

RAS 15109

February 20, 2008

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

DOCKETED
USNRC

February 20, 2008 (2:49pm)

In the Matter of:)
)
Pacific Gas and Electric Co.)
)
(Diablo Canyon Power Plant Independent)
Spent Fuel Storage Installation))

Docket No. 72-26-ISFSI

OFFICE OF SECRETARY
RULEMAKINGS AND
ADJUDICATIONS STAFF

PACIFIC GAS AND ELECTRIC COMPANY'S RESPONSE TO THE
NUCLEAR REGULATORY COMMISSION STAFF'S 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 Nuclear Regulatory Commission ("NRC") Staff.

I. GENERAL INTERROGATORIES

General Interrogatory 1

State the name, business address, and job title of each person who supplied information for responding to these interrogatories and requests for production of documents. Specifically note for which interrogatories each such person supplied information. Provide a statement of qualification, résumé, or *curriculum vitae* for each such person.

PG&E Response to General Interrogatory 1

See PG&E's response to General Interrogatories 1 and 4 in "Pacific Gas And Electric Company's Response To San Luis Obispo Mothers For Peace Interrogatories And

SECY-035

SECY-02

Request For Production Regarding Contention 2” (“PG&E’s Response to SLOMFP’s Request”). Mr. Grebel consulted and/or supplied information for General Interrogatories 1, and 2, and Specific Interrogatories 1 and 2. Mr. Mayer consulted and/or supplied information for General Interrogatories 1, and 2, and Specific Interrogatories 1 and 2. Mr. Strickland consulted and/or supplied information for General Interrogatories 1, and 2.

General Interrogatory 2

Identify each expert on whom the Applicant intends to rely in its written filing for the Subpart K proceeding described in the Commission’s January 15, 2008, Memorandum and Order, the general subject matter on which each expert is expected to provide sworn affidavits and declarations for the written filing, the qualifications of each expert whom the Applicant expects to provide sworn affidavits and declarations for the written filing. Include in the qualifications a description of the educational and scientific experience of the expert; specifically addressing (1) education, training and certifications in health physics, (2) training or experience in dose modeling for calculating radiation dose, (3) a list of all dose modeling calculations and assessments performed during the last 10 years, (4) a list of publications authored by the expert within the preceding ten years, and (5) a listing of any other cases in which the expert has testified as an expert at a trial, hearing, or by deposition within the preceding four years.

PG&E Response to General Interrogatory 2

See PG&E’s Response to SLOMFP’s General Interrogatories 1 and 4. With regard to (3) above, PG&E objects to the request as unreasonable and overbroad. Mr. Mayer’s group routinely performed dose modeling calculations and assessments as part of his previous general job responsibilities. It is not possible for PG&E to identify or determine all such calculations or assessments, or to even identify what would constitute a “single” assessment or calculation.

II. SPECIFIC INTERROGATORIES

Specific Interrogatory 1

Do you contend that land contamination would result from a radiological release from a successful terrorist attack? If the answer is yes, please answer the following with regard to the land contamination you contend would result from such an attack:

1) Describe with specificity the amount of land contamination you contend would result from a successful terrorist attack. In particular, provide any opinions on which you base your contention; including, but not limited to, the amount of land that would be contaminated, the location of that land, and the extent and nature of radiological contamination that you contend would be present on the land as a consequence of a terrorist attack.

2) Describe with specificity the means by which you contend that land contamination will result from a terrorist attack and the specific methods used to ascertain the extent and nature of land contamination you contend will result from such an attack. Specifically, answer the following:

a) Do you contend that land contamination will result from a radiological release into the atmosphere? If so, specify the following:

- The nature and extent of the radiological release upon which you base your conclusions and all facts and opinions you rely on in determining that release
- Specify the mechanism by which you contend the radiological release will be dispersed, including any dispersal of airborne or other form of the radiological release you contend would result from a successful terrorist attack. Identify the type, nature, and magnitude of the driving force over the period of time over which you allege the dispersion would occur that would lead to land contamination. Identify the facts, opinions, calculations, and sources and references which support your contention.
- The calculations used to assess the extent and nature of land contamination resulting from that release, including all input parameters, calculations and codes supporting your assessment or any sources relied on in making that assessment;
- All assumptions and input parameters for dispersal of any airborne radiological release you contend will result in land contamination, including chemical and physical form of dispersed material, atmospheric stability, wind speed and direction, weather conditions, including the basis or source for those assumptions and the basis for your conclusions, if any, regarding the applicability of those assumptions to the Diablo Canyon site.

3) Describe with specificity the impacts you allege would result from land contamination, separate and apart from health effects. For each impact, answer the following:

- Specify the volume and areal amount of contamination you contend will occur as the result of a terrorist attack, the amount of time over which you contend health effects will occur, and the amount of contamination that will remain present over that time or each segment of time if you contend that the contamination will change over time;
- Describe each and every environmental impact of the land contamination that you contend should be considered in the environmental analysis. For each impact, specify the nature and extent of the consequences you contend would result from land contamination and state all facts and opinions which support your contention;
- Specify the time period over which you are assessing the environmental impacts described above and state whether you account for any mitigation of consequences during that time frame due to clean up, evacuation, or any other mitigative measures. Describe all calculations, including all input parameters and codes methods used and sources relied on, references, and expert opinion which support your contention.

4) Describe with specificity all human health effects you contend would result from land contamination. For each impact, state the specific health effects you contend would occur and quantify the extent of those health effects that you contend would occur. Explain all exposure scenarios and pathways including ingestion, inhalation, and external radiation, by which you contend humans will ingest radioactive material or be exposed to direct radiation as a result of land contamination and the time period over which you contend that ingestion will occur. Describe any assumptions underlying your ingestion analysis regarding the extent of radiological contamination, whether people will live, work, or recreate on contaminated land and whether any contamination will naturally diminish or be abated at any time after the terrorist event and describe all facts and opinions which support those assumptions. Describe with specificity all references and expert opinion used to support your contention, including all calculations performed.

PG&E Response to Specific Interrogatory 1

No. PG&E does not contend that "land contamination would result from a radiological release from a successful terrorist attack." Hypothetically, land contamination could result from a radiological release no matter the mechanism. However, PG&E has no basis for disagreeing with the NRC's determination that there would be a dose of less than 5 rem to the nearest resident in the early phase of a release (as the NRC Staff discussed in the EA Supplement) for credible scenarios. The NRC Staff also concluded that overall environmental impacts would not be significant, which reflects an implicit conclusion that the long-term health effects and land contamination will be minimal. The dose calculated by the NRC is below the 5 rem limit for ISFSI accidents set forth in 10 CFR 72.106(b). This is on the same order of magnitude as doses in EPA protective action guidelines for evacuation, sheltering, and relocation. The regulations in that context do not require further assessment of long-term health effects or land contamination.

As a general matter, PG&E also objects to the interrogatory on the grounds that it seeks information that 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") and whether the NRC Staff should have explicitly considered the extent of land contamination or non-fatal health effects resulting from an accident at the ISFSI.

Specific Interrogatory 2

Do you contend that the radiological consequences, other than those from land contamination, from a successful terrorist attack would result in human health effects other than early fatalities, including non-fatal health effects such as latent cancers? If the answer is yes, please answer the following:

- 1) Describe the extent and nature of the radiological release from a successful terrorist attack that you contend would result in the human

health effects described above. Specify whether the health effects would result from an atmospheric release of radiation or any other means or source of human exposure to radiation. For each source of radiological exposure, describe the following:

The nature and extent of any radiological release you contend would occur, including all calculations, facts, and opinions relied on in determining the extent and nature of the release;

- All calculations used to make your assessments and the source of all calculations;
- The time period over which you contend radiation exposure will occur for the purpose of assessing health effects.

2) Describe the extent and nature of health effects described above which you contend would be caused by the radiological release from a successful terrorist attack. Include the following:

- The specific nature of the health effects that you contend would be caused by the radiological release. Describe with specificity all facts, opinions, and calculations which support your contention;
- The extent of the health effects, including the number and location of people you contend would be impacted for each separate health effect and the nature and extent of the health effects you contend would occur. Describe with specificity all facts, opinions, and calculations which support your contention.

PG&E Response to Specific Interrogatory 2

No. PG&E does not contend that “the radiological consequences, other than those from land contamination, from a successful terrorist attack would result in human health effects other than early fatalities, including non-fatal health effects such as latent cancers.” Hypothetically, such effects could result from a release no matter the mechanism because non-fatal health effects can result from radiological exposure. However, PG&E contends that substantial long-term health effects, such as latent cancers, are unlikely to occur from release scenarios where there are very low early doses.

Moreover, to the extent that Specific Interrogatory 1 raises an issue within the scope of Contention 2, PG&E has no basis for disagreeing with the NRC's determination that where there is a dose of less than 5 rem to the nearest resident in the early phase of a release (as the NRC Staff discussed in the EA Supplement), the long-term effects, including non-fatal health effects, will be minimal. The dose calculated by the NRC is below the 5 rem limit for ISFSI accidents set forth in 10 CFR 72.106(b). This is on the same order of magnitude as doses in EPA protective action guidelines for evacuation, sheltering, and relocation. These regulations do not require further assessment of health effects.

As a general matter, PG&E also objects to the interrogatory on the grounds that it seeks information that 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") and whether the NRC Staff should have explicitly considered the extent of land contamination or non-fatal health effects resulting from an accident at the ISFSI.

III. DOCUMENT PRODUCTION REQUESTS

Request 1

All documents and things that you identified, or were asked to identify, in your answers to Staff's Interrogatories.

PG&E Response to Request 1

PG&E did not identify any documents or things in its answers to the NRC Staff's Interrogatories other than publicly-available regulatory provisions and licensing documents submitted to or prepared by the NRC Staff.

Request 2

All documents or things that you relied upon, assembled, reviewed, obtained, considered, drafted, prepared, or generated in preparing your answers to Staff's Interrogatories.

PG&E Response to Request 2

None.

Request 3

All documents and things you relied upon, assembled, reviewed, obtained, considered, drafted, prepared, or generated in preparing all filings in this proceeding concerning Contention 2.

PG&E Response to Request 3

Presently, PG&E does not intend to rely on documents or other things with respect to Contention 2 other than publicly-available licensing documents, regulations, NRC regulatory documents, and other documents identified by the NRC Staff in this proceeding. See PG&E's Response to SLOMFP's General Interrogatory 5. If, in preparation of filings PG&E identifies other documents, PG&E will supplement its response as necessary pursuant to 10 C.F.R. §§ 2.740(e)(1) and (2).

Request 4

All documents and things on which you intend or expect to rely on in support of any fact, allegation, claim, contention, or opinion, in this proceeding, including all relevant documents, communications, and information.

PG&E Response to Request 4

See PG&E's Response to SLOMFP's General Interrogatory 5. Presently, PG&E does not intend to rely on documents or other things with respect to Contention 2 other than publicly-available licensing documents, regulations, NRC regulatory documents, and other documents identified by the NRC Staff in this proceeding. If, in preparation of filings PG&E identifies other documents, PG&E will supplement its response as necessary pursuant to 10 C.F.R. §§ 2.740(e)(1) and (2).

Request 5

All relevant documents, communications, and information that constitute or relate to any articles, books, or publications by any person whose testimony you intend, expect, or anticipate to obtain, subpoena, offer, proffer, present, introduce, or rely upon in this proceeding.

PG&E Response to Request 5

None.

Request 6

Biographies, résumés, curriculum vitae, and personnel records sufficient to provide a full background and description of each person whose testimony you intend, expect, or anticipate to obtain, subpoena, offer, proffer, present, introduce, or rely upon in this proceeding.

PG&E Response to Request 6

See PG&E's response to the Staff's General Interrogatories 1 and 2.

Request 7

All relevant documents, communications, and information relating to any persons whom you intend, expect, or anticipate to call as expert witnesses at the hearing in this proceeding and any persons from whom you intend, expect, or anticipate to obtain, subpoena, offer, proffer, present, or introduce any opinion testimony at the hearing in this proceeding, including the following: (a) biographies, résumés, curriculum vitae, and personnel records sufficient to provide a full background and description of such person; (b) all contracts, engagement letters, or agreements with such persons; (c) all documents that relate to any compensation that has been or will be paid to such persons for any services they may render in this proceeding; (d) all relevant documents, communications, or information that you have sent to or received from such persons; (e) all documents that relate to the facts, data, documents, or other information considered by such persons in forming their opinions; (f) all documents that relate to or constitute any exhibits to be used as a summary of, or support for, such persons' opinions and testimony; (g) all documents that relate to the qualifications of such persons to render the opinions; (h) a list of all publications authored by such persons within the preceding ten (10) years; and (i) a list of any other cases or legal proceedings in which such persons have testified as an expert or rendered opinion testimony at trial, by deposition, or otherwise within the preceding four (4) years.

PG&E Response to Request 7

PG&E objects to this request as overbroad and redundant. Moreover, to the extent that this request includes or 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 8

All documents and things that you identified, or were asked to identify, in your answers to San Luis Obispo Mothers for Peace's Interrogatories.

PG&E Response to Request 8

See generally PG&E's Response to SLOMFP's Request

Request 9

All documents and things that you intend to mark, identify, proffer, offer, present, introduce, use, show, reference, demonstrate, or rely upon at the hearing in this proceeding, including all documents that you intend, expect, or anticipate might be identified, disclosed, marked, offered, proffered, or admitted as any direct, rebuttal, impeachment, summary, or demonstrative exhibit.

PG&E Response to Request 9

At this point PG&E has not identified any documents on which it intends to rely in the Subpart K hearing. 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.

Respectfully submitted,



David A. Repka, Esq.
Tyson R. Smith, Esq.
WINSTON & STRAWN LLP
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Washington, DC 20006-3817

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

COUNSEL FOR PACIFIC GAS AND
ELECTRIC COMPANY

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 THE NUCLEAR REGULATORY COMMISSION STAFF'S 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
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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.)
(Diablo Canyon Power Plant Independent) Docket No. 72-26-ISFSI
Spent Fuel Storage Installation))

DECLARATION OF MARK MAYER

Mark Mayer states as follows under penalties of perjury:

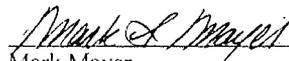
1. I am Supervisor, Reactor Engineering Supervisor, at Pacific Gas & Electric Co.'s Diablo Canyon Nuclear Power Plant.

2. I am duly authorized to verify a response provided in "Pacific Gas And Electric Company's Response To The Nuclear Regulatory Commission Staff's Interrogatories And Request For Production Regarding Contention 2." specifically, PG&E's response to General Interrogatories 1, and 2, and Specific Interrogatories 1 and 2.

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
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(Diablo Canyon Power Plant Independent)
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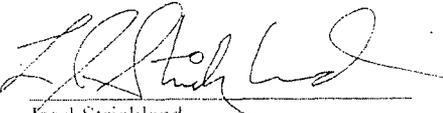
DECLARATION OF JEARL STRICKLAND

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 The Nuclear Regulatory Commission Staff's Interrogatories And Request For Production Regarding Contention 2," specifically, PG&E's response to General Interrogatories 1, and 2.
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 The Nuclear Regulatory Commission Staff's Interrogatories And Request For Production Regarding Contention 2," specifically, PG&E's response to General Interrogatories 1, and 2, and Specific Interrogatories 1 and 2.
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

Terence L. Grebel
11000 Atascadero Avenue
Atascadero, CA 93422
(805)466-0355
e-mail:grebelj@charter.net

Experience

Pacific Gas and Electric Company – 1985 to present

As Manager-Regulatory Projects, primary responsibilities included:

1. Obtaining a Diablo Canyon dry cask site-specific 10CFR72 license, including safety analysis report and environmental report and interface and resolution of NRC review questions
2. Obtaining a Humboldt Power Plant dry cask site-specific 10CFR72 license, including safety analysis report and environmental report
3. Obtaining a Low Power Testing Recapture license amendment to extend the Diablo Canyon Power Plant Unit 1 Operating License for three years
4. Supporting resolution of licensing issues on the steam generators and reactor head replacements
5. Project Manager for the Diablo Canyon License Renewal Feasibility Study

As Manager-Regulatory Services, primary responsibilities related to Diablo Canyon Power Plant and included:

1. Plant Reporting
2. All license changes
3. Managing the plant Technical Specifications interpretation and changes
4. NRC inspection interface

Illinois Power – 1984 to 1985

As Supervisor Operations Licensing, primary responsibilities related to licensing activities for the Clinton Power Station. These responsibilities included managing development of licensing documents and hearing preparations and obtaining the full power operating license.

Northwest Energy Services Company – 1981 to 1984

As Senior Consulting Engineer, responsibilities included:

1. Regulatory requirements verification program for the Trojan Nuclear Plant
2. Trojan Nuclear Plant Emergency Plan preparation

As Manager-Licensing, primary responsibilities included:

Managing development and submittal of licensing documents and hearing testimony for the relocation of the Skagit Nuclear Plant to the Hanford Reservation. These included, preparation of an Environmental Report and revision to the Preliminary Safety Analysis report for the relocated site.

Stafoo, Inc -1980 to 1981

As Senior Engineer responsibilities included performing consulting services for the Trojan Nuclear Plant e.g., general licensing support and emergency planning, security

Los Angeles Department of Water and Power-1967 to 1979

As Supervising Electrical Engineer, responsibilities included preparation of an environmental report for the San Joaquin Nuclear Project and associated state licensing documents.

Education

BS Electrical Engineering, California State College at Long Beach

MS Electrical Engineering University of Southern California