July 24, 2003

MEMORANDUM TO: Larry Camper, Deputy Director
Licensing and Inspection Directorate
Spent Fuel Project Office, NMSS

FROM: James R. Hall, Sr. Project Manager /RA/
Licensing Section
Spent Fuel Project Office, NMSS

SUBJECT: MEETING WITH PACIFIC GAS AND ELECTRIC COMPANY REGARDING A PROPOSED INDEPENDENT SPENT FUEL STORAGE INSTALLATION AT HUMBOLDT BAY

On April 3, 2003, a meeting was held between representatives of the U.S. Nuclear Regulatory Commission (NRC) and the Pacific Gas and Electric Company (PG&E) to discuss PG&E's planned license application for an independent spent fuel storage installation (ISFSI) at the Humboldt Bay site. Attachment 1 is a list of attendees. Attachment 2 is a copy of the meeting handout. The meeting was noticed on March 19, 2003.

PG&E opened the meeting with a brief overview of the Humboldt Bay power plant history and current status, and a review of past meetings with the NRC on the proposed ISFSI. Humboldt Bay Unit 3 is a 63 MWe boiling water reactor licensed in 1962. The plant was shutdown in 1976, and was not restarted, as necessary design modifications were determined not to be cost-effective. In 1988, the plant entered a SAFSTOR configuration, as the operating license was amended to a possession-only license. In order to proceed with decommissioning of Unit 3, PG&E determined that the 390 spent fuel assemblies currently stored in the spent fuel pool should be placed in an ISFSI. Past meetings with NRC were held in April and November of 1999, March of 2000, and June 2002. Meeting topics included quality assurance, control of public access to nearby areas, the use of probabilistic techniques in analyzing handling and storage activities, and licensing basis and design concepts for the ISFSI.

PG&E has received funding approval for the ISFSI project from the California Public Utilities Commission. They plan to use a modified Holtec HI-STAR dry cask storage system design that will consist of six HI-STAR casks placed in a vault below grade. Each of the HI-STAR HB casks (a customized design for Humboldt Bay) will permit storage of up to 80 spent fuel assemblies. Five of the six casks will be able to store all of the plant's spent fuel; the sixth cask will be used to store greater than Class C (GTCC) waste.

PG&E provided the current status of their application. The design of the ISFSI and support equipment (the storage vault, casks, multi-purpose canister and lifting devices) will be finalized by mid-2003. Accident analyses for both Part 50 and Part 72 activities will be completed by the third quarter of 2003, and PG&E plans to submit the ISFSI application by the end of calendar year 2003.

PG&E described the GTCC waste to be stored, which include components of the control rod drive mechanisms and the core shroud. They indicated that they were following the Spent Fuel Project Office guidance in Interim Staff Guidance document No. 17 (ISG-17) for the

design of the GTCC cask, which will be compatible with the HI-STAR system. PG&E and Holtec also described how the HI-STAR canisters will meet the leak tight criteria in accordance with ISG-5, revision 2.

PG&E explained their rationale for development of seismic design criteria for the ISFSI. For work inside the refueling building, the seismic design criteria of 0.5g currently used for the plant will apply. Outside the refueling building, for ISFSI handling and storage operations, a design criterion of 1.0g for seismic acceleration will apply. However, for specific events involving the loading and handling of the spent fuel itself, a more conservative criterion may be used. The NRC staff discussed the current Part 72 rulemaking regarding the use of Probabilistic Seismic Hazards Analysis and encouraged PG&E to consider the methods addressed in the rulemaking. PG&E reviewed the detailed cask loading and handling sequences and described the regulatory requirements that apply to each phase. Holtec described the design of the single failure proof lifting devices to be used, the details of which they consider proprietary.

PG&E described the unique vault design to be used at the Humboldt Bay ISFSI. Some of the reasons PG&E has chosen this design include its enhanced protection against seismic events and the minimization of radiological doses, due to the close proximity of public access trails. The vault will consist of six steel liners embedded in concrete, with steel lids bolted to the liner flanges. Because the decay heat of the Humboldt Bay spent fuel is so low, no ventilation of the vault spaces is required.

PG&E then discussed general security concepts for the ISFSI. PG&E proposes to locate the ISFSI inside a security fence, with the secondary alarm station outside the fence. The protected area would be defined as the area around the casks within the storage vault, with the space above designated as the isolation zone. This would allow PG&E to limit the size of the protected area needed, and along with the in-ground design, will allow for better observation of the ISFSI by security personnel. PG&E questioned the NRC as to which security requirements would apply to the Humboldt Bay ISFSI. Title 10 CFR 73.55 provides security requirements for holders of 10 CFR Part 50 licenses, while 10 CFR 73.51 addresses facilities that store spent fuel. The NRC staff indicated that it would provide a clarification to PG&E.

PG&E and NRC staff identified possible topics for future meetings, including the application of the Diablo Canyon quality assurance plan to Humboldt Bay activities, the use of probabilistic evaluations for specific short duration activities, geotechnical studies, and security issues. The meeting was then adjourned; no regulatory decisions were requested nor made.

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Attachments: 1. Attendee List
2. Meeting Handout

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Attachment 1

Meeting between the Nuclear Regulatory Commission and Pacific Gas and Electric Company on the proposed Humboldt Bay Independent Spent Fuel Storage Installation

April 3, 2003

ATTENDANCE LIST

Name	Affiliation
Terry Grebel	PG&E
Terry Nelson	PG&E
Tom Moulia	PG&E
Roy Willis	PG&E
Lawrence Pulley	PG&E
Brian Gutherman	Holtec
Eric Lewis	Holtec
Alan Soler	Holtec
Steve Agace	Holtec
Rick McGoey	Enercon
Randy Hall	NRC/SFPO
John Monninger	NRC/SFPO
Jack Guttmann	NRC/SFPO
Steve O'Connor	NRC/SFPO
Jorge Solis	NRC/SFPO
Stephanie Bush-Goddard	NRC/SFPO
Mike Waters	NRC/SFPO
Mahendra Shah	NRC/SFPO
Barry Manili	NRC/NSIR
Bill Huffman	NRC/NMSS
Neil Jensen	NRC/OGC
Greg Hatchett	NRC/NRR
Sheldon Trubatch	self

Pacific Gas and Electric Company
Humboldt Bay Power Plant, Unit 3
Docket No. 72-27, 50-133

cc:

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Attachment 2

PG&E Meeting Handout