Project Information Concerning
the Proposed Independent Spent Fuel Storage Installation, Humboldt Bay Power Plant,
Humboldt County, California

The proposed action is the construction and operation of an Independent Spent Fuel Storage Installation (ISFSI) on the site of Pacific Gas & Electric's (PG&E's) Humboldt Bay Power Plant (HBPP) in Humboldt County, California. As described in PG&E's December 15, 2003 application, the proposed ISFSI facility will be located within the 143-acre site boundary of the existing HBPP facility, on a small peninsula known as Buhne Point. The coordinates of the planned ISFSI site are latitude 40°44' N and longitude 124°12' W (approximately). Maps of the HBPP vicinity and site are attached (Attachment 1).

As shown on Figure 2.2-3, "Humboldt Bay ISFSI: Site Plan," (Attachment 2) from the PG&E December 2003 environmental report, the proposed ISFSI would be constructed in the northwestern corner of the 143-acre, PG&E owner-controlled area, in an area previously disturbed during HBPP operations. The ISFSI would provide temporary dry storage capacity for the spent nuclear fuel that PG&E currently stores in the HBPP spent fuel pool, located in the shut-down Unit 3. The proposed ISFSI is intended as an interim facility consisting of an in-ground concrete structure with storage capacity for six shielded casks.

The storage vault, with dimensions of approximately 6.1 m x 23.2 m (20 ft x 76 ft), would be comprised of six below-grade, vertically oriented, cylindrical storage cells that are structural units constructed of steel-reinforced concrete with a carbon steel liner. Each storage cell, designed to accommodate one cask, would be approximately 2.7 m (9 ft) in diameter by 3.5 m (11-1/2 ft) deep. The bottom, end walls, and side walls of the vault would be constructed of reinforced concrete. The elevation of the vault top (without the storage cell lids installed) would be approximately flush with the ground surface, with the lids approximately 0.4 m (16-1/4 inches) high, not including the height of the lid bolt caps.

Construction would be limited to the vicinity of the ISFSI site and the nearby, onsite excavation spoils disposal area (indicated on Figure 2.2-3 as "SPOIL AREA"). Construction of the ISFSI storage vault would require the removal of vegetation, soil excavation, spoils disposal, forming and pouring the concrete vault structure, and excavation backfill. PG&E estimates that approximately 917 cubic meters (1200 cubic yards) of material would be excavated using standard earthmoving equipment and disposed onsite at the spoils disposal site. Another approximately 765 m^3 (1000 yd^3) would be moved around during construction and used at the ISFSI for final site contouring. Concrete for the ISFSI vault would be obtained from offsite sources.

The spoils disposal area, covering approximately 836 square meters (9000 square feet), is located within an area that had been disturbed previously by plant operations. This area would be accessed via the existing oil road, and material disposed there would be contoured to the existing slope. As appropriate, PG&E would use best management practices (BMPs) to address storm water runoff, erosion control, and revegetation. In addition, PG&E would apply applicable BMPs during ISFSI construction to protect local waters and nearby wetlands from site runoff, spillage, and leaks. Finally, all areas disturbed during construction activities would be revegetated with an appropriate seed mix.

Enclosure

A single-story security building also would be constructed and located outside the security fencing for the ISFSI, to the east of the vault. The security building would be approximately 6.1 m x 12.2 m (20 ft x 40 ft) and no more than 6.1 m (20 ft) high. There would be water, sewer, electrical, and telephone connections to the security building. Construction of the security building would involve minor excavation in order to install the footing and foundation for the building, with concrete for this operation delivered from offsite. Lumber, glass, and insulation also may be brought to the ISFSI security building construction site. Other auxiliary security components of the ISFSI include the installation of chain-link fencing, perimeter lighting, and security surveillance monitoring equipment.

The existing oil supply road would provide the transport route from Unit 3 to the ISFSI site and would be widened 8 feet for this purpose and extended approximately 200 feet to the proposed ISFSI site. Finally, inside Unit 3, PG&E would install a cask handling crane and a rail dolly for transporting the spent fuel storage casks into and out of the building.

The operation of the ISFSI would involve pre-operational testing of the cask handling crane, the transporter, and all ancillary storage system components; transfer of the spent fuel from the spent fuel pool to the ISFSI; closure of the vault; and operational monitoring. Once in the vault, no active components would be needed to ensure safe storage of the spent fuel. No gaseous or liquid effluents would be produced during operations due to the passive nature of the ISFSI.

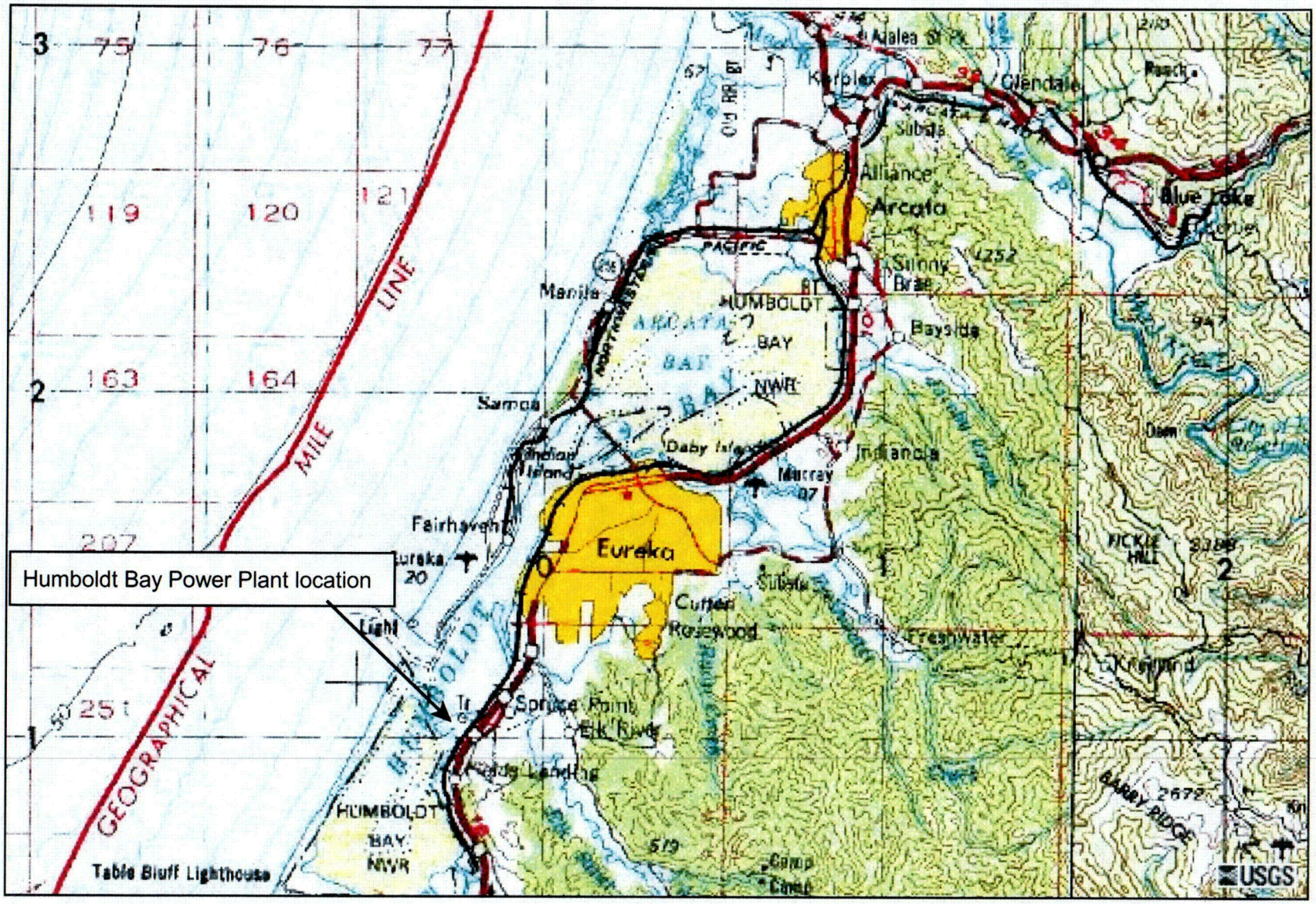
In summary, the construction and operational activities related to the proposed HBPP ISFSI are contained within the site boundary (shown on Figure 2.2-3 by the heavy dashed line). Construction would be limited to the ISFSI construction site, the extended and widened oil road, and the spoils disposal area. The spent fuel casks would be moved by a transporter from the Unit 3 building, along the oil road, and transferred to the in-ground vault for interim storage. Following closure of the ISFSI, the site would be appropriately monitored.

Attachments:

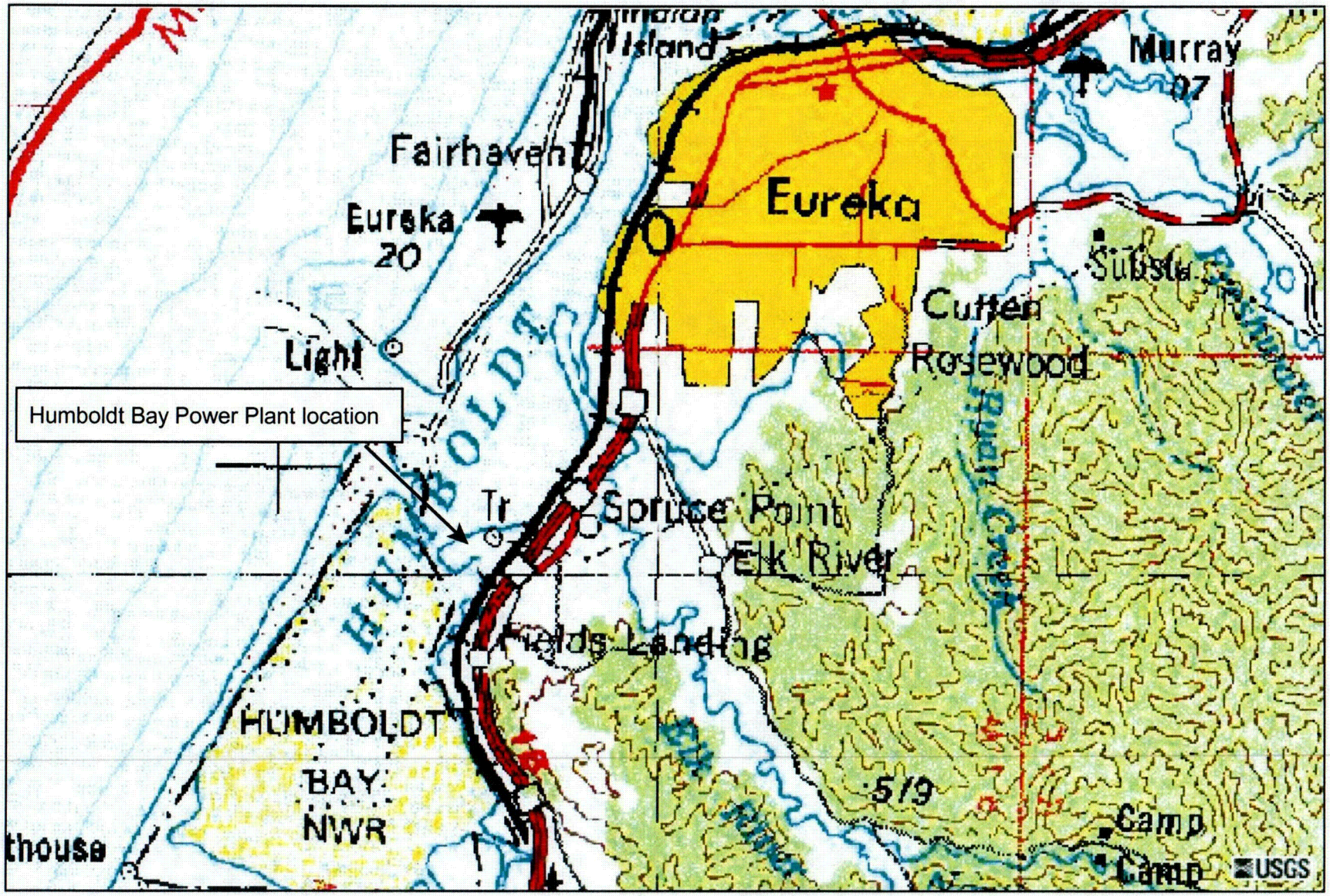
1. Maps of the Humboldt Bay Power Plant site and vicinity
2. Figure 2.2-3, "Humboldt Bay ISFSI: Site Plan," from the PG&E December 2003 environmental report

Attachment 1

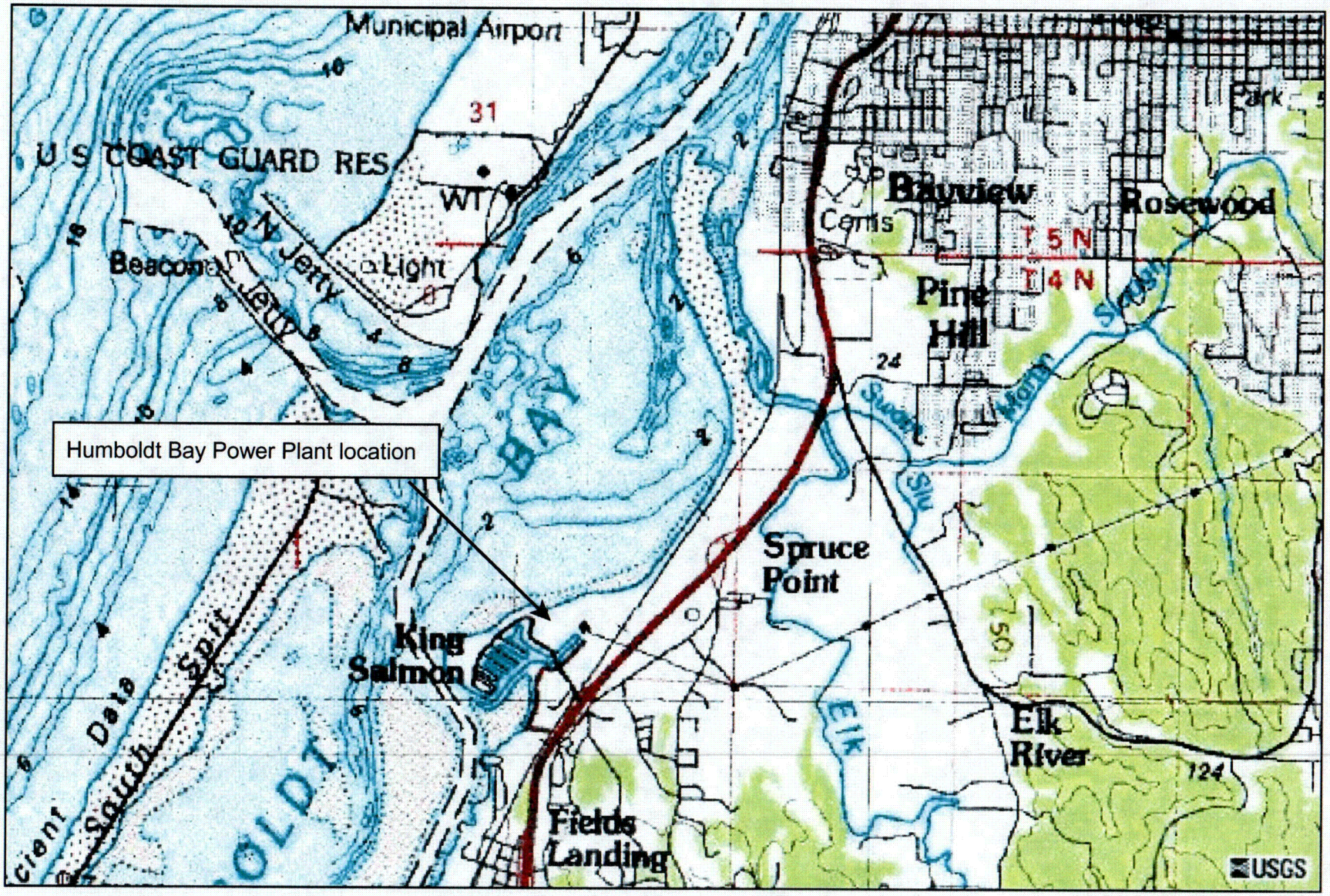
Maps of the Humboldt Bay Power Plant site and vicinity


Humboldt Bay Power Plant location
Eureka
Arcata
Alliance
Glendale
Blue Lake
Sunny Brae
Bayside
Manila
Samoa
Fairhaven
Indian Island
Daby Island
Indianola
Murray
Cutten
Rosewood
Freshwater
Kneeland
Spruce Point
Elk River
Fields Landing
HUMBOLDT BAY NWR
HUMBOLDT BAY
Table Bluff Lighthouse
GEOGRAPHICAL MILE LINE
Old RR gr
Azalea St Pk
Kerplex
Substa
Camp
Camp
Dam
FICKLE HILL
BARRY RIDGE
USGS

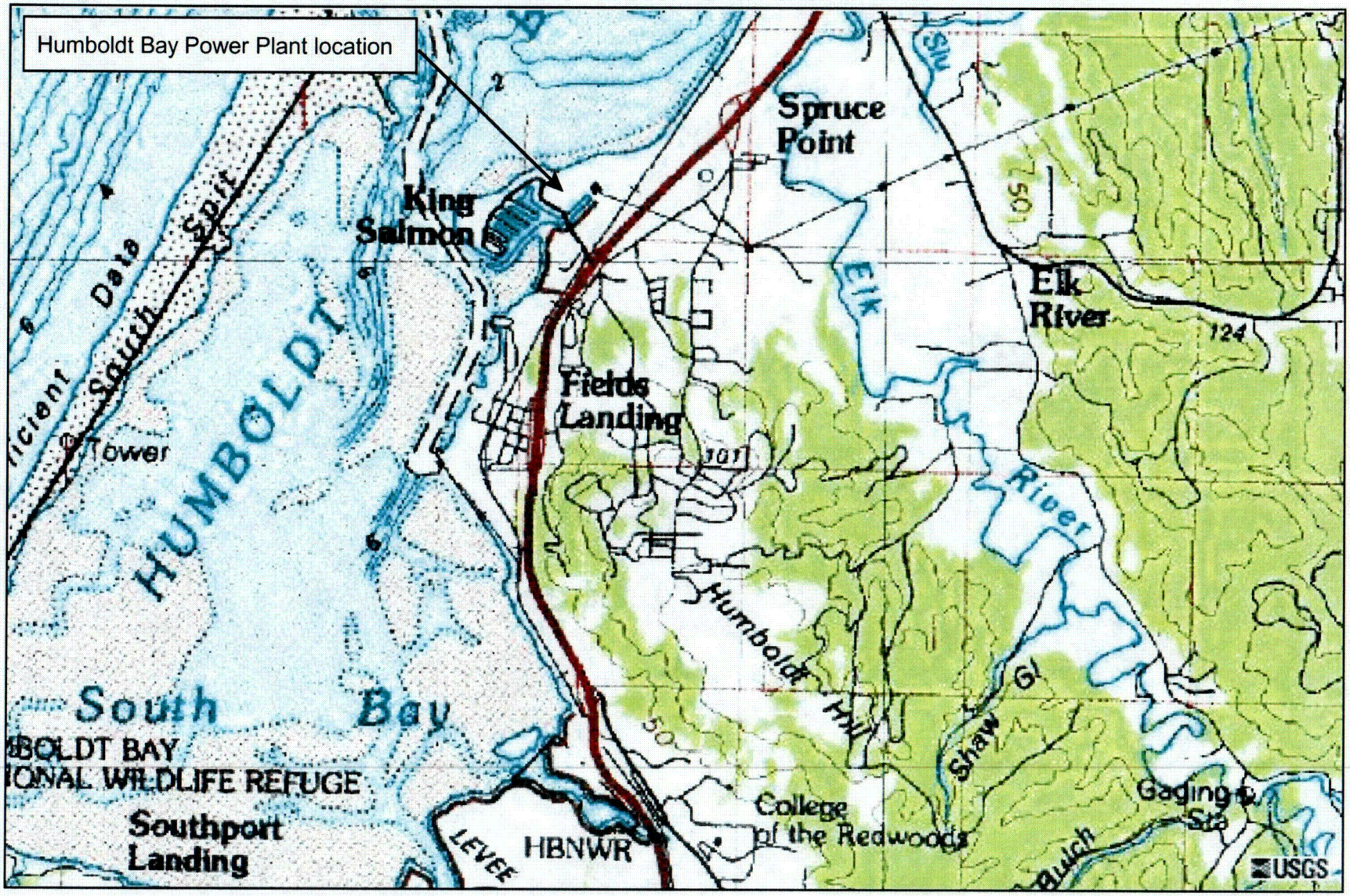
C01


Humboldt Bay Power Plant location
Island
Murray
07
Fairhaven
Eureka
Eureka
20
Substa
Cutten
Rosewood
Light
HUMBOLDT
Tr
Spruce Point
Elk River
Fields Landing
HUMBOLDT
BAY
NWR
519
Camp
Camp
thouse
USGS

C02


Humboldt Bay Power Plant location
Municipal Airport
U S COAST GUARD RES
31
WT
Light
Beacon
N Jetty
Jetty
BAY
Bayview
Rosewood
Cems
T 5 N
T 4 N
Pine Hill
Park
Swain Slu
Spruce Point
King Salmon
Elk River
Elk
Fields Landing
South Spit
Data
USGS

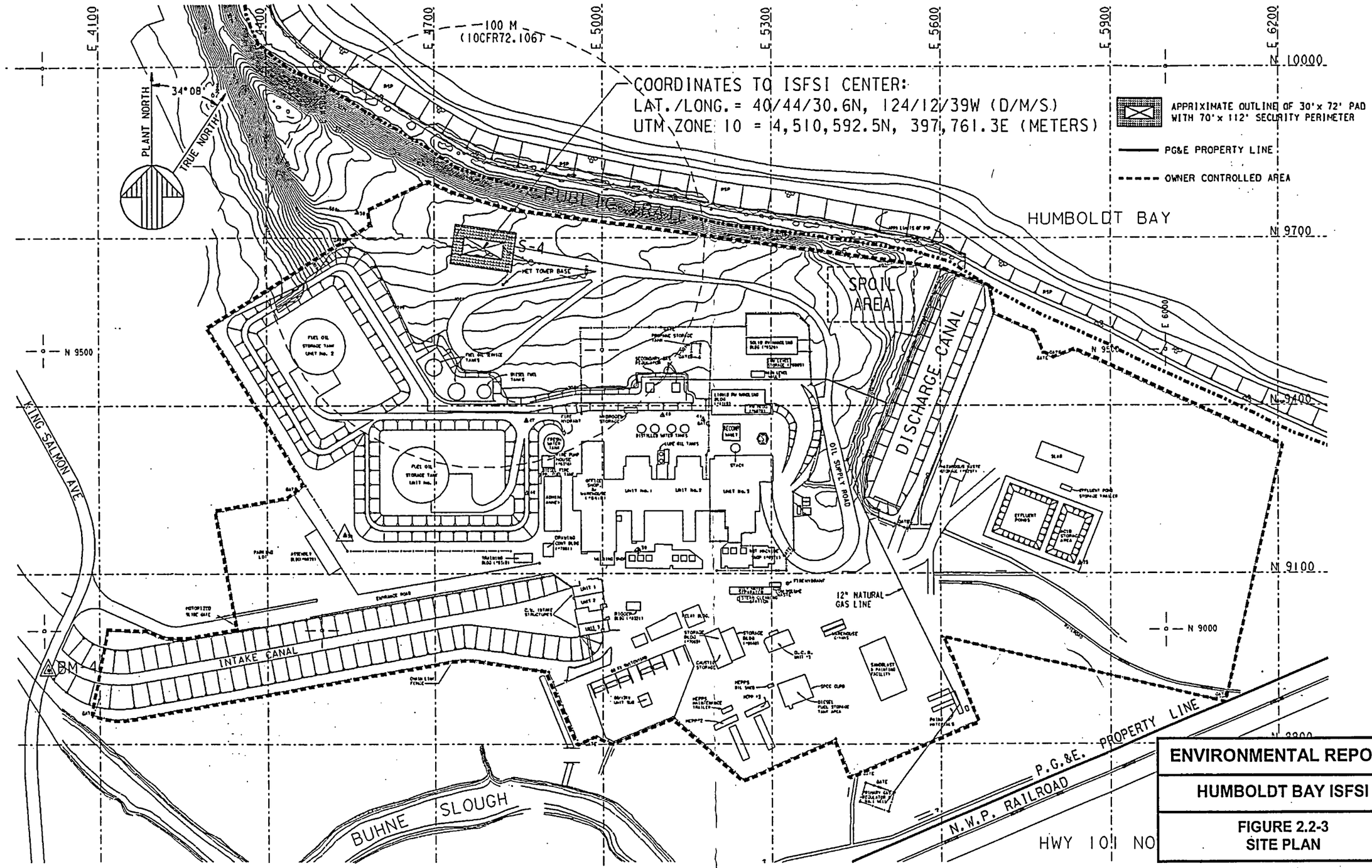
C03


Humboldt Bay Power Plant location
Spruce Point
King Salmon
Fields Landing
Elk River
Elk River
Humboldt Hill
Shaw Gl
HUMBOLDT
South Bay
Southport Landing
HBNWR
LEVEE
College of the Redwoods
Gaging Sta
Tower
South Spit
Data
USGS

C04

Attachment 2

Figure 2.2-3, "Humboldt Bay ISFSI: Site Plan"
(from the PG&E December 2003 environmental report)



ENVIRONMENTAL REPORT
HUMBOLDT BAY ISFSI
FIGURE 2.2-3 SITE PLAN