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ADJUDICATIONS STAFF

February 20, 2008

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of:	)	
	)	
Pacific Gas and Electric Co.	)	Docket No. 72-26-ISFSI
	)	
(Diablo Canyon Power Plant Independent	)	
Spent Fuel Storage Installation)	)	

PACIFIC GAS AND ELECTRIC COMPANY'S RESPONSE TO
SAN LUIS OBISPO MOTHERS FOR PEACE INTERROGATORIES
AND REQUEST FOR PRODUCTION REGARDING CONTENTION 2

In accordance with the schedule established in the Atomic Safety and Licensing Board Scheduling and Management Order for Discovery ("Scheduling Order"), dated January 24, 2008, Pacific Gas and Electric Company ("PG&E") hereby responds to interrogatories and request for production by the San Luis Obispo Mothers for Peace ("SLOMFP" or "Intervenors").

I. GENERAL INTERROGATORIES

General Interrogatory 1

> State the name, business address, and job title of each person who was consulted and/or who supplied information for responding to each of the interrogatories, requests for admission, and requests for the production of documents posed by SLOMFP herein. Specifically note for which interrogatories, requests for admissions and requests for production each such person was consulted and/or supplied information. If the information or opinions of anyone who was consulted in connection with your response to an interrogatory or request for admission differs from your written answer to the discovery request, please describe in detail the differing information or opinions, and indicate why such differing information or opinions are not your official position as expressed in your written answer to the request.

Template: Secy-035

Secy 02

PG&E Response to General Interrogatory 1

Terry L. Grebel Manager, Regulatory Projects Pacific Gas & Electric Co. PO Box 56 Avila Beach, CA	Mark Mayer Reactor Engineering Supervisor Pacific Gas & Electric Co. PO Box 56 Avila Beach, CA	Jearl Strickland Used Fuel Storage Project Manager Pacific Gas & Electric Co. PO Box 56 Avila Beach, CA

Mr. Grebel consulted and/or supplied information for General Interrogatories 1, 2, 3, 4, and 5, Request for Production 1, 2, and 3, and Specific Interrogatories 2, 3, 4, 5. Mr. Mayer consulted and/or supplied information for General Interrogatories 1, 2, 3, 4, and 5, Request for Production 1, 2, and 3, and Specific Interrogatories 2, 3, 4, 5, 6, 7, 8, and 9. Mr. Strickland consulted and/or supplied information for General Interrogatories 1, 2, 3, 4, and 5, Request for Production 1, 2, and 3, and Specific Interrogatories 2, 3, 4, 5, 6, 7, 8, and 9.

General Interrogatory 2

> Give the name, address, profession, employer, area of professional expertise, and educational and scientific experience of each PG&E representative who advised the U.S. Nuclear Regulatory Commission ("NRC") Staff or otherwise contributed to the preparation of the Supplement to the Environmental Assessment and Draft Finding of No Significant Impact Related to the Construction and Operation of the Diablo Canyon Independent Spent Fuel Storage Installation (May 2007) ("Draft EA Supplement").

PG&E Response to General Interrogatory 2

No PG&E employee, consultant, or contractor advised the NRC Staff or otherwise contributed to the preparation of the Draft EA Supplement.

General Interrogatory 3

> Give the name, address, profession, employer, area of professional expertise, and educational and scientific experience of each PG&E representative who advised the U.S. Nuclear Regulatory Commission ("NRC") Staff or otherwise contributed to the preparation of the Supplement to the Environmental Assessment and Final Finding of No Significant Impact Related to the Construction and Operation of the

Diablo Canyon Independent Spent Fuel Storage Installation (August 2007) ("Final EA Supplement").

PG&E Response to General Interrogatory 3

No PG&E employee, consultant, or contractor advised the NRC Staff or otherwise contributed to the preparation of the Final EA Supplement.

General Interrogatory 4

> Give the name, address, profession, employer, area of professional expertise, and educational and scientific experience of each person whom PG&E expects to call as a fact or expert witness at the hearing with respect to Contention 2. For expert witnesses, provide a list of all publications authored by the witness within the preceding ten years and a listing of any other cases in which the witness has provided fact and/or expert testimony and/or submitted affidavit(s) or declaration(s) within the preceding four years. For purposes of answering this interrogatory, the educational and scientific experience of expected witnesses may be provided by a resume of the person attached to the response. Fact and expert witnesses should be distinguished.

PG&E Response to General Interrogatory 4

PG&E presently expects to provide expert statements from Mark Mayer and Jearl Strickland in connection with the Subpart K hearing with respect to Contention 2. The attached resumes of Mr. Mayer and Mr. Strickland contain their professional expertise, and educational and scientific experience. Mr. Mayer has not provided any expert testimony and/or submitted affidavits of declarations in any matter within the preceding four years. Mr. Strickland previously provided expert testimony as part of PG&E's claim against the Department of Energy relating to high-level waste disposal. His testimony focused on used fuel storage at Diablo Canyon, including the ISFSI.

General Interrogatory 5

> For each witness identified in response to General Interrogatory No. 4 above, describe the facts and opinions to which each witness is expected to testify, including a summary of the grounds for each opinion, and

identify the documents (including all pertinent pages or parts thereof), data or other information which each witness has reviewed and considered, or is expected to consider or to rely on for his or her testimony.

PG&E Response to General Interrogatory 5

PG&E will file, on April 14, 2008, its "detailed summary of the facts, data, and arguments that PG&E plans to rely on at the oral argument" in accordance with 10 C.F.R. § 2.1113(a) and the schedule previously established for this Subpart K proceeding. PG&E objects to this interrogatory to the extent it seeks to expedite PG&E's filing date and seeks a detailed document that has not yet been prepared. PG&E also objects to the interrogatory as overbroad and vague to the extent it requests every document that the witnesses have reviewed or considered in their experience that may prove relevant to their statement.

Subject to and without waiving the above objections, PG&E generally expects to rely upon the testimony of the above witnesses and upon publicly-available documents to establish its position with respect to SLOMFP Contention 2. Mr. Strickland will testify to the engineering, schedule and licensing aspects of the ISFSI project. In particular, he may testify, to the extent relevant, to structural and thermal capabilities of the ISFSI and spent fuel storage casks. Mr. Mayer will testify on issues related to accident analysis, including dose consequences of certain credible accidents. He will also testify with regard to the need to address the latent health effects and land contamination that would result from postulated releases from the ISFSI which are consistent with the calculations in the Final EA Supplement. His testimony will be based on his general familiarity with accident analysis methodology, with dry cask storage radionuclide inventories, with NRC regulations and guidance, and with Diablo Canyon site conditions (including meteorology, topography, and demography).

The publicly available documents on which PG&E is expected to consider or to rely on in preparing expert testimony may include some or all of the following:

- *Environmental Assessment and Finding of No Significant Impact Related to the Construction and Operation of the Diablo Canyon Independent Spent Fuel Storage Installation (TAC No. L23399)*. U.S. Nuclear Regulatory Commission. October 24, 2003. NRC ADAMS Accession No. ML032970337.

- *Safety Evaluation Report for the Construction and Operation of the Diablo Canyon Independent Spent Fuel Storage Installation* (March 2004), available as ADAMS Accession No. ML040780107.

- *Issuance of Materials License No. SNM-2511 for the Diablo Canyon Independent Spent Fuel Storage Installation (TAC No. L23399)*. U.S. Nuclear Regulatory Commission. March 22, 2004. NRC ADAMS Accession No. ML040780107.

- *Diablo Canyon Independent Spent Fuel Storage Installation License Application - Environmental Report*, PG&E. December 2001 and Amendment 1, October 2002. NRC ADAMS Accession Nos. ML020180196, ML020180173, and ML022950304 (p.150-186).

- *Diablo Canyon ISFSI Safety Analysis Report.* Docket No. 72-26, Pacific Gas and Electric Company. December 2001, Amendment 1, October 2002, and Amendment 2, October 2003.

- *Supplement to the Environmental Assessment and Draft Finding of No Significant Impact Related to the Construction and Operation of the Diablo Canyon Independent Spent Fuel Storage Installation*, 72 Fed. Reg. 30,398 (May 31, 2007) (Draft EA Supplement).

- *Supplement to the Environmental Assessment and Final Finding of No Significant Impact Related to the Construction and Operation of the Diablo Canyon Independent Spent Fuel Storage Installation* (Aug. 2007) (Final EA Supplement), available as ADAMS Accession No. ML072400303.

- *Final Safety Analysis Report for the Holtec International Storage and Transfer Operation Reinforced Module Cask System (HI-STORM 100 Cask System).* Volumes I and II. HI–2002444. Docket No. 72-1014. Marlton, NJ: Holtec International. 2000.

- *License Amendment Request 1014-1, Revision 2*, July 2001, including Supplements 1 through 4 dated August 17, 2001; October 5, 2001; October 12, 2001; and October 19, 2001. Marlton, NJ: Holtec International. 2001.

- *10 CFR Part 72 Certificate of Compliance No. 1014, Amendment 1, for the HI-STORM 100 Cask System.* Docket No. 72-1014. Washington, DC: U.S. Nuclear Regulatory Commission. July 15, 2002.

- "Independent Spent Fuel Storage Installation Security Requirements for Radiological Sabotage," SECY-07-0148 (Aug. 28, 2007).

PG&E may also rely on the documents recently released by the NRC Staff in connection with this matter.

This response is subject to change, in that discovery is ongoing and PG&E has not yet developed its written filing for this matter. PG&E will supplement its response as necessary pursuant to 10 C.F.R. §§ 2.740(e)(1) and (2).

II. GENERAL DOCUMENT PRODUCTION REQUESTS

Request 1

> All documents in your possession, custody or control that are identified, referred to or used in any way in responding to all of the above general interrogatories and the following interrogatories and requests for admissions relating to specific contentions. If you withhold any document or any portion thereof, please describe in detail the basis for your decision to withhold the information.

PG&E Response to Request 1

To the extent that this request might be construed as requesting more than those documents identified in the above response to General Interrogatory No. 5, which provide the basis for PG&E's position with respect to the single admitted contention in this proceeding, PG&E objects to the request as duplicative, vague, and overbroad. For a list of the publicly available documents on which PG&E referred to or used in responding to these interrogatories, see the above response to General Interrogatory No. 5.

To the extent that this request seeks identification of privileged documents, the request exceeds the scope of the Licensing Board's Scheduling Order, which directed that no party be required to produce a privilege log. *See* Scheduling Order, at 4.

Request 2

> All documents in your possession, custody or control relevant to Contention 2. If you withhold any document or any portion thereof, please describe in detail the basis for your decision to withhold the information.

PG&E Response to Request 2

To the extent that this request might be construed as requesting more than those documents identified in the above response to General Interrogatory No. 5, which provide the basis for PG&E's position with respect to the single admitted contention in this proceeding, PG&E objects to the request as duplicative, vague, and overbroad. For a list of the publicly available documents on which PG&E reviewed or considered with respect to Contention 2, see the above response to General Interrogatory 5.

To the extent that this request seeks identification of privileged documents, the request exceeds the scope of the Licensing Board's Scheduling Order, which directed that no party be required to produce a privilege log. *See* Scheduling Order, at 4.

Request 3

> All documents (including experts' opinions, workpapers, affidavits, and other materials used to render such opinion) supporting or otherwise relating to testimony or evidence that you intend to use in the hearing on Contention 2. If you withhold any document or any portion thereof, please describe in detail the basis for your decision to withhold the information.

PG&E Response to Request 3

PG&E will file, on April 14, 2008, its "detailed summary of the facts, data, and arguments that PG&E plans to rely on at the oral argument" in accordance with 10 C.F.R.

§ 2.1113(a) and the schedule previously established for this Subpart K proceeding. PG&E objects to this interrogatory to the extent it seeks to expedite PG&E's filing date and seeks a detailed document that has not yet been prepared. For a list of the publicly available documents on which PG&E may rely upon with respect to Contention 2, see the above response to General Interrogatory 5.

To the extent that this request seeks identification of privileged documents, the request exceeds the scope of the Licensing Board's Scheduling Order, which directed that no party be required to produce a privilege log. *See* Scheduling Order, at 4.

III. SPECIFIC INTERROGATORIES

Specific Interrogatory 1

> If your answer to either General Interrogatory No. 2 or General Interrogatory No. 3 is yes, or if you identified any individuals in response to General Interrogatory No. 4, please respond to Specific Interrogatories 2 through 9 below.

PG&E Response to Specific Interrogatory 1

PG&E did not answer yes to either General Interrogatory No. 2 or General Interrogatory No. 3, but did identify individuals in response to General Interrogatory No. 4.

Specific Interrogatory 2

> In the Supplement to the Environmental Assessment and Final Finding of No Significant Impact Related to the Construction and Operation of the Diablo Canyon Independent Spent Fuel Storage Installation (August 2007), the Staff stated that: "As explained in the EA supplement, the staff has determined the probability of a successful terrorist attack (i.e., one which results in a significant radiological event), to be very low." Id. at A-6. Please answer the following questions with respect to that statement:
>
> a. Identify the criteria by which you would determine a hypothetical terrorist attack is "successful."
> b. If an attack did not cause early fatalities, would you consider it to be successful?

c. Please provide all quantitative and qualitative criteria by the probability of an attack should be judged to be "very low."
d. Please provide all quantitative and qualitative criteria by which you would determine that a radiological event is "significant," including identification of all reference documents you rely on.
e. Please provide all quantitative and qualitative criteria by which you would determine that a release of radioactivity to the environment is significant, including identification of all reference documents you rely on.

PG&E Response to Specific Interrogatory 2

As a general matter, PG&E objects to the interrogatory on the grounds that, insofar as it applies to PG&E, it is outside the scope of Contention 2 and therefore irrelevant. Contention 2 focuses on the NRC's Staff responsibilities under the National Environmental Policy Act ("NEPA"). Under NEPA, the NRC Staff — and not PG&E — is required to assess the environmental impacts of the ISFSI. For Contention 2, the specific issue is whether the NRC Staff should consider the extent of land contamination or non-fatal health effects resulting from a release at the ISFSI. The NRC Staff did not request any analysis from PG&E on long term health effects or land contamination. PG&E has no authority or responsibility with regard to the NRC Staff's determination as to whether an environmental impact is significant. This interrogatory is therefore better directed to the NRC Staff.

Moreover, the interrogatory specifically seeks information on the probability of attack scenarios and the likelihood and degree of "success" of those scenarios. The Commission, however, rejected SLOMFP's proposed Contention 3, stating that "[a]djudicating alternate terrorist scenarios is impracticable." *Pacific Gas and Elec. Co.* (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), CLI-08-01, __ NRC __, slip op. at 24 (Jan. 15, 2008). The Commission also refused to conduct an "adjudicatory inquiry into the probability and success of various terrorist scenarios" or litigate their significance. *Id.* Through these

interrogatories, SLOMFP cannot expand the proceeding to encompass contentions that were explicitly rejected by the Commission in CLI-08-01.

Subject to and without waiving the above objections, PG&E offers the following as to the specific subparts to the interrogatory:

- *Interrogatory 2.a*: This interrogatory raises issues that are beyond the scope of the narrow Contention 2, which is limited to whether the NRC should consider the environmental impacts of land contamination or non-fatal health effects. In addition, because the EA was prepared by the NRC Staff, PG&E is unable to offer any insights as to the meaning of statements in the EA. Nevertheless, to the extent that the NRC Staff defines a successful attack as "one which results in a significant radiological event," PG&E has no basis for disagreeing with that usage.
- *Interrogatory 2.b*: This interrogatory raises issues that are beyond the scope of the narrow Contention 2, which is limited to whether the NRC should consider the environmental impacts of land contamination or non-fatal health effects. The interrogatory is not relevant to that issue. In addition, this interrogatory raises issues regarding regulatory determinations that lie exclusively within the province of the NRC. For this reason, the interrogatory is better directed toward the NRC Staff.
- *Interrogatory 2.c*: This interrogatory raises issues that are beyond the scope of the narrow Contention 2, which is limited to whether the NRC should consider the environmental impacts of land contamination or non-fatal health effects. In addition, this interrogatory raises issues regarding regulatory determinations that lie exclusively within the province of the NRC. For this reason, the interrogatory is better directed toward the NRC Staff.

- *Interrogatory 2.d*: This interrogatory raises issues that are beyond the scope of the narrow Contention 2, which is limited to whether the NRC should consider the environmental impacts of land contamination. In addition, this interrogatory raises issues regarding regulatory determinations that lie exclusively within the province of the NRC. For this reason, the interrogatory is better directed toward the NRC Staff.

  Nevertheless, for hypothetical accidents, the NRC Staff calculated the dose to an individual at the nearest site boundary to be well below 5 rem. Potential quantitative criteria for assessing the significance of radiological releases include the design basis operating limits in 10 C.F.R. § 72.104 and the limits for accidents set forth in 10 C.F.R. § 72.106(b). Criteria are also included in U.S. Environmental Protection Agency ("EPA") protective action guidelines for evacuation, sheltering, and relocation.[1] In the EA Supplement, the NRC determined that a 5 rem dose would not lead to significant environmental impacts — whether through early exposures, land contamination, or non-fatal health impacts. PG&E has no basis for disagreeing with the NRC's regulatory determination that releases resulting in doses below 5 rem are not significant.

- *Interrogatory 2.e*: *See* PG&E's response to Interrogatory 2.d.

<u>*Specific Interrogatory 3*</u>

> In the Final EA Supplement (at page 6), the Staff states that, in the event of an attack that breaches "multiple layers of protection" and thereby causes a release of radioactive material, "a large amount of the radioactive material would remain in solid form and in the immediate vicinity of the ISFSI."

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1 *See, e.g.*, *Manual of Protective Action Guides and Protective Actions for Nuclear Incident* (Office of Radiation Programs, U.S. EPA, 1991), *available at* http://www.epa.gov/rpdweb00/docs/er/400-r-92-001.pdf.

a. Please provide any estimates PG&E has performed of the mass, isotopic inventory, and physical and chemical form of the radioactive material that would be released in the event of an attack, and the spatial distribution of the material after release.
b. Please provide PG&E's estimates of the radiological impacts that would arise from this release, including impacts during cleanup of the site.
c. Please describe the assumptions and methodologies PG&E used to make these estimates, and identify all reference documents that you relied on.

PG&E Response to Specific Interrogatory 3

With respect to Interrogatory 3, PG&E objects to this interrogatory to the extent is raises questions regarding the analysis performed by the NRC in its EA Supplement. The NRC Staff, not PG&E, has the regulatory responsibility for conducting the assessments in the EA Supplement. As such, PG&E cannot provide information underlying the NRC Staff's analysis. This interrogatory is therefore better directed to the NRC Staff.

In addition, PG&E objects to the interrogatory on the grounds that it seeks information outside the scope of Contention 2 and is therefore irrelevant. For Contention 2, the specific issue is whether the NRC Staff should consider the extent of land contamination or non-fatal health effects resulting from a release at the ISFSI. In contrast, the Commission rejected SLOMFP's proposed Contention 3, stating that "[a]djudicating alternate terrorist scenarios is impracticable." *PG&E*, CLI-08-01, slip op. at 24 (Jan. 15, 2008). The Commission refused to conduct an "adjudicatory inquiry into the probability and success of various terrorist scenarios" or litigate their significance. *Id.* This interrogatory seeks information that far exceeds Contention 2 and might more properly fall in the ambit of the rejected Contention 3. Estimates of releases and consequences are highly dependent upon hypothetical terrorist scenarios and the likelihood of their success. Through these interrogatories, SLOMFP cannot expand the proceeding to encompass matters that were explicitly rejected by the Commission in CLI-08-01.

Subject to and without waiving the above objections, PG&E notes that it did provide publicly available information regarding ISFSI accidents in Section 5.1 of its Environmental Report. In the ER, PG&E concludes that "the annual doses resulting from normal operations and anticipated occurrences at the ISFSI are well below the 10 CFR 72.104 criteria for radioactive materials in effluents and direct radiation." ER, at 5.1-1. The ER provides information on the assumptions and methodologies used in an accident analysis. Accident analysis information is also provided in the ER in Section 5.1-3, which addresses compliance with 10 C.F.R. § 72.106.

Specific Interrogatory 4

> As a general proposition, do you consider onsite radiological contamination of land to constitute a potentially significant adverse environmental impact? If so, please describe, in quantitative and qualitative terms, your criteria for evaluating the significance of such impacts.

PG&E Response to Specific Interrogatory 4

Any land contamination is potentially significant. Qualitatively, significance would depend on nature and degree of the contamination, the nature and degree of the land that is contaminated, the land use, and the nature and degree of clean-up required. Significance in the context of the NRC Staff's EA Supplement is a question within the purview of the NRC under NEPA.

Nonetheless, PG&E notes that the NRC referenced the regulatory standard of 5 rem in the EA Supplement. Under 10 C.F.R. § 72.106, an individual located on or beyond the nearest boundary of the controlled area may not receive from any design basis accident a total effective dose equivalent ("TEDE") of greater than 5 rem. PG&E has no basis for disagreeing with the NRC Staff's use of 5 rem as a threshold for significance. Additionally, according to 10

C.F.R. § 20.1402, a site will be considered acceptable for unrestricted use if the residual radioactivity that is distinguishable from background radiation results in a TEDE to an average member of the critical group that does not exceed 25 mrem per year, including that from groundwater sources of drinking water. Criteria for relocation and cleanup are included in EPA protective action guidelines referred to above. Additional information on NRC regulatory criteria is also available in SECY-07-0148.

Specific Interrogatory 5

> As a general proposition, do you consider offsite radiological contamination of land to constitute a potentially significant adverse environmental impact? If so, please describe, in quantitative and qualitative terms, your criteria for evaluating the significance of such impacts.

PG&E Response to Specific Interrogatory 5

Any land contamination is potentially significant. Qualitatively, significance would depend on nature and degree of the contamination, the nature and degree of the land that is contaminated, the land use, and the nature and degree of clean up required. Significant in the context of the NRC Staff's EA Supplement is a question that lies within the purview of the NRC under NEPA.

Nonetheless, PG&E notes that in the EA Supplement the NRC referenced the regulatory standard of 5 rem in terms of dose. Under 10 C.F.R. § 72.106, an individual located on or beyond the nearest boundary of the controlled area may not receive from any design basis accident a TEDE of greater than 5 rem. PG&E has no basis for disagreeing with the NRC's regulatory determination that releases resulting in doses below 5 rem are not likely to lead to significant land contamination. Additionally, according to 10 C.F.R. § 20.1402, a site will be considered acceptable for unrestricted use if the residual radioactivity that is distinguishable from

background radiation results in a TEDE to an average member of the critical group that does not exceed 25 mrem per year, including that from groundwater sources of drinking water. Criteria for relocation and cleanup are included in EPA protective action guidelines referred to above. Additional information on NRC regulatory criteria is also available in SECY-07-0148.

Specific Interrogatory 6

> For each reference document that have been listed by the NRC Staff in support of its Draft and Final EA Supplements, please state whether you have reviewed it.

PG&E Response to Specific Interrogatory 6

Document	**Reviewed By**	
Final EA Supplement	**M. Mayer**	**J. Strickland**
"Environmental Review Guidance for Licensing Actions Associated with NMSS Programs." NUREG-1748. U.S. Nuclear Regulatory Commission. August 2003.	Yes	Yes
Environmental Assessment and Finding of No Significant Impact Related to the Construction and Operation of the Diablo Canyon Independent Spent Fuel Storage Installation (TAC No. L23399). U.S. Nuclear Regulatory Commission. October 24, 2003. NRC ADAMS Accession No. ML032970337.	Yes	Yes
Issuance of Materials License No. SNM-2511 for the Diablo Canyon Independent Spent Fuel Storage Installation (TAC No. L23399). U.S. Nuclear Regulatory Commission. March 22, 2004. NRC ADAMS Accession No. ML040780107.	Yes	Yes
Diablo Canyon Independent Spent Fuel Storage Installation License Application - Environmental Report, PG&E. December 2001 and Amendment 1, October 2002. NRC ADAMS Accession Nos. ML020180196, ML020180173, and ML022950304 (p.150-186).	Yes	Yes
Nuclear Reactors, Materials, and Waste Sector Critical Infrastructure and Key Resources Sector-Specific Plan as input to the National Infrastructure Protection Plan, May 2007.	No	No

Orders Requiring Implementation of Additional Security Measures (ASMs) for the Diablo Canyon Independent Spent Fuel Storage Installation (ISFSI) dated May 5, 2005. (Orders are **unclassified**; the attached ASMs are designated **SAFEGUARDS INFORMATION**.)	No	No
"Results of a Large Airplane Impact into a Field of Holtec HI-STORM Spent Nuclear Fuel Storage Casks." Smith, J.A., et al. Sandia National Laboratories, Albuquerque, NM. 2004. (This document is **classified CONFIDENTIAL National Security Information**.)	No	No
"Response of the HI-STORM Spent Nuclear Fuel Storage Cask to a Large Explosive Charge Blast." Kipp, M.E., et al. Sandia National Laboratories, Albuquerque, NM. 2004. (This document is **classified CONFIDENTIAL National Security Information**.)	No	No
"NRC Spent Fuel Source Term Guidance Document." Yoshimura, R.H., et al. Sandia National Laboratories, Albuquerque, NM 2004. (This document is **classified CONFIDENTIAL National Security Information.**)	No	No
Design Basis Threat, Final Rule, 10 CFR Part 73, USNRC, dated March 13, 2007.	No	No
U.S. Nuclear Regulatory Commission Report to Congress on the National Academy of Sciences Study on the Safety and Security of Commercial Spent Nuclear Fuel Storage, dated March 2005.	Yes	Yes
Nuclear Regulatory Commission (NRC) Review of "Reducing the Hazards from Stored Spent Power-Reactor Fuel in the United States," dated August 19, 2003.	Yes	Yes
"Protecting Our Nation – Since 9-11-01," U.S. Nuclear Regulatory Commission, NUREG/BR-0314, September 2004.	No	No
Homann, S.G., 1994: HOTSPOT Health Physics Codes for the PC, UCRL-MA-106315, Lawrence Livermore National Laboratory, California.	Yes	No

Addendum		
SECY-04-0222, "Decision-Making Framework for Materials and Research and Test Reactor Vulnerability Assessments," November 24, 2004. [This document is designated Official Use Only, (**OUO, Non-public**); Attachments 1, 5, and 6 are classified **SECRET National Security Information**]	No	No
SRM-SECY-04-0222, "Staff Requirements - SECY-04-0222 - Decision-Making Framework for Materials and Research and Test Reactor Vulnerability Assessments," January 19, 2005. [This document is designated **OUO (Non-public)**]	No	No
Memorandum from Daniel H. Dorman to Wayne Hodges, "Results of NSIR Screening of Nuclear Facility Security Scenarios for Remote and Speculative Nature Prior To Use In Decision-Making Framework," March 9, 2005. [This document is designated **OUO (Non-public)**, with classified **SECRET National Security Information** attachments]	No	No
Memorandum from Luis A. Reyes to the Commission, "Completion of Security Assessment of Spent Fuel Storage Casks for Land-Based Terrorist Threats," September 15, 2005. [This document is designated **OUO (Non-public)**]	No	No
Memorandum from Luis A. Reyes to the Commission, "Completion of Security Assessments of the Crash of a Large Plane into Spent Fuel Storage Casks," September 15, 2005. [This document is designated **OUO (Non-public)**]	No	No
Memorandum from Jack R. Strosnider to Roy P. Zimmerman, "Framework Assessments of Spent Fuel Storage Casks and Transportation Packages and Radioactive Material Transportation Packages," December 9, 2005. [[This document is designated Official Use Only – Security-Related Information (OUO-SRI, Non-public); Enclosures 1-4 are designated as **SAFEGUARDS INFORMATION**]	No	No

The above responses to this interrogatory reference the point in time prior to the NRC Staff's release of the *Vaughn* index and redacted documents.

Specific Interrogatory 7

For each reference document that have been listed by the NRC Staff in support of its Draft and Final EA Supplements, please state whether you have had the opportunity to review it.

PG&E Response to Specific Interrogatory 7

Document	**Reviewed By**	
Final EA Supplement	**M. Mayer**	**J. Strickland**
"Environmental Review Guidance for Licensing Actions Associated with NMSS Programs." NUREG-1748. U.S. Nuclear Regulatory Commission. August 2003.	Yes	Yes
Environmental Assessment and Finding of No Significant Impact Related to the Construction and Operation of the Diablo Canyon Independent Spent Fuel Storage Installation (TAC No. L23399). U.S. Nuclear Regulatory Commission. October 24, 2003. NRC ADAMS Accession No. ML032970337.	Yes	Yes
Issuance of Materials License No. SNM-2511 for the Diablo Canyon Independent Spent Fuel Storage Installation (TAC No. L23399). U.S. Nuclear Regulatory Commission. March 22, 2004. NRC ADAMS Accession No. ML040780107.	Yes	Yes
Diablo Canyon Independent Spent Fuel Storage Installation License Application - Environmental Report, PG&E. December 2001 and Amendment 1, October 2002. NRC ADAMS Accession Nos. ML020180196, ML020180173, and ML022950304 (p.150-186).	Yes	Yes
Nuclear Reactors, Materials, and Waste Sector Critical Infrastructure and Key Resources Sector-Specific Plan as input to the National Infrastructure Protection Plan, May 2007.	No	Yes
Orders Requiring Implementation of Additional Security Measures (ASMs) for the Diablo Canyon Independent Spent Fuel Storage Installation (ISFSI) dated May 5, 2005. (Orders are **unclassified**; the attached ASMs are designated **SAFEGUARDS INFORMATION**.)	No	Yes

"Results of a Large Airplane Impact into a Field of Holtec HI-STORM Spent Nuclear Fuel Storage Casks." Smith, J.A., et al. Sandia National Laboratories, Albuquerque, NM. 2004. (This document is **classified CONFIDENTIAL National Security Information**.)	No	No
"Response of the HI-STORM Spent Nuclear Fuel Storage Cask to a Large Explosive Charge Blast." Kipp, M.E., et al. Sandia National Laboratories, Albuquerque, NM. 2004. (This document is **classified CONFIDENTIAL National Security Information**.)	No	No
"NRC Spent Fuel Source Term Guidance Document." Yoshimura, R.H., et al. Sandia National Laboratories, Albuquerque, NM 2004. (This document is **classified CONFIDENTIAL National Security Information.**)	No	No
Design Basis Threat, Final Rule, 10 CFR Part 73, USNRC, dated March 13, 2007.	Yes	Yes
U.S. Nuclear Regulatory Commission Report to Congress on the National Academy of Sciences Study on the Safety and Security of Commercial Spent Nuclear Fuel Storage, dated March 2005.	Yes	Yes
Nuclear Regulatory Commission (NRC) Review of "Reducing the Hazards from Stored Spent Power-Reactor Fuel in the United States," dated August 19, 2003.	Yes	Yes
"Protecting Our Nation – Since 9-11-01," U.S. Nuclear Regulatory Commission, NUREG/BR-0314, September 2004.	Yes	Yes
Homann, S.G., 1994: HOTSPOT Health Physics Codes for the PC, UCRL-MA-106315, Lawrence Livermore National Laboratory, California.	Yes	Yes
Addendum		
SECY-04-0222, "Decision-Making Framework for Materials and Research and Test Reactor Vulnerability Assessments," November 24, 2004. [This document is designated Official Use Only, **(OUO, Non-public)**; Attachments 1, 5, and 6 are classified **SECRET National Security Information**]	No	No

SRM-SECY-04-0222, "Staff Requirements - SECY-04-0222 - Decision-Making Framework for Materials and Research and Test Reactor Vulnerability Assessments," January 19, 2005. [This document is designated **OUO (Non-public)**]	No	No
Memorandum from Daniel H. Dorman to Wayne Hodges, "Results of NSIR Screening of Nuclear Facility Security Scenarios for Remote and Speculative Nature Prior To Use In Decision-Making Framework," March 9, 2005. [This document is designated **OUO (Non-public)**, with classified **SECRET National Security Information** attachments]	No	No
Memorandum from Luis A. Reyes to the Commission, "Completion of Security Assessment of Spent Fuel Storage Casks for Land-Based Terrorist Threats," September 15, 2005. [This document is designated **OUO (Non-public)**]	No	No
Memorandum from Luis A. Reyes to the Commission, "Completion of Security Assessments of the Crash of a Large Plane into Spent Fuel Storage Casks," September 15, 2005. [This document is designated **OUO (Non-public)**]	No	No
Memorandum from Jack R. Strosnider to Roy P. Zimmerman, "Framework Assessments of Spent Fuel Storage Casks and Transportation Packages and Radioactive Material Transportation Packages," December 9, 2005. [[This document is designated Official Use Only – Security-Related Information (OUO-SRI, Non-public); Enclosures 1-4 are designated as **SAFEGUARDS INFORMATION**]	No	No

The above responses to this interrogatory reference the point in time prior to the NRC Staff's release of the *Vaughn* index and redacted documents.

Specific Interrogatory 8

> Have you reviewed the NRC Staff's proposed decision-making framework for security-related decisions by the NRC which is referred to in OIG-06-A-22, Audit Report, Audit of NRC's Process for Releasing Commission Decision Documents at 16 (September 8, 2006) ("IG Report OIG-06-A-22")?

PG&E Response to Specific Interrogatory 8

PG&E objects to the interrogatory in that it seeks to raise issues outside the narrow scope of the admitted contention, which was limited to whether the NRC Staff should consider land contamination and non-fatal health effects. This interrogatory also appears to be directed at the NRC Staff process for release of information. Nevertheless, subject to and without waiving the above objections, PG&E responds that the individuals identified in the response to General Interrogatory 4 have not reviewed the referenced document.

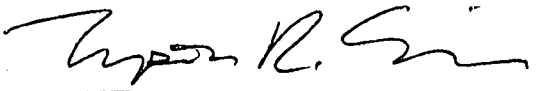
Specific Interrogatory 9

> Have you had the opportunity to review the NRC Staff's proposed decision-making framework for security-related decisions by the NRC which is referred to in OIG-06-A-22, Audit Report, Audit of NRC's Process for Releasing Commission Decision Documents at 16 (September 8, 2006) ("IG Report OIG-06-A-22")?

PG&E Response to Specific Interrogatory 9

PG&E objects to the interrogatory in that it seeks to raise issues outside the narrow scope of the admitted contention, which was limited to whether the NRC Staff should consider land contamination and non-fatal health effects. This interrogatory also appears to be directed at the NRC Staff process for release of information. Nevertheless, subject to and without waiving the above objections, PG&E responds that the individuals identified in the response to General Interrogatory 4 have not had the opportunity to review the referenced document.

Respectfully submitted,



David A. Repka, Esq.
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WINSTON & STRAWN LLP
1700 K Street, N.W.
Washington, DC 20006-3817

COUNSEL FOR PACIFIC GAS AND ELECTRIC COMPANY

Jennifer Post, Esq.
PACIFIC GAS AND ELECTRIC CO.
77 Beale Street, B30A
San Francisco, CA 94105

Dated in Washington, District of Columbia
this 20th day of February 2008

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of:	)	
	)	
Pacific Gas and Electric Co.	)	Docket No. 72-26-ISFSI
	)	
(Diablo Canyon Power Plant Independent	)	
Spent Fuel Storage Installation)	)	

CERTIFICATE OF SERVICE

I hereby certify that copies of "PACIFIC GAS AND ELECTRIC COMPANY'S RESPONSE TO SAN LUIS OBISPO MOTHERS FOR PEACE INTERROGATORIES AND REQUEST FOR PRODUCTION REGARDING CONTENTION 2" has been served as shown below by electronic mail, this 20th day of February 2008. Additional service has also been made this same day by deposit in the United States mail, first class, as shown below.

Office of the Secretary
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
Attn: Rulemakings and Adjudications Staff
(original + two copies)
e-mail: HEARINGDOCKET@nrc.gov

Judge E. Roy Hawkens
U.S. Nuclear Regulatory Commission
Atomic Safety and Licensing Board
Washington, DC 20555-0001
e-mail: erh@nrc.gov
Erica.LaPlante@nrc.gov

Atomic Safety and Licensing Board Panel
U.S. Nuclear Regulatory Commission
Mail Stop T-3F23
Washington, DC 20555-0001

Office of Commission Appellate Adjudication
U.S. Nuclear Regulatory Commission
Mail Stop O-16C1
Washington, DC 20555-0001

Diane Curran, Esq.
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U.S. Nuclear Regulatory Commission
Mail Stop O-15D21
Washington, DC 20555-0001
e-mail: OGCMailCenter@nrc.gov
lbc@nrc.gov
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San Luis Obispo Mothers for Peace
P.O. Box 164
Pismo Beach, CA 93448
e-mail: beckers@thegrid.net
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San Luis Obispo, CA 93408
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Tyson R. Smith, Esq.
Counsel for Pacific Gas
and Electric Company

February 20, 2008

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of:	)	
	)	
Pacific Gas and Electric Co.	)	Docket No. 72-26-ISFSI
	)	
(Diablo Canyon Power Plant Independent Spent Fuel Storage Installation)	)	

DECLARATION OF MARK MAYER

Mark Mayer states as follows under penalties of perjury:

1. I am Supervisor, Reactor Engineering Supervisor, at Pacific Gas & Electric Co.'s Diablo Canyon Nuclear Power Plant.

2. I am duly authorized to verify a response provided in "Pacific Gas And Electric Company's Response To San Luis Obispo Mothers For Peace Interrogatories And Request For Production Regarding Contention 2," specifically, PG&E's response to General Interrogatories 1, 2, 3, 4, and 5, Request for Production 1, 2, and 3, and Specific Interrogatories 2, 3, 4, 5, 6, 7, 8, and 9.

3. I certify that the statements and opinions in such response are true and correct to the best of personal knowledge and belief.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on February 20, 2008.

Mark Mayer

February 20, 2008

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of:	)	
	)	
Pacific Gas and Electric Co.	)	Docket No. 72-26-ISFSI
	)	
(Diablo Canyon Power Plant Independent Spent Fuel Storage Installation)	)	

DECLARATION OF JEARL STRICKLAND

Jearl Strickland states as follows under penalties of perjury:

1. I am Manager of the Used Fuel Storage Project for Pacific Gas & Electric Co.'s Diablo Canyon Nuclear Power Plant.

2. I am duly authorized to verify a response provided in "Pacific Gas And Electric Company's Response To San Luis Obispo Mothers For Peace Interrogatories And Request For Production Regarding Contention 2," specifically, PG&E's response to General Interrogatories 1, 2, 3, 4, and 5, Request for Production 1, 2, and 3, and Specific Interrogatories 2, 3, 4, 5, 6, 7, 8, and 9.

3. I certify that the statements and opinions in such response are true and correct to the best of personal knowledge and belief.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on February 20, 2008.

Jearl Strickland

February 20, 2008

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of:	)	
	)	
Pacific Gas and Electric Co.	)	Docket No. 72-26-ISFSI
	)	
(Diablo Canyon Power Plant Independent Spent Fuel Storage Installation)	)	

DECLARATION OF TERRY L. GREBEL

Terry L. Grebel states as follows under penalties of perjury:

1. I am the Manager, Regulatory Projects, at Pacific Gas & Electric Co.'s Diablo Canyon Nuclear Power Plant.

2. I am duly authorized to verify a response provided in "Pacific Gas And Electric Company's Response To San Luis Obispo Mothers For Peace Interrogatories And Request For Production Regarding Contention 2." specifically, PG&E's response to General Interrogatories 1, 2, 3, 4, and 5, Request for Production 1, 2, and 3, and Specific Interrogatories 2, 3, 4, 5.

3. I certify that the statements and opinions in such response are true and correct to the best of personal knowledge and belief.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on February 20, 2008.

Terry L. Grebel

ATTACHMENTS

LUTHER JEARL STRICKLAND

5680 Pinehurst Way
San Luis Obispo, CA 93401
wk (805) 545-6080
hm (805) 594-1775

EDUCATION

- **California State University, Chico.** B. S. Degree in Civil Engineering.
- **Golden Gate University, San Francisco.** M.B.A. Degree in Project and Construction Management.
- **University of California, Berkeley**. Graduate course work in Structural Analysis, Dynamics and Soil Structure Interaction

EXPERIENCE

MANAGER - USED FUEL STORAGE PROGRAM, (July 2000 to January 2006, June 2006 to present) Diablo Canyon Nuclear Power Plant. Responsible for the development of an Independent Spent Fuel Storage Installation (ISFSI) including; site studies, site selection, conceptual design, detailed design, development of request for proposals (RFP) for cask vendor, and ISFSI construction. Development of part 72 and part 50 License applications including Environmental Report (NEPA) and the Safety Analysis Report. Development of State applications including Coastal Development Permit, land use permits and grading/building permits (CEQA).

Management of the Licensing, Engineering, Environmental, and Geotechnical project related efforts. Teamed with corporate and outside legal council to support licensing and litigation with the Department of Energy.

DIRECTOR – STRATEGIC PROJECTS (interim), (January 2006 through June 2006), Diablo Canyon Power Plant. Responsible for the leadership of major projects including; Turbine Replacement, Independent Spent Fuel Storage Installation, and Steam Generator Replacement. Established 2006 department goals, Human Performance plans, 2R13 ALARA plans, etc. Supported Outage Leadership in management of containment related projects during 2R13.

CHIEF CIVIL ENGINEER, (April 1993 to June 2000), Diablo Canyon Nuclear Power Plant Project. Managed a group of engineers, architects and designers. Responsible for leading the plant design efforts including fire protection, environmental, interface with government agencies and the development of new facilities. Major projects include: Chemical Waste Pond clean closure, Vital Area Boundary Reconfiguration, Intake Structure Concrete Degradation, ASW Buried Piping By-pass and Meteorological Tower replacement. Participation on numbers Task Force and Management teams including: Design Change Process, Chair of Civil Performance Recognition Team, ESC Labor Management Team, OCC Engineering Representative.

ASSISTANT TO THE VP, Engineering and Construction Business Unit- Generation, (July 1991 to April 1993) Responsible for managing the office including department budget, correspondence, strategic planning, preparation of Officer Presentations, interface with department Directors, special projects and participation on various Task Force including Competitive Assessment and Organizational Restructuring.

ENGINEERING MANAGER (Acting), Diablo Canyon Nuclear Power Plant Project, (April 1990 thru June 1991) Responsible for the management and direction of 56 engineers, architects and designers in support of plant maintenance, development of design for plant improvements, and resolution of operability issues.

ENGINEERING GROUP SUPERVISOR – CIVIL/ARCHITECTURAL; Diablo Canyon Nuclear Power Plant Project, (September 1987 to April 1990). Responsible for managing the civil and architectural design of plant improvements and capital improvements.

RESPONSIBLE ENGINEER/CONSTRUCTION COMPLETION MANAGER, Diablo Canyon Nuclear Power Plant Project, (January 1984 to September 1987) Facilities Developed: 30,000 sq. ft. Maintenance Shop Facility, 80,000 sq. ft. Warehouse, Reinforces Concrete Radioactive Waste Storage Facility and a 60,000 sq. ft. 6 story bldg. Responsibilities included development of design criteria, design concepts, performing cost/feasibility studies, supervising preparation of design documents, review bid packages and shop drawings. Coordinated construction activities for all disciplines, resolution of constructability problems, developed methods for controlling and maintaining construction budget and schedule. Interface with contractor, consultants and regulatory agencies.

GROUP LEADER, Diablo Canyon Project, (October 1982 to January 1984) Seconded to Bechtel Power Division, Independent Design Verification Program. Developed design criteria, project scope, analysis and design of modifications. Group Leader responsibilities for 26 engineers including assigning work, preparing schedules, reviewing/approving calculations and coordinating group activities with other disciplines and construction Organization.

DESIGN ENGINEER, Geysers 17 & 18 and Diablo Canyon Power Plants, (January 1980 to June 1982) Design and analysis of reinforced concrete and steel structures. Development of input data for seismic spectra development.

LICENSE and COMMITTEES

Registered Civil Engineer, State of California.

Mark L. Mayer
581 Belanger Drive
Nipomo, CA 93444

Education

SB, Nuclear Engineering, Massachusetts Institute of Technology, 1981

Experience

1981 to 1986 Bechtel Power Corporation, Los Angeles Power Division, Norwalk, CA

Nuclear Engineer on the Vogtle Electric Generating Plant, responsible for ALARA design reviews, plant shielding and radiological analyses, support for plant licensing hearings related to radiological aspects of environmental qualification. Provided support to the ASLB hearings including presentation of testimony on a licensing contention.

1986 to Date Pacific Gas and Electric Company

1986 to 1988 Licensing Engineer in the San Francisco General Office

Supported generic licensing activities for the Diablo Canyon Power Plant (DCPP). Duties included support of FSAR reviews and revisions and support for licensing hearings related to the reracking of the DCPP spent fuel pools.

1988 to 1998 Reactor Engineer, Diablo Canyon

Responsible for supporting reactor core surveillances, fuel handling support, special nuclear materials tracking and related activities. Acting supervisor for 18 months while the regular supervisor was in license class.

1998 to 2007 Supervisor, Systems and Transient Analysis, Diablo Canyon

Supervised the Systems and Transient Analysis group. Was responsible for the preparation of thermal/hydraulic analyses, review of vendor safety analyses, FSAR Chapter 15 analysis preparation and review, and offsite dose analysis. Key initiatives supported by this function have included revision of the DCPP safety analyses in support of the steam generator replacement project, support for the independent spent fuel storage facility licensing activities and resolution of technical issues associated with Generic Safety Issue 191.

2007 to Date Supervisor, Reactor Engineering, Diablo Canyon

Responsible for supporting reactor core surveillances, fuel handling support, special nuclear materials tracking and related activities.

Professional Certifications and Affiliations

Licensed Professional Engineer in the State of California
Member of the American Society of Mechanical Engineers
Member of the National Society of Professional Engineers