

December 27, 2011

Mr. James R. Becker  
Site Vice President  
Pacific Gas and Electric Company  
Mail Code 104/5/601  
P.O. Box 56  
Avila Beach, CA 93424

SUBJECT: DRAFT AMENDMENT NO. 2 TO MATERIALS LICENSE NO. SNM-2511 FOR  
THE DIABLO CANYON INDEPENDENT SPENT FUEL STORAGE  
INSTALLATION  
(TAC NO. L24515)

Dear Mr. Becker:

By letter dated January 31, 2011, as supplemented June 8, July 28, September 15, and November 22, 2011, Pacific Gas and Electric Company (PG&E) submitted license amendment request (LAR) 11-001 to the United States Nuclear Regulatory Commission (NRC) to amend Materials License No. SNM-2511 for the for the Diablo Canyon (DC) site specific Independent Spent Fuel Storage Installation (ISFSI) in accordance with 10 CFR Part 72. The DC ISFSI utilizes a Holtec HI-STORM 100 Cask System modified for its specific site design and safety requirements, which employ multi-purpose canisters (MPC) placed inside concrete and steel overpacks to safely store the spent nuclear fuel.

LAR 11-001 proposed the following revisions to the technical specifications (TS):

- a. TS 1.1, "Definitions," - revise to include terms in support of high burnup fuel (HBF) selection criteria and the addition of neutron source assemblies (NSAs), and instrument tube tie rods (ITTRs).
- b. TS 2.0, "Approved Contents," - revise Tables 2.1-1 through 2.1-7, and 2.1-10 to support HBF selection criteria and the addition of NSAs and ITTRs.<sup>1</sup>
- c. TS 2.0, "Approved Contents," Table 2.1-7 - revise Fuel Assembly Cooling and Maximum Decay Heat (Uniform Fuel loading) for a MPC - 32 to limit the decay heat load to 750 W per assembly for a canister containing HBF.<sup>1</sup>
- d. TS 2.0, "Approved Contents," - delete reference to Table 2.1-9 as regionalized loading of high burn-up fuel is not being requested and changed the watts in the sample to 750 to be consistent with LAR 11-001.<sup>1</sup>
- e. TS 2.0, "Approved Contents," - revise to add new TS 2.3 and associated Table 2.3-1 to provide alternative calculations for burnup limits for fuel assemblies in a MPC-32 to allow the storage of HBF.

---

<sup>1</sup> Revised by the licensee in its November 22, 2011, supplement.

- f. TS 3.1.1, "Multi-Purpose Canister (MPC)," - revise to eliminate the vacuum drying option which is not allowed for HBF and to add a reference temperature of 70°F for the MPC Helium backfill pressure range.
- g. TS 3.1.2, "Spent Fuel Storage Cask (SFSC) Heat Removal System," - revise to allow the HI-STORM Shortened Anchored (100SA) overpack to be considered operable with up to 50 percent vent blockage (although removal of any blockage is still required on discovery).
- h. TS 3.1.4, "Supplemental Cooling System," - added to provide the conditions and criteria for the SCS.
- i. TS 4.1.2b, "Design Features Important to Criticality Control," - revise to change the B4C content in METAMIC to 33.0 wt%.
- j. TS 5.1.3b, "MPC and SFSC Loading, Unloading, and Preparation Program," - revise to delete the requirement for maintaining the annulus full during vacuum drying and to restore the requirement for maintaining the annulus full during reflood (unloading).

LAR 11-001 also proposes to revise the licensing basis from that documented in the DC ISFSI Final Safety Analysis Report Update (FSARU) to:

- k. upgrade the thermal analysis methodology to a three dimensional (3D) Computational Fluid Dynamics (CFD) model,
- l. remove the assumption of 100% fuel failure coincident with 100% vent blockage,
- m. change of some allowed component temperatures in the thermal evaluation (peak cladding, concrete, overpack metal, transfer cask lid neutron shielding),
- n. reduce the required torque criteria for the MPC lift cleats, and
- o. add a new accident for loss of SCS to the design criteria for the SCS.

The licensee initially requested an exemption from the requirements of 10 CFR 72.236(f) to allow use of a nonpassive SCS. The staff determined that this was not required for the DC site specific ISFSI. PG&E subsequently withdrew this request in its July 28, 2011, supplement.

As a result of our review of the application, and its supplements, the staff has prepared a draft revised License and Technical Specifications (TS) and a draft Safety Evaluation Report pursuant to the requirements of 10 CFR Part 72 for PG&E's review and identification of inaccuracies and omissions. Changes made to the attached draft amended License and TS are indicated by vertical lines in the right margin. Also attached is the Draft Federal Register Notice of Issuance for the amended license for your comment. PG&E is requested to respond with

J. Becker

- 3 -

any comments by close of business on December 31, 2011. Please continue to reference Docket No. 72-1014 and TAC No. L24515 in future correspondence related to this request.

If you have any questions, please contact me at (301) 492-3325.

Sincerely,

***/RA/***

John Goshen, P. E., Project Manager  
Licensing Branch  
Division of Spent Fuel Storage and Transportation  
Office of Nuclear Material Safety  
and Safeguards

Docket No.: 72-26

TAC No.: L24515

Attachments:

1. Draft Materials License No. SNM-2511  
Amendment 2
2. Draft Safety Evaluation Report
3. Draft Federal Register Notice of Issuance of Amendment

cc: Diablo Canyon Service List w/o Attachments

J. Becker

- 3 -

any comments by close of business on December 31, 2011. Please continue to reference Docket No. 72-1014 and TAC No. L24515 in future correspondence related to this request.

If you have any questions, please contact me at (301) 492-3325.

Sincerely,

**/RA/**

John Goshen, P. E., Project Manager  
Licensing Branch  
Division of Spent Fuel Storage and Transportation  
Office of Nuclear Material Safety  
and Safeguards

Docket No.: 72-26

TAC No.: L24515

Attachments:

1. Draft Materials License No. SNM-2511  
Amendment 2
2. Draft Safety Evaluation Report
3. Draft Federal Register Notice of Issuance of Amendment

cc: Diablo Canyon Service List w/o Attachments

DISTRIBUTION:

**ADAMS:**

SFST r/f

File Location: G:\SFST\Diablo Canyon\Amend 2\ \Draft [DC Amend 2issuance ltr.doc](#)

- Draft DC Amend 2 order.docx
- Draft DC Amend 2 license.docx
- Draft DC Amend 2 TS pages.docx
- Draft SER
- Draft FRN Notice of Issuance

**ADAMS Package No.: ML113610522**

<b>OFC</b>	SFST	SFST	SFST	SFST	SFST
<b>NAME</b>	JGoshen	WWheatley			
<b>DATE</b>	12/20/11	12/ 22/11			
<b>OFC</b>					SFST
					MWaters
					12/27 /11

**OFFICIAL RECORD COPY**

cc:

NRC Resident Inspector  
Diablo Canyon Nuclear Power Plant  
c/o U.S. Nuclear Regulatory Commission  
P.O. Box 369  
Avila Beach, CA 93424

Dr. Richard Ferguson, Energy Chair  
Sierra Club California  
1100 11<sup>th</sup> Street, Suite 311  
Sacramento, CA 95814

Diane Curran  
Harmon, Curran, Spielberg, & Eisenberg,  
L.L.P.  
1726 M Street N.W., Suite 600  
Washington, D.C. 20036

Rochelle Becker  
San Luis Obispo Mothers for Peace  
1037 Ritchie Rd.  
Grover Beach, CA 93433

Chairman, San Luis Obispo County  
Board of Supervisors  
County Government Center  
1050 Monterey Avenue, Room 370  
San Luis Obispo, CA 93408

Mr. Truman Burns  
Mr. Robert Kinosian  
California Public Utilities Commission  
505 Van Ness, Room 4102  
San Francisco, CA 94102

Mr. Steve Hsu  
Radiologic Health Branch  
State Department of Health Services  
P.O. Box 942732  
Sacramento, CA 94327-7320

Diablo Canyon Independent Safety  
Committee  
ATTN: Robert R. Wellington, Esq.  
Legal Counsel  
857 Cass Street, Suite D  
Monterey, CA 93940

Regional Administrator, Region IV  
U.S. Nuclear Regulatory Commission  
Harris Tower & Pavilion  
611 Ryan Plaza Drive, Suite 400  
Arlington, TX 76011-8064

Christopher J. Warner, Esq.  
Pacific Gas & Electric Company  
Post Office Box 7442  
San Francisco, CA 94120

Mr. David H. Oatley, Vice President  
Diablo Canyon Operations and  
Plant Manager  
Diablo Canyon Nuclear Power Plant  
P.O. Box 3  
Avila Beach, CA 93424

Telegram-Tribune  
ATTN: Managing Editor  
1321 Johnson Avenue  
P.O. Box 112  
San Luis Obispo, CA 93406

Mr. Ed Bailey, Radiation Program Director  
Radiologic Health Branch  
State Department of Health Services  
P.O. Box 942732 (MS 178)  
Sacramento, CA 94327-7320

Mr. James D. Boyd, Commissioner  
California Energy Commission  
1516 Ninth Street (MS 31)  
Sacramento, CA 95814

Ms. Charlotte Alexander  
Vice President, Special Projects  
Green Car Group  
1241 Johnson Avenue #356  
San Luis Obispo, CA 93401

Ellen Carroll  
Environmental Coordinator  
Department of Planning and Building  
County of San Luis Obispo  
County Government Center, Room 310  
San Luis Obispo, CA 93408

The Honorable Lois Capps  
Member, United States  
House of Representatives  
ATTN: Greg Hass, District Representative  
1411 Marsh Street  
San Luis Obispo, CA 93401

Darcie L. Houck, Staff Counsel  
California Energy Commission  
1516 Ninth Street (MS 14)  
Sacramento, CA 95814-5512

Lorraine Kitman  
P.O. Box 1026  
Grover Beach, CA 93483

County Supervisor Peg Pinard  
County Government Center  
1050 Monterey Avenue  
San Luis Obispo, California 93408

David A. Repka  
Brooke D. Poole  
Winston & Strawn  
1400 L Street N.W.  
Washington, D.C. 20005-3502

James B. Lindholm, Jr. Esq.  
County Counsel for San Luis Obispo County  
County Government Center  
1050 Monterey Avenue, Room 386  
San Luis Obispo, CA 93408

Laurence G. Chaset  
Legal Division  
California Public Utilities Commission  
505 Van Ness Avenue  
San Francisco, CA 94102

Karla Bittner, Chairman  
Ted Ivarie, Vice-Chair  
Marylou Gooden, Secretary  
Avila Valley Advisory Council  
P.O. Box 65  
Avila Beach, CA 93424

Klaus Schumann  
Mary Jane Adams  
26 Hillcrest Drive  
Paso Robles, CA 93446

Robert K. Temple, Esq.  
2524 N. Maplewood Avenue  
Chicago, IL 60647

John L. Wallace  
General Manager & District Engineer  
Avila Beach Community Services District  
P.O. Box 309  
Avila Beach, CA 93424

Barbara Byron, Nuclear Policy Advisor  
California Energy Commission  
1516 Ninth Street  
Sacramento, CA 95814