of the DPR 523 "District" record's component table). Unit 1 alteration includes "office, shops, and warehouse expansion," and Unit 2 is noted as "not significantly altered (CH2MHILL 2007a, Attachment DR27-1, Appendix A). Only one of the other components of the HBPPHD, the Relay Building (built in 1954), is noted in the DPR 523 Component Table as having been much altered, and that alteration consisted of doubling its size in 1958 when Unit 2 was added to the HBPP. The applicant also provides the information that a storage building has had a metal shed added to its northeast wall (PG&E 2006a, p. 8.3-14). These enumerated alterations are reversible, if a restoration of the altered components were hypothetically contemplated, and so do not constitute a loss of integrity. Conversion of both Unit 1 and Unit 2 from using fuel oil to natural gas in 1958 is another known alteration (PG&E 2007a). Staff believes none of these alterations is sufficient to impair the ability of Unit 1, Unit 2, or the Relay Building to convey their historical significance as major contributing components of a California steam-electric generating plant of the 1950s era, nor have the relationships among the HBPPHD's components changed since 1988.

To summarize staff's determination that the HBPP is a historic district and is potentially eligible for the NRHP at the national and, possibly, state levels, staff has established the following facts:

- The HBPP is a historic district because the individual components are linked spatially, functionally, historically, developmentally, and by plan and design.
- The HBPPHD is a historic district because it is a definable geographic area that can be distinguished from surrounding properties by easily definable boundaries.
- The HBPP is a historic district because it has both features that lack individual distinction and individually distinctive features that serve as focal points, and the majority of the components possess integrity, as does the district as a whole.

- The HBPPHD is potentially eligible for the NRHP under Criterion A (associated with events that have made a significant contribution to the broad patterns of our history), at the national level, because Units 1, 2, and 3 for the first time combined conventional thermal and nuclear thermal technology in one power plant to cost-effectively provide commercial electrical power to a transportation-challenged region, exemplifying a technological solution applicable to other geographically isolated parts of the country.
- The HBPPHD is also potentially eligible for the NRHP under Criterion A because of Unit 3's distinctions as the first commercial nuclear power plant in the nation and as the first nuclear power plant in the nation to store its spent fuel in its spent fuel pool during its decommissioning process.
- The HBPPHD is potentially eligible for the NRHP under Criterion A at the state level because it was the first combined conventional and nuclear power plant in California.
- The HBPPHD is potentially eligible for the NRHP under Criterion C (embodying the distinctive characteristics of a type, period, or method of construction, or representing the work of a master, or possessing high artistic values) at the national level because in one power plant it embodies the technological and engineering progression from conventional fossil-fuel-powered thermal power plants to nuclear power plants, going from the "typical and common" Units 1 and 2 to the nuclear-powered Unit 3.
- The HBPPHD is also potentially eligible for the NRHP under Criterion C, because of Unit 3's innovative and cost-effective containment vessel design and construction method.
- The HBPPHD is potentially eligible for the NRHP under Criterion C at the state level because being "typical and common" makes it a good example of a type of California power plant that staff suggests is becoming less typical and common as this decade progresses. The numbers of this type of power plant are decreasing because the fleet of such power plants is aging and becoming more costly to maintain and because one design aspect has become increasingly environmentally undesirable—once-through cooling, using ocean water. In recent years, the Energy Commission has seen an increasing number of applications (like the applicant's for HBPP) to repower or replace 1950s-era coastal power plants that use ocean water for once-through cooling. In just a few more years, the type of power plant represented by HBPPHD Units 1 and 2 will no longer be typical and common.
- Criteria Consideration G applies to the HBPPHD because most of its contributing components are more than fifty years old, but the district only attained significance less than fifty years before its eligibility is being assessed.
- The period of significance of the HBPPHD is 1956-1988, beginning with the completion of Unit 1 and ending with Unit 3 entering SAFSTOR status in 1988.
- The integrity of the HBPPHD is excellent in all seven aspects, with almost no attrition of contributing components and only reversible alterations made to a few contributing components.

In sum, staff has determined that the HBPPHD is potentially significant, at the national level, as a historic district under NRHP Criterion A and Criterion C, with a period of

significance of 1956-1988 and with Criteria Consideration G applying, inclusive of all components of the HBPP that were constructed before 1988 as contributing elements (listed in Cultural Resources Appendix 1). In addition, staff has determined that the HBPPHD retains sufficient integrity to convey its historical significance.

Staff has consequently determined that the HBPPHD is a significant historical resource under CEQA, based on the above substantial evidence. Thus the significance of any HBRP impacts to it must be evaluated.

Findings: Ethnographic Resources Identified and Evaluated

On May 5, 2006, the Native American Heritage Commission responded to the applicant's May 4 request, stating that no sacred sites or traditional cultural properties have been documented within the project area (PG&E 2006a, Appendix 8.3E).
In late May, 2006, in response to the May 16, 2006 letter, the applicant received three letters from Native Americans (PG&E 2006a, Appendix 8.3E). Comments received include the following:

- May 23, 2006: Lisa D. McGinnis, representing the Bear River Band of Rohnerville Rancheria, asks to be contacted if any Native American artifacts are found (PG&E 2006a, Appendix 8.3E).
- May 25, 2006: Andrea Davis, Environmental Director for the Wiyot Tribe states that the Wiyot Tribe has records of two Native American village sites within or adjacent to the project area. Unless the applicant can demonstrate that the project is located in an area of Humboldt Bay that has been historically filled below the level of ground disturbance, they recommend that Cultural Monitors be present onsite during all grading and excavation activities (PG&E 2006a, Appendix 8.3E).
- May 31, 2006: Paul Angell, Tribal Preservation Officer for the Blue Lake Rancheria states that there are numerous documented and undocumented Native American archaeological sites near the project area. Requests that the Wiyot Tribe be informed if any Native American resources are found (PG&E 2006a, Appendix 8.3E).

The applicant called the three Native Americans who responded to thank them for their input (PG&E 2006a, Appendix 8.3E).

ASSESSMENT OF IMPACTS AND DISCUSSION OF MITIGATION

METHOD AND THRESHOLD FOR DETERMINING SIGNIFICANCE

Various laws apply to the evaluation and treatment of cultural resources. CEQA requires the Energy Commission to evaluate resources by determining whether they meet several sets of specified criteria. These evaluations then influence the analysis of potential impacts to the resources and the mitigation that may be required to ameliorate any such impacts.

The CEQA Guidelines provide a definition of a historical resource as a "resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the CRHR", or "a resource listed in a local register of historical resources or identified as significant in a historical resource survey meeting the requirements of Section 5024.1

(g) of the Public Resources Code," or "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 California, provided the agency's determination is supported by substantial evidence in light of the whole record." (California Code of Regulations, Title 14, section 15064.5(a)). Historical resources that are automatically listed in the CRHR include California historical resources listed in or formally determined eligible for the NRHP and California Registered Historical Landmarks from No. 770 onward (Public Resources Code, Section 5024.1(d)).

Under the CEQA Guidelines, a resource is generally considered to be historically significant if it meets the criteria for listing in the CRHR. These criteria are essentially the same as the eligibility criteria for the NRHP. In addition to being at least 50 years old,[3] a resource must meet at least one (and may meet more than one) of the following four criteria (Pub. Resources Code section 5024.1):

- Criterion 1, is associated with events that have made a significant contribution to the broad patterns of our history;
- Criterion 2, is associated with the lives of persons significant in our past;
- Criterion 3, embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic values; or
- Criterion 4, has yielded, or may be likely to yield, information important to history or prehistory.

In addition, historical resources must also possess integrity of location, design, setting, materials, workmanship, feeling, and association (Cal. Code of Regulations, Title 14, section 4852(c)).

Even if a resource is not listed or determined to be eligible for listing in the CRHR, CEQA allows the lead agency to make a determination as to whether the resource is a historical resource as defined in Public Resources Code sections 5020.1 (j) or 5024.1. Whether a proposed project would cause a substantial adverse change in the significance of historical resources is the issue that staff analyzes to determine if the project may have a significant effect on the environment. The significance of an impact depends on:

- The cultural resource impacted;
- The nature of the resource's historical significance;
- How the resource's historical significance is manifested physically and perceptually;
- Appraisals of those aspects of the resource's integrity that figure importantly in the manifestation of the resource's historical significance; and
- How much the impact will change those integrity appraisals.

---

3 The Office of Historic Preservation's Instructions for Recording Historical Resources (1995) endorses recording and evaluating resources over 45 years of age to accommodate a five-year lag in the planning process.

DIRECT/INDIRECT IMPACTS AND MITIGATION

In the abstract, *direct impacts* to cultural resources are those associated with project development, construction, and co-existence. Construction usually entails surface and subsurface disturbance of the ground, and direct impacts to archaeological resources may result from the immediate disturbance of the deposits, whether from vegetation removal, vehicle travel over the surface, earth-moving activities, excavation, or demolition of overlying structures. Construction can have direct impacts on historic standing structures when those structures must be removed to make way for new structures or when the vibrations of construction impair the stability of historic structures nearby. New structures can have direct impacts on historic structures when the new structures are stylistically incompatible with their neighbors and the setting, and when the new structures produce something harmful to the materials or structural integrity of the historic structures, such as emissions or vibrations.

Generally speaking, *indirect impacts* to archaeological resources are those that may result from increased erosion due to site clearance and preparation, or from inadvertent damage or outright vandalism to exposed resource components due to improved accessibility. Similarly, historic structures can suffer indirect impacts when project construction causes obsolescence and demolition or creates improved accessibility with consequent vandalism and/or greater weather exposure.

Ground disturbance accompanying construction at the proposed plant site and along the proposed linear facilities has the potential to directly impact archaeological resources, unidentified at this time. The risk of potential direct, physical impacts of the proposed construction on unknown archaeological resources is commensurate with the extent of ground disturbance entailed in the particular mode of construction. This varies with each component of the proposed project. Placing the proposed project into this particular setting could have a direct impact on the integrity of association, setting, and feeling of nearby standing historic structures.

Construction Impacts and Mitigation

Direct Impacts on Archaeological Resources

Construction-related activities having the potential to adversely impact archaeological resources at the HBRP site include the following (PG&E 2006a, pp. 2-34):

- During site preparation, demolition of existing structures, topsoil removal, and preparation of drainage features would take place; these activities would destroy all known surface cultural resources on the HBRP site;
- During construction, holes for the foundations of the ten Wartsila engine-generator sets, holes for the foundations of the engine hall, stacks, and auxiliary equipment, and trenches for pipelines and linear connections would be excavated; these excavations could potentially impact buried archaeological resources, unidentified at this time, to the extent of the area and depth of the ground disturbance in the native soils of the site, under the known fill;
- During construction, ground disturbance to create pads and containment berms for diesel fuel tanks; this disturbance could potentially impact buried archaeological

resources, unidentified at this time, to the extent of the area and depth of the disturbance in the native soils of the site, under the known fill;

- During installation of three new take-off structures, excavations for the footing for three new steel poles for new tie lines; these excavations could potentially impact buried archaeological resources, unidentified at this time, to the extent of the area and depth of the ground disturbance in the native soils of the site, under the known fill;
- During construction, a trench for the installation of a new 10-inch-diameter natural-gas pipeline and a new 10-inch ultrasonic gas meter; these excavations could potentially impact buried archaeological resources, unidentified at this time, to the extent of the area and depth of the ground disturbance in the native soils of the site, under the known fill;
- During construction, a trench for the installation of a 6-inch-diameter water pipeline connection to an existing groundwater well; this excavation could potentially impact buried archaeological resources, unidentified at this time, to the extent of the area and depth of the ground disturbance in the native soils of the site, under the known fill;
- During construction, a trench for the installation of a 1,200-foot-long, 4-to-6-inch-diameter pipeline connection to a HCSD main in King Salmon Avenue; this excavation could potentially impact buried archaeological resources, unidentified at this time, to the extent of the area and depth of the ground disturbance in the native soils of the site, under the known fill;
- During construction, a trench for the installation of a 4-inch-diameter sewer pipeline connection to the on-site sanitary lift station No. 3, for wastewater disposal to the HCSD; this excavation could potentially impact buried archaeological resources, unidentified at this time, to the extent of the area and depth of the ground disturbance in the native soils of the site, under the known fill;
- Prior to construction, ground disturbance associated with a temporary construction laydown area, three temporary parking areas, a temporary construction access road, and a construction worker pedestrian access trail; this disturbance could potentially impact buried archaeological resources, unidentified at this time, to the extent of the area and depth of the disturbance in the native soils of the site.

Staff agrees with the applicant that no significant known archaeological resources have been identified in any of the areas where the proposed project would be built. Consequently, none of the HBRP construction impacts listed above would affect known archaeological resources. However, archaeological sites from the prehistoric and ethnographic periods were abundant in this general area, and historic period archaeological remains could also be present.

CEQA allows a lead agency to make provisions for archaeological resources unexpectedly encountered during construction projects, and a project owner may be required to train workers to recognize cultural resources, fund mitigation, and delay construction in the area of the find (Public Resources Code, section 21083.2; California Code of Regulations, Title 14, sections 15064.5(f) and 15126.4(b)).

To that end as well, the applicant has suggested a number of measures intended to mitigate potential impacts to archaeological resources that could be discovered during the construction of the proposed HBRP, including the following (PG&E 2006a, pp. 8.3-14–8.3-17):

- Retaining a Cultural Resources Specialist (CRS) to be on-call to investigate any cultural resources finds made during construction;
- Monitoring during initial clearing, grubbing, trenching, and excavation for foundations;
- Implementing a construction worker training program;
- Providing procedures for halting construction in the event that there is an inadvertent discovery of archaeological deposits or human remains;
- Providing procedures for evaluating an inadvertent archaeological discovery; and
- Providing procedures to mitigate adverse impacts on any inadvertent archaeological discovery determined to be significant, including data recovery and curation of all archaeologically acquired and generated materials.

Staff's provisions for the treatment of archaeological resources unexpectedly encountered during construction are the proposed Conditions of Certification **CUL-1** through **CUL-7** (below), which include:

- having an archaeologist monitor all ground disturbing activities on the project site, at the laydown areas, and along the pipeline routes, when and if ground disturbance reaches native, previously undisturbed soils;
- having construction workers be trained, as part of the Worker Environmental Awareness Program, to recognize archaeological resources;
- having construction be halted if archaeological resources are encountered;
- having finds be evaluated for significance; and
- having data recovery be carried out if significant impacts cannot be avoided.

Staff's proposed mitigation measures for identifying, evaluating, and possibly mitigating impacts to previously unknown archaeological resources discovered during construction ensure that impacts to significant archaeological discoveries would be mitigated to a less than significant level.

Direct Impacts on Historic Standing Structures

Construction-related activities at the HBRP site having the potential to directly impact potentially significant historic standing structures or contributing elements of a historic district that staff has determined is a significant historical resource under CEQA (the HBPPHD) include the following (PG&E 2006a, pp. 2-34):

- During site preparation, demolition of existing structures on the proposed HBRP site (PG&E 2006a, p. 2-1); these activities would destroy three (possibly four) HBPP elements that are known contributing elements of a significant historical resource—a storage building, a transmission line tower, a railroad spur, and possibly the oily

water separator which are all part of the HBPPHD; demolition is a significant direct effect that would need to be mitigated;

- Installation of two new circuit breakers at the HBPP Substation to accommodate the new power output from the proposed repowering (PG&E, p. 5-2); this could impact the integrity of materials and integrity of design of a contributing element of a significant historical resource, the HBPPHD; and
- Erection of the exhaust silencer stacks would introduce 10 new, tall structural elements into the setting of Buhne Point; this could impact the integrity of setting of a significant historical resource, the HBPPHD, and the integrity of setting of the unevaluated but sufficiently old to be potentially significant, nearby community of King Salmon.

Standing structures in the community of King Salmon older than 50 years were identified during a HBRP-related architectural survey, but these structures were not recorded and evaluated for eligibility for listing on the CRHR. The recorder concluded, however, that because the HBPP has been in the setting of these structures for over 50 years, the introduction of a new industrial elements into that setting would not constitute a significant impact on the King Salmon structures' integrity of setting, integrity of association, or integrity of feeling because tall industrial structures are already part of the setting on Buhne Point (PG&E 2006a, 8.3-9). Staff agrees with this conclusion. Similarly, the integrity of setting, integrity of association, or integrity of feeling of the HBPPHD would not be significantly impacted by the addition of more industrial structures because the historic district is composed of industrial structures. Consequently, procedures for identifying, evaluating, and mitigating potential visual impacts to the integrity of setting, integrity of association, or integrity of feeling of these resources would not be required.

No assessment of the potential eligibility of the NWRR trackage and grade is available, but since no physical impacts from the HBRP would affect this resource, establishing its significance is not necessary. No procedures for identifying, evaluating, and mitigating potential impacts to such resources would be required.

The demolition of three (possibly four) contributing elements of a significant historical resource (the HBPPHD's 1954 utility building, 1963 transmission tower, 1954 railroad spur, and possibly the 1954 oily water separator, as well) is a significant direct impact which would need to be mitigated. The applicant proposed no measures to mitigate for the loss of these three (possibly four) resources, but staff proposes mitigation in the form of detailed recordation (see below, under Indirect Impacts).

Direct Impacts on Ethnographic Resources

No ethnographic resources, either previously recorded or newly disclosed in the communications with Native Americans initiated by the applicant for the proposed project, were identified in the project area. Consequently, no procedures for identifying, evaluating, and mitigating potential impacts to such resources would be required.

Indirect Impacts

While no indirect impacts to known archaeological sites or ethnographic resources were identified, staff determined that the post-HBRP demolition of Units 1 and 2 and appurtenant equipment proposed by the project (PG&E 2006a, pp. 2.2, 2.4) would have an indirect and significant impact on the HBPPHD, which staff has determined is a significant historical resource under CEQA. The applicant stated that the demolition of Units 1 and 2 was not part of the HBRP and that the timing of the demolition, although foreseeable, would be speculative, so the demolition should be considered part of the cumulative impact of the project (PG&E 2006a, p. 2.4). This appears to be a justification for not considering the demolition an indirect impact under CEQA (Pub. Resources Code section 15064 (d)(2)). Based, however, on the AFC and on informal conversations with HBPP personnel, staff believes that, while the timing of the demolition may be indefinite, once the new power units are on-line, the eventual demolition is certain, making it neither “speculative” nor ”unlikely to occur,” which constitute CEQA’s threshold for rejecting a project’s indirect impact as foreseeable (Pub. Resources Code section 15064 (d)(3)).

Demolition is a significant impact, requiring mitigation. Staff is proposing Conditions of Certification **CUL-8** and **CUL-9** to provide mitigation for the HBRP’s significant indirect impact on the significant historical resource, the HBPPHD, and for the significant direct impact to the utility building, the transmission tower, and the railroad spur. Staff proposes in these two conditions that the applicant undertake Historic American Engineering Record (HAER) documentation of the contributing elements (listed in Cultural Resources Appendix 1) of the historic district, except Unit 3 and associated structures, prior to their demolition, beginning with the three (possibly four) structures that must be removed to accommodate the construction of the HBRP. The required documentation would not include Unit 3 and associated structures, because its decommissioning is unrelated to the HBRP. Staff would advise the applicant, however, to consider having Unit 3 documented at the same time as the rest of the HBPPHD because it seems probable that Unit 3 HAER documentation will eventually be required by the NRC. PAR recommended that if “those elements of the Unit 3 facility that contribute to its historical and engineering significance [the “character-defining features”] would be impacted, then mitigation measures designed in consultation with the NRC and the State Office of Historic Preservation may need to be outlined and completed prior to project implementation” (PAR 2003, p. 52).

The proposed Energy Commission conditions allow the scoping of the documentation of the HBPPHD in consultation with the Heritage Documentation Program (HDP) in Washington, D.C. While the recommended documentation could be labor-intensive and therefore costly, if the applicant already holds in its files original architectural drawings of Units 1 and 2 (and appurtenant equipment) and photographs of their construction, it is likely that copies of these can be submitted instead of new measured drawings. Then all that would be required to complete HAER documentation would be current photographs, a historic context, and an overview of the plant’s history.

Operation Impacts and Mitigation

During operation of the proposed power plant, if a leak should develop in the gas or water pipelines supplying the plant, repair of the buried utility could require the

excavation of a large hole. So such repairs could impact previously unknown subsurface archaeological resources in areas unaffected by the original project excavation. The measures proposed for mitigating impacts to previously unknown archaeological resources during the construction of the plant and linear facilities would serve to mitigate impacts from repairs occurring during operation of the plant.

Cumulative Impacts and Mitigation

A cumulative impact refers to a proposed project's incremental effects considered over time and together with those of other, nearby, past, present, and reasonably foreseeable future projects whose impacts may compound or increase the incremental effect of the proposed project (Pub. Resources Code sec. 21083; Cal. Code Regs., tit. 14, secs. 15064(h), 15065(c), 15130, and 15355).

An ongoing, nearby project, the ISFSI, currently being constructed to facilitate the decommissioning of Unit 3, must be considered as contributing to potential cumulative impacts on the cultural resources of the HBPP area. Cumulative impacts to cultural resources in the project vicinity could occur if the ISFSI project and the proposed HBRP had or would have impacts on cultural resources that, considered together, would be significant.

A cultural resources study was completed for the ISFSI. This study identified cultural resources on the HBPP property, assessed potential ISFSI project impacts to these cultural resources, and determined that construction of the ISFSI would not result in a significant impact to cultural resources, including Unit 3 (PAR 2003, pp. 51-52).

The HBRP's impacts to known archaeological and ethnographic resources have been analyzed by staff in this document and found to be not significant with the implementation of conditions of certification providing for identification, evaluation, and avoidance or mitigation of impacts to significant archaeological resources discovered during the project's construction. Staff determined, however, that the project would have both significant direct and indirect impacts on the contributing elements of a significant historical resource (the HBPPHD). Staff is thus proposing conditions to mitigate these impacts.

Proponents of future projects can mitigate impacts to as yet undiscovered subsurface archaeological sites to less than significant levels by requiring construction monitoring, evaluation of resources discovered during monitoring, and avoidance or data recovery for resources evaluated as significant (eligible for the CRHR or NRHP). Impacts to human remains can be mitigated by following the protocols established by state law in Public Resources Code section 5097.98. Since the impacts from the HBRP would be mitigated to a level less than significant by the project's compliance with Conditions of Certification **CUL-1** through **CUL-9**, and since similar protocols can be applied to other current and future projects in the area, staff does not expect any incremental effects of the HBRP to be cumulatively considerable, when viewed in conjunction with other projects.

COMPLIANCE WITH APPLICABLE LORS

If staff's proposed conditions of certification, below, are properly implemented, the proposed HBRP would be in compliance with the applicable state and local laws, ordinances, regulations, and standards listed in Table 1.

Humboldt County has general language promoting preservation of standing historic structures and archaeological resources in its General Plan. Staff's proposed conditions of certification require specific actions not just to promote but to effect historic preservation and mitigate impacts to all cultural resources. Consequently, if HBRP implements these conditions, its activities would be consistent with the general historic preservation goals of the Humboldt County General Plan.

CONCLUSIONS AND RECOMMENDATIONS

Staff has determined that the Humboldt Bay Repowering Project (HBRP) would have no impact on known significant archaeological or ethnographic resources, but would have a significant direct impact on three (possibly four) contributing elements of a significant historical resource, the HBPPHD, and a significant indirect impact on all additional contributing elements (except Unit 3 and associated structures) of that same significant historical resource. These significant impacts on the HBPPHD would require mitigation to reduce them to a less-than-significant level. The adoption and implementation of proposed Conditions of Certification **CUL-1** through **CUL-9** would mitigate significant impacts to known and as-yet-undiscovered archaeological, ethnographic, and historical resources.

Staff recommends that the Commission adopt the following cultural resources Conditions of Certification **CUL-1** through **CUL-9**, which are consistent with the applicant's proposed mitigation measures, with the exception of the direct and indirect impacts to contributing elements of the HBPPHD, mitigation for which the applicant did not provide. When properly implemented and enforced, staff believes that these conditions of certification would mitigate any impacts to known and unknown cultural resources located in the areas discussed in this assessment to less than significant.

These conditions are intended to facilitate the identification and assessment of previously unknown archaeological resources encountered during construction and to mitigate any significant impacts from the project on newly found resources assessed as significant. To accomplish this, the conditions provide for cultural resources awareness training for construction workers, for the archaeological and Native American monitoring of ground-disturbing activities, for the recovery of significant data from discovered archaeological deposits, for the writing of a technical archaeological report on monitoring activities and findings, for the curation of recovered artifacts and other data; and for the HAER recordation of the extant contributing elements of a significant historical resource, the HBPPHD.

PROPOSED CONDITIONS OF CERTIFICATION

CUL-1 Prior to the start of preconstruction site mobilization; construction ground disturbance; construction grading, boring, and trenching; and construction,

the project owner shall obtain the services of a Cultural Resources Specialist (CRS), and one or more alternates, if alternates are needed. The CRS shall manage all monitoring, mitigation, curation and reporting activities required in accordance with the Conditions of Certification (Conditions). The CRS may elect to obtain the services of Cultural Resource Monitors (CRMs) and other technical specialists, if needed, to assist in monitoring, mitigation, and curation activities. The project owner shall ensure that the CRS makes recommendations regarding the eligibility for listing in the California Register of Historical Resources (CRHR) of any cultural resources that are newly discovered or that may be affected in an unanticipated manner (Discovery). No preconstruction site mobilization; construction ground disturbance; construction grading, boring and trenching; or construction shall occur prior to CPM approval of the CRS, unless such activities are specifically approved by the CPM. Approval of a CRS may be denied or revoked for non-compliance on this or other projects.

CULTURAL RESOURCES SPECIALIST

The resumes for the CRS and alternate(s) shall include information demonstrating to the satisfaction of the CPM that their training and backgrounds conform to the U.S. Secretary of Interior's Professional Qualifications Standards, as published in the Code of Federal Regulations, 36 CFR Part 61. In addition, the CRS shall have the following qualifications:

1. the CRS's qualifications shall be appropriate to the needs of the project and shall include a background in anthropology, archaeology, history, architectural history, or a related field;

2. at least three years of archaeological or historic, as appropriate, resource mitigation and field experience in California; and

3. at least one year of experience in a decision-making capacity on cultural resources projects in California and the appropriate training and experience to knowledgably make recommendations regarding the significance of cultural resources.

The resumes of the CRS and alternate CRS shall include the names and telephone numbers of contacts familiar with the work of the CRS/alternate CRS on referenced projects and demonstrate to the satisfaction of the CPM that the CRS/alternate CRS has the appropriate training and experience to implement effectively the Conditions of Certification.

CULTURAL RESOURCES MONITORS

CRMs shall have the following qualifications:

1. a BS or BA degree in anthropology, archaeology, historical archaeology or a related field and one year experience monitoring in California; or

2. an AS or AA degree in anthropology, archaeology, historical archaeology or a related field, and four years experience monitoring in California; or

3. enrollment in upper division classes pursuing a degree in the fields of anthropology, archaeology, historical archaeology or a related field, and two years of monitoring experience in California.

CULTURAL RESOURCES TECHNICAL SPECIALISTS
The resume(s) of any additional technical specialists, e.g., historical archaeologist, historian, architectural historian, and/or physical anthropologist, shall be submitted to the CPM for approval.

Verification:

1. At least 45 days prior to the start of preconstruction site mobilization; construction ground disturbance; construction grading, boring, and trenching; and construction, the project owner shall submit the resume for the CRS, and alternate(s) if desired, to the CPM for review and approval.

2. At least 10 days prior to a termination or release of the CRS, or within 10 days after the resignation of a CRS, the project owner shall submit the resume of the proposed new CRS to the CPM for review and approval. At the same time, the project owner shall also provide to the proposed new CRS the AFC and all cultural resources documents, field notes, photographs, and other cultural resources materials generated by the project. If there is no alternate CRS in place to conduct the duties of the CRS, a previously approved monitor may serve in place of a CRS so that construction may continue up to a maximum of 3 days without a CRS. If cultural resources are discovered then construction will remain halted until there is a CRS or alternate CRS to make a recommendation regarding significance.

3. At least 20 days prior to preconstruction site mobilization; construction ground disturbance; construction grading, boring, and trenching; and construction, the CRS shall provide a letter naming anticipated CRMs for the project and stating that the identified CRMs meet the minimum qualifications for cultural resource monitoring required by this Condition. If additional CRMs are obtained during the project, the CRS shall provide additional letters to the CPM identifying the CRMs and attesting to the qualifications of the CRMs, at least five days prior to the CRMs beginning on-site duties.

4. At least 10 days prior to beginning tasks, the resume(s) of any additional technical specialists shall be provided to the CPM for review and approval.

5. At least 10 days prior to the start of preconstruction site mobilization; construction ground disturbance; construction grading, boring, and trenching; and construction, the project owner shall confirm in writing to the CPM that the approved CRS will be available for onsite work and is prepared to implement the cultural resources Conditions.

CUL-2 Prior to the start of preconstruction site mobilization; construction ground disturbance; construction grading, boring, and trenching; and construction, if the CRS has not previously worked on the project, the project owner shall provide the CRS with copies of the AFC, data responses, and confidential cultural resources reports for the project. The project owner shall also provide

the CRS and the CPM with maps and drawings showing the footprint of the power plant and all linear facilities. Maps shall include the appropriate USGS quadrangles and a map at an appropriate scale (e.g., 1:2000 or 1" = 200') for plotting cultural features or materials. If the CRS requests enlargements or strip maps for linear facility routes, the project owner shall provide copies to the CRS and CPM. The CPM shall review submittals and, in consultation with the CRS, approve those that are appropriate for use in cultural resources planning activities. No preconstruction site mobilization, construction ground disturbance, construction grading, boring and trenching, or construction shall occur prior to CPM approval of maps and drawings, unless such activities are specifically approved by the CPM.

If construction of the project would proceed in phases, maps and drawings not previously provided shall be submitted prior to the start of each phase. Written notification identifying the proposed schedule of each project phase shall be provided to the CRS and CPM.

At a minimum, the CRS shall consult weekly with the project construction manager to confirm area(s) to be worked during the next week, until ground disturbance is completed.

The project owner shall notify the CRS and CPM of any changes to the scheduling of the construction phases.

Verification:

1. At least 40 days prior to the start of preconstruction site mobilization; construction ground disturbance; construction grading, boring, and trenching; and construction, the project owner shall provide the AFC, data responses, and confidential cultural resource documents to the CRS, if needed, and the subject maps and drawings to the CRS and CPM. The CPM will review submittals in consultation with the CRS and approve maps and drawings suitable for cultural resources planning activities.

2. If there are changes to any project-related footprint, revised maps and drawings shall be provided at least 15 days prior to start of preconstruction site mobilization; construction ground disturbance; construction grading, boring, and trenching; and construction for those changes.

3. If project construction is phased, if not previously provided, the project owner shall submit the subject maps and drawings 15 days prior to each phase.

4. On a weekly basis during preconstruction site mobilization; construction ground disturbance; construction grading, boring, and trenching; and construction, a current schedule of anticipated project activity shall be provided to the CRS and CPM by letter, e-mail, or fax.

5. Within five days of identifying changes, the project owner shall provide written notice of any changes to scheduling of construction phase.

CUL-3 Prior to the start of preconstruction site mobilization; construction ground disturbance; construction grading, boring, and trenching; and construction,

the project owner shall submit the Cultural Resources Monitoring and Mitigation Plan (CRMMP), as prepared by or under the direction of the CRS, to the CPM for review and approval. The CRMMP shall be provided in the Archaeological Resource Management Report (ARMR) format, and, per ARMR guidelines, the author's name shall appear on the title page of the CRMMP. The CRMMP shall identify general and specific measures to minimize potential impacts to sensitive cultural resources. Implementation of the CRMMP shall be the responsibility of the CRS and the project owner. Copies of the CRMMP shall reside with the CRS, alternate CRS, each CRM, and the project owner's on-site construction manager. No preconstruction site mobilization; construction ground disturbance; construction grading, boring, and trenching; or construction shall occur prior to CPM approval of the CRMMP, unless such activities are specifically approved by the CPM.

The CRMMP shall include, but not be limited to, the following elements and measures:

1. A proposed general research design that includes a discussion of archaeological research questions and testable hypotheses specifically applicable to the project area, and a discussion of artifact collection, retention/disposal, and curation policies as related to the research questions formulated in the research design. A prescriptive treatment plan may be included in the CRMMP for limited resource types. A refined research design will be prepared for any resource where data recovery is required.

2. The following statement included in the Introduction: "Any discussion, summary, or paraphrasing of the Conditions in this CRMMP is intended as general guidance and as an aid to the user in understanding the Conditions and their implementation. The Conditions, as written in the Commission Decision, shall supersede any summarization, description, or interpretation of the Conditions in the CRMMP. The Cultural Resources Conditions of Certification from the Commission Decision are contained in Appendix A."

3. Specification of the implementation sequence and the estimated time frames needed to accomplish all project-related tasks during the ground disturbance, construction, and post-construction analysis phases of the project.

4. Identification of the person(s) expected to perform each of the tasks, their responsibilities, and the reporting relationships between project construction management and the mitigation and monitoring team.

5. A description of the manner in which Native American observers or monitors will be included, the procedures to be used to select them, and their role and responsibilities.

6. A description of all impact-avoidance measures (such as flagging or fencing), to prohibit or otherwise restrict access to sensitive resource

areas that are to be avoided during construction and/or operation, and identification of areas where these measures are to be implemented. The description shall address how these measures would be implemented prior to the start of construction and how long they would be needed to protect the resources from project-related effects.

7. A statement that all cultural resources encountered shall be recorded on a DPR form 523 and mapped and photographed. In addition, all archaeological materials retained as a result of the archaeological investigations (survey, testing, data recovery) shall be curated in accordance with the California State Historical Resources Commission's *Guidelines for the Curation of Archaeological Collections*, into a retrievable storage collection in a public repository or museum.

8. A statement that the project owner will pay all curation fees and a copy of an agreement with, or other written commitment from, a curation facility to accept artifacts from this project. Any agreements concerning curation will be retained and available for audit for the life of the project.

9. A statement that the CRS has access to equipment and supplies necessary for site mapping, photography, and recovery of any cultural resource materials that are encountered during construction and cannot be treated prescriptively.

10. A description of the contents and format of the Cultural Resource Report (CRR), which shall be prepared according to ARMR guidelines.

Verification:

1. At least 30 days prior to the start of preconstruction site mobilization; construction ground disturbance; construction grading, boring, and trenching; and construction, the project owner shall submit the subject CRMMP to the CPM for review and approval. Preconstruction site mobilization, construction ground disturbance, construction grading, boring and trenching, or construction may not commence until the CRMMP is approved, unless specifically approved by the CPM.

2. At least 30 days prior to the start of preconstruction site mobilization; construction ground disturbance; construction grading, boring, and trenching; and construction, a letter shall be provided to the CPM indicating that the project owner agrees to pay curation fees for any materials collected as a result of the archaeological investigations (survey, testing, data recovery).

CUL-4 The project owner shall submit the Cultural Resources Report (CRR) to the CPM for approval. The CRR shall be written by or under the direction of the CRS and shall be provided in the ARMR format. The CRR shall report on all field activities including dates, times and locations, findings, samplings, and analyses. All survey reports, Department of Parks and Recreation (DPR) 523 forms, and additional research reports not previously submitted to the California Historic Resource Information System (CHRIS) and the State

Historic Preservation Officer (SHPO) shall be included as an appendix to the CRR.

If the project owner requests a suspension of construction activities, then a draft CRR that covers all cultural resources activities associated with the project shall be prepared by the CRS and submitted to the CPM for review and approval on the same day as the suspension/extension request. The draft CRR shall be retained at the project site in a secure facility until construction resumes or the project is withdrawn. If the project is withdrawn, then a final CRR shall be submitted to the CPM for review and approval at the same time as the withdrawal request.

Verification:

1. Within 90 days after completion of ground disturbance (including landscaping), the project owner shall submit the CRR to the CPM for review and approval. If any reports have previously been sent to the CHRIS, then receipt letters from the CHRIS or other verification of receipt shall be included in an appendix.

2. Within 10 days after CPM approval, the project owner shall provide documentation to the CPM confirming that copies of the CRR have been provided to the SHPO, the CHRIS, and the curating institution, if archaeological materials were collected.

3. Within 30 days after requesting a suspension of construction activities, the project owner shall submit a draft CRR to the CPM for review and approval.

CUL-5 Prior to and for the duration of preconstruction site mobilization; construction ground disturbance; construction grading, boring, and trenching; and construction, the project owner shall provide Worker Environmental Awareness Program (WEAP) training to all new workers within their first week of employment at the project site and on the linear facilities. The training shall be prepared by the CRS, may be conducted by any member of the archaeological team, and may be presented in the form of a video. The CRS shall be available (by telephone or in person) to answer questions posed by employees. The training may be discontinued when ground disturbance, including landscaping, is completed. The training shall include:

1. A discussion of applicable laws and penalties under the law;

2. Samples or visuals of artifacts that might be found in the project vicinity;

3. Instruction that the CRS, alternate CRS, and CRMs have the authority to halt construction in the area of a Discovery to an extent sufficient to ensure that the resource is protected from further impacts, as determined by the CRS;

4. Instruction that employees are to halt work on their own in the vicinity of a potential cultural resources Discovery and shall contact their supervisor and the CRS or CRM, and that redirection of work would be determined by the construction supervisor and the CRS;

5. An informational brochure that identifies reporting procedures in the event of a Discovery;

6. An acknowledgement form signed by each worker indicating that they have received the training; and

7. A sticker that shall be placed on hard hats indicating that environmental training has been completed.

Verification:

No preconstruction site mobilization, construction ground disturbance, construction grading, boring and trenching, or construction, shall occur prior to implementation of the WEAP program, unless such activities are specifically approved by the CPM.

1. At least 30 days prior to the beginning of pre-construction site mobilization, the CRS shall provide the training program draft text and graphics and the informational brochure to the CPM for review and approval, and the CPM will provide to the project owner a WEAP Training Acknowledgement form for each WEAP-trained worker to sign.

2. On a monthly basis, until ground disturbance is completed, the project owner shall provide in the Monthly Compliance Report (MCR) the WEAP Training Acknowledgement forms of workers at the project site and on the linear facilities who have completed the training in the prior month and a running total of all persons who have completed training to date.

CUL-6 The project owner shall ensure that the CRS, alternate CRS, or CRMs monitor full time all preconstruction site mobilization; construction ground disturbance; construction grading, boring, and trenching; and construction that involve disturbance of native soils at the project site and linear facilities, and ground disturbance at parking and other ancillary areas, to ensure there are no impacts to undiscovered resources and to ensure that known resources are not impacted in an unanticipated manner.

Full-time archaeological monitoring for this project shall be the archaeological monitoring of all native-soil–disturbing activities on the construction site or along the linear facility routes for as long as the activities are ongoing. Full-time archaeological monitoring shall require at least one monitor per excavation area where machines are actively disturbing native soils. If an excavation area is too large for one monitor to effectively observe the native-soil disturbance, one or more additional monitors shall be retained to observe the area.

In the event that the CRS believes that the current level of monitoring is not appropriate in certain locations, a letter or e-mail detailing the justification for changing the level of monitoring shall be provided to the CPM for review and approval prior to any change in the level of monitoring.

The research design in the CRMMP shall govern the collection, treatment, retention/disposal, and curation of any archaeological materials encountered.

On forms provided by the CPM, CRMs shall keep a daily log of any monitoring and other cultural resources activities and any instances of non-compliance with the Conditions and/or applicable LORS. Copies of the daily monitoring logs shall be provided by the CRS to the CPM, if requested by the CPM. From these logs, the CRS shall compile a monthly monitoring summary report to be included in the MCR. If there are no monitoring activities, the summary report shall specify why monitoring has been suspended. The CRS or alternate CRS shall report daily to the CPM on the status of cultural resources-related activities at the construction site, unless reducing or ending daily reporting is requested by the CRS and approved by the CPM.

The CRS, at his or her discretion, or at the request of the CPM, may informally discuss cultural resource monitoring and mitigation activities with Energy Commission technical staff.

Cultural resources monitoring activities are the responsibility of the CRS. Any interference with monitoring activities, removal of a monitor from duties assigned by the CRS, or direction to a monitor to relocate monitoring activities by anyone other than the CRS shall be considered non-compliance with these Conditions.

Upon becoming aware of any incidents of non-compliance with the Conditions and/or applicable LORS, the CRS and/or the project owner shall notify the CPM by telephone or e-mail within 24 hours. The CRS shall also recommend corrective action to resolve the problem or achieve compliance with the Conditions. When the issue is resolved, the CRS shall write a report describing the issue, the resolution of the issue, and the effectiveness of the resolution measures. This report shall be provided in the next MCR for the review of the CPM.

The project owner shall obtain a Native American monitor to monitor ground disturbance in any areas where Native American artifacts are discovered in native soils. Contact lists of concerned Native Americans and guidelines for monitoring shall be obtained from the Native American Heritage Commission. Preference in selecting a monitor shall be given to Native Americans with traditional ties to the area that shall be monitored.

During and after construction, the project owner shall fulfill the requests received from Native American tribes or groups to be notified if Native American artifacts are found.

Verification:

1. At least 30 days prior to the start of preconstruction site mobilization; construction ground disturbance; construction grading, boring and trenching; and construction, the CPM will provide to the CRS an electronic copy of a form to be used as a daily monitoring log. While monitoring is on-going, the project owner shall include in each MCR a copy of the monthly summary report of cultural resources-related monitoring prepared by the CRS.

2. Daily, as long as no cultural resources are found, the CRS shall provide a statement that “no cultural resources over 50 years of age were discovered” to the CPM as an e-mail, or in some other form acceptable to the CPM. If the CRS concludes that daily reporting is no longer necessary, a letter or e-mail providing a detailed justification for the decision to reduce or end daily reporting shall be provided to the CPM for review and approval at least 24 hours prior to reducing or ending daily reporting.

3. At least 24 hours prior to implementing a proposed change in monitoring level, documentation justifying the change shall be submitted to the CPM for review and approval.

4. No later than 30 days following the discovery of any Native American cultural materials, the project owner shall submit to the CPM copies of letters of transmittal of requested information to the Chairperson of those Native American tribes or groups who requested it. Additionally, the project owner shall submit to the CPM copies of letters of transmittal for all subsequent responses to Native American requests for notification, consultation, and reports and records.

CUL-7 The project owner shall grant authority to halt construction to the CRS, alternate CRS, and the CRMs in the event of a cultural resources discovery. Redirection of ground disturbance shall be accomplished under the direction of the construction supervisor in consultation with the CRS.

In the event cultural resources over 50 years of age or, if younger, considered exceptionally significant are found, or impacts to such resources can be anticipated, construction shall be halted or redirected in the immediate vicinity of the Discovery sufficient to ensure that the resource is protected from further impacts. The halting or redirection of construction shall remain in effect until the CRS has visited the discovery, and all of the following have occurred:

1. The CRS has notified the project owner, and the CPM has been notified within 24 hours of the discovery, or by Monday morning if the cultural resources discovery occurs between 8:00 AM on Friday and 8:00 AM on Sunday morning, including a description of the discovery (or changes in character or attributes), the action taken (i.e. work stoppage or redirection), a recommendation of eligibility, and recommendations for mitigation of any cultural resources discoveries, whether or not a determination of significance has been made.

2. The CRS has completed field notes, measurements, and photography for a DPR 523 primary form. The “Description” entry of the DPR 523 form shall include a recommendation on the significance of the find. The project owner shall submit completed forms to the CPM.

3. The CRS, the project owner, and the CPM have conferred, and the CPM has concurred with the recommended eligibility of the discovery and approved the CRS’s proposed data recovery, if any, including the curation of the artifacts, or other appropriate mitigation; and any necessary data recovery and mitigation have been completed.

Verification:

1. At least 30 days prior to the start of preconstruction site mobilization; construction ground disturbance; construction grading, boring, and trenching; and construction, the project owner shall provide the CPM and CRS with a letter confirming that the CRS, alternate CRS, and CRMs have the authority to halt construction activities in the vicinity of a cultural resources discovery, and that the project owner shall ensure that the CRS notifies the CPM within 24 hours of a discovery, or by Monday morning if the cultural resources discovery occurs between 8:00 AM on Friday and 8:00 AM on Sunday morning.

2. Completed DPR 523 forms shall be submitted to the CPM for review and approval no later than 24 hours following the notification of the CPM, or 48 hours following the completion of data recordation/recovery, whichever the CRS decides is more appropriate for the subject cultural resource.

CUL-8 Prior to the demolition of any of the contributing components of the Humboldt Bay Power Plant Historic District (listed in Cultural Resources Appendix 1), but excluding Unit 3 and associated structures (see Cultural Resources Appendix 1), the project owner shall obtain the services of an architectural historian. The project owner shall provide the CPM with the name and resume of the architectural historian. No preconstruction site mobilization, construction ground disturbance, construction grading, boring and trenching, or construction shall occur prior to CPM approval of the architectural historian, unless specifically approved by the CPM.

The resume for the architectural historian shall include names and telephone numbers of contacts familiar with the architectural historian's work and all information needed to demonstrate that the architectural historian has the following qualifications:

1. meets the Secretary of Interior's Professional Standards for architectural history;

2. has at least three years experience in recording twentieth-century industrial structures; and

3. has completed at least one recordation project within the past five years involving coordination with the National Park Service's Heritage Documentation Program (HDP).

Verification:

1. At least 150 days prior to demolition of the utility building, the transmission tower, and the on-site railroad spur, the project owner shall submit the name and resume of the selected architectural historian to the CPM for review and approval.

2. At least 120 days prior to the demolition of the utility building, the transmission tower, and the on-site railroad spur, the project owner shall confirm in writing to the CPM that the approved architectural historian is available for onsite work and provide a date by which the architectural historian will undertake the HAER documentation of

the three Humboldt Bay Power Plant Historic District elements slated for demolition as part of the Humboldt Bay Replacement Project.

3. At least 450 days prior to demolition of Unit 1, Unit 2, and associated structures (listed in Cultural Resources Appendix 1), the project owner shall submit the name and resume of the selected architectural historian to the CPM for review and approval.

4. At least 420 days prior to the demolition of Unit 1, Unit 2, and associated structures, the project owner shall confirm in writing to the CPM that the approved architectural historian is available for onsite work and provide a date by which the architectural historian will undertake the HAER documentation of Unit 1, Unit 2, and associated structures, slated for demolition as a consequence of the Humboldt Bay Replacement Project.

CUL-9 Prior to the demolition of any of the contributing components of the Humboldt Bay Power Plant Historic District (listed in Cultural Resources Appendix 1), but excluding Unit 3 and associated structures (see Cultural Resources Appendix 1), the project owner shall ensure that the approved architectural historian prepares HAER documentation of these structures. The owner shall ensure that the architectural historian consults with the HDP, in Washington, D. C., and complies with HDP guidance on the extent and content of documentation appropriate for these structures, as contributing elements of a historic district that is potentially eligible for the National Register of Historic Places and as a significant historical resource under CEQA, and on the format and materials to be used in the documentation.

To provide for the contingency that the HDP may require additional information after reviewing the architectural historian's draft documentation, the project owner shall ensure that the architectural historian over-records ("brackets" all photographs; takes duplicate photogrammetric readings; measures everything; makes copies daily of all field notes and logs and retains them in a separate location), in the field, those physical aspects (e.g., measurements, photographs, and photogrammetry) of the utility building, transmission tower, the on-site railroad spur, and Unit 1, Unit 2, and associated structures that will not be accessible after the structures have been demolished.

No preconstruction site mobilization, construction ground disturbance, construction grading, boring and trenching, or construction shall occur prior to the completion by the architectural historian of the over-recording (defined above), in the field, of the utility building, the transmission tower, and the on-site railroad spur, and the submission to and approval by the CPM of the draft HAER documentation of these three structures, unless specifically allowed by the CPM.

No demolition of Unit 1, Unit 2, and associated structures (Cultural Resources Appendix 1) shall occur prior to the completion by the architectural historian of the over-recording, in the field, of these resources and the submission to and

approval by the CPM of the draft HAER documentation of them, unless specifically allowed by the CPM.

The project owner may make available to the architectural historian original architectural drawings of Units 1 and 2 and associated structures, and photographs of their construction that it holds in its files, so these can be submitted as part of the HAER documentation instead of new measured drawings.

Verification:

1. At least 90 days prior to demolition of the utility building, the transmission tower, and the on-site railroad spur, the project owner shall submit to the CPM a letter or memorandum from the architectural historian detailing the scope of the HDP-recommended documentation of the three structures.

2. At least 60 days prior to demolition of the utility building, the transmission tower, and the on-site railroad spur, the project owner shall provide a copy of the draft HAER documentation of these structures to the CPM for review and approval.

3. At least 390 days prior to demolition of Unit 1, Unit 2, and associated structures (Cultural Resources Appendix 1), the project owner shall submit to the CPM a letter or memorandum from the architectural historian detailing the scope of the HDP-recommended documentation of the HBPPHD.

4. At least 360 days prior to demolition of Unit 1, Unit 2, and associated structures (listed in Cultural Resources Appendix 1), the project owner shall provide a copy of the draft HAER documentation of these structures to the CPM for review and approval.

5. Within 180 days after completion of demolition of all of the contributing components of the HBPPHD, except Unit 3 and associated structures, the project owner shall submit to the CPM copies of the transmittal letters for the submission of copies of the final HAER documentation of the HBPPHD to the California State Library and to at least two local libraries in Humboldt County, and a copy of the letter of acceptance of the final HAER documentation by the Library of Congress.

REFERENCES

Anon n.d. – Anonymous. “Eureka History.” http://www.usacitiesonline.com/cacountyeureka.htm. No date provided. Accessed 10/30/07.

Anon 1970 – Anonymous (probable PG&E employee). “The Humboldt History of P.G. & E.” Typed manuscript of a public lecture, circa 1970.

California Landmarks 2004 – California State Landmarks. Humboldt County. http://www.ohp.parks.ca.gov/?page_id=21420. Accessed March 14, 2007.

CEC 2006a – California Energy Commission/P. Richins (tn: 38471). Letter to Tribal Leaders/Members dated 11/27/2006 re: Proposed Repowering Project on Humboldt Bay, Humboldt County. (Separate letters to different Tribal Leaders and/or Members.) 11/27/2006. Rec'd 11/27/2006.

CEC 2006b – California Energy Commission/J. Kessler (tn: 38581). Staff's Data Requests 1-57 dated 12/8/2006. Rec'd 12/8/2006.

CH2MHILL 2007a – CH2MHill/D. Davy (tn: 38912). Applicant's Responses to CEC Staff's Data Requests 1-57. 1/12/2007. Rec'd 1/12/2007.

CH2MHILL 2007f – CH2MHill/D. Davy (tn: 39828). Applicant's Responses to CEC Staff's Data Requests 11, 55, 82 and 83 and Workshop Queries 3, 11, 14 and 15. 3/30/2007. Rec'd 3/30/2007.

Crandell 2005 – Joan Crandell. The Indian Island Massacre: An Investigation of the Events That Precipitated the Wiyot Murders. Humboldt State University, Master's Thesis, May 2005. http://dscholar.humboldt.edu:8080/dspace/bitstream/2148/30/1/Crandell.pdf. Accessed November 1, 2007.

Elsasser 1978 – Albert B. Elsasser. "Wiyot," in *Handbook of North American Indians*, Vol. 8. Robert F. Heizer, ed. Washington, D. C.: Smithsonian Institution, 1978.

Elsasser 1986 – Albert B. Elsasser. "The Site on Gunther Island (CA-HUM-67) in Humboldt Bay." *Archives of California Prehistory*, vol. 6, pp. 49-54, 1986.

EPIC 2000 – Environmental Protection Information Center. "The End of the Line for the NWP." http://www.wildcalifornia.org/pages/page-65. Accessed 11/1/2007.

Forsyth 2006 – Suzanne Forsyth. "Remembering Kaquaish." *The Eureka Times Standard*, 2/26/2007.http://www.humboldthistory.org/articles/kaquaish.html#kaquaish. Accessed 10/29/2007.

Forsyth 2007 – Suzanne Forsyth. "Tugboat War on Humboldt Bay." *The Eureka Times Standard*, 9/24/2007. http://www.humboldthistory.org/tsarticles.html. Accessed 10/29/2007.

Fredrickson 1984 – David A. Fredrickson. "The North Coastal Region." In *California Archaeology*, Michael J. Moratto, ed., pp. 471-527. Orlando, Fla.: Academic Press, 1984.

Herbert and Walters 2006 – Rand Herbert and Andrew Walters. "Technical Memorandum: Architectural Documentation and Evaluation of the South Bay Power Plant, Chula Vista, California." Appendix 8.3G, in Application for Certification: Humboldt Bay Replacement Project (Docket No. 06-AFC-3). Submitted to CEC/Dockets on 06/30/06.

Historic Record Co. 1915 – Historic Record Co. *History of Humboldt County California*, Chap. III: The Discovery of Humboldt Bay. Los Angeles: Historic Record Co., 1915. http://www.calarchives4u.com/history/humboldt/humb1915-ch3.htm.

Historic Record Co. 1915 – Historic Record Co. *History of Humboldt County California*, Chap. XIII: Early Towns and Villages of Humboldt County. Los Angeles: Historic Record Co., 1915. http://www.calarchives4u.com/history/humboldt/humb1915-ch18.htm.

Humboldt County 1984 – Humboldt County. Humboldt County General Plan, Volume I: Framework Plan. http://co.humboldt.ca.us/planning/Genplan/Framewk/CH3B.htm. Accessed March 13-14, 2007.

Humboldt County 1989 – Humboldt County. Humboldt County General Plan, Volume II: Humboldt Bay Area Plan of the Humboldt County Local Coastal Program. Eureka, Calif.: County of Humboldt. http://library.ceres.ca.gov/cgi-bin/doc_query?where-author=Humboldt&rel-author=like&where-doc_type=coastalplan&rel-doc_type=equals&special=ceres&max=15. Accessed March 22, 2007

Kroeber 1926 – A. L. Kroeber. *Handbook of the Indians of California*. New York, NY: Dover Publications, Inc., 1926.

Moratto 1984 – Michael J. Moratto. *California Archaeology*. Orlando, Fla.: Academic Press, 1984.

Anon 2006 – Anonymous. “Northwestern Pacific Railroad.” http://redwoodrailroads.com, Accessed March 6, 2007.

NPS 2002 – National Park Service. “How to Apply the National Register Criteria for Evaluation.” National Register Bulletin No. 15. National Register of Historic Places Staff. U.S. National Park Service. Washington, D.C.: 2002.

NPRHS 2000 – Northwestern Pacific Railroad Historical Society. “NWP History: The Railroad.” http://www.nwprrhs.org/. Accessed 11/1/2007.

PAR 2003 – Lynn Compas and Mary L. Maniery. “Cultural Resources Study for the PG&E Humboldt Bay Power Project, ISFSI Licensing Project.” Final Report, prepared for Pacific Gas and Electric by PAR Environmental Services, Inc. Sacramento, Calif.: August 12, 2003.

PG&E 2006a – PG&E/R. Kuga (tn: 38050). Humboldt Bay Repowering Project Application for Certification, Vol. 1 & 2, 1 AFC CD, and 1 Air Modeling CD. 9/29/2006. Rec’d 9/29/2006.

PG&E 2007a – Humboldt Bay Repowering Project (tn: 39502). E-Mail from Susan Strachan entitled 5 Year Study of Property Taxes from Humboldt Bay Power Plant to John S. Kessler, Commission Staff. 3/6/07 Rec’d 3/7/2007.

Van Kirk 1999 – Susie Van Kirk. “Humboldt County: A Briefest of Histories.” Humboldt County Historical Society website: http://www.humboldthistory.org/briefhist.html. Accessed 10/29/07.

Humboldt Bay Power Plant Historic District
List of Contributing Components[4]

Contributor Name	Year Built	Associated With	Year Removed	Year Altered	Type of Alteration
Unit 1	1954	Unit 1		various	Office, shops, and warehouse expansion
Unit 2	1958	Unit 2		various	Not significantly altered
Unit 3	1963	Unit 3		1988	Decommissioned; stack removed
Relay Building	1954	Unit 1		1958	Expansion—doubled its size
Well No. 1	Unknown		Before 1955		Covered; non-operational
Cooling Water Intake Canal	1954	Unit 1		1958 (Unit 2) 1963 (Unit 3)	Additions for each new unit; no other known alterations
Intake Canal	1954	Unit 1		1963	North end widened (dredged?)
Discharge Canal	1954	Unit 1			No known alterations
Discharge Headworks	1954	Unit 1			No known alterations
Discharge Canal Outlet	1954	Unit 1			Possible dredging and /or widening; no significant alterations
Oil-Water Separator (also known as the Oily-Water Separator	1954	Unit 1			No known alterations
Distilled Water Tanks (2)	1954	Unit 1			No known alterations

[4] Transcribed from the component table included in the applicant's DPR 523 "District" record update (CH2MHill 2007a, Response to Data Request 27).

Contributor Name	Year Built	Associated With	Year Removed	Year Altered	Type of Alteration
Fresh Water Tank (also known as the Raw Water Tank	1954	Unit 1			No known alterations
Propane Tank	1954	Unit 1			No known alterations
CO_2 Tank	1954	Unit 1			No known alterations
Fire Pump House	1954	Unit 1			No known alterations
Fuel Oil Tank 1 (also known as No. 1 Fuel Oil Storage Tank)	1954	Unit 1			No known alterations
Fuel Oil Tank 2 (also known as No. 2 Fuel Oil Storage Tank)	1954	Unit 1			No known alterations
Entrance Road	1954	Unit 1		1958	Extended to reach Unit 2
Secondary Road (southeast of Intake Canal)	Unknown (appears in 1957 site plan)	Unit 1			No longer in use, but traces of road are visible
Railroad Spur	Unknown (appears on 1954 site plan)	Unit 1			Abandoned in place after Unit 3 no longer operational
Fuel Oil Service Tank 1 (also known as No. 1 Fuel Oil Service Tank)	1954	Unit 1			No known alterations
Fuel Oil Service Tank 2 (also known as No. 2 Fuel Oil Service Tank)	1958	Unit 2			Regular maintenance; no significant alterations

Contributor Name	Year Built	Associated With	Year Removed	Year Altered	Type of Alteration
Light Oil Tank 2 (also known as Diesel Storage Tank)	1954	Unit 1			Regular maintenance; no significant alterations
Secondary Regulator Station 1 (also known as Secondary Gas Regulator 1)	1958	Unit 2			Regular maintenance; no significant alterations
Secondary Regulator Station 2 (also known as Secondary Gas Regulator 2)	1958	Unit 2			Regular maintenance; no significant alterations
Guard House	post-1963	Unit 3			
Existing Well	Unknown	Unit 1	Unknown	Unknown	Unknown if this was removed, but it is located underneath Fuel Oil Storage Tank 2
60-kV Switchyard	1954	Unit 1			Regular maintenance; no significant alterations
60/12-kV Unit Substation	Between 1958 and 1963	Unit 2			Regular maintenance; no significant alterations
King Salmon Avenue Bridge	Unknown	Unit 1			Regular maintenance; no significant alterations
Primary Regulator Station	1958; at the site of Well No. 1	Unit 2			Regular maintenance; no significant alterations
Assembly Building	Between 1958 and 1963	Unit 2			
Training Building	Post-1963	Unit 3			

Contributor Name	Year Built	Associated With	Year Removed	Year Altered	Type of Alteration
Drawing Resources Building	Post-1963	Unit 3			
Unit 3 Vent Stack	1963	Unit 3	1998		
Radwaste Treatment (also known as Liquid Radwaste Treatment	1963	Unit 3			Regular maintenance; no significant alterations
Low Level Storage	Post-1963	Unit 3			Regular maintenance; no significant alterations
Contaminated Equipment Storage Building (also known as Radwaste Handling Building	1963	Unit 3			
Hazardous Storage Building	Post-1963	Unit 3			
Effluent Ponds (2)	Post-1963	Unit 3			
Processing Slab	Post-1963	Unit 3			
Office (five-wide)	Post-1953 [error?}	Unit 1			Temporary Construction
Misc. Sheds, Painting Office	Unknown; between 1963 and 1999	Unit 3	1999-2006		No longer on site
Hydrogen Storage	Between 1958 and 1963	Unit 2			
Waste Solids Vault	1963	Unit 3	Unknown; but does not appear on current maps		

Contributor Name	Year Built	Associated With	Year Removed	Year Altered	Type of Alteration
Machine Shop and Instrument Calibration (also known as Hot Shop)	1963	Unit 3			Regular maintenance; no significant alterations
Septic Tank	1963	Unit 3			Regular maintenance; no significant alterations
OCB Unit 3	1963	Unit 3	Unknown, but does not appear on current maps		
Hydrants (19 in 1958)	Various	Unit 2	Unknown	Unknown	No data available