Environmental Impact Statement Scoping Process

Summary Report

Diablo Canyon Power Plant
Units 1 and 2
Avila Beach, CA

March 2016

U.S. Nuclear Regulatory Commission
Rockville, Maryland

ENCLOSURE

1 Introduction

By letter dated November 23, 2009, as amended by letters dated December 22, 2014, and February 25, 2015, Pacific Gas and Electric Company (PG&E) submitted an application for renewal of the operating licenses for Diablo Canyon Power Plant, Units 1 and 2 (DCPP), to the U.S. Nuclear Regulatory Commission (NRC). DCPP is located in Avila Beach, CA. The purpose of this report is to provide a concise summary of the determinations and conclusions reached, including the significant issues identified, as a result of the two scoping processes that the NRC staff conducted as part of the environmental review of this license renewal application.

As part of the application, PG&E submitted an Environmental Report (ER) (PG&E 2009, 2014, 2015) prepared in accordance with Title 10 of the *Code of Federal Regulations* (CFR) Part 51, "Environmental protection regulations for domestic licensing and related regulatory functions," which contains the NRC requirements for implementing the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq., herein referred to as NEPA). The requirements for preparation and submittal of ERs to the NRC are outlined in 10 CFR 51.53(c)(3).

The requirements in Section 51.53(c)(3) were based upon the findings documented in NUREG-1437, "Generic Environmental Impact Statement for License Renewal of Nuclear Plants" (GEIS) (NRC 1996, 1999, 2013). In the GEIS, the NRC staff identified and evaluated the environmental impacts associated with license renewal. After issuing a draft version of the GEIS, the NRC staff received and considered input from Federal and state agencies, public organizations, and private citizens before developing the final document. As a result of the assessments in the GEIS, a number of impacts were determined to be generic to all nuclear power plants (or, in some cases, to plants having specific characteristics such as a particular type of cooling system). These generic issues were designated as "Category 1" impacts. An applicant for license renewal may adopt the conclusions contained in the GEIS for Category 1 impacts unless there is new and significant information that may cause the conclusions to differ from those of the GEIS. Other impacts that require a site-specific review were designated as "Category 2" impacts and are required to be evaluated in the applicant's ER.

On January 27, 2010, and July 1, 2015, the NRC staff initiated and reopened, respectively, the scoping process for DCPP by issuing *Federal Register* notices (75 FR 4427, 80 FR 37664). These *Federal Register* notices informed the public of the NRC staff's intent to prepare a plant-specific supplement to the GEIS regarding the application for renewal of the DCPP operating licenses. The plant-specific supplement to the GEIS is also referred to as the supplemental environmental impact statement (SEIS). The SEIS will be prepared in accordance with 10 CFR Part 51.

The scoping process provides an opportunity for public participation to identify issues to be addressed in the SEIS and to highlight public concerns and issues. The notices of intent (75 FR 4427, 80 FR 37664) identified the following objectives of the scoping process:

- Define the proposed action, which is to be the subject of the supplement to the GEIS;
- Determine the scope of the supplement to the GEIS and identify the significant issues to be analyzed in depth;
- Identify and eliminate from detailed study those issues that are peripheral or that are not

significant;

- Identify any environmental assessments and other EISs that are being or will be prepared that are related to, but are not part of, the scope of the supplement to the GEIS being considered;

- Identify other environmental review and consultation requirements related to the proposed action;

- Indicate the relationship between the timing of the preparation of the environmental analyses and the Commission's tentative planning and decision-making schedule;

- Identify any cooperating agencies and, as appropriate, allocate assignments for preparation and schedules for completing the supplement to the GEIS to the NRC and any cooperating agencies; and

- Describe how the supplement to the GEIS will be prepared and include any contractor assistance to be used.

The NRC's proposed action is deciding whether to renew the DCPP operating licenses for an additional 20 years.

The scope of the SEIS includes an evaluation of the environmental impacts of renewing the DCPP licenses and of the reasonable alternatives to license renewal. The "Scoping Comments and Responses" section of this report includes specific issues identified by the comments. The subsequent NRC staff responses explain whether the issues will be addressed in the SEIS and, if so, where in the report they will likely be addressed.

Throughout the scoping process, the NRC staff identified and eliminated peripheral issues. This report provides responses to comments that were determined to be either out of the scope of this review, or provided no new information. Those comments that were both substantive and within the scope of the NRC's license renewal environmental review will be evaluated in detail and documented in the appropriate sections of the SEIS for the DCPP license renewal.

In parallel with its NEPA review, the NRC staff is conducting section 7 consultation under the Endangered Species Act of 1973 (ESA) to ensure the protection of listed species and designated critical habitat that may be affected by the proposed license renewal. The regulations that implement section 7 (50 CFR 402, "Interagency cooperation—Endangered Species Act of 1973, as amended") describe the consultation procedures that Federal agencies must follow in order to fully comply with the act. Depending on the project, the NRC may need to consult with the U.S. Fish and Wildlife Service (FWS), the National Marine Fisheries Service (NMFS), or both. In the case of DCPP, the NRC staff is consulting with both the FWS and NMFS. The NRC is also in consultation with NMFS per the requirements of the Magnuson–Stevens Fishery Conservation and Management Act, as amended, which requires Federal agencies to consult with NMFS for any Federal actions that may adversely affect essential fish habitat.

In accordance with 36 CFR 800.8, "Coordination with the National Environmental Policy Act," the NRC will coordinate compliance with Section 106 of the National Historic Preservation Act (NHPA) through the requirements of NEPA. NRC staff has initiated consultation with the

Advisory Council on Historic Preservation, the California State Historic Preservation Office, and Federally-recognized tribes with historic ties to the area surrounding DCPP.

The NRC staff expects to publish the draft SEIS in August 2016. The SEIS will be prepared by NRC staff with contract support from Pacific Northwest National Laboratory and Idoneous Consulting.

The NRC invited the applicant; Federal, state, and local government agencies; Indian tribal governments; local organizations; and individuals to participate in the scoping process by providing oral comments at the scheduled public meetings or by submitting written comments before the end of both scoping comment periods on April 12, 2010, and August 31, 2015, respectively. The scoping process included a total of four public meetings. The first two public meetings were held on March 3, 2010, at the Embassy Suites San Luis Obispo, 333 Madonna Road, San Luis Obispo, CA. The final two meetings were held on August 5, 2015, at the Courtyard by Marriott San Luis Obispo, 1605 Calle Joaquin Road, San Luis Obispo, CA. The NRC staff issued press releases and purchased newspaper advertisements to advertise these meetings. Approximately 150 people attended the March 2010 meetings and approximately 300 people attended the August 2015 meetings. Each session began with NRC staff members providing a brief overview of the NRC's NEPA environmental review process. Following the NRC staff's prepared statements, the floor was opened for public comments. A total of 60 attendees at the March 2010 meetings and 83 attendees at the August 2015 meetings provided oral comments that were recorded and transcribed by a certified court reporter. The NRC staff issued summaries of the scoping meetings on April 21, 2011 (NRC 2011a) and September 1, 2015 (NRC 2015d).

In addition to the comments received at the meetings, the NRC also received 20 letters and 24 emails in 2010, and 101 letters in 2015 with comments about the review. All documents associated with this scoping process are available for public inspection in the NRC Public Document Room (PDR), located at One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852, or from the NRC's Agencywide Documents Access and Management System (ADAMS). The ADAMS Public Electronic Reading Room is accessible at http://www.nrc.gov/reading-rm/adams.html. Persons who encounter problems in accessing documents in ADAMS should contact the NRC's PDR Reference staff by telephone at 1-800-397-4209 or 301-415- 4737 or by e-mail at pdr.resource@nrc.gov. The ADAMS accession number for each document is listed below in Tables 1 and 2.

At the conclusion of the scoping period, the NRC staff reviewed the transcripts (NRC 2010a, 2010b, 2015b, 2015c), meeting notes, and all written material received in order to identify individual comments. As further explained below, each comment was marked with a unique identifier that allows each comment to be traced back to the transcript, letter, or e-mail in which the comment was identified. Comments were consolidated and categorized according to the topic within the proposed SEIS or according to the general topic if outside the scope of the GEIS. Once comments were grouped according to subject area, the NRC staff determined the appropriate action for the comment. The action or resolution for each comment is described in the NRC staff's responses within this report. In those cases where no new environmental information was provided by the commenter, only a brief response has been provided to the comment and no further evaluation will be performed.

The preparation of the SEIS will take into account all of the relevant issues raised during the scoping process. The SEIS will address both Category 1 and 2 issues, along with any new information identified as a result of the scoping process. The SEIS will rely on conclusions

supported by information in the GEIS for Category 1 issues and will include analysis of Category 2 issues and any new and significant information (NRC 2013). The NRC will issue a draft SEIS for public comment. The comment period will offer the next opportunity for interested Federal, state, and local government agencies; Indian tribal governments; local organizations; the applicant; and other members of the public to provide input to the NRC's environmental review process. The comments received on the draft SEIS will be considered in the preparation of the final SEIS. The final SEIS, along with the staff's safety evaluation report (SER), will provide much of the basis for the NRC's decision on PG&E's application to renew the DCPP licenses.

2 Comments Received During the Scoping Comment Period

Table 1 identifies the individuals providing comments during the 2010 scoping period and the assigned Commenter ID. Individuals are listed alphabetically, along with the document type and identifier of the source document through which the comment was submitted.

Table 1. Individuals Providing Comments during the 2010 Scoping Comment Period

Commenter	Affiliation (If Stated)	Commenter ID	Comment Source	ADAMS Accession Number
Susan Atlee	None given	CN	Letter	ML103050046
Sheila Baker	None given	S	Afternoon Scoping Meeting	ML100850376
Della Barrett	None given	CS	Letter	ML110840123
Rochelle Becker	Alliance for Nuclear Responsibility	AO	Evening Scoping Meeting	ML100850388
		CF	Email	ML103010449
Jim Bennett	PG&E	AK	Evening Scoping Meeting	ML100850388
Jack Biesek	None given	BB	Evening Scoping Meeting	ML100850388
James Boyd	Commissioner and Vice Chair, California Energy Commission	BX	Email	ML101270220
Joe Boysen	None given	AY	Evening Scoping Meeting	ML100850388
		B	Afternoon Scoping Meeting	ML100850376
ML Boysen	None given	BN	Email	ML101270208
Michael Brass	Project Manager, Granite Construction Company	BW	Letter	ML101270219
Lauren Brown	None given	J	Afternoon Scoping Meeting	ML100850376
Jeff Buckingham	None given	AQ	Evening Scoping Meeting	ML100850388

Commenter	Affiliation (If Stated)	Commenter ID	Comment Source	ADAMS Accession Number
James Byerley	None given	BG	Evening Scoping Meeting	ML100850388
Barbara Byron	California Energy Commission	AG	Evening Scoping Meeting	ML100850388
		CU	Letter	ML110840123
Lois Capps	U.S. Representative	CK	Letter	ML103050047
Andrew Christie	Director, Santa Lucia Sierra Club	Y	Afternoon Scoping Meeting	ML100850376
Dave Christy	None given	AW	Evening Scoping Meeting	ML100850388
Paul Clanon	Executive Director, Public Utilities Commission, State of California	CG	Letter	ML103050058
June Cochran	None given	AL	Evening Scoping Meeting	ML100850388
Melody DeMeritt	Chapter Chair, Sierra Club Santa Lucia Chapter	CW	Letter	ML101040674
Bill Denneen	None given	BI	Email	ML101270193
		G	Afternoon Scoping Meeting	ML100850376
Diane Dolden	None given	CE	Email	ML101270232
Carl Dudley	None given	BF	Evening Scoping Meeting	ML100850388
		BZ	Email	ML101270223
Judy Evered	Co-Chair, Santa Barbara Women's International League for Peace and Freedom	A	Afternoon Scoping Meeting	ML100850376
		AX	Evening Scoping Meeting	ML100850388
		CM	Letter	ML103050049

Commenter	Affiliation (If Stated)	Commenter ID	Comment Source	ADAMS Accession Number
Lee Ferrero	President/CEO (Retired), Private Industry Council of San Luis Obispo County, Inc.	CJ	Letter	ML103050051
Richard Fryer	None given	BL	Email	ML101270206
		C	Afternoon Scoping Meeting	ML100850376
Jim Galusha	CEO, Silverado Stages, Inc.	BR	Email	ML101270212
Dwight Goggans	Retiree, California Highway Patrol	R	Afternoon Scoping Meeting	ML100850376
Dr. Henrietta Groot	None given	AR	Evening Scoping Meeting	ML100850388
David Hafemeister	None given	V	Afternoon Scoping Meeting	ML100850376
Jan Haynes	None given	BM	Email	ML101270207
Shelly Higginbotham	None given	AC	Afternoon Scoping Meeting	ML100850376
Adam Hill	Board of Supervisors, San Luis Obispo County	E	Afternoon Scoping Meeting	ML100850376
John Holloway	PG&E	BC	Evening Scoping Meeting	ML100850388
William Jack	None given	L	Afternoon Scoping Meeting	ML100850376
		BY	Letter	ML101270221
Chris Joyce	PG&E	AH	Evening Scoping Meeting	ML100850388
Ermina Karim	San Luis Obispo Chamber of Commerce	AA	Afternoon Scoping Meeting	ML100850376

Commenter	Affiliation (If Stated)	Commenter ID	Comment Source	ADAMS Accession Number
Ms. Keltey	Representative for Willow Walking Turtle	AE	Afternoon Scoping Meeting	ML100850376
Catherine Kornreich	Kornreich Design Associates, Inc.	BV	Letter	ML101270218
Sally Krenn	PG&E	M	Afternoon Scoping Meeting	ML100850376
Peggy Koteen	None given	T	Afternoon Scoping Meeting	ML100850376
Richard Krenzdorf	None given	Z	Afternoon Scoping Meeting	ML100850376
M.C. Lawver	None given	AD	Afternoon Scoping Meeting	ML100850376
Lynne Levine	None given	Q	Afternoon Scoping Meeting	ML100850376
Robert Lewin	Deputy Chief, Cal Fire/San Luis Obispo County Fire Department	O	Afternoon Scoping Meeting	ML100850376
Jeff Lewis	Retiree, PG&E	X	Afternoon Scoping Meeting	ML100850376
Sherry Lewis	None given	D	Afternoon Scoping Meeting	ML100850376
Stephen Lieberman	None given	BT	Letter	ML101270216
Chuck Lidden	None given	AZ	Evening Scoping Meeting	ML100850388
John Lindsey	PG&E	AU	Evening Scoping Meeting	ML100850388
Joanne Main	President and CEO, Atascadero Chamber of Commerce	U	Afternoon Scoping Meeting	ML100850376
Ted Martino	Owner, Atlas Performance Industries, Inc.	CC	Email	ML101270230

Commenter	Affiliation (If Stated)	Commenter ID	Comment Source	ADAMS Accession Number
Rebecca McMurry	CEO, Pismo Beach Chamber of Commerce	P	Afternoon Scoping Meeting	ML100850376
Carolyn Moffatt	President, San Luis Harbor Commission	BE	Evening Scoping Meeting	ML100850388
		CI	Letter	ML103050053
Laura Murphy	Morris & Garritano Insurance	CB	Letter	ML101270228
Brian Myracle	None given	CD	Email	ML101270231
James Patterson	San Luis Obispo County Board of Supervisors	AS	Evening Scoping Meeting	ML100850388
Mark Phillips	None given	BA	Evening Scoping Meeting	ML100850388
		CV	Letter	ML110840123
Ginger Schenk	Owner, C&S Industrial Coatings	CX	Letter	ML103050057
Peter Schneider	Branch Manager of Independent Electric Supply, Central Coast	BU	Email	ML101270217
Klaus Schumann	None given	BJ	Email	ML101270202
Barbara Scott	None given	AJ	Evening Scoping Meeting	ML100850388
Kathy Silverman	President, Excel Cleaning, Inc.	CL	Letter	ML103050052
Charlee Smith	None given	AV	Evening Scoping Meeting	ML100850388
Noah Smukler Betty Winholtz	Council Members, City of Morro Bay	CO	Letter	ML100560321
Deb Spatafore	None given	BO	Email	ML101270209
Jim Stevens	Vice President, Atascadero Glass	BP	Email	ML101270210

Commenter	Affiliation (If Stated)	Commenter ID	Comment Source	ADAMS Accession Number
Jane Swanson	San Luis Obispo Mothers for Peace	AN	Evening Scoping Meeting	ML100850388
		BK	Email	ML101270205
		N	Afternoon Scoping Meeting	ML100850376
Jane Swanson June Cochran Jill ZamEk	San Luis Obispo Mothers for Peace	CP	letter	ML110840123
Karen Swift	None given	AP	Evening Scoping Meeting	ML100850388
		CQ	Letter	ML110840123
Sonja Swift	None given	BH	Evening Scoping Meeting	ML100850388
Edward Thoma	Vice President, Thoma Electric, Inc.	CA	Email	ML101270224
Ned M. Thompson	Filipponi & Thompson Drilling	CZ	Letter	ML103050050
Betsy Umhofer	District Representative for Congresswoman Lois Capps	F	Afternoon Scoping Meeting	ML100850376
Chris Ungar	Trustee of the San Luis Coastal Unified School District	AI	Evening Scoping Meeting	ML100850388
Ed Valentine	Superintendent, San Luis Coastal Unified School District	I	Afternoon Scoping Meeting	ML100850376
Tracey Vardas	PG&E	AF	Afternoon Scoping Meeting	ML100850376
Ed Waage	None given	AB	Afternoon Scoping Meeting	ML100850376

Commenter	Affiliation (If Stated)	Commenter ID	Comment Source	ADAMS Accession Number
Duane Waddell	None given	W	Afternoon Scoping Meeting	ML100850376
W.H. Wadman	None given	CT	letter	ML110840123
Hugh Wadman	None given	K	Afternoon Scoping Meeting	ML100850376
David Weisman	Alliance for Nuclear Responsibility	H	Afternoon Scoping Meeting	ML100850376
Patrick Weller	Executive Vice President, Pacific West Energy Solutions	CY	Letter	ML103050056
Larry Werner	CEO, North Coast Engineering Inc.	BS	Letter	ML101270213
Steve White	None given	CR	Letter	ML110840123
Michael Wighton	President, A & J Refrigeration	BQ	Email	ML101270211
Larry Womack	Retiree, PG&E	AT	Evening Scoping Meeting	ML100850388
Sharon Young	Business Owner, Avila Valley	CH	Letter	ML103050054
Jill ZamEk	San Luis Obispo Mothers for Peace	AM	Evening Scoping Meeting	ML100850388
Steve Zawalick	None given	BD	Evening Scoping Meeting	ML100850388

Each comment was marked with a unique identifier consisting of the Commenter ID (specified in Table 1) and a comment number corresponding to the sequential comment. This unique identifier allows each comment to be traced back to the transcript, letter, or e-mail in which the comment was identified.

Table 2 identifies the individuals providing comments during the 2015 scoping period and the assigned Commenter ID. Individuals are listed alphabetically, along with the document type and identifier of the source document through which the comment was submitted.

Table 2. Individuals Providing Comments during the 2015 Scoping Comment Period

Commenter	Affiliation (If Stated)	Commenter ID	Comment Source	ADAMS Accession Number
Sylvia Alcon	None given	001	Comment Letter (L011)	ML15238A724
Amy Anderson	Santa Barbara County Action Network	002	Evening Transcript (T002)	ML15243A558
Kaila Anderson	Economic Vitality Corporation	003	Afternoon Transcript (T001)	ML15243A554
Dr. Anthony Armini	Californians for Green Nuclear Power	004	Comment Letter (L085)	ML15289A405
			Afternoon Transcript (T001)	ML15243A554
Steve Arnold	San Luis Obispo County Cattlemen's Association	005	Comment Letter (L023)	ML15251A200
Paula Ash	Guacamole Fund	006	Afternoon Transcript (T001)	ML15243A554
Sybil Ashley	San Luis Obispo Mothers for Peace	007	Evening Transcript (T002)	ML15243A558
Bill Barrow	Port San Luis Harbor District	008	Comment Letter (L077)	ML15289A316
Jane Baxter	None given	009	Evening Transcript (T002)	ML15243A558
Rochelle Becker	Alliance for Nuclear Responsibility	010	Afternoon Transcript (T001)	ML15243A554
Nina Beety	None given	011	Comment Letter (L096)	ML15292A391
Eron Beton	None given	012	Comment Letter (L014)	ML15244A387

Commenter	Affiliation (If Stated)	Commenter ID	Comment Source	ADAMS Accession Number
Anthony Bisset	None given	013	Comment Letter (L100)	ML15292A389
Michael Boyer	None given	014	Comment Letter (L004)	ML15225A118
Elizabeth Brousse	San Luis Obispo Mothers for Peace	015	Comment Letter (L036)	ML15275A234
			Afternoon Transcript (T001)	ML15243A554
			Evening Transcript (T002)	ML15243A558
Dr. Jerry Brown	World Business Academy	017	Comment Letter (L083)	ML15289A402
Marty Brown	None given	018	Comment Letter (L037)	ML15275A235
			Afternoon Transcript (T001)	ML15243A554
Michael Brown	Coalition for Labor, Agriculture, and Business of San Luis Obispo County and Coalition for Labor, Agriculture, and Business of Santa Barbara County	019	Afternoon Transcript (T001)	ML15243A554
Jackson Browne	None given	020	Comment Letter (L035)	ML15275A233

Commenter	Affiliation (If Stated)	Commenter ID	Comment Source	ADAMS Accession Number
Bruce Campbell	None given	021	Comment Letter (L099)	ML15292A545 ML15275A215*
			Afternoon Transcript (T001)	ML15243A554
			Evening Transcript (T002)	ML15243A558
Tom Campbell	Guacamole Fund	022	Afternoon Transcript (T001)	ML15243A554
Dr. Alexander Cannara	None given	023	Comment Letter (L031)	ML15275A229
			Comment Letter (L086)	ML15292A235
			Afternoon Transcript (T001)	ML15243A554
Margaret Carman	None given	024	Evening Transcript (T002)	ML15243A558
Milton Carrigan	None given	025	Comment Letter (L005)	ML15225A120
			Afternoon Transcript (T001)	ML15243A554
Dr. Sam Casalina	None given	026	Comment Letter (L040)	ML15275A216
Andrew Christie	Sierra Club Santa Lucia Chapter	027	Comment Letter (L007)	ML15225A122
			Evening Transcript (T002)	ML15243A558
Mary Ciesinski	Environmental Center of San Luis Obispo	028	Comment Letter (L026)	ML15251A203 ML15282A352*

Commenter	Affiliation (If Stated)	Commenter ID	Comment Source	ADAMS Accession Number
Madeline Cimone	None given	029	Comment Letter (L093)	ML15292A340
Gayle Comer	None given	030	Evening Transcript (T002)	ML15243A558
Lynn Compton	San Luis Obispo County Board of Supervisors	031	Afternoon Transcript (T001)	ML15243A554
Gary Corsiglia	None given	032	Afternoon Transcript (T001)	ML15243A554
David Crosby	None given	033	Afternoon Transcript (T001)	ML15243A554
Liz Curren	None given	034	Afternoon Transcript (T001)	ML15243A554
Keay Davidson	None given	035	Afternoon Transcript (T001)	ML15243A554
Adrianne Davis	None given	036	Comment Letter (L002)	ML15225A116
Kathi DiPeri	San Luis Obispo Mothers for Peace	037	Evening Transcript (T002)	ML15243A558
Carl Dudley	None given	038	Evening Transcript (T002)	ML15243A558
Terre Dunivant	None given	039	Comment Letter (L053)	ML15282A332
Christian Fine	None given	040	Comment Letter (L050)	ML15282A328
Michele Flom	None given	041	Evening Transcript (T002)	ML15243A558
Yvonne Floyd	None given	042	Comment Letter (L055)	ML15282A335

Commenter	Affiliation (If Stated)	Commenter ID	Comment Source	ADAMS Accession Number
Nancy Foley	None given	043	Comment Letter (L015)	ML15244A386
Fred Frank	None given	044	Afternoon Transcript (T001)	ML15243A554
Daryl Gale	None given	045	Comment Letter (L094)	ML15292A341
			Evening Transcript (T002)	ML15243A558
Michele Gardner	Town of Fairfax, CA	046	Comment Letter (L024)	ML15251A201
John Geesman	Alliance for Nuclear Responsibility	047	Afternoon Transcript (T001)	ML15243A554
William Gloege	None given	048	Comment Letter (L079)	ML15289A398
			Comment Letter (L084)	ML15289A403
			Afternoon Transcript (T001)	ML15243A554
Ernest Goitein	None given	049	Comment Letter (L060)	ML15282A351
Dion Good	None given	050	Comment Letter (L065)	ML15287A426
Kirk Gothier	None given	051	Comment Letter (L082)	ML15289A401
Nancy Graves	Environmental Center of San Luis Obispo	052	Evening Transcript (T002)	ML15243A558

Commenter	Affiliation (If Stated)	Commenter ID	Comment Source	ADAMS Accession Number
Dr. Bob Greene	Thorium Energy Alliance of Silicon Valley	053	Comment Letter (L088)	ML15292A237
			Afternoon Transcript (T001)	ML15243A554
Eric Greening	None given	054	Afternoon Transcript (T001)	ML15243A554
Dr. Henrietta Groot	San Luis Obispo Mothers for Peace and Alliance for Nuclear Responsibility	055	Afternoon Transcript (T001)	ML15243A554
Barbara Harmon	None given	056	Afternoon Transcript (T001)	ML15243A554
Minea Herwitz	None given	057	Comment Letter (L042)	ML15282A298
Carole Hisasue	San Luis Obispo Mothers for Peace	058	Afternoon Transcript (T001)	ML15243A554
Ace Hoffman	None given	059	Afternoon Transcript (T001)	ML15243A554
			Evening Transcript (T002)	ML15243A558
Sharon Hoffman	None given	060	Afternoon Transcript (T001)	ML15243A554
			Evening Transcript (T002)	ML15243A558
Elaine Holder	None given	061	Comment Letter (L054)	ML15282A333
Emilie Inman	None given	062	Comment Letter (L067)	ML15287A430

Commenter	Affiliation (If Stated)	Commenter ID	Comment Source	ADAMS Accession Number
Joseph Ivora	None given	063	Comment Letter (L032)	ML15275A230
			Comment Letter (L095)	ML15292A390
			Afternoon Transcript (T001)	ML15243A554
Mary Ivora	None given	064	Comment Letter (L038)	ML15275A213
Jeff Jacoby	None given	065	Comment Letter (L048)	ML15282A353
Cori Jane	None given	066	Comment Letter (L049)	ML15282A302
Molly Johnson	San Luis Obispo Mothers for Peace	067	Afternoon Transcript (T001)	ML15243A554
David Jolly	None given	068	Comment Letter (L051)	ML15282A329
Anthony Kalvans	None given	069	Evening Transcript (T002)	ML15243A558
Anne Kellogg	None given	070	Comment Letter (L025)	ML15251A202
Gary Kirkland	None given	071	Afternoon Transcript (T001)	ML15243A554
Mike Kirkwood	Economic Alliance of Northern Santa Barbara County	072	Comment Letter (L090)	ML15292A239
Diane Koletzke	None given	073	Afternoon Transcript (T001)	ML15243A554
Mark Landon	Nature Corps	074	Comment Letter (L016)	ML15244A384

Commenter	Affiliation (If Stated)	Commenter ID	Comment Source	ADAMS Accession Number
Sandra Lee	None given	075	Comment Letter (L062)	ML15287A427
Sherry Lewis	San Luis Obispo Mothers for Peace	076	Afternoon Transcript (T001)	ML15243A554
LMH Anonymous	None given	077	Comment Letter (L075)	ML15289A314
Ellen Lodge	San Luis Obispo Mothers for Peace	078	Evening Transcript (T002)	ML15243A558
Jessica Lovering	The Breakthrough Institute	079	Afternoon Transcript (T001)	ML15243A554
			Evening Transcript (T002)	ML15243A558
Nathan Macher	None given	080	Comment Letter (L003)	ML15225A117
Terry Madonna	Plumbers and Pipefitters Local 403	081	Comment Letter (L009)	ML15225A125
			Afternoon Transcript (T001)	ML15243A554
Marni Magda	None given	151	Afternoon Transcript (T001)	ML15243A554
Simone Malboeuf	San Luis Obispo Mothers for Peace	082	Afternoon Transcript (T001)	ML15243A554
			Evening Transcript (T002)	ML15243A558
Michael Manetas	None given	083	Comment Letter (L006)	ML15225A121

Commenter	Affiliation (If Stated)	Commenter ID	Comment Source	ADAMS Accession Number
Ann McPherson	U.S. Environmental Protection Agency	084	Comment Letter (L028)	ML15258A345
Oliver Mellan	Radiation Filters Legal Team	085	Comment Letter (L087)	ML15292A236
			Comment Letter (L091)	ML15292A240
Marianne Mellow	None given	086	Afternoon Transcript (T001)	ML15243A554
David Merrick	None given	087	Comment Letter (L008)	ML15225A123
Natalia Merzoyan	None given	088	Afternoon Transcript (T001)	ML15243A554
Vita Miller	None given	089	Evening Transcript (T002)	ML15243A558
Joseph Mirabile	None given	091	Comment Letter (L041)	ML15275A217
			Evening Transcript (T002)	ML15243A558
Gina Mori	San Luis Obispo Mothers for Peace	092	Comment Letter (L027)	ML15257A213
			Comment Letter (L059)	ML15282A350
			Evening Transcript (T002)	ML15243A558
Randy Morton	Friends of Diablo Canyon	093	Afternoon Transcript (T001)	ML15243A554
Larry Murray	Plumbers and Pipefitters Local 403	094	Afternoon Transcript (T001)	ML15243A554

Commenter	Affiliation (If Stated)	Commenter ID	Comment Source	ADAMS Accession Number
Allen Myers	None given	095	Comment Letter (L044)	ML15282A300
Graham Nash	None given	096	Comment Letter (L034)	ML15275A232
Dr. Gene Nelson	Californians for Green Nuclear Power	097	Comment Letter (L063)	ML15287A437
			Comment Letter (L064)	ML15289A374
			Comment Letter (L070)	ML15287A435
			Comment Letter (L071)	ML15287A436
			Comment Letter (L072)	ML15287A438
			Comment Letter (L074)	ML15289A313
			Comment Letter (L080)	ML15289A399
			Comment Letter (L081)	ML15289A400
			Afternoon Transcript (T001)	ML15243A554
			Evening Transcript (T002)	ML15243A558
Debby Nicklas	French Hospital Medical Center	098	Comment Letter (L033)	ML15275A231
Gregory Odom	None given	099	Evening Transcript (T002)	ML15243A558
Kathy Oliver	San Luis Obispo Mothers for Peace	100	Evening Transcript (T002)	ML15243A558

Commenter	Affiliation (If Stated)	Commenter ID	Comment Source	ADAMS Accession Number
Linde Owen	None given	101	Evening Transcript (T002)	ML15243A558
Rick Owen	None given	102	Afternoon Transcript (T001)	ML15243A554
Mark Parson	None given	103	Comment Letter (L058)	ML15282A349
Tanya Quinones	None given	104	Comment Letter (L069)	ML15287A434
Joey Racano	None given	105	Comment Letter (L066)	ML15287A428
Bonnie Raitt	None given	106	Comment Letter (L039)	ML15275A214
Ethan Ramirez	None given	107	Comment Letter (L043)	ML15282A299
Ellie Replei	None given	108	Afternoon Transcript (T001)	ML15243A554
Thomas Rippner	None given	109	Comment Letter (L057)	ML15282A337
Sarah Risley, Heather Tarango, Shilo Terek, Meagan Wilson, and Kristin Zaitz	U.S. Women in Nuclear, Diablo Canyon Chapter	110	Comment Letter (L092)	ML15292A339
Del Ritchie	PG&E	111	Comment Letter (L019)	ML15244A379
Charlene Rosales	San Luis Obispo Chamber of Commerce	112	Comment Letter (L017)	ML15244A383
Barbara and Robert Rosenthal	None given	113	Comment Letter (L022)	ML15251A199
J.A. Savage	None given	114	Comment Letter (L001)	ML15203A552

Commenter	Affiliation (If Stated)	Commenter ID	Comment Source	ADAMS Accession Number
Klaus Schumann	None given	115	Comment Letter (L101)	ML15310A057
			Afternoon Transcript (T001)	ML15243A554
Barbara Scott	None given	116	Afternoon Transcript (T001)	ML15243A554
Andrea Seastrand	None given	117	Afternoon Transcript (T001)	ML15243A554
Linda Seeley	None given	118	Comment Letter (L056)	ML15282A336
Nancy Shaw	San Luis Obispo Mothers for Peace	119	Evening Transcript (T002)	ML15243A558
Sawada Showning	None given	120	Evening Transcript (T002)	ML15243A558
Dorah Rosen Shuey	None given	121	Afternoon Transcript (T001)	ML15243A554
Geoff Shuey	None given	122	Afternoon Transcript (T001)	ML15243A554
Craig Shuman	California Department of Fish and Wildlife	123	Comment Letter (L029)	ML15258A347 ML15292A546*
Mark Skinner	None given	124	Evening Transcript (T002)	ML15243A558
Margaret Smith	None given	125	Comment Letter (L097)	ML15292A392
Justin Stanley	San Luis Obispo Mothers for Peace	126	Evening Transcript (T002)	ML15243A558

Commenter	Affiliation (If Stated)	Commenter ID	Comment Source	ADAMS Accession Number
Antoinette Stein	None given	127	Comment Letter (L098)	ML15292A544
John Stephens	Occidental College	128	Comment Letter (L021)	ML15251A198
			Afternoon Transcript (T001)	ML15243A554
Sharon Steuer	None given	129	Comment Letter (L061)	ML15282A354
Terri Strickland	None given	130	Afternoon Transcript (T001)	ML15243A554
Sherry Stuckey	None given	131	Evening Transcript (T002)	ML15243A558
Brian Sturtevant	Atascadero City Council; PG&E	132	Comment Letter (L018)	ML15244A381
Laura Sutton	San Luis Obispo Mothers for Peace	133	Evening Transcript (T002)	ML15243A558
Jane Swanson	San Luis Obispo Mothers for Peace	134	Comment Letter (L078)	ML15289A397
David Traub	JOBS	135	Comment Letter (L047)	ML15282A304

Commenter	Affiliation (If Stated)	Commenter ID	Comment Source	ADAMS Accession Number
Unknown Commenter	None given	136	Comment Letter (L030)	ML15275A228
			Comment Letter (L045)	ML15282A301
			Comment Letter (L046)	ML15282A303
			Comment Letter (L052)	ML15282A330
			Comment Letter (L076)	ML15289A315
			Evening Transcript (T002)	ML15243A558
Nikohl Vandel	None given	137	Comment Letter (L068)	ML15287A431
Charles Varni	None given	138	Evening Transcript (T002)	ML15243A558
Duane Waddell	None given	139	Evening Transcript (T002)	ML15243A558
Lynn Walter	None given	140	Comment Letter (L012)	ML15244A390
			Afternoon Transcript (T001)	ML15243A554
Harvey Wasserman	None given	141	Afternoon Transcript (T001)	ML15243A554
			Evening Transcript (T002)	ML15243A558
Dr. Wesley Weisenberger	None given	142	Afternoon Transcript (T001)	ML15243A554

Commenter	Affiliation (If Stated)	Commenter ID	Comment Source	ADAMS Accession Number
Mary White	Environmental Center of San Luis Obispo	144	Afternoon Transcript (T001)	ML15243A554
Colin Wigglesworth	None given	145	Comment Letter (L013)	ML15244A388
Meagan Wilson	None given	146	Comment Letter (L089)	ML15292A238
Rosemary Wilvert	None given	147	Comment Letter (L073)	ML15287A439
			Afternoon Transcript (T001)	ML15243A554
Charlene Woodcock	None given	148	Comment Letter (L010)	ML15237A262
Jill ZamEk	San Luis Obispo Mothers for Peace	149	Afternoon Transcript (T001)	ML15243A554
			Evening Transcript (T002)	ML15243A558
Steve Zawalick	PG&E	150	Comment Letter (L020)	ML15244A377

* Duplicate submissions

Each comment provided during the 2015 scoping period was marked with a unique identifier consisting of the Commenter ID (specified in Table 2), an alphanumeric code corresponding to the source document (also specified in Table 2), and a comment number. This unique identifier allows each comment to be traced back to the transcript, letter, or e-mail in which the comment was identified.

The comments received during the scoping period have been grouped into the following general categories:

1. air quality and meteorology;
2. alternatives to license renewal;
3. aquatic resources;
4. climate change;
5. cumulative impacts;

6. geology and soils;
7. groundwater;
8. human health;
9. postulated accidents, including severe accident mitigation alternatives (SAMA);
10. socioeconomics;
11. special status species and habitats;
12. surface water resources;
13. terrestrial resources;
14. waste management;
15. support for nuclear power or the license renewal for DCPP;
16. opposition to nuclear power or the license renewal for DCPP;
17. license renewal and NEPA process; and
18. other comments outside the scope of the NRC's environmental review.

The disposition of each comment is discussed in Sections 2.1 and 2.2.

2.1 Scoping Comments Considered During Development of the SEIS

2.1.1 Air Quality and Meteorology

Comment: The following comments are related to air quality and meteorology.

Identifiers: AA-2, 006-T001-26, 015-L036-3, 015-T002-21, 020-L035-2, 027-L007-2, 051-L082-1, 052-T002-13, 058-T001-54, 134-L078-2, and 150-L020-2

Response: *The NRC staff will describe the air quality around DCPP in Chapter 3 of the draft SEIS and will address the impacts to air quality and meteorology from renewing the DCPP license in Chapter 4. An expanded response to these comments will be included in Appendix A of the draft SEIS.*

2.1.2 Alternatives to License Renewal

Comment: The following comments are related to alternative energy sources other than license renewal.

Identifiers: C-1, H-5, J-2, S-1, T-4, AG-4, AJ-2, AL-2, AL-4, AP-3, AS-2. AS-5, AV-2, AX-4, AY-4, AZ-2, BB-2, BF-3, BH-2, BL-3, BX-7, CF-8, CQ-1, CU-4, CV-5, 027-L007-1, 027-T002-58, 028-L026-2, 053-L088-10, 077-L075-1, 085-L091-4, 102-T001-39, 106-L039-4, 115-T001-37, 121-T001-56, 134-L078-1, 136-L030-3, and 141-T002-9

Response: *The NRC staff will identify and evaluate reasonable alternatives to the renewal of the DCPP license in Chapter 2 of the draft SEIS. This includes the option of not renewing the DCPP license, referred to as the "no-action alternative." Chapter 4 of the draft SEIS will compare the impacts of renewing the operating license of renewing the DCPP license to the*

environmental impacts of alternatives. Expanded responses to these comments will be included in Appendix A of the draft SEIS.

2.1.3 Aquatic Resources

Comment: The following comments are related to aquatic resources.

Identifiers: Y-1, AG-8, AR-1, AS-6, BE-4, BX-8, CE-7, CI-3, CW-1, 006-T001-25, 015-L036-1, 015-T001-31, 018-L037-3, 018-T001-15, 020-L035-1, 021-L099-7, 021-T001-87, 023-L086-4, 023-L086-5, 023-T001-42, 025-L005-1, 025-T001-11, 028-L026-4, 037-T002-67, 048-L079-2, 049-L060-1, 051-L082-2, 053-L088-3, 053-L088-8, 070-L025-5, 075-L062-7, 089-T002-63, 092-L027-2, 100-T002-29, 105-L066-1, 108-T001-48, 123-L029-10, 123-L029-12, 123-L029-5, 123-L029-6, 123-L029-7, 128-L021-1, 128-T001-19, 134-L078-9, 136-L030-9, and 144-T001-20

Response: *The NRC staff will describe the aquatic environment around DCPP in Chapter 3 of the draft SEIS and will address the impacts to aquatic resources from renewing the DCPP license in Chapter 4. Expanded responses to these comments will be included in Appendix A of the draft SEIS.*

2.1.4 Climate Change

Comment: The following comments are related to climate change.

Identifiers: AP-2, CV-2, 021-T002-55, 045-T002-27, 052-T002-12, 072-L090-1, 072-L090-2, 079-T002-48, 079-T002-50, 084-L028-4, 097-L070-1, 097-L074-1, 113-L022-5, and 123-L029-11

Response: *The NRC staff will describe the environment around DCPP in Chapter 3 of the draft SEIS and will address the impacts from climate change on the environment and impacts to climate change from renewing the DCPP license in Chapter 4 of the draft SEIS. Expanded responses to these comments will be included in Appendix A of the draft SEIS.*

2.1.5 Cumulative Impacts

Comment: The following comments are related to cumulative impacts from license renewal.

Identifiers: 048-L084-1, 097-L080-1, and 097-L081-1

Response: *The NRC staff will address the cumulative impacts that result from renewing the DCPP license when considered with other past, present, and reasonably foreseeable actions in Chapter 4. Expanded responses to these comments will be included in Appendix A of the draft SEIS.*

2.1.6 Geology and Soils

Comment: The following comments are related to geology and soils.

Identifiers: 084-L028-2 and 141-T001-3

Response: *The NRC staff will describe the geologic environment in the vicinity of DCPP in Chapter 3 of the draft SEIS and will address the impacts to geology and soils from renewing the*

DCPP license in Chapter 4 of the draft SEIS. Expanded responses to these comments will be included in Appendix A of the draft SEIS.

2.1.7 Groundwater

Comment: The following comment is related to groundwater.

Identifier: BN-1

Response: *The NRC staff will describe the groundwater around DCPP in Chapter 3 of the draft SEIS and will address the impacts to groundwater from renewing the DCPP license in Chapter 4.* An e*xpanded response to this comment will be included in Appendix A of the draft SEIS.*

2.1.8 Human Health

Comment: The following comments are related to human health.

Identifiers: G-1, V-2, AD-4, AX-1, AX-3, BG-2, CM-1, 011-L096-4, 017-L083-5, 021-L099-12, 021-T001-89, 030-T002-72, 037-T002-66, 051-L082-4, 058-T001-52, 070-L025-6, 089-T002-61, 092-L027-3, 113-L022-3, 127-L098-2, 127-L098-4, and 141-T002-6

Response: *The NRC staff will describe the human health risks from DCPP in Chapter 3 of the draft SEIS and will address the impacts to human health from renewing the DCPP license in Chapter 4. Expanded responses to these comments will be included in Appendix A of the draft SEIS.*

2.1.9 Postulated Accidents, including SAMA

Comment: The following comments express concerns relating to postulated accidents and SAMA.

Identifiers: CE-5, 059-T002-23, 061-L054-1, 076-T001-28, 085-L091-1, 112-L017-3, and 134-L078-7

Response: *The NRC staff will address postulated accidents—including those initiated by terrorist events—and SAMAs in Chapter 4 and Appendix F of the draft SEIS. Expanded responses to these comments will be included in Appendix A of the draft SEIS.*

2.1.10 Socioeconomics

Comment: The following comments are related to socioeconomics.

Identifiers: H-3, L-1, AG-2, AP-1, CU-2, 019-T001-79, 038-T002-56, 069-T002-42, 072-L090-3, 112-L017-2, and 132-L018-1

Response: *The NRC staff will discuss the* socioeconomic factors that have the potential to be directly or indirectly affected by changes in operations at *DCPP in Chapter 3 of the draft SEIS. The NRC staff will address the socioeconomic impacts from renewing the DCPP license in Chapter 4 of the draft SEIS. Expanded responses to these comments will be included in Appendix A of the draft SEIS.*

2.1.11 Special Status Species and Habitat

Comment: The following comments are related to special status species and habitats.

Identifiers: AE-1, CR-1, 123-L029-8 and 123-L029-9

Response: *The NRC staff will discuss the species and habitats that are Federally protected under the Endangered Species Act of 1973 and the Magnuson–Stevens Fishery Conservation and Management Reauthorization Act, referred to as special status species and habitats, in Chapter 3 of the draft SEIS. The NRC staff will address the impacts to special status species and habitats from renewing the DCPP license in Chapter 4 of the draft SEIS. Expanded responses to these comments will be included in Appendix A of the draft SEIS.*

2.1.12 Surface Water Resources

Comment: The following comments are related to surface water resources.

Identifiers: 021-L099-5, 021-T001-86, 084-L028-1, 123-L029-3, and 123-L029-4

Response: *The NRC staff will describe the surface water resources around DCPP in Chapter 3 of the draft SEIS and will address the impacts to surface water resources from renewing the DCPP license in Chapter 4. Expanded responses to these comments will be included in Appendix A of the draft SEIS.*

2.1.13 Terrestrial Resources

Comment: The following comments are related to terrestrial resources.

Identifiers: B-12, BH-3, 072-L090-6, 123-L029-1, and 123-L029-2

Response: *The NRC staff will describe the terrestrial environment around DCPP in Chapter 3 of the draft SEIS and will address the impacts to terrestrial resources from renewing the DCPP license in Chapter 4. Expanded responses to these comments will be included in Appendix A of the draft SEIS.*

2.1.14 Waste Management

Comment: The following comments are related to waste management.

Identifiers: 001-L011-1, 021-L099-10, 021-L099-11, 021-T001-88, 025-L005-2, 025-T001-13, 053-L088-9, 070-L025-2, 075-L062-5, 075-L062-6, 084-L028-3, 089-T002-62, 092-L027-6, 092-L027-9, 115-L101-4, 118-L056-1, 134-L078-12, 136-L030-6, 136-L030-8, 141-T002-4, and 147-T001-72

Response: *The NRC staff will describe the management of radioactive waste in Chapter 3 of the draft SEIS and will address the impacts to radioactive waste from renewing the DCPP license in Chapter 4 of the draft SEIS. Expanded responses to these comments will be included in Appendix A of the draft SEIS.*

2.2 Scoping Comments That Will Not Be Further Considered

The comments listed in the following sections are either outside of the scope of the environmental review for the DCPP license renewal or provided no new environmental information and will not be considered further in the development of the SEIS.

2.2.1 Support for Nuclear Power or the License Renewal for DCPP

Comment: The following comments express support for nuclear power, PG&E, or the DCPP license renewal. The commenters cite the socioeconomic benefits from DCPP; the negative impacts of failing to renew the DCPP licenses—including the negative socioeconomic impacts and decreased air quality; that spent fuel is being safely stored; the reliability of the electrical power generated by DCPP; the unreliability of alternative energy sources; carbon-free generation and clean air benefits; the need for DCPP, specifically, and nuclear power, in general, to be part of the power generation mix to address climate change; PG&E's environmental stewardship; the emergency services and coordination provided by PG&E; PG&E's agreement to provide excess desalination plant capacity to San Luis Obispo County; and the ability of nuclear power to provide energy for desalination in the State of California, as reasons for their support.

Identifiers: C-2, I-1, I-2, J-1, J-4, K-1, K-3, L-2, M-1, P-1, R-1, U-1, X-3, X-4, X-5, AA-1, AA-3, AB-1, AC-1, AF-1, AF-2, AH-1, AI-1, AK-1, AQ-1, AT-1, AU-1, AV-1, AZ-3, AZ-4, BC-1, BD-2, BF-1, BF-2, BF-4, BL-1, BL-2, BM-1, BM-2, BM-5, BO-1, BP-1, BP-2, BQ-1, BQ-2, BR-1, BS-1, BT-1, BU-1, BU-2, BV-1, BW-1, BY-1, BZ-1, BZ-3, CA-1, CA-2, CB-1, CC-1, CC-2, CD-1, CH-1, CJ-1, CL-1, CX-1, CY-1, CZ-1, 003-T001-68, 004-L085-1, 004-T001-47, 005-L023-1, 014-L004-1, 019-T001-78, 019-T001-80, 023-L031-1, 023-L086-1, 023-T001-43, 031-T001-1, 032-T001-77, 048-L079-1, 048-L079-3, 048-L084-2, 048-T001-41, 053-L088-1, 053-L088-11, 053-L088-12, 053-L088-2, 053-L088-4, 053-T001-35, 056-T001-66, 063-L032-1, 063-L095-1, 063-T001-64, 064-L038-1, 069-T002-41, 071-T001-92, 072-L090-5, 074-L016-1, 079-T001-62, 079-T002-47, 079-T002-49, 080-L003-1, 081-L009-1, 081-T001-82, 087-L008-1, 093-T001-60, 094-T001-61, 097-L063-1, 097-L064-1, 097-L072-1, 097-T001-18, 097-T002-10, 098-L033-1, 102-T001-40, 110-L092-1, 111-L019-1, 117-T001-84, 130-T001-70, 136-T002-71, 140-L012-1, 140-T001-51, 142-T001-49, 145-L013-1, 146-L089-1, and 150-L020-1

Response: *These comments are general in nature and provide no new and significant information. As such, these comments will not be evaluated further in the development of the SEIS. However, to the extent that these comments refer generally to the socioeconomic impacts from license renewal, the alternatives to license renewal—including the impacts of not renewing the DCPP licenses, the impacts to greenhouse gases, spent fuel storage at DCPP, and programs in place at DCPP to protect aquatic and terrestrial resources as reasons for support, the NRC staff will describe the environment around DCPP as it pertains to these issues in Chapter 3 of the draft SEIS. The NRC staff will address the impacts from renewing the DCPP licenses and alternatives to renewal as they pertain to these issues in Chapter 4 of the draft SEIS. PG&E's plan to share its excess desalination plant capacity with San Luis Obispo County, although not directly related to the DCPP license renewal, will be considered as part of the cumulative impacts from license renewal, which will be addressed in Chapter 4 of the draft SEIS.*

To the extent that comments cite the need for the power generated by DCPP, the need for power is considered to be outside the scope of license renewal, and the SEIS need not address it (10 CFR 51.95 (c)(2)). The purpose and need for the proposed action (issuance of a renewed license) is to provide an option that allows for power generation capability beyond the term of a

current nuclear power plant operating license to meet future system generating needs, as such needs may be determined by other energy-planning decisionmakers. This definition of purpose and need reflects the NRC's recognition that, unless there are findings in the safety review required by the Atomic Energy Act or findings in the NEPA environmental analysis that would lead the NRC to reject a license renewal application, the NRC does not have a role in the energy-planning decisions of state regulators and utility officials as to whether a particular nuclear power plant should continue to operate.

The decision to build additional desalination plants in California, or elsewhere, is outside the scope of this environmental review.

2.2.2 Opposition to Nuclear Power or the License Renewal for DCPP

Comment: The following comments generally express opposition to nuclear power, PG&E, or the DCPP license renewal. Many commenters cite the potential for accidents—including those initiated by terrorist events—likening the impact to those at Fukushima; various seismic design issues; the safety of spent fuel; the lack of a plan for the final disposition of spent fuel; the effects on human health from radioactive releases; the cost-effectiveness and financial viability of nuclear power; decommissioning costs; the lack of need for the power generated by DCPP, specifically, or nuclear power, more generally; the need for subsidies—including the coverage provided by the Price-Anderson Act; the attractiveness and viability of alternatives; and the impacts to aquatic biota from the operation of the DCPP once-through cooling system. Several commenters stated the belief that that license renewal should be denied because PG&E could not be trusted to operate DCPP safely or that the NRC does not enforce its regulations effectively. Several comments stated that license renewal should be denied because of their belief that emergency preparedness plans were inadequate, or ineffective. One commenter stated the opinion that license renewal should be denied, but that the plant employees should be kept at the plant through the decommissioning process. One comment expressed concerns about long term deterioration of DCPP.

Identifiers: A-3, B-3, B-5, B-6, B-7, B-10, D-2, N-2, N-4, N-6, Q-2, T-1, T-2, T-3, T-5, V-3, AD-1, AD-2, AD-3, AD-5, AE-2, AL-5, AX-2, AY-1, AY-3, AY-5, AY-6, AY-7, AY-8, BA-2, BA-4, BB-1, BB-3, BB-5, BG-1, BG-3, BK-3, BK-4, BK-5, BK-7, BN-2, BN-5, BN-6, CM-2, CM-3, CP-9, CR-3, CV-3, CV-6, 001-L011-2, 002-T002-34, 006-T001-27, 007-T002-40, 009-T002-35, 011-L096-1, 011-L096-2, 011-L096-6, 012-L014-1, 013-L100-1, 015-L036-2, 015-L036-4, 015-T001-32, 015-T002-20, 017-L083-1, 018-L037-4, 018-T001-16, 020-L035-3, 021-L099-3, 021-L099-6, 022-T001-17, 024-T002-70, 026-L040-1, 029-L093-1, 033-T001-9, 034-T001-67, 036-L002-1, 037-T002-65, 037-T002-68, 040-L050-1, 041-T002-22, 042-L055-1, 043-L015-1, 045-L094-1, 045-T002-28, 046-L024-1, 047-T001-34, 050-L065-1, 052-T002-11, 057-L042-1, 057-L042-2, 058-T001-53, 058-T001-55, 059-T001-90, 059-T002-25, 060-T001-91, 060-T002-26, 062-L067-1, 065-L048-1, 066-L049-1, 068-L051-1, 070-L025-7, 073-T001-21, 073-T001-24, 075-L062-1, 076-T001-29, 077-L075-3, 078-T002-32, 082-T001-65, 082-T002-19, 083-L006-1, 085-L091-2, 085-L091-5, 086-T001-75, 089-T002-64, 091-L041-1, 092-L027-13, 092-L027-14, 092-L027-5, 092-L027-7, 092-L059-1, 092-T002-43, 095-L044-1, 096-L034-1, 101-T002-59, 103-L058-1, 105-L066-2, 106-L039-1, 106-L039-9, 107-L043-1, 109-L057-1, 113-L022-1, 113-L022-4, 114-L001-1, 116-T001-71, 119-T002-44, 120-T002-14, 121-T001-58, 122-T001-59, 124-T002-52, 125-L097-1, 126-T002-46, 127-L098-1, 127-L098-5, 129-L061-1, 131-T002-1, 133-T002-45, 134-L078-6, 135-L047-1, 136-L030-1, 136-L045-1, 136-L046-1, 136-L052-1, 136-L076-1, 137-L068-1, 138-T002-39, 139-T002-33, 141-T001-2, 141-T001-7, 147-L073-1, 147-T001-74, 148-L010-1, 149-T001-76, 149-T002-16, and 149-T002-17

Response: *These comments are general in nature and provide no new and significant information. As such, these comments will not be evaluated further in the development of the SEIS. However, to the extent that these comments refer generally to the alternatives to license renewal—including the no-action alternative; the potential for, and consequences of an accident at DCPP; the safety of spent fuel; the effects of radioactive releases; and the impacts to aquatic biota from the operation of the once-through cooling system, the NRC staff will describe the environment around DCPP as it pertains to these issues in Chapter 3 of the draft SEIS. The NRC staff will address the impacts from renewing the DCPP licenses as they pertain to these issues in Chapter 4 of the draft SEIS.*

Relative to seismic issues at DCPP, the NRC's license renewal review takes into consideration seismic information in two limited ways. First, for the environmental review, the risk from external hazards, such as earthquakes, are considered as part of the NRC staff's review of PG&E's SAMA analysis. SAMAs are potential ways to reduce the risk or potential impacts of uncommon, but potentially severe accidents. SAMAs may include changes to plant components, systems, procedures, and training. The NRC's evaluation of PG&E's SAMA analysis will be documented in Chapter 4 of the draft SEIS. Second, the seismic licensing basis for the plant helps to inform the scope of the license renewal safety review. Structures, systems, and components (SSCs) that are relied upon to remain functional during and after design basis events, such as seismic events, are within the scope of license renewal. As such, the NRC staff review considers whether an applicant will adequately manage the effects of aging on these SSCs. The results of the NRC staff's safety review is documented in the safety evaluation report for license renewal. However, to the extent that these comments express the opinion that the NRC staff should reevaluate the DCPP seismic licensing basis as part of license renewal, or imply some other deficiency with respect to the licensing basis, these comments are considered outside the scope of the environmental review. As explained further below, the adequacy of the DCPP seismic basis is addressed as part of the NRC's ongoing regulatory oversight function.

Regarding the potential for long-term degradation at DCPP, the primary purpose of the license renewal safety review is to determine if PG&E has adequately demonstrated that the effects of aging will not adversely affect any systems, structures, or components, as identified in 10 CFR 54.4. When the plant was designed, certain assumptions were made about the length of time the plant would be operated. PG&E must demonstrate that the effects of aging will be managed in such a way that the intended functions of "passive" or "long-lived" structures and components (such as the reactor vessel, reactor coolant system, piping, steam generators, pressurizer, pump casings, and valves) will be maintained during extended operation. For active components (such as motors, diesel generators, cooling fans, batteries, relays, and switches) surveillance and maintenance programs will continue throughout the period of extended operation.

To the extent these comments make reference to the need for power from DCPP, the financial viability of DCPP, or the need for subsidies, these issues are considered to be outside the scope of license renewal, and the SEIS need not address it (10 CFR 51.95 (c)(2)). The purpose and need for the proposed action (issuance of a renewed license) is to provide an option that allows for power generation capability beyond the term of a current nuclear power plant operating license to meet future system generating needs, as such needs may be determined by other energy-planning decisionmakers. Similarly, the decision whether or not to pursue nuclear power as a power generation source is a decision that is made by other energy-planning decisionmakers and is outside the scope of this review. With regard to the Price-

Anderson Act, this Act is a Federal law that governs liability-related issues for all nonmilitary nuclear facilities constructed in the United States before 2026. The main purpose of the Act is to provide prompt and orderly compensation to the public who may incur damages from a nuclear incident, no matter who might be liable. The Act provides "omnibus" coverage—the same protection available for a covered licensee or contractor indemnifies any persons who may be legally liable, regardless of their identity or relationship to the licensed activity. Because the Act channels the obligation to pay compensation for damages to the licensee, any party with a claim only needs to bring its claim to the licensee or contractor.

On the topic of decommissioning costs, NRC regulations at 10 CFR 50.33(k) and 50.75 require each power reactor licensee to provide reasonable assurance that funds will be available for decommissioning and prescribes acceptable methods for providing financial assurance and the minimum dollar amounts, adjusted annually, to demonstrate such reasonable assurance. A licensee's ability to demonstrate financial assurance for decommissioning costs is reviewed by the NRC through its ongoing regulatory oversight function. As such, this issue is outside the scope of a license renewal review, which is focused on assessing an applicant's capability to adequately manage the effects of aging during the period of extended operation.

With regard to the trustworthiness of PG&E to operate DCPP safely, or of the NRC's ability to enforce its regulations effectively, these issues are outside the scope of the NRC's license renewal environmental review. The NRC provides continuous oversight of nuclear power plants through its ongoing reactor oversight process to verify that they are being operated and maintained in accordance with NRC regulations. This oversight includes having full-time NRC inspectors located at the plant and periodic safety inspections conducted by NRC inspectors based in an NRC Regional Office. The inspections look at a licensee's compliance with NRC's regulations, which include the following: plant safety (routine and accident scenarios), radiation protection of plant workers and members of the public, radioactive effluent releases, radiological environmental monitoring, emergency preparedness, radioactive waste storage and transportation, quality assurance, and training. Should the NRC discover an unsafe condition, or that a licensee not complying with its licensing basis, the NRC has full authority to take whatever action is necessary to protect public health and safety. Additional information related to the NRC's assessment of current performance at DCPP can be found at http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/DIAB1/diab1_chart.html (Unit 1) and http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/DIAB2/diab2_chart.html (Unit 2).

On the topic of the final disposition of spent fuel, as described in NUREG-2157, "Generic Environmental Impact Statement for Continued Storage of Spent Nuclear Fuel," the national policy for the ultimate disposition of spent fuel remains disposal at a repository. This was affirmed by the Department of Energy in 2013, who stated its intent to have a repository sited and licensed by 2048 (DOE 2013). As discussed above, Chapter 4 of the draft SEIS will evaluate the environmental impacts of the storage of spent fuel during the license renewal term. The NRC generically evaluated the environmental impacts of continuing to store spent fuel beyond the license term in NUREG-2157. This evaluation included an evaluation of impacts in the unlikely situation that a repository is not built. In accordance with 10 CFR 51.23, the impact determinations in NUREG-2157 regarding continued storage are deemed incorporated into the SEIS for DCPP license renewal.

Regarding the effectiveness of emergency planning, the requirements related to emergency planning are in the NRC's regulations at 10 CFR Part 50.47 and Appendix E to 10 CFR Part 50. These requirements, which include the performance of a full-scale exercise at least once every

two years in order to maintain the skills of the emergency responders and to identify and correct weaknesses, apply to all operating licenses and will continue to apply to facilities with renewed licenses. As such, the NRC, in 10 CFR Part 50.47, has determined that there is no need for a special review of emergency preparedness issues in the environmental review for license renewal.

2.2.3 Comments Related to the NRC's License Renewal and NEPA Process

Comment: The following comments express disagreement with the timing of the license renewal process. Two comments express the opinion that the NRC should not be continuing its review of PG&E's application with so many unresolved issues, with comments specifically mentioning uncertainty surrounding PG&E's commitment to pursue State of California processes for issues related to Coastal Zone Management Act certification, alternatives to the DCPP once-through cooling system, and the permanent disposition of radioactive waste. Two comments state the opinion that PG&E should not be able to submit a license renewal application so far in advance of the expiration dates of its current licenses.

Identifiers: CF-3, 010-T001-10, 021-L099-2, 021-T002-54, and 055-T001-83

Response: *Section 54.17(c) of 10 CFR Part 54 allows licensees to submit license renewal applications up to 20 years before the expiration of the current license. The Commission established the earliest date for submission of license renewal applications after soliciting and considering comments (56 FR 64943). In the 1991 statements of consideration for section 54.17(c), the Commission rejected the suggestion that 20 years of operational and regulatory experience with a particular plant was an insufficient period in which to accumulate information on plant performance. Further, the Commission also rejected suggestions that a 5-year or even a 15-year time limit for filing renewal applications would be adequate. The Commission stated that, in establishing the earliest date for license renewal applications, it considered the time necessary for utilities to plan for replacement of retired nuclear plants. The Commission found that the lead time for building new electric generation facilities is 10-14 years depending on the technology. When the license renewal rule was revised in 1995, the Commission again solicited comments on the earliest date for filing license renewal applications. After considering the comments, the Commission concluded that there was no new information warranting a change in the earliest date for license renewal applications, either to make it earlier or later (60 FR 22461).*

Relative to the outstanding issues raised in comments, only Coastal Zone Management Act certification needs to be resolved prior to the NRC reaching its decision on PG&E's application (NRC 2015a). However, neither that issue, nor any of the other issues identified preclude the NRC staff from completing and documenting its review of the DCPP license renewal application.

On the topic of the final disposition of spent fuel, as described in NUREG-2157, "Generic Environmental Impact Statement for Continued Storage of Spent Nuclear Fuel," the national policy for the ultimate disposition of spent fuel remains disposal at a repository. This was affirmed by the Department of Energy in 2013, who stated its intent to have a repository sited and licensed by 2048 (DOE 2013). As discussed above, Chapter 4 of the draft SEIS will evaluate the environmental impacts of the storage of spent fuel during the license renewal term. The NRC generically evaluated the environmental impacts of continuing to store spent fuel beyond the license term in NUREG-2157. This evaluation included an evaluation of impacts in the unlikely situation that a repository is not built. In accordance with 10 CFR 51.23, the impact

determinations in NUREG-2157 regarding continued storage are deemed incorporated into the SEIS for DCPP license renewal.

As for alternatives to the DCPP once-through cooling system, the NRC is not directly involved in this process, nor does this issue need to be resolved as a component of the NRC staff's review of the license renewal application. In order to continue operating, PG&E will need to seek and be granted all necessary permits to operate, one of which is the State-issued National Pollution Discharge Elimination system permit. Any potential modifications to the DCPP once-through cooling system will be determined by PG&E and the State of California as a part of that process and in accordance with the State's Once-Through Cooling Policy. The compliance date for this policy is December 2024.

Comment: The following comments were submitted during the 2010 scoping period and relate to the timing of license renewal application with respect to the completion of seismic studies required by California Assembly Bill (AB) 1632. Several of the comments expressed the opinion that the license renewal review should proceed concurrently with the completion of those seismic studies. Several of the other comments stated that opinion that the license renewal review should be delayed pending the completion of those studies. Many of those comments also stated that the NRC should consider the information gathered from the studies as part of its review of the license renewal application. Some of the comments stated that the NRC should form a joint panel consisting of representatives of the NRC, United States Geological Survey, and the State of California to review the seismic study results. One comment stated that the NRC should also consider possible changes to the DCPP once-through cooling system resulting from the State's Once-Through Cooling Policy and the plant's emergency preparedness programs.

Identifiers: C-3, E-1, J-3, L-3, P-2, U-2, X-2, AB-2, AC-2, AF-3, AN-1, AO-2, AR-2, AS-1, AS-4, AS-8, AW-1, BA-1, BE-1, BF-5, BJ-1, BJ-8, BL-4, BM-3, CF-1, CF-2, CF-4, CF-6, CF-9, CF-12, CO-1, CP-1, CU-7, and CW-2

Response: *AB 1632 directed the California Energy Commission to assess the vulnerability of the state's operating nuclear power plants to a major disruption due to a major seismic event or plant aging, the potential impacts of such a disruption, potential impacts from the accumulation of nuclear waste at the state's existing nuclear plants, and other key policy and planning issues regarding the future role of California's existing nuclear plants (CEC Undated). Following that assessment, the California Energy Commission recommended that PG&E perform additional seismic surveys to more fully assess the seismic setting around DCPP, which PG&E agreed to perform. On April 10, 2011, PG&E requested the NRC to delay the final processing of the license renewal application pending completion of the seismic studies (PG&E 2011). On May 31, 2011, the NRC delayed all remaining milestones associated with the NRC staff's review of the license renewal application (NRC 2011b). Upon completion of those studies and PG&E's submission of additional information related the NRC staff's review of the license renewal application, the NRC staff issued a schedule for the remainder of its review (NRC 2015a).*

Regarding the consideration as part of the license renewal review of the information gathered from the studies, the NRC staff's review of the license renewal application takes into consideration external hazards, such as earthquakes, in two limited ways. First, for the environmental review, the risk from external hazards are considered as part of the NRC staff's review of PG&E's SAMA analysis. PG&E (2015) addressed the results of the seismic surveys as part of its updated SAMA analysis. The NRC's evaluation of PG&E's SAMA analysis will be

documented in Chapter 4 of the draft SEIS. Second, the external hazard licensing basis for the plant helps to inform the scope of the license renewal safety review. SSCs that are relied upon to remain functional during and after design basis events are within the scope of license renewal. As such, the NRC staff review considers whether an applicant will adequately manage the effects of aging on these SSCs. The results of the NRC staff's safety review is documented in the safety evaluation report for license renewal (NRC 2011c).

To the extent that comments suggest that the NRC should review the DCPP seismic licensing in light of the seismic survey results, the adequacy of the DCPP seismic licensing basis is addressed as part of the NRC's ongoing regulatory oversight function. As such, this issue is outside the scope of the NRC's license renewal review, which is focused on managing the effects of aging during the period of extended operation. As part of the Japan lessons-learned activities resulting from the March 2011 earthquake and tsunami, the NRC has used its regulatory authority under 10 CFR 50.54 to request licensees of operating nuclear power plants to reevaluate the existing seismic hazard that could affect their sites using present-day information. This newly reevaluated hazard, if worse than what the plant had originally calculated upon initial licensing, will be analyzed to determine whether SSCs need to be updated to protect against the new hazards. However, this process is being done as part of DCPP's current licensing basis, rather than as part of the NRC's review of the DCPP license renewal application, which is focused on managing the effects of aging during the period of extended operation. For current information about this effort as it pertains to DCPP, please see the following websites: http://www.nrc.gov/reactors/operating/ops-experience/japan/plants/diab1.html (Unit 1) and http://www.nrc.gov/reactors/operating/ops-experience/japan/plants/diab2.html (Unit 2).

Regarding reevaluating emergency preparedness programs, emergency preparedness programs are required at all nuclear power plants which require specified levels of protection from each licensee regardless of plant design, construction, or license date. Requirements related to emergency planning are in the regulations at 10 CFR 50.47 and Appendix E to 10 CFR Part 50. Emergency preparedness and planning are part of the current operating license and are outside the scope of the environmental analysis for license renewal.

As for alternatives to the DCPP once-through cooling system, the NRC is not directly involved in this process, nor does this issue need to be resolved as a component of the NRC staff's review of the license renewal application. In order to continue operating, PG&E will need to seek and be granted all necessary permits to operate, one of which is the State-issued National Pollution Discharge Elimination system permit. Any potential modifications to the DCPP once-through cooling system will be determined by PG&E and the State of California as a part of that process and in accordance with the State's Once-Through Cooling Policy. The compliance date for this policy is December 2024.

Comment: The following comments express concern about aging components at DCPP or the ability to effectively manage aging during the period of extended operation. Many comments specifically cite reactor pressure vessel embrittlement and two comments mention cracked or corroded piping. One comment requests the NRC staff to describe the aging management programs for DCPP in the draft SEIS.

Identifiers: AL-3, BX-4, CF-7, CP-7021-L099-9, 067-T001-8, 134-L078-5, 136-L030-10, and 141-T001-5

Response: *These comments raise issues related to the aging management of structures, systems, and components. In order to be granted renewed licenses, PG&E must demonstrate that aging effects will be adequately managed such that the intended functions of the systems, structures, and components within the scope of license renewal will be maintained consistent with the current licensing basis for the period of extended operation. The NRC staff is evaluating PG&E's aging management programs as part of that safety of the license renewal application, which is separate from the environmental review. The results of the NRC staff's safety review is documented in the safety evaluation report for license renewal, which was issued in June 2011 (NRC 2011c). The NRC staff intends to issue a supplement to the safety evaluation report to address information identified subsequent to 2011.*

Comment: The following comments generally relate to scope of issues considered in the NRC's environmental review. One comment, citing NUREG-1850, "Frequently Asked Questions on License Renewal of Nuclear Power Reactors," lists topics considered outside the scope of the NRC's environmental review, specifically naming safety; security and safeguards issues; emergency preparedness; and spent fuel disposal and storage. Two comments state that the NRC should consider all issues related to DCPP. One comment states that the NRC should conduct an analysis of impacts and mitigation measures to ensure that the surrounding natural and marine environment is protected. One comment states that the NRC should revise its license renewal process to include the consideration of all site-specific issues.

Identifiers: N-7, BK-8, BX-9, CK-1, and 015-T001-30

Response: *The GEIS contains the results of a systematic evaluation of the environmental consequences of renewing an operating license and operating a nuclear power facility for an additional 20 years. Those environmental issues that could be resolved generically were analyzed in detail and were resolved in the GEIS. Those issues that were unique because of a site-specific attribute, a particular site setting or unique facility interface with the environment, or variability from site to site, were deferred and would be resolved at the time that an applicant sought license renewal. In the license renewal process, these issues are addressed by a site-specific SEIS. The GEIS is used to avoid duplication and allow the staff to focus specifically on those issues that are important for a particular plant (i.e., issues that are not generic). This is an appropriate and effective use of the concept of tiering that was promulgated by the President's Council on Environmental Quality in its 1978 regulations that implemented the requirements of NEPA. As explained in NUREG-1850, the issues of safety, which in this context refers to the safety review of a license renewal application; security and safeguards issues; emergency preparedness, and other issues related to the current licensing basis of a plant are addressed through separate processes and are, therefore outside the scope of the NRC's license renewal environmental review. Relative to spent fuel disposal and storage, Chapter 4 of the draft SEIS will evaluate the environmental impacts of the storage of spent fuel during the license renewal term. The NRC generically evaluated the environmental impacts of continuing to store spent fuel beyond the license term in NUREG-2157. This evaluation included an evaluation of impacts in the unlikely situation that a repository is not built. In accordance with 10 CFR 51.23, the impact determinations in NUREG-2157 regarding continued storage are deemed incorporated into the SEIS for DCPP license renewal.*

Comment: The following comment requests the NRC to put special emphasis on the no-action and environmentally superior alternatives.

Identifier: 115-L101-2

Response: *The NRC staff will identify and evaluate reasonable alternatives to the renewal of the DCPP license in Chapter 2 of the draft SEIS. This includes the option of not renewing the DCPP license, referred to as the "no-action alternative." Chapter 4 of the draft SEIS will compare the impacts of renewing the operating license of renewing the DCPP license to the environmental impacts of alternatives, including identifying the environmentally preferred alternative.*

Comment: The following comment states that the NRC staff should an integrated review of the DCPP license renewal application rather than separate safety and environmental reviews.

Identifier: 028-L026-1

Response: *The NRC's process for evaluating the environmental impacts of license renewal is consistent with the requirements of NEPA. NEPA focuses on the environmental impacts of a major Federal action rather than on issues related to the safety of an operation. Safety issues become important to the environmental review when they could result in environmental impacts, which is why the environmental effects of postulated accidents were considered in the GEIS. The Council on Environmental Quality regulations for implementing NEPA's procedural requirements do not include a safety review. Similarly, the NRC has codified its NEPA-implementing regulations separate from the regulations governing the safety review of a license renewal application. The regulations governing the environmental review are contained in 10 CFR Part 51, and the regulations covering the safety review are contained in 10 CFR Part 54. For this reason, the license renewal review process includes an environmental review that is distinct and separate from the safety review. Ultimately, the NRC considers the results of both the safety and environmental reviews prior to issuing any renewed licenses.*

Comment: The following comments express support for evaluating the environmental impacts related to DCPP.

Identifier: F-1 and 112-L017-1

Response: *The NRC staff's evaluation of the environmental impacts from license renewal and alternatives to license renewal will be documented in Chapter 4 of the draft SEIS.*

Comment: The following comment expresses disagreement with the NRC's practice of resolving some environmental issues generically via the GEIS. The comment further states that the SEIS should contain a DCPP-specific information on several issues, including seismic setting, "embrittled and vulnerable" equipment, and radioactive waste storage.

Identifier: 021-L099-4

Response: *The GEIS was developed to establish an effective licensing process. It contains the results of a systematic evaluation of the environmental consequences of renewing an operating license and operating a nuclear power facility for an additional 20 years. Those environmental issues that could be resolved generically were analyzed in detail and were resolved in the GEIS. Those issues that were unique because of a site-specific attribute, a particular site setting or unique facility interface with the environment, or variability from site to site, were deferred and would be resolved at the time that an applicant sought license renewal. In the license renewal process, these issues are addressed by a site-specific SEIS, such as the one being prepared for DCPP. The GEIS is used to avoid duplication and allow the staff to focus specifically on those issues that are important for a particular plant (i.e., issues that are*

not generic). This is an appropriate and effective use of the concept of tiering that was promulgated by the President's Council on Environmental Quality in its 1978 regulations that implemented the requirements of NEPA.

The DCPP SEIS will contain a detailed description of the relevant environment around the site, including a description of the geologic environment and information relevant to radioactive waste storage, in Chapter 3 of the draft SEIS. Chapter 4 will contain the NRC staff's evaluation of site-specific environmental issues relevant to DCPP, as well as an evaluation of any potentially new and significant information that may call into question the generic conclusions in the GEIS. However, issues related to aging management (e.g., embrittlement) are evaluated as part of the NRC staff's safety review under 10 CFR Part 54 and are outside the scope of the environmental review.

Comment: The following comment expresses disbelief that none of the references in the license renewal application were published after 2011.

Identifier: 085-L091-3

Response: *PG&E submitted Amendments 1 and 2 to the DCPP environmental report in December 2014 and February 2015, respectively. Both of those amendments contained multiple references that were published after 2011. In addition, should relevant information become available over the course of the review, the NRC staff will consider it, as appropriate.*

Comment: The following comment questions what the NRC staff meant when stating that it would not approve a license renewal until it was "happy" with all utility responses.

Identifier: CF-11

Response: *The NRC will not approve a license renewal application until an applicant has provided sufficient information to allow the NRC staff to make the findings required by the regulations in 10 CFR Parts 54 and 51.*

Comment: The following comment poses questions about how to participate in the NRC's adjudicatory hearing process.

Identifier: B-2

Response: *Any person whose interest may be affected by the proceeding to grant a renewed license to a specific facility may file a written request for a hearing or a petition for leave to intervene with respect to the renewal of the license. The regulations related to intervening in a licensing action are governed by 10 CFR 2.309. As noted in the 2010 scoping meeting and as indicated in the FRN issued on January 21, 2010 (75 FR 3493), any interested individual had the opportunity to submit a petition to intervene in the license renewal proceeding by March 22, 2010. At this time, the proceeding has been terminated so an individual interested in participating must meet the reopening standards in 10 CFR 2.326, as well as the contention admissibility requirements of 10 CFR 2.309.*

Comment: The following comments pose general questions about the NRC's license renewal process, such as questions about what information from the review will be available to the public, and questions about the operation of reactors in the post-license renewal period.

Identifiers: CF-5 and CF-16

Response: *A license renewal application is determined to be sufficient for docketing once the NRC staff verifies that an applicant has provided the information required per the regulations at 10 CFR Parts 54 and 51. The NRC staff follows the guidance in NUREG-1800, "Standard Review Plan for Review of License Renewal Applications for Nuclear Power Plants," and NUREG-1555, Supplement 1, "Standard Review Plans for Environmental Reviews for Nuclear Power Plants: Environmental Standard Review Plan for Operating License Renewal" in making its determination. Additional information and documents associated with the NRC staff's review DCPP, including draft or final reports prepared by the NRC staff, can be found on the DCPP license renewal website at http://www.nrc.gov/reactors/operating/licensing/renewal/applications/diablo-canyon.html.*

Additional information about which operating licenses the NRC has approved for operation beyond 40 years, as well as how to subscribe to license renewal correspondence for a particular plant can be found at the following website: http://www.nrc.gov/reactors/operating/licensing/renewal/applications.html.

Comment: The following comments endorse the information presented on the San Luis Obispo Mothers for Peace website.

Identifiers: 115-L101-1 and 115-T001-36

Response: *The information presented on the Mothers for Peace website was submitted in substantially similar form as part of comment documents L030 and L078 and will be responded to accordingly.*

2.2.4 Other Comments Outside the Scope of the NRC's Environmental Review

Comment: The following comments discuss issues relating to the need for power generated by DCPP. Most of the comments expressed the opinion that the power generated by DCPP is not needed, with several of the comments stating that the California Independent System Operator had determined that the power from DCPP was not needed, and could be disruptive to the grid. One comment stated the opinion that the availability of alternative energy sources made the continued operation of DCPP unnecessary. One comment stated that the SEIS should include an analysis of energy planning and policy options. One commenter stated that the SEIS should analyze the disruption to the power distribution grid and increase in energy poverty that would result from denying the proposed license renewal.

Identifiers: 017-L083-2, 051-L082-3, 075-L062-2, 077-L075-2, 118-L056-2, 136-L030-2, and 151-T001-44

Response: *The determination of the need for power generated by DCPP is considered to be outside the scope of license renewal, and the SEIS need not address it (10 CFR 51.95 (c)(2)). The purpose and need for the proposed action (issuance of a renewed license) is to provide an option that allows for power generation capability beyond the term of a current nuclear power plant operating license to meet future system generating needs, as such needs may be determined by other energy-planning decisionmakers. This definition of purpose and need reflects the NRC's recognition that, unless there are findings in the safety review required by the Atomic Energy Act or findings in the NEPA environmental analysis that would lead the NRC to reject a license renewal application, the NRC does not have a role in the energy-planning*

decisions of state regulators and utility officials as to whether a particular nuclear power plant should continue to operate.

Comment: The following comments discuss issues relating to the consideration of costs in the SEIS. One comment expressed concern about PG&E prioritizing resources to maintain DCPP and its spent fuel, if it were unprofitable. One comment suggested conducting a study to find ways to provide financial support for plant personnel during decommissioning and also to consider the costs of continuing to operate DCPP. One comment suggested performing a comparative cost of decommissioning DCPP during different timeframes and one comment stated that nuclear power is not cost-effective compared to alternatives. Other costs identified in comments include cleanup costs, cost of waste disposal, costs for complying with California's once-through cooling policy, cost of relicensing, cost per kilowatt- hour, and cost to the taxpayers.

Identifiers: B-9, H-4, W-1, W-2, W-3, AG-3, AG-6, AS-3, BA-3, BB-4, CF-18, CU-3, CV-1, CV-4, 017-L083-3, 021-L099-8, 028-L026-3, and 044-T001-63

Response: *The consideration of economic costs are considered to be outside the scope of license renewal, and the SEIS need not address it (10 CFR 51.95 (c)(2)). The purpose and need for the proposed action (issuance of a renewed license) is to provide an option that allows for power generation capability beyond the term of a current nuclear power plant operating license to meet future system generating needs, as such needs may be determined by other energy-planning decisionmakers. Similarly, the decision whether or not to pursue nuclear power as a power generation source is a decision that is made by other energy-planning decisionmakers and is outside the scope of this review.*

With regard to concerns about PG&E providing appropriate funding to maintain plant systems and spent fuel storage, licensees are required to maintain plant systems and spent fuel storage in accordance with regulations, regardless of profit. As part of its oversight of all power plant licensees, the NRC considers the financial qualifications of its licensees. NRC regulations contain provisions (10 CFR 50.33(f)(5)) to determine and remain current on the financial qualifications of its reactor licensees, as necessary.

Comment: The following comments relate to the seismic or tsunami licensing bases for DCPP. On the topic of the DCPP seismic licensing basis, many comments express concern about a lack of certainty regarding the seismic setting around DCPP. Many comments point out that multiple faults have been discovered around DCPP since the plants were originally licensed. Several of the comments question the ability of SSCs at DCPP to withstand a seismic event. Some comments stated that the NRC should consider DCPP's ability to withstand a joint fault-rupture scenario, with one comment providing information that the Newport-Inglewood Fault may be deeper than previously thought and that the San Andreas Fault may propagate a seismic event under certain circumstances. One comment stated that DCPP is safe because the geologic conditions around the plant are different from other places and will not see large vertical ground motion that might be experienced other places. One comment states that the NRC should conduct additional studies of local faults around DCPP and another comment states that the DCPP SAMA analysis fails to resolve important questions about the potential for earthquakes very near the plant.

On the topic of the DCPP tsunami licensing basis, many comments expressed concern DCPP's ability to withstand a tsunami and whether or not the licensing basis is adequate. Some of the comments expressed concern that a tsunami generated by a seismic event in the Cascadia

Subduction Zone could impact DCPP. One comment states that DCPP is safe from tsunamis because of the elevation of the plant relative to the ocean and that geologic conditions close to the plant are not sufficient to generate tsunami that would challenge DCPP.

Several of the comments expressed concern about the potential for an accident resulting from an earthquake or tsunami. Some of the comments express concerns related to emergency preparedness and one comment asked how and where people would evacuate. One comment stated that experts could not be trusted. One comment stated that the NRC could require additional earthquake and tsunami safety measures, if warranted.

One comment asks what the design basis for DCPP is when so many changes have been made to the operating licenses since issuance.

Identifiers: A-2, F-2, G-2, H-1, N-1, Q-1, AG-1, AG-5, AG-7, AG-9, AZ-1, BH-4, BJ-3, BK-2, BN-4, BX-1, BX-10, BZ-2, CE-2, CF-10, CF-13, CF-15, CF-17, CF-19, CG-1, CI-4, CK-2, CK-4, CN-1, CP-2, CR-2, CS-1, CU-1, CU-5, 009-T002-36, 017-L083-4, 018-L037-1, 018-T001-14; 021-L099-1, 021-L099-14, 021-T001-85, 021-T002-53, 023-L086-2, 023-L086-3, 035-T001-38, 047-T001-33, 049-L060-2, 053-L088-6, 070-L025-1, 073-T001-23, 075-L062-3, 078-T002-31, 099-T002-69, 106-L039-2, 106-L039-6, 113-L022-6, 121-T001-57, 134-L078-10, 134-L078-3, 136-L030-4, 141-T002-3, 149-T002-15, 149-T002-18, and 151-T001-45

Response: *The NRC's review of the DCPP license renewal application takes into consideration external hazards, such as earthquakes and tsunamis, in two limited ways. First, for the environmental review, the risk from external hazards are considered as part of the NRC staff's review of PG&E's SAMA analysis. SAMAs are potential ways to reduce the risk or potential impacts of uncommon, but potentially severe accidents. SAMAs may include changes to plant components, systems, procedures, and training. The NRC's evaluation of PG&E's SAMA analysis will be documented in Chapter 4 of the draft SEIS. Second, the external hazard licensing basis for the plant helps to inform the scope of the license renewal safety review. SSCs that are relied upon to remain functional during and after design basis events are within the scope of license renewal. As such, the NRC staff review considers whether an applicant will adequately manage the effects of aging on these SSCs. The results of the NRC staff's safety review is documented in the safety evaluation report for license renewal.*

However, the adequacy of the DCPP seismic and tsunami design and licensing bases are issues that are addressed as part of the NRC's ongoing regulatory oversight function. As such, these issues are outside the scope of the NRC's license renewal review, which is focused on managing the effects of aging during the period of extended operation. As part of the Japan lessons-learned activities resulting from the March 2011 earthquake and tsunami, the NRC has used its regulatory authority under 10 CFR 50.54 to request licensees of operating nuclear power plants to reevaluate the existing seismic and flooding hazards that could affect their sites using present-day information. These newly reevaluated hazards will be analyzed to determine whether SSCs need to be updated to protect against the new hazards. For current information about this effort as it pertains to DCPP, please see the following websites: http://www.nrc.gov/reactors/operating/ops-experience/japan/plants/diab1.html (Unit 1) and http://www.nrc.gov/reactors/operating/ops-experience/japan/plants/diab2.html (Unit 2).

For comments expressing concern about the potential for, or consequences of, an accident at DCPP, postulated accidents are a Category 1 issue. The NRC staff will address whether or not any new and significant information relative to this issue has been identified over the course of

the review, and, if so, will evaluate the information. Because it has not previously been evaluated, SAMAs will be evaluated in Chapter 4 and Appendix F of the draft SEIS.

Regarding the comment that states that the DCPP SAMA analysis fails to resolve important questions about the potential for earthquakes very near the plant, it is unclear what questions remain unresolved, or how the SAMA fails to address them. To the extent that this comment suggests that PG&E's July 2015 SAMA submittal, which considers revised seismic hazard information for DCPP, is inadequate, please see response to comment 076-T001-28 in Appendix A of the draft SEIS.

Regarding the impacts on emergency preparedness and the question about how and where people would go in the event of an accident, emergency preparedness programs requiring specified levels of protection are required at all nuclear power plants from each licensee regardless of plant design, construction, or license date. Requirements related to emergency planning are in the regulations at 10 CFR 50.47 and Appendix E to 10 CFR Part 50. Emergency preparedness and planning are part of the current operating license and are outside the scope of the environmental analysis for license renewal.

Comment: The following comments claim that the NRC is ignoring a concern raised through the NRC's Differing Professional Opinions (DPO) Program by Dr. Michael Peck, former Senior Resident Inspector at DCPP. One of the comments requests copies of all correspondence, both internal to the NRC and between the NRC and PG&E, related to the issue.

Identifiers: 021-L099-13, 073-T001-22, 106-L039-5, 106-L039-8, 141-T001-4, and 141-T002-2

Response: *The NRC's DPO Program is a formal process that allows employees and contractors to have their differing views on established, mission-related issues considered by the highest level managers in their organizations (i.e., Office Directors and Regional Administrators). The process also provides managers with an independent, three-person review of the issue, one of whom is chosen by the employee. After a decision is issued to an employee, he or she may appeal the decision to the Executive Director for Operations for final disposition. Additional information on the program can be found on the NRC's website: http://www.nrc.gov/about-nrc/values.html.*

In July 2013, Dr. Peck filed a DPO identifying a number of concerns related to the consideration of seismic information from the Shoreline fault in the context of DCPP's current licensing basis. Following established NRC procedures, the Executive Director for Operations issued a final determination that the seismic information had been appropriately considered within the context of the DCPP seismic licensing basis, noting agreement with Dr. Peck that there were no immediate or significant safety concerns associated with the issue (NRC 2014b). Thus, the NRC followed established processes for addressing Dr. Peck's DPO, and did not ignore it. For more information on the issues considered in and the bases for the decisions reached on the DPO, please refer to NRC 2014b.

To the extent that these comments raise issues about the adequacy of the DCPP seismic licensing basis, these issues are outside the scope of the NRC's license renewal review, as described in the previous response.

Comment: The following comments address emergency planning-, or security-related issues. On the topic of emergency planning, most commenters expressed skepticism that emergency

plans at DCPP are adequate. Some comments specifically state the belief that earthquakes, tsunamis, or increased population during tourism season make emergency plans unworkable. Two comments request the NRC to consider the need for water evacuation from Point San Luis and the public safety impacts of shoaling. One comment stated that the NRC should also consider fire protection.

On the topic of plant security, many of the comments express the opinion that security plans at DCPP are inadequate. Reasons given in comments include inadequate threat assessment (i.e., design-basis threat vs. "real-word" threat); a decrease in the number of force-on-force drills; an under-equipped, or otherwise under-prepared security force; the change in characteristics of the plant and threat environment since initial licensing; and lack of ability for the public to review the DCPP security plans. Two comments expressed concern over the potential for theft or diversion of nuclear material. One comment stated that the NRC should hold DCPP to the same standard as other nuclear power plants. Several comments requested the NRC to address the justification for and benefits of the 1-mile exclusion zone in the waters around DCPP. One comment requested that the intake cove be considered a harbor of refuge.

Identifiers: D-1, H-2, N-5, O-1, Z-1, AC-3, AJ-1, AL-1, BE-2, BE-3, BK-6, BX-5, CF-20, CF-14, CI-1, CI-2, CP-5, CP-6, CT-1, 008-L077-1, 008-L077-2, 018-L037-2, 053-L088-7, 054-T001-69, 061-L054-2, 075-L062-4, 091-T002-30, 092-L027-11, 113-L022-2, 134-L078-4, 136-L030-5, 136-L030-7, 141-T002-5, and 147-T001-73

Response: *Emergency preparedness and security are part of the current operating license and are outside the scope of the environmental analysis for license renewal. Emergency preparedness and physical security plans are required at all nuclear power plants and require specified levels of protection from each licensee regardless of plant design, construction, or license date. Requirements related to emergency planning are in the regulations at 10 CFR 50.47 and Appendix E to 10 CFR Part 50. Requirements related to physical security are in the regulations at 10 CFR Part 73. Requirements related to fire protection are in the regulations at 10 CFR Part 50.48 and Appendix R to 10 CFR Part 50. These requirements apply to all operating licenses and will continue to apply to facilities with renewed licenses.*

The NRC has regulations in place to ensure that existing plans are updated throughout the life of all plants. For example, nuclear power plant operators are required to update their evacuation time estimates after every U.S. Census, or when changes in population would increase the estimate by either 25 percent or 30 minutes, whichever is less. Additionally, the NRC assesses the capabilities of the nuclear power plant operator to protect the public by requiring the performance of a full-scale exercise—that includes the participation of various Federal, State, and local government agencies—at least once every two years. These exercises are performed in order to maintain the skills of the emergency responders and to identify and correct weaknesses.

Comment: The following comments relate to the current operation of and the current licensing basis for DCPP. Several comments state that DCPP is not in compliance with Federal safety regulations or that the NRC fails to apply its regulations to DCPP. One comment stated that the draft SEIS should make mention of a safety recognition from the Institute of Nuclear Power Operations. Two comments cited an "unacceptable number of human performance deficiencies." Two comments stated that the NRC should include an evaluation of safety culture at DCPP in the SEIS. One comment stated that the review should ensure that there are no leaking pipes, or personnel and safety problems experienced at other reactor sites.

Identifiers: AM-1, BX-6, BX-11, CE-4, CP-4, 011-L096-3, 072-L090-4, 092-L027-8, 127-L098-3, and 134-L078-8

Response: *These comments are related to the current operation of and current licensing basis (CLB) for DCPP, which is outside the scope of license renewal. The CLB is defined as the particular set of NRC requirements applicable to a licensed nuclear power plant and includes the NRC regulations, NRC Orders, safety and environmental license conditions, and technical specifications. The NRC's oversight of nuclear plants is an ongoing effort. Each nuclear plant has at least two NRC resident inspectors who scrutinize day-to-day activities at nuclear power plants and ensure that the plant operator is adhering to the plant's CLB. The NRC's Reactor Oversight Process (ROP) provides a means to collect information about a licensee's performance, assess the information for its safety significance, and provide for the appropriate licensee and NRC response. With the ROP, NRC inspectors monitor the performance of licensees in the areas of reactor safety, radiation safety for plant workers and the public during routine operations, and security.*

Additional information related to the NRC's assessment of current performance at DCPP can be found at http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/DIAB1/diab1_chart.html (Unit 1) and http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/DIAB2/diab2_chart.html (Unit 2).

In addition to the ROP, members of the public may also petition the Commission, in accordance with the provisions of 10 CFR 2.206, for consideration of safety issues arising during current operation and the period of extended operation of the plant, should a renewed license be granted.

To the extent that these comments raise issues related to the aging management of structures, systems, and components, the primary purpose of the license renewal safety review is to determine if PG&E has adequately demonstrated that the effects of aging will not adversely affect any systems, structures, or components, as identified in 10 CFR 54.4. In order to be granted renewed licenses, PG&E must demonstrate that aging effects will be adequately managed such that the original design assumptions for structures, systems, and components will continue to be valid throughout the period of extended operation. The NRC staff is evaluating PG&E's aging management programs as part of that safety of the license renewal application, which is separate from the environmental review. The results of the NRC staff's safety review is documented in the safety evaluation report for license renewal, which was issued in June 2011 (NRC 2011c). The NRC staff intends to issue a supplement to the safety evaluation report to address information identified subsequent to 2011.

Comment: The following comment states that with limited liability under the Price-Anderson Act, PG&E does not have an incentive to operate DCPP safely.

Identifier: 106-L039-3

Response: *The Price-Anderson Act is a Federal law that governs liability-related issues for all nonmilitary nuclear facilities constructed in the United States before 2026. The main purpose of the Act is to provide prompt and orderly compensation to members of the public who may incur damages from a nuclear incident, no matter who might be liable. The Act provides "omnibus" coverage—the same protection available for a covered licensee or contractor indemnifies any persons who may be legally liable, regardless of their identity or relationship to the licensed*

activity. Because the Act channels the obligation to pay compensation for damages to the licensee, any party with a claim only needs to bring its claim to the licensee or contractor.

Currently, owners of nuclear power plants maintain $375 million in private insurance for offsite liability coverage for each reactor site (not per reactor). This primary, or first tier, insurance is supplemented by a second tier. In the event a nuclear accident causes damages in excess of $375 million, each licensee would be assessed a prorated share of the excess, up to $121.255 million per reactor. If 15 percent of these funds are expended, prioritization of the remaining amount would be left to a federal district court. If the second tier is depleted, Congress is committed to determine whether additional disaster relief is required.

All nuclear power plants must comply with NRC regulations, regardless of coverage under the Price-Anderson Act. As described in the previous response, the NRC ensures safe operation at DCPP and other nuclear power plants through the Reactor Oversight Process.

Comment: The following comments express concern about the potential loss of offsite power event caused by grid failure, citing vulnerability to both malicious and natural events. One comment stated that emergency diesel generators that provide backup power are also vulnerable to failure.

Identifiers: 011-L096-5 and 088-T001-81

Response: *As required by 10 CFR 50.63, all nuclear power plants must be able to maintain core cooling and containment integrity for a specified duration following the complete loss of alternating current power, referred to as a station blackout. Subsequent to the accident at Fukushima, the NRC (2012) issued the Mitigation Strategies Order requiring all U.S. nuclear power plants to implement strategies that will allow them to cope without their permanent electrical power sources for an extended period of time. These strategies must keep the reactor core and spent fuel cool, as well as protect the thick concrete containment buildings that surround each reactor.*

The NRC is working to codify the Mitigation Strategies Order in regulations through the rulemaking process, which is separate from the license renewal process. This rulemaking, referred to as the Mitigation Strategies for Beyond Design Basis Events Rulemaking, will ensure that if a nuclear power plant loses power, it will have sufficient procedures, strategies, and equipment to cope with the loss of power for an indefinite amount of time. All rulemaking-related documents are available on www.regulations.gov by searching for the docket NRC-2014-0240.

Comment: The following comment ask whether or not the DCPP hydrogen suppression system has been updated since the Three Mile Island accident in 1979.

Identifier: 049-L060-3

Response: *This comment relates to the CLB of DCPP. As described above, the NRC ensures compliance with the CLB through its ongoing regulatory oversight function, whereas the focus of the NRC's license renewal review is managing the effects of aging on SSCs during the period of extended operation.*

Comment: The following comment states that DCPP is at-risk for fire damage due to drought conditions in the area.

Identifier: 070-L025-3

Response: *All nuclear power plants are designed to withstand a variety of unlikely, but potentially harmful events, including fire events. Nuclear power plants today use multiple layers of fire protection features to protect plant safety systems, including fire barriers (such as insulation), fire detection systems and fire suppression systems (such as sprinklers). Every plant must have a fire protection plan outlining the fire protection program, installed fire protection systems, and the means to assure the reactor can be safely shutdown in the event of a fire. The NRC lists these requirements in 10 CFR 50.48(a). The NRC regularly inspects how plants achieve and maintain the reactor's safe shutdown capability in the event of a fire.*

Comment: The following comments relate to the final disposition of spent fuel. Most of the comments express concern about what will be done with the spent fuel at DCPP given the lack of a repository, with many of the comments stating that the spent fuel will remain onsite indefinitely. Many of the comments express concern about being able to safely store spent fuel in pools and dry casks in the interim. Some of the comments state that the NRC should include an evaluation of alternate configurations and/or technologies to store spent fuel. One comment identifies reprocessing as a solution and one comment states that reprocessing should not be considered a solution. Two comments identify hardened onsite storage as a solution. One of the comments states that, in the absence of a repository, the NRC should require a variety of measures, including hardened onsite storage, low-density fuel pool loading, increased security capabilities, and dedicated funding to State and local governments to perform monitoring.

Identifiers: B-8, D-3, G-3, N-3, S-2, V-1, AO-1, AS-7, BE-5, BI-1, BJ-2, BJ-4, BJ-9, BN-3, BX-2, CE-1, CE-3, CE-6, CI-5, CK-3, CP-3, and CS-2

Response: *The GEIS (NRC 2013) evaluated the impacts associated with onsite storage of spent fuel, including the impacts of potential severe accidents in spent fuel pools and concluded that spent fuel storage could be accomplished during the license renewal term safely and without significant environmental impact. The issue of spent fuel storage is a Category 1 issue. The NRC staff will address in Chapter 4 of the SEIS whether or not any new and significant information relative to this issue has been identified over the course of the review, and, if so, will evaluate the information. Similarly, the NRC generically evaluated the environmental impacts of continuing to store spent fuel beyond the license term in NUREG-2157. This evaluation included an evaluation of impacts in the unlikely situation that a repository is not built. In accordance with 10 CFR 51.23, the impact determinations in NUREG-2157 regarding continued storage are deemed incorporated into the SEIS for DCPP license renewal.*

On the topic of the final disposition of spent fuel, as described in NUREG-2157, the national policy for the ultimate disposition of spent fuel remains disposal at a repository. This was affirmed by the Department of Energy in 2013, who stated its intent to have a repository sited and licensed by 2048 (DOE 2013).

Regarding requiring PG&E to implement low-density spent fuel pool loading or hardened onsite storage, the NRC has evaluated, or is currently evaluating these issues for all nuclear power plants. Following an NRC staff assessment of the issue, the Commission determined not to pursue further evaluation of the expedited transfer of spent fuel from pools to dry storage to achieve low-density spent fuel pool loading. Regarding hardened onsite storage, the NRC is considering, in its update of the independent spent fuel storage installation security requirements, a request that the NRC require hardened onsite storage at all power plants (77

FR 63254). As for funding State and local governments to perform monitoring around nuclear power plant, the NRC has neither the authority, nor the funding to provide such grants.

For comments that discuss reprocessing, commercial reprocessing is not practiced in the U.S., although it has been practiced in the past. The NRC is currently working to identify and establish the regulations necessary to license and regulate a reprocessing facility. For more information, please visit: http://www.nrc.gov/materials/reprocessing.html.

Comment: The following calls for the NRC to standardize designs for spent fuel storage systems to allow for transportation and extended storage.

Identifier: 151-T001-46

Response: *Spent fuel may be stored in casks and canisters that are licensed for storage only, or for both storage and transportation. Both types of cask certification are acceptable for storage provided they meet NRC requirements. All dry cask storage systems are review and approved by the NRC through the appropriate licensing process to ensure compliance with regulations.*

Contrary to statements made in the comment, the NRC has not approved storage for 100 years, or greater. The approved storage term is defined by the individual license, or cask certification, which depends on whether the independent spent fuel storage installation is site-specifically, or generally-licensed. In neither case will the maximum approved term exceed 40 years.

Comment: The following comments relate to reprocessing and recycling of nuclear waste. Most comments advocate reprocessing or the use of recycled fuel. One comment states that reprocessing is not the answer.

Identifiers: B-11, K-2, X-1, AB-3, BM-4, CT-2

Response: *Reprocessing refers to the processing of reactor fuel to separate the unused fissionable material from waste material. Reprocessing extracts isotopes from spent fuel so they can be used again as reactor fuel. Commercial reprocessing is not practiced in the U.S., although it has been practiced in the past. However, the U.S. Department of Defense oversees reprocessing programs at Department of Energy facilities such as in Hanford, WA, and Savannah River, SC. These wastes as well as those wastes at a formerly operating commercial reprocessing facility at West Valley, NY, are not regulated by the NRC. The NRC is currently working to identify and establish the regulations necessary to license and regulate a reprocessing facility. For more information, please visit: http://www.nrc.gov/materials/reprocessing.html.*

Comment: The following comments express opinions about the NRC. One comment expressed skepticism about the NRC; one comment suggests that the NRC lacks transparency; and one comment suggests that the NRC is cozy with the entities it regulates. One comment states that the NRC has a credibility problem.

Identifiers: BH-1, BK-1, 089-T002-60, 092-L027-4, 106-L039-7, and 138-T002-37

Response: *The NRC strives to be an open, accountable, and accessible Federal regulator. Additional information on the agency's effort to maximize transparency can be found at the following website: http://www.nrc.gov/public-involve/open.html.*

Comment: The following comments relate to the events at Fukushima. One comment stated that all of the recommendations from the NRC's taskforce assigned to study the event must be implemented before considering license renewal at DCPP. Two comments stated that all of the reactors at Fukushima and Onagawa survived the earthquake, but that the tsunami was the issue. One comment stated that contaminated water continues to flow into the Pacific Ocean. One comment relayed a visit to Fukushima, stating that the people she spoke with were more concerned about effects of increased air pollution from the fossil fuels used as replacement power generation than radiation from the accident.

Identifiers: 053-L088-5, 079-T002-51, 134-L078-11, 141-T002-7, and 142-T001-50

Response: *In response to the accident at Fukushima, the NRC has taken significant action to enhance the safety of reactors in the United States based on the lessons learned from this accident. Because lessons learned from this accident are applicable to many nuclear power plants in the US, the NRC has established a process, which is separate from the license renewal process, for the identification and implementation of lessons learned. Refer to the NRC Japan Lessons Learned website (http://www.nrc.gov/reactors/operating/ops-experience/japan-dashboard.html) for a current status of these activities.*

Comment: The following comments relate to the effects of hydraulic fracturing (fracking) and deep-well injection and the potential for impacts on DCPP.

Identifiers: 039-L053-1 and 138-T002-38

Response: *Activities associated with hydraulic fracturing and deep-well injection are not regulated by the NRC. The underground injection of the wastewater produced as a byproduct of the hydraulic fracturing process is regulated by the U.S. Environmental Protection Agency via Underground Injection Control regulations (40 CFR Parts 144–148). The discharge of wastewater to surface water is regulated under the National Pollutant Discharge Elimination System permit regulations pursuant to the Clean Water Act. These regulations, along with the permitting of hydraulic fracturing and deep-well injection operations, are administered by the State of California.*

Comment: The following comment poses a series of general questions.

Identifier: 085-L087-1

Response: *To the extent these questions relate to PG&E's compliance with applicable environmental requirements, the NRC will describe this compliance in Chapter 3 and Appendix B of the draft SEIS. None of the other questions posed raise issues within the scope of the NRC's environmental review, and most of the questions relate to issues that should be directed towards the State of California or PG&E. Regarding the funding and staffing levels at the NRC, the agency receives its funding via the Congressional appropriation process, similar to other Federal agencies. Additional information about the NRC, including its leadership and other relevant information can be found at the NRC's website (www.nrc.gov).*

Comment: The following comment incorporates comments submitted in response to a request for comment on the NRC's Continued Storage rulemaking.

Identifier: 115-L101-3

Response: *The comment provided relate to the continued storage of spent fuel following permanent cessation of reactor operations and issues outside the scope of license renewal (e.g., spent fuel pool loading density). The NRC staff considered these comments as part of its Continued Storage rulemaking and responses to these comments can be found in Appendix D of NUREG-2157 (NRC 2014c).*

Comment: The following comments relate to issues that fall within the purview of the State of California, or relate to interactions between PG&E and the State. One comment also raises issues related to spent fuel storage at DCPP and emergency planning.

Identifiers: A-1, CU-6, 025-T001-12, 051-L082-5, 053-L088-13, 118-L056-3, and 141-T001-6

Response: *The State of California energy policy and interactions between the State and PG&E are outside of the regulatory authority of the NRC. Regarding compliance with water quality standards, the NRC will describe DCPP's compliance with relevant water quality standards in Chapter 3 and Appendix B of the draft SEIS; however, the enforcement of these standards, including compliance with the State's Once-Through Cooling Policy, are outside of the NRC's authority. Regarding emergency planning, as described above, the NRC evaluates the effectiveness of emergency plans as part of its ongoing regulatory oversight process, which is separate from the license renewal process. On the issue of spent fuel storage, spent fuel storage during the license renewal term is a Category 1 issue. The NRC staff will address whether or not any new and significant information relative to this issue has been identified over the course of the review, and, if so, will evaluate the information in Chapter 4 of the draft SEIS. Any issues related to loading of casks at DCPP will be addressed as part of its site-specific independent spent fuel storage installation license.*

Comment: The following relates to the availability of uranium for fuel.

Identifier: CP-8

Response: *The environmental impacts of the uranium fuel cycle is a Category 1 issue. The NRC staff will address whether or not any new and significant information relative to this issue has been identified over the course of the review, and, if so, will evaluate the information in Chapter 4 of the draft SEIS. However, the availability of uranium fuel for nuclear power plant operation is outside the scope of the NRC's license renewal environmental review.*

Comment: The following comment raise a variety of other general issues that are outside the scope of the NRC's environmental review.

Identifiers: B-1, B-4, W-4, 038-T002-57, 075-L062-8, 092-L027-1, 092-L027-12, 097-L071-1, 104-L069-1, and 141-T002-8

Response: *These comments are general in nature and provide no new and significant information related to the NRC's environmental review of PG&E's license renewal application. As such, these comments will not be evaluated further in the development of the SEIS.*

3 References

10 CFR 50. *Code of Federal Regulations*, Title 10, *Energy*, Part 50, "Domestic licensing of production and utilization facilities."

10 CFR 51. *Code of Federal Regulations*, Title 10, *Energy*, Part 51, "Environmental protection regulations for domestic licensing and related regulatory functions."

10 CFR 54. *Code of Federal Regulations*, Title 10, *Energy*, Part 54, "Requirements for renewal of operating licenses for nuclear power plants."

36 CFR 800.8. *U.S. Code of Federal Regulations*, "Coordination with the National Environmental Policy Act," Part 800.8, Title 36, "Parks, Forests, and Public Property."

50 CFR 402. *U.S. Code of Federal Regulations*, "Interagency Cooperation—Endangered Species Act of 1973," Part 402, Subchapter A, Title 50, "Wildlife and Fisheries."

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4 Comment Letters and Meeting Transcripts

The following pages contain the comments provided during the scoping period. The comments are from letters, emails, and the transcripts of the public scoping meetings. Each comment is identified by its unique comment identifier, as discussed in Section 2 of this report. Section 4.1 includes those comments submitted during the 2010 scoping period, presented in order of commenter, as identified in Table 1. Section 4.2 includes those comments submitted during the 2015 scoping period, presented in order of commenter, as identified in Table 2.

4.1 Comments Submitted During the 2010 Scoping Period

NRC FORM 659
(9-2009)

U.S. NUCLEAR REGULATORY COMMISSION

Category
3

NRC PUBLIC MEETING FEEDBACK

Meeting Date: 03/03/2010

Meeting Title: Environmental Scoping Meeting for the Diablo Canyon Nuclear Power Plant License Renewal Application Review

In order to better serve the public, we need to hear from the meeting participants. Please take a few minutes to fill out this feedback form and return it to NRC.

1. How did you hear about this meeting?

☐ NRC Web Page ☐ NRC Mailing List ☒ Newspaper
☒ Radio/TV ☒ Other Mothers/Peace

		Yes	No (Please explain below)	Somewhat
2.	Were you able to find supporting information prior to the meeting?	☒	☐	☐
3.	Did the meeting achieve its stated purpose?	☒	☐	☐
4.	Has this meeting helped you with your understanding of the topic?	☒	☐	☐
5.	Were the meeting starting time, duration, and location reasonably convenient?	☒	☐	☐
6.	Were you given sufficient opportunity to ask questions or express your views?	☐	☐	☐
7.	Are you satisfied overall with the NRC staff who participated in the meeting? Very nice people	☒	☐	☐

COMMENTS OR SUGGESTIONS:

Thank you for answering these questions.

CN-1

After seeing the detailed explanations of the emergency cooling system with pipes and valves. I am worried that a devastating earthquake could crack and jam these pipes so that the emergency cooling system could not work
(We worked in Guatemala after the 1970s earthquake there, and the damage was VERY IMPRESSIVE!

Continue Comments on the reverse.

S Atlee

OPTIONAL

Name Susan Atlee Organization

Telephone No. 805-544-6298 E-Mail

☒ Check here if you would like a member of NRC staff to contact you.

OMB NO. 3150-0197 Expires: 08/31/2012

Public Protection Notification: If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

Please fold on the dotted lines with Business Reply side out, tape the bottom, and mail back to the NRC.

COMMENTS OR SUGGESTIONS: (Continued)

CN-2

1. What would happen if a plane flew into the
- cooling pools?
- control room which is outside the containment dome)?
- casks if used fuel in such a way as to crack one or more?

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derailment, that released significant amounts of a hazardous material in this county, we could go to the Diablo Plan and use that as framework to respond to that emergency in the most effective way possible.

Additionally, Diablo Canyon coordinates very regular drills for us to work no our response and mitigation process. Because of those drills, we are much more effective as emergency service providers in this county than any other county I've ever worked in.

So basically, I'd just like to say that because of Diablo Canyon, we have what I consider to be one of the best, if not the best, emergency service systems in the State of California.

MR. CAMERON: Thank you, Dwight.

O.V. Harkee. Mr. Harkee? Are you guys good? Okay. Thank you.

Let's go to Peggy Koteen and then Joanne Main and Sheila Baker, in whatever order you want to come up. And this is Sheila; right? Sheila Baker.

MS. BAKER: Hello. I am Sheila Baker. S-1 Today, I emptied a five gallon bucket of water from a bucket that had some algae in it, and this was on the campus of Cal Poly, and about less than a half a mile from that site is, exists a greenhouse that has been conducting an algae study for bioenergy.

Cal Poly is very proud of this. It's nationally known, it--algae is definitely considered a potential energy source. Alternative energy consists of bioenergy, and wind as well as ocean energy, and solar. S-1 - cont

I don't agree with those who put nuclear energy in the same category as wind and algae and bio. I am concerned, really, about the waste issue. S-2 Actually, there are two very, very not clean, not safe ends of nuclear energy. One is the mining of uranium done in Colorado and Utah, with uranium mill tailings in the water. The other end if the nuke waste as Mothers For Peace, Jane Swanson, has suggested, that there is not really an answer.

Before this licensing happens, before this plant is licensed, PG&E and the NRC need to tell the public what they will do with the waste. And several options are out there. Reprocessing, on-site hardening, storage, and barging, and railing, and trucking, and all kinds of things.

But I think the--just as the earthquake issue will need to be studied, so will the waste issue. What will happen to the waste? What will PG&E do with the waste? NRC needs to answer this. We need to study it.

S-2 - cont

1 Before it is licensed, you need to say
2 what is going to happen to that waste. Thank you.
3 MR. CAMERON: Thank you, Sheila.
4 Peggy, are you ready, or should we go--
5 Peggy. Okay. This is Peggy Koteen. And then we'll
6 go to Joanne Main.
7 MS. KOTEEN: Thank you for letting me
8 speak. I consider myself an environmentalist, and I
9 am terribly conservative about global warming and I do
10 support true, clean energy. I do not see nuclear
11 power as clean. How can it be considered clean when
12 there's no true disposal of the waste? Let's not fool
13 ourselves. There's no Yucca Mountain. And even if
14 there, how could we transport the nuclear waste safely
15 there?
16 I do not want to see Diablo relicensed.
17 It frightens me to hear those people in the audience
18 who have accolades about Diablo because of the jobs
19 they bring here, because of the tax dollars that work
20 to help our schools. You know, recently, it reminds
21 me of a company that's been in the news, a company
22 that we thought was reliable, that had high standards.
23 That company is Toyota. That company brings jobs all
24 over the world, you know, benefits its employees,
25 brings great tax dollars to different places, and I'm

February 3, 2010
To the NRC -

Thank you for holding these public hearings.

CS-1

When the Diablo Canyon plant was built, it was known that there are at least four earthquake faults in the area. Then in 2008, an additional fault was discovered one half mile off-shore from the power plant.

After that fault was discovered, in a letter written April 8, 2009, an NRC Project Manager wrote …"based on the currently available information, the NRC staff concludes that the design and licensing basis evaluations of the DCPP structures, systems, and components are not expected to be adversely affected and the current licensing basis remains valid and supports continued operability of the DCPP site."

I am not reassured by the phrase "based on currently available information". I am concerned about the effect of an earthquake on the reactor and on the storage tanks for the spent fuel.

CS-2

And, to digress for a moment, it looks to me as though spent but still highly radio-active fuel will always have to be stored at the sites of nuclear power plants. Let's face it -- no one wants to have that stuff in their neighborhood – and for very understandable reasons. So, the safety of the radio-active spent fuel storage will need to be considered for the next … well, I don't know how many years. But I know that at the proposed Yucca Mountain site, one of the criteria for the signs informing people of the radioactive danger was that signs had to be something that a future civilization could understand. That would be a civilization that comes so long after us that they don't recognize our words or our symbols. That indicates a very, very long time.

Diablo Canyon's current licenses allow them to operate for the next 15 years. You are now considering whether to renew Diablo Canyon's operating licenses for the 20 year period between 2025 and 2045. Since their current licenses allow them to operate for the next 15 years anyway, it seems to me there is no need to rush.

I request that you postpone consideration of their license renewals until definitive seismic studies, particularly of this new fault, are complete.

Thank you.

Della Barrett
(Della Barrett)
9519 Carmel Road
Atascadero, CA 93422

to meet with Commissioner Jaczko, the chair of the Nuclear Regulatory Commission, to discuss our biggest concern, seismic activity and the relicensing of the nuclear power plant for an additional -- 1800 feet offshore of Diablo Canyon. But we had asked them to look at some seismic studies five years previous to that, when the NRC came to San Luis Obispo to license an on-site radioactive waste dry cask storage facility. AO-1

Now the facility has been built with no seismic hearings, whatsoever. Now you're expected to live with this waste in a temporary manner, but the NRC has no definition for temporary. Yucca Mountain has been ostensibly cancelled, and therefore we are living with highly radioactive waste on a seismically active coast, less than three miles from two major active earthquake faults.

If earthquakes are foreseeable then to Diablo Canyon, I don't know what is. I don't know why the NRC refuses to make sure that the state-required studies aren't being finished before they continue with the license renewal application process. I don't know why PG&E refuses to do these seismic studies and get them out of the way. AO-2

We do know that the state spent a great

AO-2 - cont

1 deal of time doing an in-depth analysis, and
2 recommended that high-level, high-definition, new
3 seismic studies be done. 3-D studies. 3-D mapping.
4 These are new studies. These are studies that haven't
5 been done before, and we need them completed, and we
6 need them completed now.
7 The NRC is not to be trusted with this
8 information. The NRC has proven in the past, that
9 when PG&E said no, don't look any further, and no, we
10 tell you everything is okay, that that hasn't been the
11 case. And when they did this in the past, they cost
12 us $4.4 billion, according to the CPUC's own staff.
13 It's time to start this process. It's time to do it
14 right, to do the collaboration that the NRC talks
15 about, to do the transparent and open proceedings that
16 the NRC talks about.
17 It is time to do the seismic studies.
18 Quit spending money coming to our community to talk
19 about scoping and process, when the one issue, the one
20 issue that this community cares most about--
21 earthquakes, nuclear power plants and radioactive
22 waste are being ignored. We need these studies done
23 now, we need to stay in the process now, we need a
24 joint panel with the NRC, the USGS, and state
25 oversight agencies now.

AO-2 - cont

Anything less is not what this community deserves. We need these studies now and we hope you are listening. Thank you.

MR. CAMERON: Okay. Karen Swift, and Jeff Buckingham, and Henriette Groot. This is Karen Swift coming up to join us.

MS. SWIFT: Good evening, everyone, and thank you, NRC staff, for being here to hear and hopefully listen to public commentary regarding the relicensing of PG&E.

I was here earlier this afternoon, between 1:30 and 4:30, as well as now, and I've heard perspectives, as everyone has, on the relicensing. Some of those views expressed would like immediate closure of the plant, if that were possible, due to reasonable concerns about there being two major fault lines within the near vicinity of PG&E, one only 1800 feet from the plant.

I do not need to outline these concerns, once again, because others have been very good at doing so. Others we have heard from would like to have quick renewal, without any further delays, no more seismic surveys.

Yet anyhow, there have been two kind of overlapping views expressed by people. One is

DiabloCanyonCEm Resource

From: Rochelle [beckers@thegrid.net]
Sent: Friday, February 12, 2010 3:24 PM
To: Stuyvenberg, Andrew
Subject: Follow up NRC Diablo License Renewal Proces meeting Feb 9th
Attachments: 2 9 10 NRC outline put in questions.doc; 021010+NRC Follow+up+que#4EEC6A.doc FINAL.doc; 2 10 10 SB NEWSPRESS.doc

Hello Drew,

Attached are both follow-up questions from the NRC's license renewal "process" meeting in San Luis Obispo this week and our corrected presentation from that evening in electronic form so you can share with appropriate staff.

As stated at the NRC meeting we find this process to be premature and believe the March 3rd meeting is only premature, but a costly waste of resources until the NRC recognizes that the state's required seismic studies must be completed and reviewed before this process goes forth. CF-1

The Alliance requests that all responses be sent by email if possile or regular mail if not.

cc's have been sent to all California oversight and elected represtatives within PG&E's service territory.

PS: my first message bounced (used "Drew" not "Andrew", so here is the cc list from that message: "Dedrick Kathy (EPW)" <Kathy_Dedrick@epw.senate.gov>, Jennifer Tang <Jennifer_Tang@boxer.senate.gov>, Hillary Pearson Bishop <Hilary_Bishop@boxer.senate.gov>, Haas Greg <greg.haas@mail.house.gov>, Levenshus Jonathan <Jonathan.Levenshus@mail.house.gov>, Kay Sally <Sally.Kay@asm.ca.gov>, Byron Barbara <Bbyron@energy.state.ca.us>, Rachel MacDonald <rmacdona@energy.state.ca.us>, Marlena Elliott <Melliott@energy.state.ca.us>, Adams Gina <Gina.Adams@asm.ca.gov>, adam hill <achill29@hotmail.com>, Jim Patterson <jpatterson@co.slo.ca.us>, bgibson@co.slo.ca.us

And just to you I included an article from the Santa Barbara Independent

In Peace

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ALLIANCE FOR NUCLEAR RESPONSIBILITY

February 9, 2010

CF-2

The Alliance for Nuclear Responsibility believes that this panel may be unaware of historical information that has heavily influenced California's perception of PG&E's license renewal application. The utilities application blatantly defied the state's recommendations and requirements to update seismic and other studies for Diablo Canyon. Absent this information the acceptance of PG&E's license review panel was an incomplete application. The missing information -- the significance of two major active earthquake faults less than three miles offshore of Diablo Canyon -- to the economy of California, was an "omission" that has been extremely costly in the past:

In 1988, after a three-year ratepayer funded review of construction costs, the Public Staff Division of the California Public Utilities Commission wrote:

> "Because of PG&E's failure to discover the Hosgri Fault and later design errors [related to seismic retrofits], the Diablo Canyon plant had to be constructed and reconstructed three times."
>
> "The plant was essentially complete in 1976 at a total cost of about $1 billion when the NRC required PG&E to redesign and reconstruct it to withstand severe shaking that could occur as a result of a large earthquake on the Hosgri Fault. By 1981 the plant had been redesigned and reconstructed a second time to correct the deficiencies in the original seismic design, increase sit the total cost of the plant to $2.4 billion."
>
> "From 1981 to 1985 the plant had to be redesigned and reconstructed a third time to correct the errors made in the earlier second redesign ...increasing it [costs] from $2.4 billion to $5.518 billion.

For the last five years the state has held workshops, instituted an in depth analysis of the costs, benefits and risks of reliance of aging reactors, submitted recommendations and issued requirements and has made it clear to PG&E that it expected the utility to complete all recommended AB 1632 studies before filing for a license renewal. Unfortunately, PG&E again decided that a seismic review

could wait until after the NRC had spent time and resources on a license renewal application that dedicated a single page to the collection and independent review of new seismic information.

CF-2- cont

Just this month the NRC's Chair quoted Benjamin Franklin:

> "it takes many good deeds to build a good reputation, and only one bad one to lose it." The NRC has done many good deeds – recruited, developed, and retained top-notch staff, developed strong regulatory, inspection, and enforcement programs, and many others that I will discuss later this morning – to build its good reputation. But Ben Franklin's insight about one bad deed has particular resonance in the nuclear field. Few civilian technologies – if any – have the ability of nuclear energy to attract public attention and elicit public concerns. As a nuclear safety regulator, I am sensitive to the fact that a single accident or lapse can significantly harm public health and safety and undermine public confidence in the agency in a lasting way.

The NRC's willingness to accept PG&E's license renewal application without completion and independent review of state-required seismic studies, especially when viewed with the above historical perspective of the economic impacts of PG&E's failure to accurately and independently review seismic data in the 1970's and costly retrofits of the 1980's, would likely be frowned upon by Mr. Franklin and we hope by Chairman Jaczko.

CF-3

The NRC has accepted an application to extend the life of Diablo Canyon for an additional twenty years after the current expiration of 2025. Unlike the original license, no one – not the utility, the NRC, the DOE, nor the administration – no one believes that the highly radioactive waste produced during this license extension will leave our coast in our lifetimes. So what is the hurry?

CF-4

The Alliance for Nuclear Responsibility asks this license renewal panel and Region IV of the NRC to support our request to place a hold on PG&E's application. We also have requested that the Commission create a joint NRC/USGS/state seismic review panel to resolve earthquake concerns before proceeding with the renewal process. We believe this is a reasonable, responsible and cost-effective proposal to resolve an issue that could devastate this communities, this state's and this nation's economy.

We do have a list of questions for this panel *may* be able to partially answer tonight or preferably send a response that the Alliance can post on our own very open and transparent website.

This above statement and the questions that follow will be sent to California's state and federal representatives. A service list that includes all elected representatives within PG&E's service territory (and those on

energy/environmental committees), state oversight agencies, San Luis Obispo County Supervisors and all city representatives, and public participants who request to be included.

Questions for Feb 9, 2009
NRC Relicensing Panel

1) What criteria did the NRC rely upon to determine that PG&E's License Renewal Application was complete and should be accepted for review? CF-5
2) What departments/divisions/departments/offices at the NRC reviewed PG&E's application for license renewal?
3) Will contact information be available to the public?
4) If yes, how does the public get on the NRC's service list for reviews and public input?
5) Will all draft reports by NRC staff and consultants, PG&E staff and consultants, relating to license renewal be posted on the NRC's website? If, yes, will the above service list be notified when documents are posted? If yes, how to sign up? If no, why not – this is how the California Energy Commission conducted its reviews and issues its reports.
6) Does the NRC intend to issue a license renewal before state required seismic studies are complete and reviewed? If yes, what is your justification? If no, then another reason to support our request. CF-6
7) Have the NRC's independent seismic experts met with the seismic experts or lead staff of the California Energy Commission's? CPUC? California Seismic Commission? Legislature? Coastal Commission? If yes, are there summaries of these meetings? If no, do you intend to meet before finalizing scope of license renewal for Diablo Canyon?
8) What does the NRC require to confirm that new seismic studies mandated by the state of California are completed and resolved before approval of license renewal?
9) Has the NRC reviewed the cost, benefit and risk analysis mandated by our Assemblyman Sam Blakelee bill AB 1632? If yes, is that review available to the public? If no, does the NRC intend to review before finalizing the scope of license renewal for Diablo Canyon?
10) Given that 25% of nukes have had pipe breaks and tritium leaks due to aging, and yet some have still been approved to be relicensed, how can the NRC be sure that existing aging seismic restraints and/or pipes at Diablo are still capable of withstanding their design basis seismic event? Please provide reports citing the studies reports that the NRC depended upon. CF-7
11) The Alliance requests that the NRC's justify its "Aging Management" systems in any previous approvals, where tritium leaks have been discovered, since issuance of license renewal.
12) As an alternative to relicensing of Diablo Canyon, will the NRC consider a state-of-the-art renewable energy park at the nuclear site? The Alliance has proposed a park that generates electricity from solar, wind, wave and CF-8

tidal technologies and an onsite energy efficiency think tank and retraining center using existing transmission. Will the NRC investigate this alternative? If so, who will be leading this investigation? If not, why not? CF-8-cont

The above questions are submitted in a sincere effort to remove the premier confrontational and controversial issue defining Diablo Canyon – two major active earthquake faults within three miles offshore of Diablo's aging reactors. Yes the steam generators, turbine rotors and reactor vessel heads may be new, but the originals did not last their full service life. Diablo Canyon was built using the technology from the 1960's and in 1967 when the state granted a permit to construct twin reactors on San Luis Obispo's pristine coast no one knew of the existence of offshore faults. There are some who would spend years denying the existence, magnitude and impacts of these faults yet again. We ask the NRC to consider this history and current state requirements for seismic studies and hold PG&E's License Renewal Application. Furthermore, the NRC should demonstrate its willingness to bring its Collaboration Process (link) to California. The Commission's creation of a joint NRC, USGS, and state seismic review panel to independently review PG&E's completed seismic studies would be a valuable contribution to the openness and transparency encouraged by Chairman Jaczko. CF-9

In Peace

Rochelle Becker, Executive Director
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February 2, 2010

Andrew L. Stuyvenberg
Andrew.stuyvenberg@nrc.gov

Dear Andrew,

The follow are questions that arose during the February 9, 2010 License Renewal Process meeting

1. Are transmission lines at Diablo (both outgoing, and those returning offsite power back to the facility for emergencies) seismically qualified to the same standards as the plant's "nuclear safety-related" structures? Have or will seismic studies be completed to insure that these transmission lines are also engineered to withstand the effects from an earthquake on the new Shoreline fault? If not, when are such studies and results expected? CF-10
2. Diablo has been granted over 200 waivers, amendments, and temporary orders to its operating license. Therefore, what exactly *is* the design basis for license renewal if there have been hundreds of changes to the original rules, regulations and policies? Please provide the design basis that the NRC will be relying on to approve or disapprove license renewal.
3. A statement was made at the Feb 9th meeting that the NRC does not approve a license renewal application until it is "happy" with all utility responses. Please define "happy." CF-11
4. During responses to questions at the public meeting, the NRC provided an example of "refurbishment" being a contention proposed as new information by intervenors, and added to the Indian Point License Renewal Proceedings. Please explain why the new seismic studies and detailed analysis required by our state would not be considered as valid a contention as "refurbishment" and therefore require satisfactory resolution before application goes forth? CF-12
5. What seismic studies has the NRC reviewed to ensure that highly radioactive waste that will likely be stored at Diablo's earthquake active site will remain intact – both pools and casks? Please provide copies of all these studies. CF-13
6. The FEMA representative mentioned a drill at Mercy Medical Center – where is this Center located and why is it relevant to San Luis Obispo? CF-14
7. It was difficult to hear seismologist Dr. Kammerer, but believe she mentioned a "large seismic team." Is this team all made up of NRC staff? If no, who else is on the "team"? Why was no other member of this "large" team able to attend the CF-15

SLO meeting? In fact, as Ms. Kammerer was in the state of California during the public meeting, what other event could have (and did) merit more attention than this public meeting in the reactor community that is being asked to an additional twenty years of operation, production and storage of highly radioactive waste?

CF-15 - cont

8. Ms. Kammerer mentioned that, "both an NRC independent and an in-house review will be done" regarding the Shoreline fault. Please provide identifications of team members as well as their credentials and affiliations for this review.

CF-16

9. The NRC's License Renewal panel mentioned operating experience of reactors after they reach forty years. How many reactors have operated beyond 40 years? For how long after 40 years? What has been their post-license renewal operating record?

CF-17

10. When does the NRC expect the "Hazard" model mentioned by Dr. Kammerer to be released?

CF-18

11. The NRC panel mentioned several times that the plant could be shutdown after approval of license renewal if seismic information warranted. PG&E is requesting $85 million for the license application process; are the NRC's costs included? If not, please request that PG&E provide this information to both the NRC and all interested parties. Please provide the full billable NRC license renewal costs for: Oyster Creek, Indian Point and to date for Vermont Yankee.
12. Please ask PG&E to provide for the record the claim their representative made that "The California Public Utility Commission requested that PG&E file their license renewal to the NRC in November 2009."
13. As a matter of public record, please send us documents or links that tabulate, to date, the NRC's billable costs to PG&E for the license renewal process since the application was filed in November, 2009. This should include all NRC labor, human resources, travel, per diem, hotel, airfare, meeting room rentals and audio-visual resources, consultants, printing and publication, and the cost of security required for the five uniformed San Luis Obispo police officers (as well as any overtime costs) that were present at the public meeting of February 9, 2010.

Please let me know when the Alliance will receive a response to our questions, so that we may be prepared for the upcoming scoping meeting. I have also attached our questions stated, but not answered at the Feb 9th meeting so you can more easily circulate for complete answers.

In Peace

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Cleanliness Is Next to Dogliness

Poodle Barks at Pacific Gas & Electric

http://www.independent.com/news/2010/feb/04/cleanliness-next-dogliness/

Thursday, February 4, 2010

By Nick Welsh (Contact)

IT'S MY OWN FAULT: The big shots running Pacific Gas & Electric must have been weeping with joy over President Barack Obama's call for new nuclear power plants during last week's State of the Union speech. For them, the timing could not have been better. But for us—and anyone else who happens to live downwind from an existing nuclear power plant—the timing could not have been much worse.

Angry Poodle

I say that because PG&E is now applying to renew its license for the Diablo Canyon Nuclear Power Plant, located in Morro Bay just outside San Luis Obispo. For the geographically challenged out there, that's just a few miles up the road. If something bad were to happen at Diablo, rest assured that your day would be ruined. In fact, the Nuclear Regulatory Commission (NRC) is hosting the first of many public hearings on Diablo's relicensing application this coming Tuesday, February 9, at S.L.O.'s Embassy Suites. For those itching for a novel way to witness government inaction, this is a day trip worth taking. PG&E's timing in this, however, is not merely curious; it's downright suspicious. First, Diablo Canyon's permits with the NRC do not expire for another 12 years. So why the sudden rush to get relicensed?

The answer to this not-so-rhetorical question lies somewhere near the fact that in November 2008, scientists with the United States Geological Survey determined that Diablo Canyon lies no more than 1,800 feet off an offshore earthquake fault line that until then no one knew for certain

CF-19

really existed. This is the sort of news that might require most mere mortals to run out of the room to change their underwear. But not the executives at PG&E or the regulators with the NRC. These guys flinch at nothing. Hell, they knowingly located—and approved—the Diablo Canyon plant within four miles of an active fault line known as the Hosgri Fault. They have reassured us that the presence of the "new" fault line—known as the Shoreline Fault—is hardly cause for alarm. That's because it's believed the Shoreline Fault, about which little is actually known, is capable of delivering only a 6.0-6.5 jolt on the Richter scale. Not to worry. Diablo Canyon was engineered to withstand a seismic uppercut of 7.5.

CF-19 - cont

Not all of us, however, can be so Zen about things. When it comes to building nuclear power plants in earthquake country, I tend to get a little frantic. To be otherwise requires Botox to the brain. It turns out that the California Energy Commission and the Public Utilities Commission share my skittishness. In fact, the state regulators notified PG&E that before they could apply to the NRC—the feds—to renew their license at Diablo Canyon, PG&E needed to conduct a complete seismic analysis of the area, complete with a report on the environmental and economic impacts if the plant were to be shut down by some sort of seismic incident. In addition, the state regulators wanted a study on the available alternatives if, all of a sudden, Diablo Canyon went dark. Given that Diablo Canyon supplies up to 10 percent of California's total electricity demand, that's not an idle question. But given that there's a gigantic solar plant proposed just north of the Carrizo Plain—capable of providing more than half of Diablo Canyon's mega-wattage—there may be some intriguing answers as well.

Guess what? PG&E hasn't gotten a study started, let alone finished. But that didn't stop them from submitting its application with the NRC to renew its license anyway. To be fair, PG&E just got around to asking the Public Utilities Commission for permission to charge its rate-payers for the $16-million bill that the high-tech 3-d study on the new Shoreline Fault will cost. At the very soonest, that study will be complete sometime in 2013. By contrast, the NRC license renewal process is expected to take only 22 months. That takes us to 2012. Translated, that means PG&E will get its new license to operate Diablo Canyon for another 20 years well before the seismic studies are complete. One might think such information could prove vital to the NRC's deliberations, let alone our own personal safety. But then, one might also have thought no one in their right minds would ever build a nuclear power plant within four miles of a known earthquake fault.

CF-20

The last line of defense in this scenario, of course, is the NRC itself. That's not good news. Even in the aftermath of 9/11, the NRC refused to require PG&E to conduct additional anti-terrorism studies when the company sought permission to build a de facto nuclear waste storage facility at Diablo Canyon. It should be noted that when the plant initially was approved, no permanent waste storage facility was envisioned. As changes go, that's big. (Prior security analysis assumed that the plant would never be attacked by more than five would-be assailants, and plant security strategies were calibrated accordingly.) Mothers for Peace had to sue the NRC to make that agency require additional analysis. Ultimately, the lawsuit went all the way to the Supreme Court. Although Mothers for Peace "won" in court, it's not really clear what their victory achieved. That's because the new plant security analysis is deemed confidential, so no one really knows for sure what's in it.

The good news is that Santa Barbara has no shortage of Botox bars. Next time I get nervous about Diablo Canyon, I'll order a shot straight to the pre-fontal lobe. Then you'll see all those worry lines disappear.

1 June Cochran.

2 MR. BENNETT: Thank you. My name is Jim
3 Bennett. I am also an employee at Diablo Canyon.
4 I've lived here since 1975, and raised my family here.
5 I'm here tonight speaking on my own behalf. I'm not
6 a spokesman for Pacific Gas & Electric. I'm a
7 bargaining unit, hourly employee, so that affords me
8 the opportunity to walk around in the plant and
9 actually work on the equipment.

10 I feel Diablo Canyon, myself, is a very AK-1
11 safe place. I'm very glad, and have the opportunity
12 to work there, and even though I know I'm a thorn in
13 management's side from time to time, raising issues,
14 I'm very pleased, and here to tell you, that there's
15 not one issue that I've raised, that they haven't
16 really addressed.

17 The management at Diablo Canyon takes
18 nuclear safety and this community very seriously, and
19 I'm really proud to work for them. I plan on retiring
20 here in a few years, and going to continue to make
21 this my home, and I graduated from Cal Poly and met my
22 wife there. I graduated in 1980. And so I don't
23 necessarily need Diablo Canyon to be here when I
24 retire. I don't need the job. But our community
25 needs Diablo Canyon. It provides a great opportunity

AK-1 - cont

for a lot of people here. It enriches out community and provides a lot of opportunities.

And, you know, so as far as environmental stewardship, it's a beautiful drive, too bad that the general public doesn't have the opportunity to drive out to the plant. PG&E takes very good care of the property as far as I can tell, down to the point where we're even limited on how we rinse our cars off in the parking lot.

So they're--from my perspective as an employee working out there, I'm very impressed with the way management addresses environmental stewardship, and the safety, and the general public at large. Thank you very much.

MR. CAMERON: Thank you, Jim. And June Cochran's going to join us, and then we're going to go to Jill Zamek and Jane Swanson.

MS. COCHRAN: My name's June Cochran, and I live in Shell Beach, which is where the plume would hit, if there was an accident, and we saw with the big rig accident, just last year, that Highway 101 is the only way in and out of this place, and it was clogged up for hours. Imagine, if there was an evacuation.

And no one has addressed these issues, really. It is a two-lane road, in and out of Avila,

1 Again, Ernie Gunderson found these many
2 violations, tried to enlist the NRC's support, could
3 not get their support. The NRC finally went in to
4 look, to try to verify his claims. They found no
5 evidence of, of any problems, but yet, when John Glynn
6 and some others went into the plant, they found seven
7 serious violations.
8 They also found that the NRC was taking
9 illegal gratuities from the owner of the power plant.
10 Again, how are we supposed to trust the NRC if
11 they're taking gratuities from the people they're
12 supposed to control and regulate?
13 So I guess that covers most of my
14 comments. Thank you very much.
15 MR. FULLER: Thank you, Mr. Phillips.
16 Next we have Jack--and please, when you get up, go
17 ahead and pronounce your name for me, so I'll stop
18 messing it up so bad.
19 MR. BIESEK: Biesek.
20 MR. FULLER: Biesek. Thank you.
21 MR. BIESEK: Good evening. My name is
22 Jack Biesek. I'm a 40 year resident of San Luis
23 Obispo, and I am opposed to nuclear power at the BB-1
24 Diablo Canyon Power Plant. In my opinion, it has not
25 proven to be a logical, economical or a sustainable

resource for our county. Rather, it's proved to be just a hell of a way to heat water and create steam. It definitely has not lived up to the promises that were given, that go back 40 years ago, 30 years ago, when it was announced and first developed. BB-1 - cont

On a broader note, shouldn't we be here tonight to discuss putting solar panels on every household in California? What if the $50 billion spent at Yucca Mountain was put into solar panels? The gentleman who spoke about a 30- or $40,000 expense could be given a subsidy, a tax break, or whatever. Who is supporting this kind of logic and common sense, the soft footprint of solar? BB-2

It's a better, more sustainable way, and a way to lighten our foot--our foot, carbon footprint.

But on a broader note, too, maybe we need to speak about money and follow the money. Yes, the county gets money. Yes, the schools get money. But that is short-term unsustainable thinking. It's really more like a bribe, to help with immediate needs, but ignore the long-term needs. We're talking about hundreds, thousands of years of storage. BB-3

Who is taking the long view here? And we also need to consider where that money comes from. It comes from the ratepayers. That is us. This BB-4

BB-4 - cont

expensive nuclear industry, including what's going on here tonight, the planning, the studies, the research, is being funded by you and me. Frankly, I've had enough of that. We need to consider where the money is also going.

It is going to PG&E stockholders, PG&E executives, PG&E lawyers, PG&E lobbyists, nuclear industry lobbyists, and other, others that profit from nuclear power industry, including the NRC staff and its employees, many who have probably flown in here tonight at our expense, ultimately.

Why is it that a few people get to make so much money at the expense of the environment and at the expense of the ratepayers?

Where--when, in the history of mankind, did we encourage this kind of profit-taking activity? Who's looking out for this oversight? Do we need an oversight group to oversight, look at the NRC? And what is fair from a humanist, balanced Earth standpoint?

BB-5

Maybe we should change the name of Diablo to Lemming Canyon Nuclear Power Plant, because that's what I see--all of us just giving in and letting go, and following the status quo.

But someone needs to speak up for the

environment, and for the humanist aspect. I'm concerned about the long-term deterioration of Diablo, as well as the projected cost to maintain a nuclear waste dump for hundreds and thousands of years.

BB-5 - cont

In effect, we are borrowing money and maintenance efforts from future generations, by putting the responsibility for storage of the waste into their hands.

What happened to the pay-as-you-go lifestyle? What happened to being responsible for our actions? What happened to stepping up to the plate and living within the means of what we're given?

We are making a big mess for others to clean up. What lasts for 10,000 years? Who can even think in those terms? What happens when the cost of storing the waste is more than what the funding reserves can cover. The original plant was estimated at $800 million to construct. Recently, the steam generators were $800--$800 million to replace. I don't think we need an accountant to tell us that the future is going to be way more expensive than we thought it would be.

We were promised, in 1977, that radioactive nuclear waste would be stored in a repository, a safe storage site outside California, to

BB-5 - cont

be provided by the U.S. Government, and that Diablo was only going to temporarily hold these wastes.

What is the status of that promise today? It's a broken promise. And what are the current plans for removing the waste? No plans. We're going to be the dump, a nuclear waste dump for a permanent storage of the waste.

And what is the status of PG&E being responsible for current and future efforts? They can file bankruptcy. They have. They can go away. What are we left with then? Why would we be granting a new license to store waste in our backyard? This is ludicrous, unfair, unjust, and unsustainable.

What kind of planning process and EIR would allow hazardous materials to be stored for thousands of years, and what kind of logic are we following here as a human species?

I submit that the only reasonable plan would be to close Diablo until a storage site is approved, thereby stopping the generation of hazardous material that might end up as a terrorist bomb, a terrorist target, or any other unforeseen nuclear disaster.

Let's look at recent history. How many nuclear plants have been opened since Three Mile

BB-5 - cont

1 Island? Zero. Let's look at our state. Humboldt
2 Nuclear Plant. Closed. Rancho Seco Plant. Closed.
3 The Yankee Plant now is slated to be closed.
4 Let's look at the world. Chernobyl. What
5 a waste of human resource, and a shame upon the human
6 race. I don't know how many of you executives have
7 been to Chernobyl, but I hope there's a lesson to
8 learn from that.
9 Are we going to repeat that kind of
10 disaster here, in California? Are we going to have
11 this kind of threat in our neighborhood for decades to
12 come? We hope not, and that is why I am here tonight,
13 to ask the NRC to hold on any licensing until Diablo
14 can--until a permanent waste storage is found and
15 until nuclear power is truly clean and recyclable.
16 Zero waste would be what I would support. Anything
17 less is selfish, greedy thinking. Let's live within
18 our means and be stewards for the future, and be
19 sensitive to the human race. Thank you.
20 MR. FULLER: Thank you, Mr. Biesek. Next
21 we'll have John Holloway, and after him Mr. Steve
22 Zawalick. And then Will, Mr. Will Landreth. Mr.
23 Holloway.
24 MR. HOLLOWAY: Hello. My name is John
25 Holloway and I'm a maintenance electrician at Diablo

requirements that must be met for the renewal of operating licenses for nuclear power plants are found in 10 CFR Part 54. Operating licenses may be renewed for up to 20 years beyond the 40-year term of the initial license. There are no limitations on the number of times the license may be renewed.

The Director of the NRC's Office of Nuclear Reactor Regulation makes the final decision to either approve or deny the request to renew the license. State agencies can specify conditions or reject permits that are required by the applicant. For example, California State Water Resources Control Board approval is needed to receive a National Pollutant Discharge Elimination System (NPDES) permit that is required for the continued operation of the nuclear plant's once-through cooling system. Similarly, California Coastal Commission approval is needed for a Coastal Development Permit (CDP) that would be required for the continued operation of DCPP through a license renewal period.[3] As a result, the NRC confers with state agencies as part of the environmental review and defers to agencies with appropriate regulatory authority.

Part 54 requires license renewal applicants to perform specified types of evaluations and assessments of their facility and to provide sufficient information for the NRC to determine whether or not continued operation of the facility during the renewal term would endanger public health and safety or the environment. Specifically, licensees are required to assess the effect of age-related degradation on certain long-lived, passive systems, structures, and components of the plant that are within the scope of Part 54. The purpose of the California Energy Commission's comments is to identify the issues that should be addressed in the plant-specific supplement to the GEIS and identify the significant issues that PG&E and the NRC should analyze in depth regarding the possible environmental impacts that could occur from renewing the licenses of DCPP.

The Energy Commission requests that the following issues be addressed as part of the plant--specific environmental impact analyses by PG&E and the NRC during the environmental impact review for DCPP license renewal:

1. Seismic Risks

BX-1

As noted in the 1996 GEIS, the NRC staff has reviewed or performed detailed probabilistic assessments of external events, such as earthquakes, fires, and sabotage, at a number of plants. The 1996 GEIS' analysis of external events included a study completed in 1990 and reported in NUREG-1150 ("Severe Accident Risks: An Assessment for Five U.S. Nuclear Power Plants," NRC). This report analyzed the risks of severe accidents at a nuclear power plant from internal and external events. It noted that in cases where external event risk was shown to be a significant contributor to the overall risk, the majority of the estimated risk arose from large beyond design basis earthquakes.[4]

[3] A CDP is required by the Coastal Zone Management Act (CZMA), see 16 U.S.C. Section 1456(c)(3)(A) and 15 C.F.R. Section 930.60(a). Letter to James Becker, PG&E, from Tom Luster, California Coastal Commission, December 29, 2009.
[4] NUREG-1437, 1996, p. 5-17.

BX-1 - cont

California's two operating nuclear power plants – Diablo Canyon Nuclear Power Plant and the San Onofre Nuclear Generating Station (SONGS) are located in highly seismically active areas on the Pacific Coast. The discovery in the late 1960s of a major offshore fault – the Hosgri Fault -- which is located 4.5 kilometers west of DCPP, resulted in years of investigations and hearings and the redesign and seismic retrofit of Diablo Canyon. That effort resulted in Unit 1 not becoming operational until 1984 -- about 15 years after work at the site began. In 1984, the NRC made it a condition of the operating license for Diablo Canyon that, "PG&E shall develop and implement a State-of-the-Art Program to revalidate the seismic design bases used for Diablo Canyon." In November 2008, PG&E and USGS announced the discovery of a previously unidentified offshore fault – called "the Shoreline Fault" – approximately one kilometer west of DCPP that has a capacity to generate a magnitude 6.5 earthquake. PG&E is working with the USGS to study earthquake hazards along the coastline in central and northern California, including in the vicinity of Diablo Canyon. The NRC and the USGS will conduct an independent review of PG&E's Long-Term Seismic Program (LTSP) in 2010.

In November 2008 the Energy Commission completed a comprehensive assessment of DCPP and SONGS, as required by Assembly Bill 1632 (Blakeslee, Chapter 722, Statutes of 2006). This assessment included a major consultant study by an interdisciplinary study team, public hearings, and review of academic, scientific, and government reports and data provided by California's nuclear plant owners. To assist with this seismic vulnerability assessment, the Energy Commission formed a Seismic Vulnerability Advisory Team made up of seismic safety experts from California's Seismic Safety Commission, California Geological Survey, and the California Coastal Commission.

The AB 1632 study confirmed that the Hosgri Fault is believed to pose the dominant seismic hazard for Diablo Canyon and can generate up to a magnitude 7.5 earthquake. The AB 1632 study also raised the possibility that ground motion at Diablo Canyon from the Hosgri Fault could be stronger than previously thought, based on recent research on near-source ground motion. In addition, just prior to completion of this study, PG&E announced the discovery of the Shoreline Fault less than half a mile offshore from Diablo Canyon, with an estimated maximum earthquake magnitude of 6.5. Moreover, the AB 1632 study found that important data on Diablo Canyon's seismic hazard and plant vulnerabilities were incomplete or outdated and that new seismic studies could resolve questions and might change conclusions about the seismic hazards for the plant and plant vulnerabilities. As a result of these uncertainties and the discovery of the Shoreline Fault, the Energy Commission adopted the AB 1632 study, as part of the Energy Commission's 2008 Integrated Energy Policy Report (IEPR), and recommended that PG&E conduct a number of additional advanced seismic hazard and plant vulnerability analyses. These studies include:

- Updated seismic/tsunami hazard studies, including using three- dimensional geophysical seismic reflection mapping and other advanced techniques to explore fault zones near Diablo Canyon;
- Assessments of the long-term seismic vulnerability and reliability of the plant, focusing on switchyards and other non-safety-related components;

BX-1 - cont

- An evaluation of additional pre-planning or mitigation steps that the utility could take to minimize plant outage times following a major seismic event, such as the earthquake that struck the Kashiwazaki-Kariwa plant in Japan in 2007; and
- An evaluation of the adequacy of access roads to Diablo Canyon and surrounding roadways for allowing emergency personnel to reach the plant and local communities and plant workers to evacuate following a major earthquake.

PG&E plans to complete these advanced seismic studies in 2011- 2013, if the California Public Utilities Commission (CPUC) approves the utility's application for funding to support these studies. The CPUC directed PG&E to report on the major findings and conclusions from these studies as part of the utility's license renewal feasibility studies for Diablo Canyon.

PG&E's completion of these studies is particularly important in light of the recently discovered Shoreline Fault and the nearly 3-year outage of most units at the Kashiwazaki-Kariwa nuclear power plant following the 2007 magnitude 6.8 earthquake in Japan. These seismic studies are relevant to the NRC's evaluation of the environmental and safety implications of continuing to operate DCPP for an additional 20 years. For example, an updated seismic hazard assessment is needed to assess the vulnerability of aging plant components to a major earthquake. This is especially important for those aging reactor components, such as the reactor pressure vessel, that have experienced embrittlement due to neutron bombardment.

The tsunami hazard at Diablo Canyon should also be reexamined during license renewal reviews. The December 26, 2004, Sumatran earthquake that resulted in widespread and catastrophic tsunami impacts and loss of life around the Indian Ocean caused the automatic shut-down of the Kalpakkam nuclear power plant on the east coast of India. Currently available tsunami studies for DCPP are at least 10 years old and do not take advantage of modern tools and recent studies that could improve the quality of the assessments, such as new data from the National Oceanic and Atmospheric Administration, new probabilistic hazard assessments, and inundation modeling. In light of the new and significant seismic information that is available for the plant site since the original operating licenses for DCPP were issued, the seismic and tsunami hazards for nuclear power plants should be examined as plant-specific issues during license renewal reviews.

A significant increase in the seismic or tsunami hazard could have major ratepayer impacts. For example, the discovery of the Hosgri Fault after plant construction was well underway in the 1970s resulted in the subsequent seismic redesign of the Diablo Canyon plant and very costly plant retrofits. Similarly, the shutdown of the Kashiwazaki-Kariwa Nuclear Power Plant following the July 2007 earthquake in Japan will cost billions of dollars for plant retrofits and for purchases of replacement power. As such, the 2009 IEPR recommended that PG&E complete and report in a timely manner on all of the AB 1632 studies, including the three-dimensional seismic studies and the studies of the long-term seismic vulnerability and reliability of the plant, and make their findings available for consideration by the Energy Commission and available to the CPUC and the NRC during their reviews of the utilities' license renewal applications.

In light of the continuing and significant uncertainty about the seismic hazard at Diablo Canyon and the need to evaluate significant new information since the operating licenses for DCPP were first issued, the NRC, in cooperation with the Energy Commission and the CPUC, should require that these seismic studies be completed, independently peer reviewed, and made part of NRC's and PG&E's environmental assessment for DCPP license renewal studies, before the NRC takes any further action on DCPP license renewal. In addition, the plant-specific EIS should include an analysis of new significant seismological data for the Diablo Canyon site gathered since the plant was constructed. BX-1 - cont

Another concern is the potential for a major release of radioactive waste to the Pacific Ocean as the result of an accident or major event at Diablo Canyon. As noted by the California Regional Water Quality Control Board when the plant was originally licensed, "In your review of earthquake safety and design errors at this facility, we again request that you make sure that all structures and piping which may result in accidental or unauthorized discharge to the Pacific Ocean be thoroughly inspected and audited independently, and where necessary, brought up to the standards which will prevent chemical or radioactive contamination of the ocean."[5] The design and construction errors that were discovered at the plant associated with the seismic design of the plant were subjected to an Independent Design Verification Program so that its construction meets the approved seismic design criteria.[6] The NRC determined that the plant did not fall into the categories warranting more extensive consideration of Class 9 accidents because it did not fall into any of three categories: (1) high population density around the site, (2) A novel reactor design, and (3) a combination of a unique design and unique siting mode.

However, since the plant was licensed, the population density around the plant has increased. The NRC should reevaluate whether this increase would make the plant eligible for a more extensive consideration of Class 9 accidents. If it does qualify, a plant-specific evaluation for DCPP of the risk of Class 9 accident should be completed as part of the license renewal review taking into consideration the new seismic hazard studies for the site.

2. Accumulation of At-Reactor Spent Nuclear Fuel

Twenty additional years of plant operation will generate additional nuclear wastes of all classes (low, medium and high-level wastes), which would result in additional impacts from waste management, storage, transport and disposal. The long-term risk of at-reactor storage and accumulation of spent fuel on California's seismically active coastline should be reevaluated during license renewal reviews given the uncertainties of when a permanent repository or offsite interim storage facility will become available. The Obama Administration has ordered cessation of most activities relating to the licensing of the Yucca Mountain High-Level Nuclear Waste Repository. PG&E can no BX-2

[5] Letter to Chairman Nunzio Palladino, NRC, from Marit Evans, Chair, Central Coast Region, California Regional Water Quality Control Board, December 24, 1982, Docket Number 50-275 OL.

[6] Letter from Harold R. Denton, Director Office of Nuclear Reactor Regulation, Nuclear Regulatory Commission to Kenneth R. Jones, Executive Officer, California Regional Water Quality Control Board – Central Coast Region, July 21, 1982.

longer count on transferring spent fuel to a federal nuclear waste repository in the near or medium-term future. As a result, PG&E must continue indefinitely to store spent nuclear fuel at the reactor sites. For California, this means that about 6,700 assemblies of spent fuel (approximately 2,600 metric tons of uranium) that are currently being stored at operating and decommissioned nuclear plants in-state, combined with the spent fuel that will be generated in the coming years, will remain at these sites for the foreseeable future. The potential economic and environmental impacts from the long-term storage of nuclear wastes at Diablo Canyon, including low, medium, and high-level nuclear wastes, should be evaluated as part of the plant-specific license renewal environmental review. PG&E should describe the nuclear waste management plan for these wastes, including the plan for managing current and projected waste generated through the end of the 20-year license extension, and this plan should be evaluated in the plant-specific EIS. BX-2 - cont

3. Safeguards and Security

The 1996 GEIS analysis of the threat of sabotage and terrorist attack is severely outdated and inadequate. For example, p. 5-18 of the GEIS states that, "With regard to sabotage, quantitative estimates of risk from sabotage are not made in external event analyses because such estimates are beyond the current state of the art for performing risk assessments." This pre-9/11 analysis focuses on protection against malevolent use of vehicles, including land vehicle bombs, and mentions the NRC's requirement (amended 10 CFR Part 73) that licensees establish vehicle control measures, including vehicle barrier systems, to protect against vehicular sabotage. The GEIS does not take into consideration the risk of a possible air attack on a spent fuel storage pool or dry storage facilities and instead simply concludes that "the regulatory requirements under 10 CFR part 73 provide reasonable assurance that the risk from sabotage is small. Although the threat of sabotage events cannot be accurately quantified, the commission believes that acts of sabotage are not reasonably expected. Nonetheless, if such events were to occur, the commission would expect that resultant core damage and radiological releases would be no worse than those expected from internally initiated events."[7] Based on the above, the commission concluded that "the risk from sabotage and beyond design basis earthquakes at existing nuclear power plants is small and additionally, that the risks form [sic] other external events, are adequately addressed by a generic consideration of internally initiated severe accidents." BX-3

Clearly this discussion is out-of-date and inadequate in light of the September 11, 2001, attacks on the World Trade Center. A 2006 National Academy of Sciences Study on the safety and security of spent fuel storage concluded that, "it is not prudent to dismiss nuclear plants, including their spent fuel storage facilities, as undesirable targets by terrorists."[8] Also, "…attacks by knowledgeable terrorists with access to advanced weapons might cause considerable physical damage to a spent fuel storage facility, especially in a suicide attack." The NAS Committee further concluded that, "under some conditions, a terrorist attack that partially or completely drained a spent fuel pool could lead to a propagating zirconium cladding fire and the release of large quantities of

[7] NUREG-1437, 1996, p. 5-18.
[8] National Academies, *Safety and Security of Commercial Spent Nuclear Fuel Storage*", 2006, p.35

radioactive materials to the environment."[9] The NAS Committee also concluded that, "The potential vulnerabilities of spent fuel pools to terrorist attacks are plant-design specific. Therefore, specific vulnerabilities can be understood only by examining the characteristics of spent fuel storage at each plant."[10]

BX-3 - cont

The NRC states that security issues are not tied to a license renewal action but are considered to be issues that need to be dealt with constantly as part of the current license.[11] However, extending a plant's license to allow it to operate an additional 20 years will change the spent fuel-related security threat because of the larger quantities of spent fuel stored at the reactor site. These additional quantities of spent fuel could pose a richer and more attractive target for potential terrorists. License renewal results in a far greater accumulation of spent fuel stored at a reactor than was envisioned when the plants were first licensed.

The plant-specific studies for the DCPP license renewal should recognize the increased potential for terrorist attacks on nuclear power plants and spent fuel storage facilities, including air attacks similar to those that occurred on Sept. 11, 2001. The plant-specific environmental impact review for the DCPP license renewal should include meaningful analyses of the potential risks and environmental impacts from large-scale terrorist attacks on spent fuel storage at DCPP, taking into consideration the potentially affected population (i.e., residents, businesses, and workers) and available transport routes. Although some of the security information pertaining to nuclear power plants must remain "safeguarded" information, an appropriate level of information should be provided to the public during the license renewal review to help ensure that all reasonable efforts are being made to minimize the risks and consequences of a potential terrorist attack.

4. Aging Plant Issues

BX-4

The Energy Commission requests that PG&E and NRC's plant-specific EIS should describe the aging management programs for DCPP plant components and how these programs will be evaluated, at what frequency, and how quality assurance programs will be maintained at DCPP. In the license renewal proceeding for the Pilgrim Nuclear Station the NRC judged the adequacy of the plant's Aging Management Program simply on whether it provided "reasonable assurance" that the components would perform the functions outlined in 10 C.F.R. Section 54.4(a) (1) – (3)." This standard appears to be vague and insufficient to ensure reactor safety over a 20-year license renewal period. The basis for such a finding should be provided as part of the GEIS and environmental review. For example, the problem of substandard or counterfeit plant replacement parts, including defective welds such as the ones found in SONGS new steam generators, should be addressed within a plant's aging management plans. Aging plant management plans should include plans for guarding against the procurement of substandard or counterfeit parts and for detailed inspections of all new parts.

[9] Ibid, p. 57.
[10] Ibid. p. 58.
[11] NUREG-1437, 2009, p. 1-12.

BX-4 - cont

In addition, as we enter an era of large numbers of aging and refurbished nuclear pow plants, it is important that the NRC begin developing additional proactive methods for identifying age-related safety problems before they become significant. In NRC's license renewal application review, the DCPP should be evaluated in detail for aging issues and trends to identify preliminary or potential "anticipatory indicators" of safety problems related to plant aging. Trends could include steam generator tube cracking, vessel head corrosion, embrittlement, repeated unplanned reactor shutdowns, long-term problems, and/or repeated failures in safety-related equipment. These issues must be evaluated on a plant-specific basis rather than as part of the GEIS.

In the case of DCPP, which is located in a seismically active region, the combined effects of age-related degradation, including DCPP reactor pressure vessel embrittlement issues, and the risk and potential impacts of a major earthquake should be evaluated. For example, earthquakes are considered possible initiating events for the development of through-wall cracks that could challenge the integrity of a reactor pressure vessel. According to NUREG-1806, under NRC's old regulations for assessing the probability of a crack forming through the wall of a reactor pressure vessel, DCPP Unit 1 and nine other reactors would have exceeded the screening limit during a 20-year license extension.[12] If such a crack occurred, it could damage the reactor core and, in some cases, release radioactive materials into the environment.

The probability of crack formation relates directly to the extent of reactor pressure vessel embrittlement, which determines the ability of metals that make up the reactor pressure vessel to withstand stress without cracking. As such, these reactors would not have been eligible for license renewal unless they reduced the embrittlement rate or demonstrated that operating the reactor would not pose an undue public risk. Under NRC's new methodology, assessing the probability of a crack forming through the reactor pressure vessel wall results in a much lower calculated embrittlement for most reactors. Since DCPP Unit 1 has been identified as having significant reactor pressure vessel (RPV) embrittlement issues, the plant-specific DCPP EIS should examine the risk of a crack forming through the wall of an RPV at DCPP, explain the technical assumptions used in calculating RPV integrity, the frequency by which RPV integrity will be reevaluated over the remainder of the DCPP operating license (e.g., including the 20-year license extension period), and how new information from planned advanced seismic hazard studies for Diablo Canyon will be taken into consideration in these periodic reevaluations of RPV integrity.

[12] The NRC recently revised its regulations to provide licensees with a new alternative for assessing the probability of a crack forming through the wall of a reactor pressure vessel. The old regulations required licensees to demonstrate that reactor pressure vessel embrittlement would not exceed a screening limit corresponding to a one-in-200,000-year probability of through-wall crack formation. The NRC's recently adopted regulations expand this requirement to a one-in-a-million-year probability, while allowing for the use of a less conservative methodology for assessing the probability. Using the new methodology, reactor vessel pressure embrittlement is no longer expected to limit any U.S. reactor from obtaining a 20-year license renewal. (NUREG-1806, p. xxii and Appendix D.)

5. Emergency Response Planning

BX-5

The NRC recently considered the need for a review of emergency planning issues in the context of license renewal and concluded that programs for emergency preparedness at nuclear plants apply to all licensees, that all operating licensees must keep up with changing demographics and other site-related factors,[13] and that there is, therefore, no need for a special review of emergency planning issues in the context of a plant-specific environmental review for license renewal.[14] However, the public has expressed considerable concern about the adequacy of evacuation plans and emergency preparedness plans at DCPP, particularly with regard to access to emergency routes in the event of an earthquake or terrorist attack. Although the NRC, state and local agencies, and utilities routinely conduct table-top exercises, people are concerned about the lack of real testing of these plans and whether such plans will work in an actual emergency. Some have expressed concern that the infrastructure and roadways are not adequate to evacuate communities in a timely manner. Another common concern is that evacuation routes might be blocked due to traffic congestion or damaged roads, for example, following a major earthquake.

Clearly the population potentially impacted by the release of radioactive materials following an accident or attack on a nuclear power plant and the viability of emergency preparedness plans vary from plant to plant. As such, the NRC should include an evaluation of emergency planning as a plant-specific issue and should evaluate it in the supplemental plant-specific evaluation for DCPP, including how an earthquake might impact plant worker and community evacuation timeliness and planning.

6. Plant Safety Culture

BX-6

The NRC noted recently that the license renewal environmental review is confined to environmental matters relevant to the extended period of operation requested by the applicant and that safety and security matters are considered outside the scope of the license renewal review.[15] However, the license renewal review for DCPP should also include an evaluation of the plant's safety culture. It is not just the pieces of hardware that are important in predicting a plant's overall safety and performance – it is also the people who operate and maintain the plant. Assessing the safety culture of a plant at the time of license renewal is essential for predicting future plant performance and safety.

When plants malfunction or accidents occur, human error or a degrading safety culture at a plant is often to blame. As NRC Chairman Jaczko recently noted, NRC has "increasingly focused on safety culture in recent years for the simple reason that we have found that a deteriorating safety culture is often associated with safety problems. Sound rules and procedures are certainly necessary to further safety, but the NRC and

[13] NUREG-1437, 2009, p. 1-11.
[14] NUREG-1437, 2009, p. 1-12.
[15] NUREG-1437, 2009, p. A-95.

our licensees all need to continually work to cultivate the type of open, collaborative organizational culture that will best enable us to meet our safety and security goals."[16] BX-6 - cont

A plant-specific review of safety culture is essential to evaluating the safety of a plant operating an additional 20 years. Investigations of the Columbia Space Shuttle disaster (2003), the Davis-Besse incident (2002), and the Challenger Space Shuttle disaster (1986) disclosed major deficiencies in risk and safety assessments and management practices that developed over time. The "lessons learned" from investigative reports of these events identified additional factors that are important to consider during program reviews. These lessons seem highly relevant to our nation's aging nuclear power plants, given the current emphasis on increased plant efficiencies, production, and cost-cutting measures – sometimes at the expense of plant safety. NRC should incorporate these lessons learned, as appropriate, into its nuclear power plant license renewal programs and in its plant-specific license renewal review of DCPP.

In its Response to Comments in the GEIS,[17] the NRC staff noted improvements in the NRC's inspection and assessment procedures following the Davis-Besse reactor head degradation and enhancements to the NRC's Reactor Oversight Program to more fully address licensee safety culture. However, a plant's safety culture merits reexamination during license renewal reviews, similar to the need to reexamine thoroughly aging plant components and hardware during license renewal reviews. Therefore, an evaluation of DCPP's management and safety culture during the license renewal review and during plant inspections is necessary to obtain a complete and accurate assessment of the plant's overall predicted safety and performance during the 20-year license extension. An evaluation of the DCPP safety culture should be included in the NRC's and PG&E's assessments of the adequacy of the licensee's aging management plans and should be evaluated in the DCPP plant-specific supplemental environmental evaluation for license renewal.

7. Evaluation of Energy Alternatives

The 1996 GEIS' discussion and evaluation of energy alternatives to license renewal is deficient and out-of-date and should be updated. The alternatives considered in the GEIS included wind energy, photovoltaic (PV) cells, solar thermal energy, hydroelectricity, geothermal energy, incineration of wood waste and municipal solid waste (MSW), energy crops, coal, natural gas, oil, advanced light water reactors, and delayed retirement of existing non-nuclear plants. Similarly, the discussion of the uranium fuel cycle and waste management impacts including transportation, storage and disposal of nuclear waste is out-of-date and needs to be updated. BX-7

In addition, the types of replacement power available and the environmental impacts from alternative energy sources vary substantially from region to region. For example, a portion of the electricity generated by Diablo Canyon could be replaced by renewable resources located in central California and augmented by dispatchable gas-fired

[16] NRC News, "NRC Chairman Gregory B. Jaczko Remarks at Today's meeting on NRC Safety Culture Initiatives", March 30, 2010, No. 10-056, p. 1.
[17] NUREG-1437, 2009, Vol. 2, p. A-84 and A-85.

BX-7 - cont

resources. The latter, capable of cycling up and down, unlike the DCPP, would facilitate the integration of the intermittent resources that are expected to contribute significantly to meeting California's renewable energy goals.

The NRC should require regional or site-specific lifecycle evaluations of nuclear power and alternative electricity sources, including wind, solar, biomass, geothermal, and energy efficiency. In some regions base load renewable resources or a combination of intermittent renewable resources and gas-fired generation or energy storage could replace large quantities of nuclear power. Evaluations of the environmental impacts of these power options during license renewal reviews should include "cradle-to-grave" or lifecycle environmental impacts. Therefore, the plant-specific EIS for DCPP should include an analysis of the environmental impacts of the alternatives for replacement power that are specific to the DCPP region.

8. Once-Through Cooling

BX-8

The State Water Resources Control Board (SWRCB) released a draft policy in June 2009 and a final policy on March 23, 2010, on the use of the Pacific Ocean for power plant cooling.[18] The SWRCB found that DCPP and SONGS' cooling systems are responsible for a major portion of all Once Through Cooling (OTC)-related impingement mortality and entrainment losses along the California coast.[19] The proposed policy calls for coastal power plants to cut water intake by 93 percent to reduce the harmful impacts on marine life. Power plants are given several options: (1) to be retrofitted for closed-cycle wet cooling, dry cooling towers, or other cooling means, (2) to be repowered with a non-OTC technology, or (3) to be shut down. However, in recognition that previous studies have found that, for California's nuclear plants, these options would be very expensive and possibly infeasible from an engineering perspective, the two California nuclear plants are given special consideration in the proposed policy. Therefore, the proposed policy would allow these nuclear plants to be exempted from the on-site mitigation requirements if the utilities demonstrate that the costs of compliance are excessive. A new round of mitigation cost studies will be required to be completed within three years under the supervision of the SWRCB and an advisory committee. The nuclear plants could also be exempted if the utilities demonstrated that full compliance would result in a conflict with the NRC's safety requirements. In both circumstances, the SWRCB could impose less stringent on-site compliance requirements on the plants, but would then impose off-site compliance mitigation requirements. The draft policy requires that any gap between onsite requirements and the basic standard for OTC compliance "shall be fully mitigated." The deadline for DCPP compliance with these new OTC requirements is 2022.

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[18] See [http://www.swrcb.ca.gov/water_issues/programs/npdes/cwa316.shtml].

[19] "Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling: Draft Substitute Environmental Document." State Water Resources Control Board and California Environmental Protection Agency, July 2009, page 47. http://www.swrcb.ca.gov/water_issues /programs/npdes/docs/cwa316/draft_sed.pdf ;State Water Resources Control Board (SWRCB), California Environmental Protection Agency. "Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling." SWRCB_1000_2008_001. March 2008, pages 13-16.

BX-8 - cont

If the SWRCB's policy is approved (SWRCB meets May 4, 2010 to vote on the policy), the agency will direct PG&E and SCE to commission an independent study to assess the costs of alternative options for their facilities to meet the requirements of the SWRCB's policy. These studies and their consequences, in terms of compliance activities mandated by the SWRCB, should be coordinated with the studies required by NRC for license renewal.

9. Need for the NRC to Hold License Renewal Hearings near DCPP

BX-9

NRC should provide an opportunity for the residents, plant workers, local officials, schools, and businesses located near DCPP to comment on the scope of the issues to be considered during the license renewal reviews. The NRC should conduct public meetings for the DCPP license renewal in the San Luis Obispo area both during the day and the evening to accommodate the work schedules of members of the public.

10. Public Comment Process

The NRC has stated that it will consider public comments that provide any information that is new and significant compared with that previously considered in the GEIS and will address these comments in the SEIS. The NRC should clearly explain what criteria are used to determine what is considered to be "new and significant information." In prior nuclear power plant license renewal proceedings, state representatives and members of the public have provided new and significant information related to seismic, emergency response, population demographics, the potential impacts particularly in largely populated areas from acts of sabotage or a terrorist attack, and other issues related to license renewal, and yet the NRC has found those issues to be non-admissible contentions. It is unclear why the NRC excludes from license renewal proceedings site-specific issues that clearly affect the safety and costs of the continued operation of a nuclear power plant.

Conclusions

California's two operating nuclear power plants provide about 14% of the state's total electricity generation and have operated approximately half of their 40-year initial license periods. PG&E has submitted a license renewal application to the NRC for Diablo Canyon and Southern California Edison Company is exploring the feasibility of seeking a 20-year license extension for SONGS. If granted, license renewals could keep Diablo Canyon and SONGS in operation until the mid-2040s. In past license renewal proceedings, the NRC has excluded an examination of seismic hazards, plant security, emergency preparedness, environmental review of spent fuel storage, and analysis of spent fuel storage options from the scope of NRC's license renewal review. The NRC's Office of Inspector General completed an audit of the license renewal process in September 2007 and concluded that NRC staff should improve their analyses and audits.[20] An important means for improving the NRC's license renewal process would be to revise the license renewal review to allow important site-specific

[20] *Audit Report: Audit of NRC's License Renewal Program*, Nuclear Regulatory Commission Office of Inspector General, OIG-07-A-15, September 6, 2007.

BX-9 - cont

issues to be reexamined during this review rather than relying upon, as in the case of PG&E's license renewal review, an outdated GEIS (1996) that was published before the events of September 11, 2001, and before considerable new seismic research information has been developed. New and significant information has arisen since DCPP originally received its operating license and this information should be examined during its license renewal reviews.

BX-10

The discovery, announced to the public in 2008, of a new Shoreline Fault near Diablo Canyon is an example of new and significant seismic information that should be reviewed during Diablo Canyon's license renewal review. The USGS and PG&E are conducting additional seismic research in the vicinity of Diablo Canyon, and the Energy Commission has recommended additional tsunami and seismic research at both Diablo Canyon and SONGS. The NRC and the USGS are beginning in January 2010 an independent assessment of Diablo Canyon's seismic research program. New and significant seismic research information resulting from these studies must be considered in Diablo Canyon's license renewal review. Seismic issues, particularly when new and significant seismic research information is available, should be considered plant-specific issues to be examined during license renewal review.

BX-11

Plant safety culture has been an ongoing concern at plants throughout the U.S. and should receive as much scrutiny and attention during the NRC's license renewal review and plant-specific environmental impact assessment as attention is paid to the aging plant components, hardware, systems and materials. Plant management and plant workers' attitudes and strict adherence to proper maintenance and safety procedures are extremely important, particularly in aging reactors, as plant components and systems show signs of aging and stress.

We recommend that the NRC include seismic; emergency response planning; safety culture; evaluation of energy alternatives; once-through cooling; security issues; as well as at-reactor nuclear waste accumulation, transport, and disposal impacts among the plant-specific environmental impacts that will be addressed in NRC's and PG&E's analyses for DCPP license renewal. We also strongly urge the NRC to hold license renewal hearings in the vicinity of DCPP in the San Luis Obispo area.

patients had lung cancer. And then people from Pismo Beach, I remember saying they were furious at the NRC. They said you are killing us. And that fits right in with Jay Gould's research. And so you don't need an earthquake to be killed by nuclear power pollution.

So I think that's just about all I need to say for now. I'm writing a book about Diablo Canyon, the protests that were made in '81, and the thousands of people who were against the nuclear plant. Not the people in the nuclear plant, because we think that there should be economic conversion, because more workers are needed for wind, solar, thermal, and so on, than are needed in nuclear power, without the expense of nuclear power, and without the dangers.

So thank you for your attention.

MR. CAMERON: Thank you, Judy. And now we're going to hear from Joe Boysen.

MR. BOYSEN: My name is Joe Boysen, and I live in Sunset Palisades, and have for about 22 years. And I was here today, so I'm not really addressing any of my remarks to the NRC people, because I think they have heard about as much as they want to hear from me. I'm hoping to reach people in the audience who are perhaps of a like mind.

I hope we can count on the NRC. I think AY-1

AY-1 - cont

they're fine people, especially this handsome leading man who is quite an asset to them, I think, Troy Pruett. But I don't think that--I think they're going to approve this, you know, and I think we have to look elsewhere. The score, right now, is 57 to nothing. They've approved 57 extensions.

I don't know why they have twenty more. I mean, I think there's 63 plants and locations, 104 reactors. So if they've approved 57, it seems like, you know, they've all been given a new lease on life.

I am a little disturbed by so many things, but one of them is I think that it's a bit of abuse of the process to have so many PG&E loyalists speaking, naturally, on behalf of, you know, the company, that they have a lot of loyalty to.

AY-2

I've heard some comments I want to try to respond to. The beautiful drive in on--which one of the fellows mentioned--why he regretted that we can't enjoy it. And I would say why can't we enjoy it? 12,000 acres. I would point out that if Judy does write her book, that's a squalid history. That land is land of Chumash people. That's land of people that were put in internment camps in 1942. That's land of old white ranchers facing bankruptcy. That land has a bad chain of title, and I think that the real story is

1 even worse.

2 They own that land, and they bought it AY-2 - cont
3 with our money. We're the sovereigns here, we're the
4 rich people, not PG&E. I, and others, pay 85 percent
5 of the school cost in San Luis Obispo Coastal, as
6 taxpayers, and that should be taken into account. The
7 appearance here of a school superintendent today was a
8 little upsetting. And then to have somebody from the
9 board of trustees--it seems to me like that
10 politicizes. We're the 85 percent. We're the rich
11 people. The money that PG&E has is money that has
12 been obtained from us.

13 We need a grassroots opposition group, I
14 think here, and if anyone wants to throw in on that,
15 because we're be--as far as this NRC process, no
16 matter that--they're going to interpret this the way
17 they do. It's scary here. I tried to put an ad in
18 the Tribune, and was just locked out. They just so
19 heavily censored it, that to get announcements out to
20 people--you know? Because I know what has to happen
21 is phone calls.

22 But that was a very upsetting experience.
23 I went in and--including after this Chilean thing. I
24 thought, for sure, they would relent. They wouldn't
25 let me talk about earthquakes and tidal waves.

1 Wouldn't do it. Too much red meat. Had an interview
2 with the KSBY 6 today. Didn't show up on the news.
3 Okay. I don't need the exposure. But the people need
4 to hear these things.
5 We are the sovereigns here. We are the
6 rich ones. We're playing Russian roulette with
7 Murphy's Law, and with Mother Nature. With Murphy's
8 Law, in so far as we are dealing with the most
9 dangerous technology in the history of mankind. With
10 respect to Mother Nature, the Pacific Ocean, the tidal
11 wave threat that's present in this county, on this
12 coast. Where I live was destroyed in 1907. There was
13 a brand new refinery. It lasted three weeks.
14 It was a place called Oilport. Actually
15 existed. There was a harbor--what do you call it?
16 You know, the pier was destroyed, and the buildings,
17 and never functioned after that.
18 Avila was destroyed by a tidal wave in
19 1878. God only knows what else the record would show.
20 This jobs argument. We hear that all the time. The
21 20 percent--there's going to be plenty a jobs. I
22 mean, the county was probably better off before. 20
23 percent argument. That we get 20 percent of the
24 power. Well, it's been used to finance growth that we
25 don't need and don't want.

AY-3

1 We can--the one, clearest solution, is the AY-4
2 one that's available from conservation. And this
3 business about bashing. This is now being used to AY-5
4 push this Obama plan, to reinvigorate the nuclear
5 industry. And this business about bashing carbon.
6 Global warming is one thing, and that's fairly well-
7 acknowledged.
8 But the carbon--the scientists are
9 standing against the carbon as the causative force
10 there. They say it's like being a Holocaust denier.
11 They're just shut down. They can't get their word
12 out.
13 Subsidy of unlimited growth. Altitude AY-6
14 questions. I've asked this over and over again. I
15 think that plant's lower than 85 feet, and that
16 storage is lower than 300 feet. I was told, first, it
17 was a mile back. It's a quarter-mile back. Jeff said
18 we have already paid the environmental price. Well, I
19 hope he's right, but I think we haven't paid the
20 environmental price. That's what we're concerned
21 about paying, is the environmental price, which would
22 be--imagine trying to--that plant needs to be shut
23 down now.
24 You couldn't get a license for it now and
25 you don't extend a license, and it shouldn't be

extended. But why would you extend a license if you, if you--in other words, if you don't extend the license, that means you have to shut it down now, rather than take another 15 years of risk.

AY-6 - cont

We wouldn't, we wouldn't give the license now, so we're the ones that are on the line. It's not PG&E. PG&E's broke. Abuse of--jobs argument--environmental-friendly. Larry said it was environmentally-friendly. I don't know how you can say that with a straight face, when you're creating fuel, spent fuel that will, many thousands of years from now will still be--and you're storing it on site, and they have eight casks out there but there ought to be eighty.

AY-7

They have another eight they're going to fill. But there's so much stuff in the ground, they, they already have 87 of them spoken for. They need three and a half a year, and this--we'll end up with two hundred--

MR. CAMERON: Mr. Boysen, I'm going to have to ask you to wrap up.

MR. BOYSEN: Okay. Can I just wrap up here?

MR. CAMERON: Okay.

MR. BOYSEN: This business about the tide

AY-8

AY-8 - cont

pools, and, you know, it's so much better down by the plant than it is over by Montana de Oro, so I guess we ought to put a reactor out there, so they can clean the water up. I would say, those who have confidence in--a lady said today, she said they wouldn't be operating if it wasn't safe, and this fellow said NASA, you know, that's something we can look up to. Well, NASA was in charge of the Challenger fiasco, and I hope I'm not like the guy that they wouldn't listen to on the O rings.

One-legged birds and pristine tide pools. What I remember are the one-legged birds that used to hang over by Fat Cats, and I think I don't see them anymore because I think they're extinct.

MR. CAMERON: Okay.

MR. BOYSEN: If anybody wants to--

MR. CAMERON: Thank you very much.

MR. BOYSEN: --join up, let me know. Thank you.

MR. CAMERON: Thank you. And we're going to go to Chuck Linden at this point.

MR. LINDEN: Good evening. I'd like to thank the NRC, being here, and allowing this open session with everybody here. I am from the Midwest. Life's a lot different. We don't have earthquakes.

MR. JACK: Sandy Jack.

MR. CAMERON: Sandy Jack. Thank you, Sandy. Let's go to Barbara and then we'll go to this gentleman back there. Barbara.

MS. BYRON: I was just wondering when the NRC expects to put out the Scoping Report?

MR. STUYVENBERG: The Scoping Report will be out some time before the Environmental Impact Statement. So it will depend on how lengthy the scoping comment is. I anticipate, at this point, that we're going to have a relatively large volume of scoping comment. So I would expect it some time early this coming fall, but I don't have a specific date for that. Staff will certainly be looking through that as they start their review, though.

MR. CAMERON: That was Barbara Byron from the California Energy Commission.

Yes, sir. Please introduce yourself to us.

MR. BOYSON: Yes. My name is Joe Boyson and I live in Sunset Palisades, and have for almost 22 years.

My question is about these environmental B-1
review milestones, a procedural question, and I am curious, and I hope you can amplify. It says here the

B-1 - cont

application was received November 24th of 2009, and it moved quite rapidly. There was a public information meeting on February 9th, and this, two sessions today, this afternoon and this evening, March 3rd--it's my understanding that this is the final meeting. It's kind of a "speak now or forever hold your peace" situation, such that a little over three months have passed. That's my definite impression, because I have been aware that this business about applying for a hearing--and I think it's called an adjudicatory hearing--and that deadline is March 22nd, and my impression is that this is a front-loaded process, and our chances to--we're the customers and the sovereign people, and so forth, and our chances to impact it are sharply controlled, and I'm wondering if that's true, because I'm seeing here scoping comments, you know, that date, and then I'm seeing this Environmental Impact Statement, which I understood that that generic one was something provided by PG&E, by the way.

And I thought that maybe your EISs, your response to that and so forth, I see here that--and you said that there's a public meeting in December of 2010. But is this subject still open, or what is happening today, that is narrowing down this process?

Am I correct, that this is the--and I

B-1 - cont

1 don't know why it is that you can't have more
2 meetings. In other words, this has happened rather
3 rapidly and, you know, I've had some--I think a lot of
4 people would be interested in this, if they realized
5 this. I attempted to place an add to generate more
6 knowledge of these, and there isn't even an article in
7 today's paper.
8 The paper allowed me to put a very small
9 ad in. They would not permit a larger one. So I'm
10 very concerned about--
11 MR. CAMERON: Mr. Boyson, let's--Drew, can
12 you make sure that everybody--Mr. Boyson and everybody
13 else knows about--
14 MR. STUYVENBERG: Yes.
15 MR. CAMERON: --what the process is, and
16 the fact that it's not--that what we finally end up
17 with is going to be dependent on what the public
18 comments are. Can you just go through that again, for
19 him, and for everyone.
20 MR. STUYVENBERG: Absolutely. And I'm
21 sorry, I didn't mean to try to jump in there, there
22 were a lot of questions that I wanted to try to
23 answer. First of all, with regard to whether this is
24 the last opportunity for public comments, the public
25 comment opportunity comes back again on the draft

1 MR. CAMERON: Okay. Thank you very much.
2 We would go for one more question to Mr. Boyson, and
3 we'll go over here, and then we're going to go to
4 being able to listen to your comments.
5 Mr. Boyson, you had a follow-up on the
6 environmental review?
7 MR. BOYSON: Yes; a follow-up. On this B-2
8 business about this adjudicatory hearing, you had--I
9 want to ask you, do you have any applications, or
10 whatever is the correct terminology, for that now, and
11 are you likely to call for adjudicatory hearings?
12 I had the definite impression from the
13 earlier meeting, and I guess that's the February 9th
14 meeting, that--from you, I believe--that you thought
15 that it was likely that there would be an adjudicatory
16 hearing. At least that's what I understood.
17 And so my question is: Do I have to apply
18 for that? Or have other people applied already, and
19 are you likely to--my whole question is: What's the
20 hurry here? Because it does seem like we're narrowing
21 down very quickly. And that's my question.
22 Are there going to be--is there going to
23 be an adjudicatory hearing, in your judgment?
24 MR. CAMERON: And Drew, whatever
25 information you have on that for everybody would be

1 Boysen. Then we'll go to Dave Wrona.

2 Mr. Boysen.

3 MR. BOYSEN: Thank you. I want to warn

4 all of you that I'm not ready for primetime. I'm not

5 an experienced speaker and I'm not very well

6 organized. My name is Joe Boysen. I live in Sunset

7 Palisades, which is where I have lived--my wife and I,

8 Mary, have lived for 22 years with our son Dane. And

9 I have quite a bit to say. I hope you allow me to say

10 some of it. I'm going to try to talk faster than I

11 usually do.

12 And this is kind a going to be jumping B-3

13 around. I wanted also--I want to admit that I'm no

14 green, sixties flower child, and I'm not liberal. And

15 having said all that, I'm very much against this

16 license extension, and I'm very much against the

17 continuation of Diablo Canyon, in fact, any of the

18 other power, nuclear power plants for one moment

19 longer.

20 So I have a definite--I didn't enter this

21 with a bias, I don't believe, but I've become

22 interested over the last few months, and it's been an

23 interesting experience.

24 For the good of the order, I would like to B-4

25 suggest that there be future meetings, and that they

B-4 - cont

be one meeting and not two meetings. I think the media tends to cover this afternoon meeting, and I'm very disappointed with the turnout. Last time, the evening meeting, which the media did not cover, was much better attended.

We feel like we have to go to both meetings. I think, in some sense, there's a "divide and conquer" element happening here, which is certainly not intended. But I think there should be one evening meeting, which more likely would be one that could accommodate us, so that as a community, we're at least together.

I want to comment that by my count, I'm speaker number 29,and I would say that there's been a sizeable number in favor of, more or less in favor of PG&E and in favor of Diablo, and so forth, and I do have the feeling that it was, there was some orchestration going on here.

We've heightened our effort. I tried to place an ad in the Tribune to stir up some more attendance, and that ad was heavily censored, I'm sorry to report.

I want to commend Adam Hill for coming here today and for staying as long as he did. One of the gentlemen said that he was going to protest that.

1 Well, the other side of the coin, I'm very thrilled
2 by that and by the congresswoman's letter.
3 On this question of nuclear power, these
4 nuclear plants are unsafe, under any circumstances.
5 We are playing Russian roulette with Murphy's Law.
6 This is the most dangerous technology in human
7 history.
8 In our case, we're playing Russian B-5
9 roulette with Mother Nature. We live where we live.
10 A history of tidal waves, of tsunamis. 1878 wiped out
11 Avalon. 1907 destroyed the power plant where I live
12 today. These, and other instances, which doubtless
13 are available to one who studies such things.
14 I won't even mention the earthquake thing.
15 You know, it would seem like this is--we don't even
16 need to have this meeting after what happened in
17 Chile. I would say that of the speakers here, many of
18 them were people--this is a county that has a lot of
19 government employees, and retired government
20 employees, and I think that the NRC should take that
21 into account. And there are people who--and by the
22 way, in all these things, the good people, good people
23 at the Tribune, good people at Diablo, good people on
24 the NRC, good people on the Safety Committee.
25 So none of these comments are directed at

1 any of those individuals, and it's a question of
2 disagreement.
3 This earthquake business. The tsunamis. B-6
4 Spent fuel is forever. We're funding something on a
5 completely insane basis of--we're creating something
6 far into the future which we don't know how to handle.
7 This business about the 20 percent
8 argument. We're using power, way too much power, that
9 we don't need anyway, and we're doing it to fuel a
10 runaway growth situation where we have 300 million
11 people instead of maybe the 240 million which, at
12 most, we should have. And if we didn't have those
13 extra people--and those of us who have been fighting
14 growth--we wouldn't have those people, and close our
15 borders, and so forth--we wouldn't have the power
16 need.
17 Diablo funds excessive growth. The B-7
18 alternatives. There's plenty of alternatives, and I
19 want to point out in this business of global warming
20 and the carbon argument, there's two different
21 arguments there, whether global warming's occurring or
22 not and what role carbon has in it.
23 And there's a small body of scientists who
24 are routinely shut off. There's a recent movie on
25 this on Sundance channel, who maintained that the

1 carbon argument is not what's causing the global B-7 - cont
2 warming, since the carbonization has been going on
3 heavily since 1940, and this warming didn't occur
4 until after that.
5 Rich PG&E. We're the ones who are rich.
6 We're the sovereigns. We're the land owners here.
7 PG&E is rich because they've gotten it from us. We
8 don't have to adopt a war economy, or a broken glass
9 economy, or employ our daughters as streetwalkers in
10 order to be able to have a future. We're the rich
11 ones, not PG&E, so we oughtn't go hat in hand to PG&E.
12 Of course they've been good citizens.
13 They're good people. What would you expect? But it's
14 our wealth. This "carbon bashing," I've mentioned. I
15 call it "carbon bashing theology." Jobs argument.
16 Ditto.
17 We have what we have. In fact,
18 everybody's "on the ropes." The Tribune's on the
19 ropes. The Tribune was a strong organization when I
20 came here in '88. So in what way have they gained
21 from this wonderful economy? And the man said that he
22 can barely afford the power he already has. Well, why
23 is the power so expensive, if everything's so
24 wonderful? While I'm on it, the fellow who--Walsh, I B-8
25 guess it was, he made it sound like there wasn't any

B-8 - cont

1 problem with these, this storage question.

2 Well, if there's no problem, what are we

3 talking about?

4 MR. CAMERON: Excuse me, Mr. Boysen. If

5 you could, please just go ahead and summarize.

6 MR. BOYSEN: I'm trying to.

7 MR. CAMERON: Thank you.

8 MR. BOYSEN: I'm trying to. Tax revenue.

9 And don't be hurrying us. We're the sovereigns here.

10 There is no hurry. The hurry is coming from the

11 process. You are our representatives, NRC. You work

12 for us. You don't work for PG&E.

13 Tax revenue argument. The costly cleanup. B-9

14 I want to get this--

15 [Clapping]

16 MR. BOYSEN: Good; do it. Costly cleanup.

17 What kind of a cleanup will it be, if we have to do

18 it in a negative environment after a disaster has

19 happened? Think of that. What I'm recommending is

20 that we decommission all of these plants, but B-10

21 particularly this one where we live, and that we

22 dismantle it.

23 The cleanup can occur in an orderly

24 fashion now. I can't even tell you what it would be

25 like, if we were in a post-tragic environment. Just a

growth. That goes without saying, and it goes without saying as far as energy.

Reprocessing isn't an answer. The reprocessing leaves 90 percent. I think there's been some orchestration here. I mention that--one-legged birds versus pristine tide pools. One-legged birds. Where do we see the one-legged birds? Well, maybe they're all extinct by now, but they used to be down at--what is it? Fat Cats. The birds down there were one-legged birds, and that was a result of, you know, birth defects. I say it--maybe you remember the one-legged birds. You still seeing the one-legged birds?

A government county, tide pools. We are, again, the sovereigns, and I--we got to keep this alive. This is not okay. Suppressing ads, and so forth is not going to be a permanent thing. We're going to be organized, we're going to be here, and we want--I want to hear an assurance from you that this process is going to remain open, and not rush to a judgment.

Again, will you brief the people tonight on what they missed today? I think that ought to be a routine part of this, since you have had two meetings, so that they are acquainted with what was said today. And with that, I thank you. I may eventually have to

B-11

B-12

DiabloCanyonCEm Resource

From: M.L Boysen [mlboysen2000@yahoo.com]
Sent: Tuesday, March 09, 2010 6:08 PM
To: fmeacham@co.slo.ca.us; bgibson@co.slo.ca.us; ahill@co.slo.ca.us; kachadjian@co.slo.ca.us; jpatterson@co.slo.ca.us
Cc: janeslo@me.com; janeslo@kcbx.net; dianedolden@gmail.com; Stuyvenberg, Andrew; dcsafety@dcisc.org; rochelle@a4nr.org; info@wdc.greenpeace.org; info@icanw.org
Subject: What We Know....

To: The San Luis Obispo Board of Surpervisors and Other Interested Parties

Subject: What Do We Know about Nuclear Power

Date: Tuesday, March 9th, 2010

Dear Sirs,

BN-1

Thank you for appearing at today's meeting on our behalf. May I please add a comment or two.... *trying* to be brief first, some or all of the older nuclear plants on the East coast are apparently now leaking tritium into the aquifers there. This is serious. After fifty or more years, we still know very little of Nuclear technology. We can't control it well nor neutralize it or its' waste. We don't know how. What little we know comes from the first plants built on our Eastern coast and the alarming results of waste dumped in the ocean, yet we didn't hear about these deadly leaks at today's meeting. It occurs to us that this plant near us may well want relicensing before it begins to leak --when, *hopefully*, it would be shut down as the Vermont plant is being shut down-- incidentally, by the state government, not the NRC. But PG&E has money, OUR money, and the power to intimidate with their soothing "everything is fine, no worries" well paid professionals who seem so sincerely to believe in proliferating this *Never Ending Deadly Waste* problem.... for jobs? the money it will bring shareholders? a laissez-faire attitude towards the future of our children, wildlife and planet?

BN-2

It seems clear the NRC is cosier with PG&E than with safe and sane technology asked for by "We the people".

BN-3

The state of Nevada which is nearly 85% federally owned has nuclear "forever" waste leaking into it's ground water too and that poison is now heading West.... we don't have the technology to stop it. To comfort us they tell us it is moving "slow". This is *not* comforting. Yucca Valley is a "dead issue" per the NRC, so there is NO federal depository in our future and WE will be stuck with this deadly "forever" waste there at the plant, at the seaside, the doorstep of Mother Nature, the Terror of the Pacific Rim. The cost of moving the waste is prohibitive even IF there were a place that would accept it-- even South Dakota turned it down despite the promised jobs it would bring.

At one point in time it was suggested that the U.S. accept nuclear waste from other countries. Is this in our future?

BN-4

Second, we would hope the seismic and other "studies" could be done by an INDEPENDENT group, not a PG&E in-house study. We heard NRC's young "Berkeley PhD" seismologist speak and were not impressed with the "nonspeak" language she used as she assured us -- all is well, no worries, our plant can withstand a 7.5 quake. As we know, Mother Nature certainly does not listen to such assurances nor is she bound by such questionable numeric quantifications.

One also wonders why the shareholders' money is not involved but only the rateholders, OUR money?.... we are apparently asked to provide the eighty-five million dollars (today, March 9th they thought about fourteen million dollars. Last week they admitted to having spent nineteen million thus far) they will spend trying to convince us we should be saddled with countless more tons of "forever" waste waiting for a quake, tsunami, terrorist or just a sleepy employee to touch off the agonizing deaths of countless thousands of us and the ruination of our farm lands for tens of thousands of years. (Perhaps we are no longer a rich agricultural state and that no longer matters?)

BN-5

In short, this is a technology that the *world's* "Best" and "Brightest" have not been able to control or neutralize. Too much deadly waste has already been dumped into our oceans, including near the Farallon Islands off the coast of San Francisco (47,500 barrels, 14,500 Ci). And witness the hundreds of thousands of tons of chemical waste – that we know of--- dumped into the beautiful Baltic Sea. This can't be an Answer. Those in charge are now in the dark as to what to do.... they fear removing these various wastes-- to put, where?-- would be worse than leaving them there. The Farralon dumping for over twenty-four years was the brainchild of the Atomic Energy Commission....now the NRC... a result of not knowing or understanding the technology we are playing with. We are playing Russian Roulette with Murphy's Law and we are playing Russian Roulette with Mother Nature's laws and it is a too dangerous game. We want out NOW, with our lives and lands intact-- not thirty-five years from now-- or sooner via some catastrophic disaster, depending on the unknown but Certain movements of the earth.

BN-6

Please stay with those of us who live here on the Central Coast and who share in a concern for the future of the planet. Why can we not talk about the very little we know about nuclear power-- the thirty-eight year old plants in the East? Let's first know how to control it before we proliferate such a deadly product.

Thank you for your courageous vote today. It takes a lot of courage to oppose powerful people who insist nuclear is "clean, safe and cheap". We KNOW it certainly is NOT clean, it is NOT safe, and-- ask us, it is NOT cheap. How can we re-license for another thirty-five years, a plant that could not be licensed TODAY? Let's shut it down. No more well meaning assurances that all is well, no worries, --based on money and jobs.

Thank you,

MLBoysen/773-3920 (My apologies if this is a duplicate. I was unsure if the Website email acutally was sent)

GRANITE

Mailing Address
425 Volpi Ysabel Road
Templeton, CA 93465

805.226.7475
mike.brass@gcinc.com

April 12, 2010

U.S Nuclear Regulatory Commission
Mail Stop: O-11F1
Washington, DC 20555-0001

VIA ELECTRONIC MAIL

Re: Pacific Gas and Electric - Diablo Canyon Power Plant

Dear Mr. Stuyvenberg,

Thank you and the Nuclear Regulatory Commission (NRC) for holding the environmental scoping meetings in San Luis Obispo in March 2010. I found the meetings to be very informative and beneficial to the local community.

I am writing to encourage the NRC to evaluate the environmental benefits of Diablo Canyon Power Plant (DCPP). DCPP provides low-cost, carbon free electricity for nearly three million homes and businesses in northern and central California. In addition, Pacific Gas and Electric Company have demonstrated exemplary environmental stewardship of its nearly 12,000 acres in San Luis Obispo County. I believe that the EIS must be fair and balanced in evaluating all environmental issues. BW-1

I look forward to reading the draft environmental document later this year. Thank you in advance for your consideration.

Sincerely,

Michael Brass
Project Manager
Granite Construction Company
805.226.7475: office
805.331.1452: cell

this opportunity to solicit input from the community. My name is Lauren Brown. I live at 7 Chuparross here, in San Luis Obispo. I'm retired, and I'm speaking on behalf of what I consider to be important concerns for this community.

Among the most important environmental concerns that I think should be taken into consideration is the fact that nuclear power is one of the alternative ways of generating energy that does not put additional carbon dioxide into the atmosphere. J-1

I'm very concerned, personally, about the risk of extensive climate damage to the entire Earth because of the enormous amount of CO2 going into the atmosphere.

I think the fact that this plant is not emitting CO2 is something that should definitely be taken into consideration from an environmental standpoint.

I personally feel so strong about this, that I am installing solar panels on our roof in the next month. In terms of alternative, I think absolutely, there should be no consideration to additional fossil fuel-generating facilities. The only alternatives that I would consider acceptable would be solar. For this region, it's about the only J-2

J-2 - cont

one that is practical.

J-3

And the license time, the period of time required for planning, for the development, siting, environmental studies for such a extensive facility, one that would generate 20 percent of the power that comes from Diablo Canyon--it would be a very, very lengthy and daunting process. Hence, it's essential, from my standpoint, that this application run concurrent with the current seismic assessment.

I certainly support that the NRC should take fully into consideration all of the security and safety issues around this in terms of completing their application. But I do urge that the NRC run this concurrently.

J-4

To conclude, I'd just like to comment that my impression of PG&E is that it's been an outstanding community member. Its contribution to our economy is enormous. I have seen also how they support the community in so many ways, helping nonprofits, and a variety of other ways.

And so I'd like to support this process going forward concurrently. Thank you.

MR. CAMERON: Thank you, Lauren.

Hugh. Hugh Wadman. And then we're going to go to Sandy Jack, Sally Krenn and Jane Swanson.

MR. BUCKINGHAM: Hi. I'm Jeff Buckingham. I live on a ranch outside of Los Osos, and I think it's important, when we look at this plant, and the relicensing process, that we really look at the whole environment here. We've already paid whatever price, environmentally, we needed to pay to have the plant in place today.

AQ-1

And I find it really interesting, that when you look at the way PG&E is structured and compensated, PG&E as a company is viable, producing power through whatever means that it produces. The real benefit to the plant being here is really to all of us as ratepayers and as citizens.

For PG&E, they'll be fine. They could make power any way they want. We've paid the price for this plant. It's here today. We get the benefit of the electricity from this plant as we actively pursue many other ways to provide environmentally-safe power, and of course PG&E has been a champion of that.

As I mentioned, I live on a ranch outside of Los Osos. I actually live off the grid. I'm probably one of the only people in San Luis Obispo County who's not a customer of PG&E. However, I have several sets of high-power lines that cross the ranch,

AQ-1 - cont

1 and I have an opportunity to interact with PG&E all
2 the time.
3 And a couple of things I've noticed about
4 PG&E. One of them is their stewardship of the land
5 around Diablo Canyon is exemplary, and I often wish
6 that I could afford to put as many resources in to
7 protecting my land as PG&E puts into protecting
8 theirs. Last weekend, my wife and I were out with our
9 shovels, trying to kind of do some thing that PG&E had
10 done a much better job of. We were doing them by
11 hand. But they set an example for that.
12 And in my experience with working with
13 PG&E, I've seen them in all kinds of situations, and
14 what I see is they do the right thing when nobody else
15 is even around to look, and I think given that, and
16 the way that they've run this plant, and the price
17 that we've paid for, to have it, we certainly ought to
18 continue to use it as long as possible while we
19 explore all other kinds of sources for power, you
20 know, in the future. Thank you.
21 MR. CAMERON: Thank you, Jeff. Henriette.
22 And then we're going to go to James Patterson, who's
23 a supervisor, here, in San Luis Obispo County.
24 MS. GROOT: Good evening. My name is
25 Henriette Groot. When fishermen out at sea want to

plant has another issue, and I don't think we ought to wait till 2024 to decide what we're going to do about it. That's something that needs to be done right away, if it's severe. I have other, but in the interest of time, thank you.

BF-5 - cont

MR. FULLER: Thank you, Mr. Dudley. We'll now hear from Mr. James Byerley, and then Sonja Swift after that, and then that's all we have signed up at this point. After Ms. Swift, we will hear from Dave Wrona of the NRC, who will wrap things up for us this evening.

Mr. Byerley.

MR. BYERLEY: Thank you. Well, I was told in elementary school not to be nervous, to imagine everybody in their underwear, so if you'll excuse me. I spent four days in jail, civil disobedience, back in the '80s, protesting Diablo. So that'll give you a hint on what I'm about to say.

I want to thank all the great speakers I've heard and I want to thank the Commission for this democratic moment. I've heard several--I got here late but I heard several workers reassuring us to trust them, and that Diablo's safe. Safe. Safe. Why do we need to hear that over and over? Because it's one a--plutonium and the waste is one of the most

BG-1

1 toxic substances known to human beings. BG-1 - cont

2 I believe that if everyone in this
3 community knew that, was well-informed, we would not
4 have Diablo Canyon. I call it an invisible Pandora's
5 Box. It's invisible. All of us still mourn 9/11,
6 because you could see the planes. All of us watched
7 it on TV. And you could see the terror, and so many
8 horrors.

9 You cannot see plutonium when you ingest BG-2
10 it, when you breathe it in, when it pops up in cancer,
11 five, ten, fifteen, thirty years later. Yes, I know
12 where it came from. I propose a study, before
13 relicensing, to examine the health of all the workers
14 at Diablo Canyon who've worked there, what kind of
15 health problems that they've had.

16 Is it any coincidence, is anybody trying BG-3
17 to tell us something, that we've having this meeting
18 tonight right after the Chile earthquake? Right after
19 the Haiti earthquake. What does Diablo mean in
20 Spanish? I say shut it down. Let's think ahead. In
21 Katrina, and many other disasters, they're behind the
22 eight-ball, and they clean up after the disasters.
23 Let's all think ahead.

24 Let's shut it down now. Thank you all for
25 listening.

1 adviser with the California Energy Commission. We
2 appreciate the opportunity to provide comments here
3 today regarding the scope of the environmental review
4 for the Diablo Canyon license extension application.
5 My comments will be brief since we plan to AG-1
6 submit written comments at the end of this month. In
7 November 2008, as required by California Assembly Bill
8 1632, which was authored by Assemblyman Sam Blakeslee,
9 the California Energy Commission completed a
10 comprehensive assessment of Diablo Canyon and San
11 Onofre Nuclear Power Plants. We also completed two
12 additional integrated energy policy reports in 2008
13 and 2009, and all of these reports are available at
14 our Web site, www.energy.ca.gov. And if you're
15 interested, I can, in the break, or after the meeting,
16 I can give you--help you get to these sites, or give
17 you the Web link.
18 We completed these studies, and this
19 assessment included studies of the seismic hazards at
20 Diablo Canyon, and San Onofre, and the seismic
21 vulnerability of these plants.
22 We found, through this assessment, that
23 important data on Diablo Canyon seismic hazard and
24 vulnerabilities are incomplete or are outdated.
25 In addition, just prior to the completion

AG-1 - cont

1 of our assessment, PG&E announced the discovery of the
2 Shoreline Fault, which you've heard a lot about today.
3 As a result, the Energy Commission recommended that
4 PG&E conduct a number of additional seismic hazard and
5 plant vulnerability analyses.
6 The California Public Utilities Commission
7 also directed PG&E, in 2009, to report on the major
8 findings and conclusions from these studies as part of
9 its license renewal feasibility studies for Diablo
10 Canyon.
11 These important studies include updated
12 seismic tsunami hazard studies, including using three-
13 dimensional seismic reflection mapping, and other
14 advanced techniques, to explore fault zones near
15 Diablo Canyon. Assessments of the long-term seismic
16 vulnerability and reliability of the plant, focusing
17 on switch yards and non-safety related components.
18 An evaluation of additional preplanning,
19 or mitigation steps that PG&E cold take to minimize
20 plant outage times, following a major seismic event,
21 such as the event that occurred after the major
22 earthquake in Japan in 2007, that affected their large
23 nuclear power plant. And then finally, an evaluation
24 of the adequacy of access roads to Diablo Canyon and
25 surrounding roadways, for allowing emergency personnel

AG-1 - cont

1 to reach the plant and local communities and plant
2 workers to evacuate.
3 PG&E's completion of these seismic studies
4 is particularly important in light of the nearly three
5 year outage of the Kashiwazaki-Kariwa Nuclear Power
6 Plant in Japan, following the 2007 earthquake.
7 The Energy Commission and the Public
8 Utilities Commission have also identified a number of
9 other studies that are needed, in order to determine
10 the economic, environmental and reliability
11 implications of relicensing Diablo Canyon.

AG-2

12 These studies would answer the following
13 questions. What would be the local economic impacts
14 of continuing to operate the plant, and how would
15 these impacts compare with potential alternate uses of
16 the Diablo Canyon site?

AG-3

17 What would be the low-level nuclear waste
18 disposal costs, and spent fuel costs, in estimated
19 storage, and disposal plans for spent fuel from the
20 plant's operation, the 20 year license extension, and
21 decommissioning?

AG-4

22 What alternate power generation options
23 could be used in place of power from Diablo Canyon,
24 and what would be the reliability, economic and
25 environmental impacts of these options, compared to

AG-4 - cont

1 the impacts of Diablo Canyon?

AG-5

2 What mitigation plans may be needed to
3 ensure the integrity of the Diablo Canyon reactor
4 pressure vessel over a 20 year license extension, in
5 light of any updates to the estimated seismic hazard
6 at the site?

AG-6

7 And finally, what are the options and
8 costs for complying with California's once-through
9 cooling policy?
10 The seismic studies, and these additional
11 studies, are all needed to assess the cost and benefit
12 to the state of continuing to operate Diablo Canyon
13 for an additional 20 years.

AG-7

14 In addition, some of these studies are
15 also relevant to the NRC's evaluation of the
16 environmental and safety implications of continuing to
17 operate the plant. For example, an updated seismic
18 hazard assessment is needed to assess the
19 vulnerability of aging plant components to an
20 earthquake.
21 This is especially important for those
22 reactor components, such as the reactor pressure
23 vessel, that have been embrittled by neutron
24 bombardment.
25 In addition, the environmental assessment

1 should consider possible changes to Diablo Canyon's AG-8
2 cooling system, resulting from the state's emerging
3 once-through cooling regulations that are required by
4 provisions of the U.S. Clean Water Act, and updated
5 assessments of site evacuation plans.
6 Therefore, we request that the NRC AG-9
7 evaluate the safety and environmental implications of
8 these studies, as recommended in the AB 1632
9 assessment, and that have been identified by the
10 California Public Utilities Commission and the Energy
11 Commission, and require that these seismic studies,
12 and the other state-mandated studies, be reviewed as
13 part of the Diablo Canyon license renewal review
14 proceeding. Thank you very much.
15 MR. CAMERON: Thank you, Barbara. Next
16 we're going to go to Chris Joyce, and then Chris
17 Ungar, and then Barbara Scott. And this is Chris
18 Joyce.
19 MR. JOYCE: Good evening, and thank you
20 for the opportunity to speak tonight. My name's Chris
21 Joyce. I've been here, I've been blessed enough to be
22 a part of this county, part of this--I came to Cal
23 Poly in 1978 and they couldn't get rid of me. I
24 managed to get a job with PG&E. So I am a plant
25 employee. But tonight I speak on behalf of myself,

Comments on the

U.S. NUCLEAR REGULATORY COMMISSION'S ENVIRONMENTAL SCOPING FOR DIABLO CANYON NUCLEAR POWER PLANT, UNITS 1 AND 2 LICENSE RENEWAL APPLICATION REVIEW

March 3, 2010

Barbara Byron
Senior Nuclear Policy Advisor
California Energy Commission

Good afternoon/evening. My name is Barbara Byron. I am the Senior Nuclear Policy Advisor with the California Energy Commission. We appreciate the opportunity to provide comments here today regarding the scope of the environmental review for the Diablo Canyon Nuclear Power Plant license extension application. My comments will be brief, since we plan to submit written comments later this month.

CU-1

In November 2008, as required by California statutes Assembly Bill 1632, the California Energy Commission completed a comprehensive assessment of the Diablo Canyon and San Onofre Nuclear Power Plants. This assessment included studies of the seismic hazards at the Diablo Canyon and San Onofre sites and the seismic vulnerabilities of these plants. We found through this assessment that important data on Diablo Canyon's seismic hazard and vulnerabilities are incomplete or outdated. In addition, just prior to the completion of this assessment, PG&E announced the discovery of the Shoreline Fault less than half a mile offshore from Diablo Canyon. As a result, the Energy Commission recommended that PG&E conduct a number of additional seismic hazard and plant vulnerability analyses. The California Public Utilities Commission (CPUC) also directed PG&E in 2009 to report on the major findings and conclusions from these studies as part of its license renewal feasibility studies for Diablo Canyon.

These important studies include:

- Updated seismic/tsunami hazard studies, including using three-dimensional geophysical seismic reflection mapping and other advanced techniques to explore fault zones near Diablo Canyon;
- Assessments of the long-term seismic vulnerability and reliability of the plant, focusing on switchyards and other non safety-related components;
- An evaluation of additional pre-planning or mitigation steps that the utility could take to minimize plant outage times following a major seismic event, such as the earthquake that struck the Kashiwazaki-Kariwa plant in 2007; and
- An evaluation of the adequacy of access roads to Diablo Canyon and surrounding roadways for allowing emergency personnel to reach the plants and local communities and plant workers to evacuate.

PG&E's completion of these seismic studies is particularly important in light of the nearly 3-year outage of the Kashiwazaki-Kariwa nuclear power plant following the 2007 earthquake in Japan and the recently discovered Shoreline Fault near Diablo Canyon. CU-1 - cont

The Energy Commission and the CPUC have also identified a number of other studies that are needed in order to determine the economic, environmental, and reliability implications of relicensing Diablo Canyon. These studies would answer the following questions:

1. What would be the local economic impacts of continuing to operate the nuclear plant, and how would these impacts compare with potential alternate uses of the Diablo Canyon site? CU-2
2. What would be the low-level nuclear waste disposal costs for waste generated through a 20-year plant license extension, including the low-level waste disposal costs for any major capital projects that might be required during this period? In addition, what are PG&E's plans and estimated costs for the storage and disposal of low-level waste and spent fuel from the plant's operation and decommissioning? CU-3
3. What alternate power generation options could be used in place of power from Diablo Canyon? What would be the reliability, economic, and environmental impacts of these options compared to the impacts of Diablo Canyon? CU-4
4. What mitigation plans may be needed to ensure the integrity of the Diablo Canyon reactor pressure vessel over a 20-year license extension in light of any updates to the estimated seismic hazard at the site? CU-5
5. What are the options and costs for complying with California's once-through cooling policy? CU-6

The seismic studies and these additional studies are all needed to assess the cost and benefit to the state of continuing to operate Diablo Canyon for an additional 20 years. In addition, some of these same studies are also relevant to the NRC's evaluation of the environmental and safety implications of continuing to operate the plant. For example, an updated seismic hazard assessment is needed to assess the vulnerability of aging plant components to an earthquake. This is especially important for those reactor components, such as the reactor pressure vessel, that have been embrittled by neutron bombardment. In addition, the environmental assessment should consider possible changes to Diablo Canyon's cooling system resulting from the State's emerging once-through cooling regulations, required by provisions of the U.S. Clean Water Act, and updated assessments of site evacuation plans. CU-7

We, therefore, request that the NRC evaluate the safety and environmental implications of all of the AB 1632 recommended studies and issues identified by the CPUC and the Energy Commission and require that these seismic studies and the other state-mandated studies be reviewed as part of the Diablo Canyon's license renewal review proceeding before the Atomic Safety and Licensing Board.

Statement of U.S. Representative Lois Capps
Statement at NRC Scoping Meeting on the
Diablo Canyon Nuclear Power Plant Relicensing Application
March 3, 2010

I would like to read the following statement from U.S. Representative Lois Capps:

Thank you for the opportunity to comment on the environmental issues the Nuclear Regulatory Commission should consider in its review of the proposed license renewal application for the Diablo Canyon nuclear plant.

I represent the 23rd Congressional District, in which this facility is located.

As a member of the House Energy and Commerce Committee, I am very interested in issues relating to the relicensing process of nuclear power plants.

CK-1

I appreciate the NRC holding this forum to assess all of the environmental impacts that would result if this plant were to be relicensed.

Given the scale of this renewal, as well as the complex technical issues contained in the licensee's application, it is critically important that this assessment be comprehensive and independent.

The NRC must fully assess and address safety and security impacts, including any measures available to mitigate them, as they relate to the environment.

That means the assessment must include updated and completed analyses to ensure:

- the surrounding natural and marine environment is protected,

CK-2

- the plant—including aging infrastructure—can withstand potential earthquakes and is not vulnerable to a terrorist attack, and
- that any on-site storage of waste be done safely.

CK-3

I believe failure to fully assess these issues would do a disservice to the review process by disallowing a look at the overall, collective impacts of this renewal on the environment.

CK-4

For example, the recently discovered Shoreline Fault, less than one mile offshore of the plant, has not been thoroughly studied.

This clearly exacerbates an already precarious situation. The central coast of California has a number of major and active earthquake faults.

To reduce the likelihood or severity of a severe accident due to these faults, the NRC must include severe accident mitigation alternatives—supported by new seismic hazard data—as part of this review process.

Only with an all-inclusive review of the safety and security impacts will the NRC ever be able to come to an accurate conclusion as to the degree of the severity of a planned or unplanned event at the plant.

Accordingly, the NRC must require site-specific assessments to address the potentially catastrophic and far-ranging impacts on the environment during the license renewal process.

Again, I urge the NRC to act deliberatively in this matter, based on a thorough public record.

My constituents deserve assurance that everything possible is being done to insure this facility is operated in a safe and sound manner, and that the relicensing process is focused on protecting their health and safety.

Thank you for this opportunity to comment on this proposal.

we'll have Andrew Christie. After that, we'll have Richard Krenzdorf, and then Ermina Karim.

MR. CHRISTIE: Good afternoon. I'm Andrew Christie. I'm the director of the Santa Lucia chapter of the Sierra Club. In its Applicant's environmental report, operating license renewal stage, PG&E says the following of a marine environmental monitoring conducted in the vicinity of the power plant since the mid 1970's.

Y-1

Quote. Various analysis reports have been consistent in their conclusions, that biological effects of the discharge are mainly confined to Diablo Cove, and diminished with both depth and distance from the point of discharge. End quote.

This statement might have been excusable prior to plant start-up, when PG&E dramatically underestimated the plant's impacts on the marine environment, but there is no excuse for it now. The Department of Fish & Game, in terms of PG&E's assertion of minimal, narrow, geographically-limited impacts, has directly refuted that statement.

They stated, quote: Overall, the effects of the discharge include loss and degradation of habitat, decreases in several species diversity and intensity, and loss of entire species. It has been

Y-1 - cont

shown that the effects continue to expand beyond Diablo Cove and are greater than predicted.

The discharge does not provide for the protection or propagation of species, and does not provide habitat suitable for indigenous species. End quote.

Per the Safe Energy Communication Council and the Nuclear Information and Resource Service, reading excerpts from their report, quote: PG&E's original thermal plume pollution predictions were literally off by more than a mile, significantly affecting an additional area, 4.2 miles to the north of the reactor. Where the utility's prediction prior to operation had placed an area 3/10ths of a mile around Diablo Cove at uncertain risk from thermal pollution, the actual impacts from the reactors amount to 1.4 miles of nearly complete loss of habitat in the intertidal zone.

Summing up Diablo's effect on this once-vital densely-inhabited marine habitat, Michael Thomas, the regional water board manager for the Diablo Canyon studies said, quote: It's essentially bare rock. End quote.

Diablo Canyon's operators were discovered to have withheld information from environmental

Y-1 - cont

1 regulators for two decades, revealing the true effect
2 of the reactor's hot water discharges. The concealed
3 data included infrared images, indicating more
4 extensive thermal plume concealed in PET zones than
5 previously admitted, and time series photographs
6 showing the progressive deterioration of biologically
7 important habitat in marine coastal waters around the
8 reactor. The damage was catastrophic to the
9 indigenous marine life community, including the near
10 obliteration of the already-threatened black-and-red
11 abalone populations.
12 PG&E was required to reanalyze the effects
13 through an independent review, and settled with the
14 State of California for $14 million, a fine seven
15 times higher than any fine ever leveled by the Nuclear
16 Regulatory Commission for any violation. End quote.
17 It is a matter of concern, that more than
18 ten years after these findings and events, PG&E, in
19 its environmental report, accompanying its license
20 renewal application, is still attempting to minimize
21 the effects on the marine environment of its nuclear
22 power plant.
23 In preparing its Category 2 site-specific
24 assessment, the NRC should be mindful of this history,
25 and in your consultations with U.S. Fish & Wildlife,

Y-1 - cont

and the National Marine Fisheries Service, ascertain what PG&E's obligations are under the Endangered Species Act, as per the power plant's impacts on the black abalone, which is now, as of 2009, on the Endangered Species list.

Mitigations for all of the plant's impacts must fully mitigate impacts of the past, the present, and the future. Thank you.

MR. CAMERON: Thank you, Mr. Christie. Richard Krenzdorf. After that, we'll have Ermina Karim. And after that we'll have Mr. Ed Waage.

MR. KRENZDORF: Thank you so much. I'm actually going to speak about--well, every time the NRC comes to town, I talk about one subject, and I get a thank you very much, and it goes into the vertical file.

I'm pleased--I'm a "happy camper" this afternoon because there's been more people speaking on the issue of safety, and specifically on the emergency plan, than I think I've heard in many years.

People who have serious questions with the present setup, such as Jane Swanson who spoke, David Weisman who spoke. People who said everything's fine. The police person who spoke some time ago, the fire person who spoke some time ago say not to worry.

of the solution.

This was something they didn't expect, and, to me, that was really good news. I know, in listening to some of the speakers here, a question came up. I know everybody's talking about switching to solar power, solar panels. My question is, if we have a 7.5 earthquake, what's going to survive? The Diablo Canyon or a bunch of solar panels?

I don't know if that issue has been addressed, or not, the durability of solar panels to earthquakes. Even the windmills, I'm sure, can be very vulnerable in an earthquake.

The issue--again, if you want to push for solar power, I feel that within ten years, a lot of us are going to be driving plug-in hybrid cars. If you want to charge your car up overnight, you're not going to do it with solar panels.

MR. CAMERON: Okay. Thank you, Charlie. The next three speakers. Dave Christy. Judy Evered, and Joe Boysen.

MR. CHRISTY: Hi. I'm Dave Christy from San Luis Obispo. I got interested in this issue, when I saw, in a recent newspaper article, the proposal that the relicensing effort be postponed until the completion of the 3-D seismic studies that are

AW-1

AW-1 - cont

1 proposed for the offshore fault that has been
2 identified, because at the conclusion of this study,
3 we then know if it was going to be safe.
4 This concerns me because I think that it's
5 an attempt to either deliberately misunderstand what
6 science can do, or to politicize science and
7 manipulate it. At the end of this study, we won't
8 know, conclusively, what will happen to that fault.
9 But we'll know a lot more, and it'll trigger us to do
10 another study, and another study after that, because
11 that's how science proceeds.
12 It's not a matter of doing a single study,
13 collecting some data, having people decide, here's the
14 answer, and it's finished. We don't understand
15 cancer. We don't understand AIDS. We don't
16 understand global warming. We don't understand a lot
17 of things. But if we believe that science is a method
18 by which we can understand the world that we live in,
19 then we have to commit ourselves to the systematic
20 step by step analysis.
21 If the proposal to postpone the
22 relicensing effort is to use this argument, I think
23 that it's fallacious. And I think that the Nuclear
24 Regulatory Commission is one of the public standards
25 of scientific knowledge in our society. Just like we

AW-1 - cont

expect NASA, and the Office of Surgeon General, and the National Institutes of Health, and the Centers For Disease Control, to act responsibly about scientific information, and to educate the public about what we can and cannot expect from science, I would really hope that the NRC rejects this particular approach to postponing the relicensing effort.

If there are other reasons to postpone it, let the proposers suggest those. But I would rather not see science be manipulated or distorted for this purpose. Thank you.

MR. CAMERON: Thank you, Dave. Judy, are you ready? This is Judy Evered.

MS. EVERED: I'm from Santa Barbara, and I'm the only one here from there, but we're very interested because we know that we're in the plume of the downwind from Diablo. So some--I've been very, very interested in nuclear power for many years, because we lost our son at the age of six years. Our first born was in England when the Windscale nuclear--well, it was called Atom Research, had an explosion, and it didn't get reported in the Sunday, or the London Times. It merely said the explosion was under control, and that they threw 200 gallons of contaminated milk into the Irish Sea. But of course

STATE OF CALIFORNIA ARNOLD SCHWARZENNEGER, *Governor*

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Kimberly J. Green and Andrew L. Stuyvenberg
Mail Stop (MS) O-11F1
Project Managers – Diablo Canyon License Renewal
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

RE: Notice of Pending State Applications – Pacific Gas and Electric Company's Requested Nuclear Regulatory Commission Operating License Renewal for Diablo Canyon Power Plant

Dear Ms. Green and Mr. Stuyvenberg,

CG-1

I am writing to inform the Nuclear Regulatory Commission (NRC) of several important regulatory proceedings that are ongoing at the California Public Utilities Commission (CPUC) related to the Diablo Canyon Power Plant (DCPP). These proceedings could be relevant to the NRC's consideration of Pacific Gas and Electric Company's (PG&E's) request for an operating license renewal for DCPP.

On September 29, 2006, Governor Arnold Schwarzenegger signed into law AB 1632, introduced by Assemblyman Sam Blakeslee. AB 1632 required the California Energy Commission (CEC) to conduct a "[c]ompilation and assessment of existing scientific studies…to determine the potential vulnerability, to a major disruption due to aging or a major seismic event, of large baseload generation facilities" including DCPP. The CEC was required to issue its assessment by November 1, 2008.

In a decision dated March 15, 2007, addressing PG&E's 2007 General Rate Case, the CPUC approved a request by PG&E to fund a Diablo Canyon license renewal feasibility study. In issuing our approval, the CPUC directed PG&E to incorporate the findings and recommendations from the CEC's AB 1632 assessment into its Diablo Canyon license renewal feasibility study.[1] The CPUC also required PG&E to submit an application by June 30, 2011 to the CPUC on whether to pursue license renewal for DCPP and address the CEC's AB 1632 assessment.[2]

In November 2008, the CEC completed a comprehensive assessment of DCPP and San Onofre Nuclear Generation Station (SONGS) and adopted the study titled, "An Assessment of California's Nuclear Power Plants: AB 1632 Report." The CEC assessment examined the potential vulnerability of DCPP and SONGS to a major disruption due to a seismic event or plant aging. The report noted that the seismic setting around DCPP has been extensively studied, but uncertainties remain. The CEC assessment notes that "advanced technology may help resolve remaining uncertainties" and

[1] Decision 07-03-044 at Ordering Paragraph 10. March 15, 2007
[2] *Id.* at Ordering Paragraph 11

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A. Stuyvenber (ALS3)
N. Ferrer (nbf)

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CG-1 - cont

recommends that PG&E use "three-dimensional geophysical seismic reflection mapping and other advanced techniques to explore fault zones near Diablo Canyon."[3]

The California legislature again took up the issue of seismic fault studies at Diablo Canyon in 2009, unanimously passing AB 42, which would have required PG&E to conduct three-dimensional mapping. The Governor did not sign the legislation, noting that "in light of the actions already taken by the CPUC and the Energy Commission on this matter, further legislative authorization is unnecessary."

The CEC included a further discussion of the seismic issues associated with DCPP in its 2009 Integrated Energy Policy Report. This new report noted the discovery of a new fault in the DCPP area known as the Shoreline Fault and reiterated the recommendation that PG&E conduct three-dimensional seismic mapping.[4]

In January 2010, PG&E filed two applications related to DCPP with the CPUC. Both applications are currently pending:

- A.10-01-014, a request to approve funding to perform two-dimensional and three-dimensional seismic studies in the area at and around DCPP recommended by the CEC in its AB 1632 Report. PG&E proposes to perform the seismic studies from 2011 to 2013 (the total cost of the seismic studies is estimated at $16.73 million); and
- A.10-01-022, a request to recover in rates the costs to obtain the state and federal approvals related to renewal of the Diablo Canyon operating licenses (the total cost of the License Renewal project is estimated at $85 million).

The CPUC will be determining whether PG&E's requests for over $100 million are reasonable and whether the costs should be paid by PG&E's customers.

The CPUC encourages the NRC to fully consider the findings from any studies that PG&E conducts as the NRC reviews PG&E relicensing application. The seismic studies in PG&E's application, if approved by the CPUC, could provide valuable information to assist the NRC.

Thank you for your attention to this issue.

Sincerely,

Paul Clanon

Paul Clanon
Executive Director

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[3] California Energy Commission 2008, An Assessment of California's Operating Nuclear Power Plants: AB 1632 Committee Report, CEC-100-2008-108-CTF at page 6.

[4] California Energy Commission, 2009 Integrated Energy Policy Report, Final Commission Report, December 2009, CEC-100-2009-003-CMF at pages 120-121, 238.

for a lot of people here. It enriches out community and provides a lot of opportunities.

And, you know, so as far as environmental stewardship, it's a beautiful drive, too bad that the general public doesn't have the opportunity to drive out to the plant. PG&E takes very good care of the property as far as I can tell, down to the point where we're even limited on how we rinse our cars off in the parking lot.

So they're--from my perspective as an employee working out there, I'm very impressed with the way management addresses environmental stewardship, and the safety, and the general public at large. Thank you very much.

MR. CAMERON: Thank you, Jim. And June Cochran's going to join us, and then we're going to go to Jill Zamek and Jane Swanson.

MS. COCHRAN: My name's June Cochran, and I live in Shell Beach, which is where the plume would hit, if there was an accident, and we saw with the big rig accident, just last year, that Highway 101 is the only way in and out of this place, and it was clogged up for hours. Imagine, if there was an evacuation. AL-1

And no one has addressed these issues, really. It is a two-lane road, in and out of Avila,

and it is a very narrow 101 that goes through San Luis Obispo County, trying to get out of the area. That's one segment. AL-1 - cont

The next is that let's not waste money on an old plant, with aging parts, on top of this seismic nightmare. Instead, let's see what we can do in the next few years--and maybe it's a good thing that PG&E asked for this license now, because now we can start thinking about the alternatives. As Drew said, we need to be thinking about wind, solar, and new technologies. Wave. There's so many things coming out. AL-2

Santa Barbara, Ventura, and San Luis Obispo County have gotten together, and they're talking about fossil-free by thirty-three. Well, in their plan, they don't really have nuclear as part of the equation.

We're hoping to make up the difference by conservation, by education, and by new technologies. And there's new technology in the solar field, it just came out in USA Today, just this weekend. So this is a very viable thing to do.

One of the things that concerns me in addition to the aging plant, and the cable systems--you've seen my pictures before of the cables AL-3

corroding, the pipes corroding, and there's no way to know how many of these pipes are corroded, and whenever I ask PG&E, are you going to dig these up, especially the fire system, the fire protection system, which was almost the first thing that went in, they go, no, we'll just wait till we have a problem with it, which they have, and that's why we have the pictures of it. AL-3 - cont

And Diablo Canyon would be so perfect-- there's a nice windstream in there to put more wind up, we could have a retraining session, so that these wonderful PG&E employees that love the area and do so much community work can stay here, and just retrain into the renewable fields, and continue with their community service. AL-4

So the waste problem is the next thing, and the last thing I'll talk about. We have these casks up there, and there's several things that worry me about the casks, and the gentleman from the school district is concerned about the children not having money. But I would be concerned about the children having waste in their backyard for hundreds of thousands of years, and the casks are not all that well made. There's been a lot of studies that talk about the welding being a problem. They have to be AL-5

AL-5 - cont

1 relicensed every 20 years, infinitum. How is that
2 going to be financed?
3 Our grandchildren are going to have to do that.
4 We're already going to have all the waste
5 from what it's come up with now. Or do we really want
6 20 more years of waste there? I don't think so. So
7 thank you.
8 MR. CAMERON: Thank you, June. And Jill,
9 Jill Zamek, and then we're going to go to Jane
10 Swanson, and then we're going to go to Rochelle Becker
11 on video.
12 MS. ZAMEK: My name is Jill Zamek, and I'm
13 speaking on behalf of the San Luis Obispo Mothers For
14 Peace. In the NRC environmental review for PG&E's
15 license renewal, Mothers For Peace requests that the
16 issue of inadequate design basis documentation be
17 included. NRC document titled "Frequently Asked
18 Questions on License Renewal of Nuclear Power Plants"
19 states that, quote, the current licensing basis, the
20 CLB, is the particular set of NRC requirements
21 applicable to a licensed operating nuclear power
22 facility. End quote.
23 These CLB changes are noted in documents
24 such as the Final Safety Analysis Report, Technical
25 Specifications and License Amendments.

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Chief, Rulemaking and Directives Branch
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US Nuclear Regulatory Commission
Washington DC 20555-0001

Dear Sirs:

The Santa Lucia Chapter of the Sierra Club submits these comments on the NRC's scoping of the Environmental Impact Statement for the renewal of the Diablo Canyon Nuclear Power Plant's operating licenses.

We have attached two documents:

1) Excerpts from the 2000 report "Licensed to Kill," prepared by the Nuclear Information Resource Service, Humane Society of the United States, Safe Energy Communication Council, and Standing for Truth About Radiation

2) An excerpt from the December 14, 2006, California Coastal Commission staff report on the appeal of a Coastal Development Permit issued to PG&E for the replacement of Diablo Canyon's steam generators.

Both documents detail the nature and history of environmental impacts of the power plant's cooling system. This history stands in marked contrast to the assertions contained in the Environmental Report submitted by PG&E with its license renewal application.

CW-1

In particular we draw to your attention the documented history in "Licensed to Kill" of attempted suppression of evidence of the cooling system's environmental impacts **and** the assessment of fines against PG&E by the State of California for withholding that evidence. The attempt to minimize and mischaracterize the environmental impacts of the plant continues in PG&E's submitted Environmental Report, which reflects the arguments made by PG&E when attempting to refute the conclusions of the 1997 study overseen by the technical

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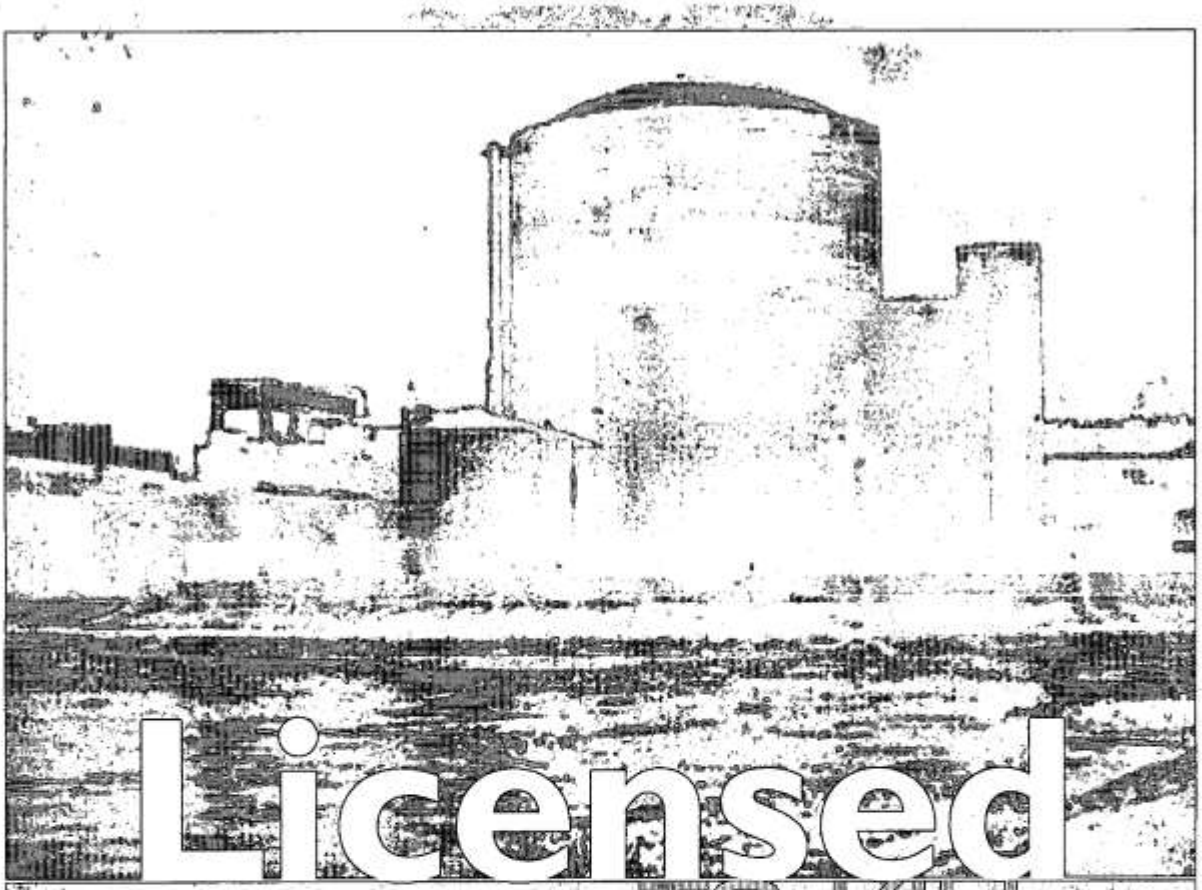
workgroup of the Central Coast Regional Water Quality Control Board. When the Water Board reviewed a report submitted by PG&E that attempted to refute the findings of the technical workgroup and support a finding of less severe, limited impacts, the Board rejected those arguments, reaffirming the findings of independent scientists that the impacts of the plant's cooling system on the marine environment are significantly greater than PG&E maintained. Despite this, PG&E continues to make the same arguments today. CV-1 - cont

In light of this history, we strongly urge the NRC to discard the reporting of PG&E and researchers in its employ in its self-assessment of the nature and extent of the plant cooling system's impacts. Instead, we urge the NRC to accept the independent evaluations of the Central Coast Regional Water Quality Control Board, the California Department of Fish and Game, and the California Coastal Commission, described herein, as the appropriate authorities on which to base an assessment of the impacts on the marine environment that would result from the relicensing of the Diablo Canyon Nuclear Power Plant and an appropriate mitigations for those impacts.

Additionally, the scope of your review should include the results of all seismic studies required by the state of California. Thank you for your attention to these issues. CW-2

Sincerely,

Melody DeMeritt
Chapter Chair



Licensed TO KILL

How the nuclear power industry destroys endangered marine wildlife and ocean habitat to save money

By: Linda Gunter, SECC and Paul Gunter, NIRS • Scott Cullen, STAR and Nancy Burton, Esq.

(entrained) into the plant's cooling canals through an intake canal or tunnel. Larger species, such as sea turtles and seals, have drowned or suffocated during entrainment. Others become impinged against trash rakes or net. Fish larvae, spawn, and fingerlings (young fish), are destroyed by their passage through the plant systems and, when discharged at the end of the cooling process, are described by the industry as "debris."

Endangered sea turtles, creatures that have lived in our oceans for 200 million years, are rapidly dwindling in numbers. Among the common victims at U.S. nuclear power plants are the Kemp's ridley sea turtle (the most severely endangered sea turtle species in the world), the loggerhead sea turtle, and the green sea turtle. Additionally, the endangered West Indian manatee and American crocodile, seals and sea lions, several species of large fish, and a variety of sea birds, some endangered or at risk, have also been found captured or dead in the circulating water systems at atomic reactors.

The degradation of the marine environment as a result of this technology could have serious, and potentially irreversible, repercussions if operation of once-through nuclear reactors is allowed to continue unchecked.

The coolant system discharge structure used by these same reactors presents additional hazards by expelling water warmed to a higher temperature than the water into which it flows. Recent research findings suggest that even small elevations in temperature over long periods can alter the abundance of many species of marine life.[8] Consequently, indigenous species around reactor discharge systems are displaced and replaced by others unnatural to that environment. The warmer waters also attract sea turtles, fish, crabs, sea birds, and other organisms. Periodically, reactors are shut down, the flow of warm water stops, and the temperature of the waterway into which it flows abruptly drops. This can result in cold-stunning of the species occupying the waters. Warmer waters may also present other hazards. Studies have shown decreased reproduction and increased mortality in seabirds coinciding with warmer water.[9]

The degradation of the marine environment as a result of this technology could have serious, and potentially irreversible, repercussions if operation of once-through nuclear reactors is allowed to continue unchecked. Marine ecosystems are home to many kinds of living things that occur nowhere else. Marine species provide a livelihood for millions of people and food, medicines, raw materials, and recreation for billions worldwide; they are intrinsically important.[10] The nuclear industry argues that its negative effects, if any, are localized and temporary, and therefore have no long-term or widespread impact on species. This view is vehemently contradicted by the California Department of Fish and Game:

> The science of ecology has now generally recognized that the destruction or disturbance of vital life cycles or of the balance of a species of wildlife, even though initiated in one part of the world, may have a profound effect upon the health and welfare of people in distant parts; like pollution it does not cease to be of vital concern merely because the problem is created at a distant point.[11]

Clearly, the depletion of these resources by nuclear power and other factors will ultimately harm not only the creatures themselves but the ability of humans to prosper and survive.

An additional hazard results from the cleaning methods used by once-through reactors. When the water intake and discharge pipes become restricted with marine organisms such as mollusks, impeding the plant's efficiency, they are cleansed to eliminate what the industry calls "biofouling." A chemical concentration—usually chlorine or other biocides—is flushed through the system to kill or flush out these impediments. This operation can have grave consequences for the survival of wildlife essential in the food web. For example, chlorines have been found to disrupt the endocrine system of marine animals, affecting reproductive capacity.

California Department of Fish and Game, Legal Department, "In the Matter of WDR Order 90-09 Diablo Canyon Nuclear Power Plant," Memorandum to Regional Water Quality Control Board, February 29, 2000, p. 8.

The Magnuson Act established eight regional fisheries management councils that were charged with developing Fishery Management Plans for fisheries under their jurisdiction. For example, in New England, each state has its own set of fisheries regulations restricting gear, fishing areas, season, and licenses. Federal fisheries permit holders fishing in state waters must comply with federal fisheries regulations, unless state regulations are more restrictive or unless specifically exempted.[5] Furthermore, fisheries management experts close areas of fishing grounds or prohibit fishing during certain seasons to reduce fishing activity and protect a specific spawning nursery area or a spawning season.[6]

In general, the commercial fishing industry is highly regulated as to the manner of catch, quantity, and frequency. Conversely, the nuclear power industry is required to take very few precautions to avoid impacts on fish stocks and the larvae of numerous near-shore species. Indeed, two very different regulatory regimes control the environmental impacts of commercial fisheries and the nuclear power industry. In theory, nuclear power plants are required to use water intake systems that "reflect the best technology available for minimizing adverse environmental impacts," according to the Clean Water Act (CWA). Yet, in the absence of all-inclusive federal regulations, not a single state has put limits on the number of fish that power plants are allowed to kill.

Indeed, two very different regulatory regimes control the environmental impacts of commercial fisheries and the nuclear power industry.

As the following case studies illustrate, the operation of once-through nuclear reactors has resulted in much larger impacts on fish stocks than anticipated. Fish species and the marine habitat remain inadequately protected by a flawed regulatory system. Efforts to enforce the CWA Section 316(b) requirement, mandating the use of the best technology available to minimize adverse environmental impacts of intake structures, have failed. This is due largely to the fact that utilities not only have embarked upon experimental projects with questionable and suspect environmental benefits but are also attempting to get this option generally accepted instead of installing technology that reduces damage to the marine environment. The regulatory system empowers utility owners with the responsibility for environmental monitoring, and agency review is based upon data submitted and potentially manipulated by the utility. The bias that can result when the "fox watches the hen house" creates the potential for misrepresentation of the facts. In fact, utilities have been eager to take advantage of these loopholes.

Showdown at Diablo Cove — A Utility Gets into Hot Water

A Cease and Desist Order Stirs Controversy

A recent, high-profile confrontation over the destruction and alteration of the marine environment by thermal discharge pollution is exemplified by events at Pacific Gas and Electric's (PG&E's) Diablo Canyon Power Plant near San Luis Obispo, CA. The two-unit nuclear power station, first fully operational in 1986, draws in and directly discharges 2.5 billion gallons of heated water a day into the rocky intertidal zone of Diablo Cove on the Pacific Ocean.

The controversy stems from allegations by the California Water Quality Control Board (WQCB), the California Department of Fish and Game (DFG), and a host of environmental groups who allege that PG&E has been violating its National Pollution Discharge Elimination System (NPDES) permits to the detriment of ocean aquatic life. In February and March 2000, the fish and game department and water board drafted a cease and desist order for Diablo's discharges into the ocean cove.

A memo from the fish and game department stated:

> Overall, the effects of the discharge include loss and degradation of habitat, decreases in several species' diversity and density, and loss of entire species. It has been shown that the effects continue to expand beyond Diablo Cove and are greater than predicted. The discharge does not provide for the protection of propagation of species and does not provide habitat suitable for indigenous species.[7]

The proposed cease and desist order cites that 97 percent of the cove's surface kelp forest (Bull Kelp) has literally been clear cut from its former habitat, with more kelp forests potentially affected beyond the cove.[8] As a result, the intertidal communities of Diablo Cove are now devoid of historically abundant quantities of perennial algae cover. Surfgrass, once the predominant plant thriving in continuous bands throughout the cove, survives only in isolated locations.

The Decline of the Abalone

Water temperatures in north Diablo Cove now prevent the successful developmental growth of black abalone and red abalone, both indigenous coastal water mollusk species. PG&E had first predicted that black abalone would not be at risk from the reactors. From 1988 to 1991, following reactor startup, the red and black abalone population in Diablo Cove declined by almost 90 percent as the result of withering syndrome, a chronic progressive disease exacerbated by elevated sea water temperatures. NMFS lists the black abalone as a "candidate species" under the Endangered Species Act.[9] Further population declines in the black abalone could lead to listing as a threatened or endangered species. In 1997, the California Legislature imposed a moratorium, making it unlawful to take abalone for commercial purposes from San Francisco south.[10] Furthermore, the statute defines *take* as including killing or attempting to kill.[11] The California courts have determined that the definition of take in the Fish and Game Code included killing and that nothing suggested that the proscribed killing must result from hunting or fishing.[12] The commercial nuclear power industry, however, has so far escaped penalty for its virtual elimination of abalone populations in its waters.

Water temperatures in north Diablo Cove now prevent the successful developmental growth of black abalone and red abalone, both indigenous coastal water mollusk species.

The Department of Fish and Game stated that, as a result of the routine operation of Diablo Canyon, mortality does occur in species found in Diablo Cove and that substantial decreases in formerly indigenous species continue to take place.[13] The department concluded: "This is because the temperatures that are found in the affected areas are in excess of the upper temperature limits for survival, growth, and reproduction of several indigenous species."[14]

The agency concluded:

> The question presented is whether the degradation of the marine environment near DCPP [Diablo Canyon Power Plant] is acceptable to the Department of Fish and Game. Based on review of law and policies administered by the Department, and other laws requiring enhancement and protection of the marine ecosystem, the answer is no."[15]

The DFG maintained, based upon "the effects of elevated water temperature and the severe decrease in adult population densities below the recommended Department levels, that it is questionable whether or not abalone populations will recover naturally in Diablo Cove should temperatures return to normal."[16]

The state agency went on to add, "The black abalone was listed as a candidate species by the National Marine Fisheries Service on June 23, 1999 (Federal Register, Vol.. 64, No.120) throughout the entire range (Oregon, California, Baja California)."[17]

Evidence of Discharge Destruction Suppressed by PG&E.

Like all reactors' water discharges, Diablo Canyon's are regulated by both state agencies and a federal National Pollution Discharge Elimination System permit, certified by the Environmental Protection Agency and governed by the Clean Water Act. In 1982, prior to Diablo Canyon's operation, the state established effluent limitations for heat discharge into Diablo Cove. PG&E's permit stipulated that: (1) there shall be no degradation of indigenous species; (2) there shall be no degradation in marine communities, to include plants, invertebrate and vertebrate animals and; (3) the elevated temperatures of the receiving water shall not have any adverse effect on beneficiary uses, including shellfish harvesting and the marine habitat.[18]

The permit relied on a Thermal Discharge Assessment Report, prepared by PG&E. The report predicted very limited harm to a small percentage of the Diablo Cove habitat and its species. Also in 1982, PG&E submitted a report entitled "Assessment of Alternatives to the Existing Cooling Water System" that, after exploring options for reducing discharge water temperatures, concluded that all of the alternatives, including the installation of cooling towers and ponds, were economically prohibitive.[19]

Michael Thomas, WQCB project manager for the Diablo Canyon Studies, said: "It's essentially bare rock—what I call bare rock."

In approving the 1982 discharge permit, the WQCB considered the utility's high cost for a technological fix of its discharge problem and determined what were "reasonable" levels of environmental degradation in accepting a daily effluent discharge objective of 20 degrees F above ambient temperatures in the Diablo Cove and a periodical 100 degrees F above ambient discharge to kill mussel and barnacle infestations in the cooling system piping.[20] The WQCB recognized that, once the reactors were operational, their effects would be further studied and that additional regulation might be required if the effects were different from those predicted. The WQCB stipulated that, should the thermal effect limits prove inadequate, the regional regulator would have the authority to modify or revoke the permit in order to protect the beneficial uses of Diablo Cove.[21]

Defined as an "existing discharge" under state regulations, the NPDES permit issued in 1990 provided Diablo Canyon with a waiver to allow a maximum discharge temperature of 22 degrees F above the natural temperature of Diablo Cove. This is 2 degrees F higher than the stated water quality discharge objective. However, the 1990 discharge permit again stipulated that: "Waste discharge shall not individually or collectively cause temperature of the receiving water to adversely affect beneficial uses."[22]

As part of the permit, the utility was required to environmentally monitor Diablo Cove to analyze the hot water discharge effects on the cove. In December 1997, PG&E submitted a study that determined that there were large, statistically significant, and ecologically important changes in habitat-forming species of surf grass, kelps, seaweeds, and algae with impacts on the rest of the cove community caused by the reactors. Collapse of these plant species affected many more species in the interrelated community of marine species that graze among the plants such as limpets, snails, abalone, sea urchins, fish species that feed on the algae, and invertebrates.

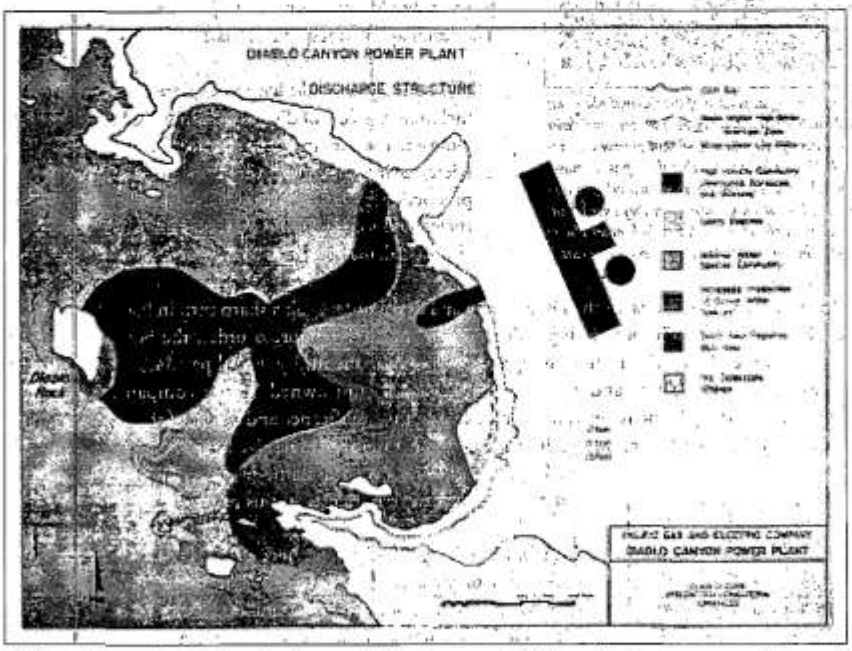
The study findings not only indicated that the utility prediction of impact on a variety of species was entirely wrong but also that PG&E failed to predict accurately how far and wide the hot water discharge

would extend. The original thermal plume pollution predictions were literally off by more than a mile, significantly affecting an additional area 4.2 miles to the north of the reactors. Where utility predictions had placed a 0.3 mile area of Diablo Cove at uncertain risk from thermal pollution, the actual impacts from the reactors amount to 1.4 miles of nearly complete loss of all habitat in the intertidal zone. Summing up Diablo Canyon's effect on this once vital, densely covered marine habitat, Michael Thomas, WQCB project manager for the Diablo Canyon Studies, said: "It's essentially bare rock—what I call bare rock."[23]

Legal Wrangling Ends in Water Board Capitulation to Utility Demands

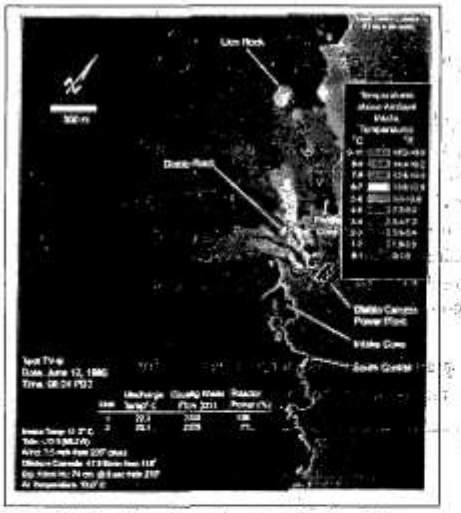
Completing the utility's environmental monitoring program report was not entirely a cooperative and forthcoming process. For 10 years, PG&E did not submit 1986 infrared images that showed a much more widespread distribution pattern of Diablo Canyon thermal plumes into the cove. PG&E also withheld an extensive set of 20-year time-series photographs of ocean monitoring stations, showing a steady degradation of habitat. The submittal of temperature-monitoring data, collected by PG&E from 1997 to 1998, confirming elevated temperatures, was delayed until May 2000, even though the company had submitted annual monitoring reports for 1998 and 1999.[24]

In 1994, PG&E attempted to reduce the state's monitoring program by about 90 percent, essentially its elimination. PG&E's effort to close down the Diablo Cove marine life monitoring program was



PG&E's predictions of benefits, rather than damage to Diablo Cove as a result of the heated discharge waters, proved to be way off target. Furthermore, the utility knew of the damage, but withheld evidentiary photos for more than ten years. In a 1982 PG&E report, the utility asserted that there would be potential indirect benefits of the discharge on the Cove's marine habitat. "By causing an increase both in the turnover and, possibly, the source of the ocean water, an increase in nutrient supply may promote a more luxurious growth and production of the cove's marine plant community and marine biomass," read PG&E's report. In March 2000, testimony by the Regional Water Quality Control Board the agency stated: "In reality, bare rock has increased in Diablo Cove, and the intertidal algal community has been almost completely lost.

vehemently and successfully opposed by state agencies and several environmental groups. Additionally, allegations came to the attention of the California Office of the Attorney General that the utility had omitted information from a 1988 report, analyzing the effects of taking in 2.5 billion gallons of water a day from the cove and the entrainment of marine life in the reactor cooling system. PG&E eventually settled with California for $14.04 million and was required to reanalyze the effects through an independent review. This fine was 7 times higher than any fine ever levied by the federal Nuclear Regulatory Commission for any violation.[25]



An aerial infrared photo showing dispersion of the thermal plume on June 12, 1986. In its March 2000 testimony, during cease and desist hearings, the Regional Water Quality Control Board observed on exhibiting this photograph: "It should be noted that the infrared images in Figures 6 and 7 [shown] are dated 1986, but were not submitted to the Regional Board until 1996, about ten years after they were taken. PG&E's 1988 annual thermal effects report did include other plume maps which did not show the plume contacting the nearshore areas."

PG&E denies state allegations that it has violated its NPDES permit. In response to charges of environmental damage as a result of its discharges, the utility has argued that the WQCB should reconsider the economics of Diablo Canyon station operation when enforcing the NPDES permit and thus should relax enforcement of its regulations.[26] The state has countered that if it were to reconsider the economics of the power plant, it should not be limited to just the costs to the utility. The regional board responded that:

> [S]uch analysis would have to explore issues including the cost of disposing of the DCPP radioactive waste, the market price for electricity being produced versus the cost of production by DCPP, and whether the electricity produced by DCPP is necessary to meet electrical demands of the community.[27]

The board's deliberations on the DCPP cease and desist order took a sharp turn in favor of the utility on June 2, 2000. Without issuing a decision on the staff-supported order, the board and PG&E reached a broad tentative settlement agreement whereby the utility would pay $4.5 million for marine restoration projects and preservation of coastal land owned by the company. Despite the unreconciled disagreement between the parties over the significance and extent of the cooling system's harmful impacts on the marine environment, the board sought to resolve the pollution issues to avoid a lengthy and expensive legal battle in utility appeals.[28] (For more details on this case, see chapter 4, this report.)

"You still gotta realize that you're taking in a square mile of water, to the depth of 14 feet, per day, and passing it through that power plant, killing every bit of plankton and some of the adult fishes contained in the cove every day."

Diablo Discharges Only One Piece of the Disaster

The issue of the thermal discharges is but one piece of the environmental problem caused by the wasteful once-through cooling system. The environmental consequences from the intake of large volumes of water into the system must also be taken into account. With the intake of large volumes of water into the nuclear power station cooling systems, the entrainment of wildlife and marine life has a significant, and at least equally disastrous, impact on the environment.

As California marine biologist and chemist Dr. Rimmon Fay pointed out at the Diablo Canyon hearings:

"You still gotta realize that you're taking in a square mile of water, to the depth of 14 feet, per day, and passing it through that power plant, killing every bit of plankton and some of the adult fishes contained in the cove every day."[29]

Millstone Nuclear Power Station and Long Island Sound: Fishing Without a License

In the first 11 months of 2000, 43 arrests were made off the coast of Connecticut for fishing violations in Long Island Sound.[30] Those arrested were charged with an array of offenses, including catching undersize lobsters, exceeding quotas, fishing without a license, and failing to keep accurate log entries. Penalties for such violations may range from a $25 fine or 30-day imprisonment or both; each illegal taking of a fish or crustacean is considered a separate offense.[31] Commercial fishermen face potential license suspension for illegal takings and other violations.[32]

Although commercial, sport, and recreational fishing are closely regulated, Millstone's fish kills are unregulated. There are no limits on Millstone's kills, by season, size, age, or number.

The State of Connecticut Department of Environmental Protection (DEP) employs a staff of 13 full-time conservation officers to patrol the Long Island Sound; six officers and two supervisors are assigned to the area east of New Haven. These "harbor police," who are also certified police officers, are charged with enforcing state and federal laws governing all aspects of fishing in Long Island Sound, including commercial, sport, and recreational uses.[33] The regulations set limits for legal capture of fish and crustaceans as to season, size, age, number, and even gender. For example, Section 26-157c-1 of the Regulations of Connecticut State Agencies, entitled "Taking lobsters—general," provides as follows:

> (a) Lobsters may be taken only by lobster pots, traps, trawls or similar devices or by skin diving, including the use of self-contained underwater breathing apparatus, or by hand. The use of spears or hooks of any kind to take lobsters and the possession of lobsters taken by any method which pierces the shell are prohibited.
> (b) No person shall buy, sell, give away, offer for sale or possess (1) any female lobster, regardless where taken, with ova or spawn attached or from which the ova or spawn have been removed or (2) any female lobster, regardless where taken, bearing a v-shaped notch at least one-quarter inch in depth and tapering to a point in the flipper next to the right of the center flipper as viewed from the rear of the lobster, or (3) any lobster, regardless where taken, with a body shell (carapace) less than 3-1/4 inches. Such length shall be measured along the length of the body shell (carapace) parallel to the center line from the rear end of the eye socket to the rear end of the body shell (carapace). For the purposes of this subsection, any lobster specified in subdivision (2) of this subsection includes any female lobster which is mutilated in a manner which could hide, obscure or obliterate such a mark.
> (c) When caught, any lobster specified in subdivision (1), (2) or (3) of subsection (b) shall, without avoidable injury, be immediately returned to the waters from which taken.

State regulations have tightened over the years, as biologists at the DEP's Marine Fisheries office in Old Lyme have documented the decline of fish species in the Sound. DEP fisheries biologists have directed particular attention to the decline in the Niantic River winter flounder population, a subspecies of indigenous fish believed to have inhabited the Niantic River Bay area for thousands of years. Winter flounder, once a staple of the local commercial fishing industry, return every winter to Niantic to breed

7 Joseph Milton, staff counsel, California Department of Fish and Game, Memorandum to California Regional Water Quality Control Board, Draft Cease and Desist Order for Pacific Gas and Electric National Pollution Discharge Elimination System Permit Order 90-09, February 29, 2000, p. 5.

8 Ibid., p. 3.

9 64 Federal Register 120, June 23, 1999.

10 Fish and Game Code § 5521;Stats.1997, chapter 787, p. 2.

11 Fish and Game Code, p. 86.

12 *Department of Fish and Game v. Anderson-Cottonwood Irrigation District* (1992) 8 Cal.App.4th 1554.

13 Legal Office, California Department of Fish and Game, Memorandum, February 29, 2000, p. 1.

14 Ibid.

15 Legal Office, California Department of Fish and Game, Memorandum to Michael Thomas, RWQCB, February 28, 2000, p. 7.

16 California Department of Fish and Game, Memorandum to Roger Briggs, executive officer, RWQCB–Central Coast Region, February 29, 2000.

17 Ibid.

18 Jennifer Soloway, staff counsel, California Regional Water Quality Control Board—Central Coast Region, "Response to Legal Argument Opposing Adoption of Draft Cease and Desist Order 00-032 for Diablo Canyon Nuclear Power Plant, May 5, 2000, p. 2.

19 Ibid., p. 7.

20 Ibid., "Response," p. 8.

21 Staff Counsel, CRWQCB, "Legal Argument in Support of Adoption of Draft Cease and Desist Order 00-32 for PG&E's Diablo Canyon Nuclear Power Plant," March 1, 2000, p. 3.

22 Hearing Before the California Regional Water Quality Control Board, Central Coast Region, for Consideration of a Cease and Desist Order Against Pacific Gas and Electric Company's Diablo Canyon Nuclear Power Plant for Alleged Violations of the Facility's National Pollutant Discharge Elimination Permit System, *Transcript of the Proceedings*, San Luis Obispo, CA, March 30, 2000, line 24, p. 15–line 1, p. 16.

23 Ibid. , lines 4-5, p. 79.

24 Michael Thomas, project manager, CRWQCB, Rebuttal Testimony in Support of Cease and Desist Order No. 00-032, May 5, 2000, p. 6.

25 NRC Office of Public Affairs, telphone conversation with Paul Gunter, December 7, 2000. In 1997, NRC levied a $2.1 million fine on Millstone that currently stands as the agency's largest fine.

26 CRWQCB, Legal Argument, March 1, 2000, p. 14.

27 Ibid.

federal and state agencies has left a void in the patchwork of the regulated protection of fish stocks and their marine ecology.

28 David Sneed, "Diablo Settlement Reached," *The Tribune*, June 3, 2000.

29 CRWQCB , Hearing Transcript, lines 5-9, p. 299.

4-3. Diablo Canyon Nuclear Power Plant
Pacific Gas and Electric Company, San Luis Obispo, CA

PG&E: Cover-ups, falsifications challenged—but money talks in the end.
The Diablo Canyon Nuclear Power Plant near San Luis Obispo, CA, operates two nuclear reactors, using the once-through cooling system. Their routine operation was determined to have a damaging effect on the coastal marine environment by the California Department of Fish and Game (DFG) and the California Regional Water Quality Control Board (RWQCB), Central Coast Region. Yet, like other utilities, Diablo Canyon's operating utility and licensee, PG&E, has long attempted to minimize and obfuscate the facts about its impact on the marine environment.

In 1982, PG&E, under its obligation to the water quality control board's San Luis Obispo office, submitted a series of reports about the plant's effect on the surrounding marine environment in Diablo Cove. However, in 1994 the regional board finally discovered, through revelations by the Department of Fish and Game, that PG&E's data contained only information that showed the plant had little or no effect on the marine environment around its reactors. "Evidence indicates PG&E omitted more than half of the actual test results which showed up to a 90 percent reduction in sea life as it passed through the cooling system," the state and federal environmental protection agencies said in a joint statement after the discovery that PG&E had suppressed data detrimental to its claims.[1]

PG&E's track record of withholding data...on the reactors' actual discharge impacts has further undermined the company's credibility.

PG&E's track record of withholding data, for years and even decades, on the reactors' actual discharge impacts has further undermined the company's credibility. These revelations have led to extensive litigation between PG&E and state water authorities, revealing the lengths to which PG&E is willing to go to cover up facts, avoid mitigation, and stall or withdraw from negotiations. Meanwhile, Diablo Canyon's on-going operation further degrades the marine environment.

Chronology

PG&E fined for tampering with and withholding key data. In May 1997, in one of the largest environmental settlements reached since the 1989 Exxon Valdez disaster, PG&E was forced to pay out $14.04 million for tampering with and withholding portions of studies that showed negative impacts on entrained marine life at Diablo Canyon.[2] Sued by California and U.S. Environmental Protections Agencies, the state and federal attorneys general offices and the RWQCB, Central Coast Region, PG&E was found to be in violation of the federal Clean Water Act. The utility's conclusions about the amount of sea life drawn into the system were found to be based on scientifically unsound data—measurements of the amount of fish and other organisms at the outflow of the cooling system.

PG&E refuses to admit guilt, despite overwhelming evidence. After the 1997 settlement, PG&E refused to admit guilt while the RWQCB conceded that the problem might be impossible to correct with the plant already in place. "It's not sure there would be anything that could actually be done the way the plant is currently built," said Paul Jagger, assistant executive officer at RWQCB's San Luis Obispo office.[3] The government agencies that settled with PG&E issued scathing statements about the company, calling the conduct of its senior officials "rogue behavior" and saying its decision not to report findings at Diablo Canyon "lacked integrity."[4]

PG&E stalls mitigation agreements. The terms of the settlement included a new study to be done for Diablo Canyon by Moss Landing Marine Laboratory. Terms also stipulated that $6.19 million of the

$14.04 million penalty would be directed toward environmental enhancement projects. However, agreement on conservation programs between PG&E and the regional water board led to continual breakdowns in negotiations between the two parties, resulting in delays.

Water board submits to PG&E delaying tactics. By November 1999, the regional board was tired of waiting. Prior to a November 19 board meeting, the *San Luis Obispo Telegram–Tribune* reported that the board was considering issuing a cease and desist order against the utility company for violating its water discharge permit by damaging the marine environment.[5] This would have obligated PG&E to submit an analysis and time line for modifying its water discharge system to prevent further degradation of near-shore habitat.[6] At the meeting, PG&E showed a 10-minute video of abundant fish swimming in the cove near the plant, an effort that some board members dismissed as "fluff, misleading and without scientific value."[7] The fish flourishing in the cove were found not to be the indigenous species, but those attracted by the artificially warmed waters. Despite this, the board agreed to yet another delay, giving PG&E until March 30, 2000, to allow the utility to plan adequately for evidentiary hearings on the proposed cease and desist order.

The abundance-of-organisms argument has been shown to be flawed by ecologists and others. As award-winning Harvard Professor of Entomology and conservation scientist Edward O. Wilson pointed out in his landmark book, *The Diversity of Life*, numerical abundance of any species is not necessarily a guarantee of survival. "The age, health and breeding patterns of individuals have an important effect on the genetic trajectory of a population and eventually its very survival," Wilson wrote.[8] "Even if the woods and fields are swarming with plants and animals of a certain kind, the species might be destined for extinction."[9]

Damage proven but PG&E argues against mitigation. By December 1999, PG&E's own new study was made public in draft form. It revealed that Diablo Canyon was killing significant numbers of near-shore fish larvae.[10] "One species of kelp fish suffers 24 percent larvae mortality, two species of sculpin larvae were reduced by 10 percent and 7 percent respectively and 14 percent of monkey-faced prickleback young are killed," the study stated.[11] The study also found that about 90 percent of the black abalone that once inhabited the cove had succumbed to withering syndrome, a fatal disease that has also affected the red abalone. This disease has been attributed to the higher water temperatures created by the plant's discharge system. Despite these numbers, the PG&E legal team continued to argue that "the plant's impacts on the ocean are predictable, minimal and temporary, and no mitigation action is needed."[12] The state Department of Fish and Game and the state Water Resources Control Board disagreed, and both submitted substantial testimony in support of a cease and desist order.

More delays as environmental damage continues. No decision was made at the March 30, 2000, meeting. Testimony and rebuttals from both sides were provided to the board for a decision at the next meeting, on June 2, 2000. In the interim, during evidentiary hearings, PG&E turned down one mitigation proposal from the state—to preserve in perpetuity the 12,000 acres surrounding the plant. Jeff Lewis, Diablo Canyon spokesman, said that handing over 14 miles of valuable coastal land was too high a price to pay. PG&E also declared as financially unacceptable the construction of cooling towers, the less destructive alternative to the once-through cooling system.[13]

Discovery of suppressed evidence shows extensive damage. In May 2000 during the evidentiary hearings, it was discovered that PG&E had withheld, since 1986, infrared images that showed the actual distribution patterns of the thermal plume and impact zones.[14] PG&E had also withheld 20-year-time-series photographs of the monitoring stations. The extensive library of historical photos showed major deterioration of Diablo Cove.[15] PG&E had also collected temperature-monitoring data during 1997

and 1998 from the area north of Diablo Cove. These data were not submitted until May 1, 2000 (even though annual monitoring reports were submitted in 1998 and 1999).[16] The temperature-monitoring data only came to light during the discovery process. The state's testimony further documents that, during earlier evidentiary hearings for the cease and desist order, PG&E's legal counsel had argued "extensively" the degree of elevated temperatures in this same area was "unknown" while PG&E staff, aware of the data, remained silent.[17]

Water board buckles to PG&E pressure. Prior to the final June hearing, PG&E reportedly entertained negotiations with the RWQCB with an offer to spend $75 million to build a deep-water intake and discharge system in lieu of paying any fines levied by the order.[18] However, at the June hearing, the RWQCB instead succumbed to the utility when PG&E threatened protracted and costly law suits if faced with the issuance of a cease and desist order to mitigate fully for the damage it had caused. On October 27, 2000, the utility and the RWQCB settled for a meager $4.5 million restoration package and the preservation of 5.7 miles of company-owned coastline habitat.

Without addressing the ongoing harmful thermal discharges, the settlement included:

- preservation of an unspecified amount of company-owned watersheds draining to the coastline from Fields Cove
- PG&E payment of $4 million for unspecified marine restoration projects in the vicinity of the reactor
- opening of Diablo Canyon Power Plant biological research laboratories to educational organizations for a 10-year period
- payment of $350,000 through company contributions for black abalone restoration through artificial cultivation and transplants
- reduction of PG&E's marine environment monitoring program for the Diablo Canyon discharges
- a narrow provision to protect the settlement against future changes in law, regulations, and permit conditions related to the settlement.

The public intervenors in the California case strenuously objected to the board's adoption of a settlement that failed to address the specific violations of the Diablo National Pollution Discharge System permit as documented by the board's own legal staff.[19] The ongoing thermal discharges continue to violate the provisions of the water discharge permit that states that: (1) there shall be no degradation of indigenous species, (2) there shall be no degradation of marine communities, including plants and invertebrate and vertebrate animals, and also (3) the elevated temperature of the receiving water shall not have any adverse effect on beneficiary uses. The intervenors also objected to the abdication of the board's regulatory responsibilities to protect water resources and marine life from the indisputable ongoing and growing damage from the generator's cooling system.

Had the board approved and issued a cease and desist order, PG&E could have faced fines of millions of dollars a day for the past 15 years.

Had the board approved and issued a cease and desist order, PG&E could have faced fines of millions of dollars a day for the past 15 years. Additionally, PG&E's proposal to extend the hot water discharges farther out into the cove or beyond, tantamount to constructing a superhighway on the ocean floor, would likely have caused new and as yet unexplored harmful environmental consequences and would have required an environmental impact statement. Furthermore, artificially cultivating black abalone and placing them back into the same environment in which they were destroyed, without reducing the rates or temperatures of the discharge water, fails to protect the species' long-term survival. This license to kill black abalone for the foreseeable future could mark the obliteration of the Diablo Cove population.

Notes

[1] Silas Lyons, "$3.6 Million for Morro Estuary," *San Luis Obispo Telegram–Tribune*, May 28, 1997.

[2] See also: Glenn Roberts, Jr., "Estuary Program in the Right Place at the Right Time," *San Luis Obispo Telegram–Tribune*, May 29, 1997.

[3] Ibid.

[4] Ibid.

[5] David Sneed, "Water Board Delays Sanctions," *San Luis Obispo Telegram–Tribune*, November 20, 1999.

[6] Ibid.

[7] Ibid.

[8] Edward O. Wilson, "*The Diversity of Life*," (New York: W.W. Norton and Company, 1999), p. 237.

[9] Ibid.

[10] David Sneed, "Study: Diablo Killing Fish Larvae," *San Luis Obispo Telegram–Tribune*, December 14, 2000.

[11] Ibid.

[12] David Sneed, "Warm-Water Outflow Has Altered Cove's Ecosystem – but Is That Bad?" *Telegram–Tribune*, January 16, 2000.

[13] Ibid.

[14] Michael Thomas, project manager, California Regional Water Quality Control Board—Central Coast Region, "Rebuttal Testimony in Support of Cease and Desist Order No. 00-032," May 5, 2000, p. 6.

[15] Ibid.

[16] Ibid.

[17] Ibid.

[18] *California Energy Market*, May 12, 2000, p. 7.

[19] Jennifer Soloway, senior staff counsel, California Regional Water Quality Control Board, Central Coast Region, "Response to Legal Argument Opposing Adoption of Draft Cease and Desist Order 00-032 for Diablo Canyon Nuclear Power Plant," May 5, 2000, p. 1.

CALIFORNIA COASTAL COMMISSION
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Th6a-b

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Staff:	Tom Luster-SF
Staff Report:	11/30/06
Hearing Date:	12/14/06

CONSOLIDATED STAFF REPORT
DE NOVO HEARING FOR APPEAL
AND
COASTAL DEVELOPMENT PERMIT APPLICATION

COMMISSION APPEAL NO.:	A-3-SLO-06-017
APPLICATION FILE NO:	E-06-011
LOCAL GOVERNMENT:	County of San Luis Obispo
LOCAL DECISION:	Approved with Conditions, March 7, 2006
APPLICANT:	Pacific Gas and Electric Company
SUBSTANTIAL ISSUE:	On May 11, 2006, the Commission found that the appeals of the local government action on this project raised substantial issue.
PROJECT DESCRIPTION:	Remove Diablo Canyon Power Plant's existing steam generators and replace with new generators.
PROJECT LOCATION:	Diablo Canyon Nuclear Power Plant, P.O. Box 56, Avila Beach 93424 (approximately 6 miles north of Avila Beach), County of San Luis Obispo.
APPELLANTS:	Mothers For Peace / Sierra Club – Santa Lucia Chapter / Commissioners Reilly and Shallenberger
SUBSTANTIVE FILE DOCUMENTS:	See Appendix A
STAFF RECOMMENDATION:	Approval of De Novo Permit with Conditions and Approval of Regular Permit with Conditions

Adverse Impacts Caused by DCPP's Cooling System: DCPP uses up to about 2.6 billion gallons per day of seawater to cool its generating units[10]. The seawater is pulled in through an intake structure and then passes through thousands of feet of narrow tubes in the generating units, where it carries off heat from steam passing through another set of similar narrow tubes carrying water from a closed-loop system that carries steam and water to and from the reactor. The heated cooling water is then discharged into Diablo Cove. DCPP's use of seawater for cooling, along with several other operational discharges, is permitted through an NPDES permit issued by the Central Coast Regional Board. DCPP's most recent NPDES permit, issued in 1990, has been on administrative extension since 1995. The facility is authorized to discharge its cooling water at a temperature up to 20° F above the ambient seawater temperature.

DCPP's use of seawater for cooling plant creates three main types of adverse impacts – entrainment, impingement, and thermal effects – each of which is described below, along with a brief description of studies conducted at DCPP to determine the extent of these impacts.

- **Entrainment:** Entrainment occurs when small organisms, such as plankton, fish eggs, larvae, etc., are pulled into the intake. Once-through cooling systems like the one used at DCPP are considered to cause essentially 100% mortality due to the organisms being subjected to high temperatures or high pressures within the system. Entrainment causes direct impacts by killing the small organisms that are pulled through the cooling system and causes indirect impacts to the larger marine community by altering the food web and removing part of the community's productivity. The loss of eggs and larvae due to entrainment may or may not result in losses of adult members of a given population; however, the losses from large cooling systems cause a loss or change in ecosystem resources and can cause alterations in community structure.

  Determining Entrainment Impacts: Determining the scale and the extent of entrainment impacts generally requires a study that includes at least one year's worth of regular sampling data and application of any of several modeling approaches. The samples are taken from waters near the intake and from nearby source waters. Organisms captured are identified to the lowest possible taxon. In most cases, all organisms cannot be identified, so the known taxa serve as indicators or surrogates for the full set of affected species. Of the various models available, the most acceptable is known as the Empirical Transport Model (ETM). It is used to provide an estimate of the proportion of organisms lost due to entrainment compared to the overall number of organisms in a source water body. The ETM approach allows estimates of loss for each identified species, in part by recognizing that each species is subject to entrainment during particular life stages. Once the species subject to entrainment are identified, the ETM approach then determines what period of time each of the species are subject to entrainment – that is, based on local currents, it determines how many days an egg stage or larval stage of a particular species is subject to being pulled into the cooling system

[10] To provide a comparison and a sense of scale, the 2.6 billion gallons of ocean water DCPP uses each day is equal to about 8,000 acre-feet, or the amount of water that would cover 8,000 acres (more than 12 square miles) with a foot of water. Over the course of a year, DCPP uses almost a trillion gallons of ocean water, or about 3 million acre-feet, which would cover over 4500 square miles up to a foot deep.

rather than be able to move away and escape from it. This period varies by species, ranging from just a few days to several weeks. It will also vary by whether it is calculated using the maximum or mean duration of larvae in the source water. As a very simple example, if individuals of a species are "entrainable" for the first five days of their lives and the average currents in the area move past the cooling system intake at half a mile per hour, that species has a source water area of sixty miles (5 days x 24 hours x 0.5 mph = 60 miles). Determining source water areas is complicated by seasonal changes in current speed or direction and whether the species are from nearshore or offshore areas, but the basic concept is the same.

The proportion of larvae lost to larvae in the source water (known as "proportional mortality") is then multiplied by the source water area to provide an estimate of how much overall production of the species in this area is lost due to entrainment. This result of this calculation, known as "habitat production foregone" (HPF) can be expressed in acres or in miles of shoreline. Even a low "proportional mortality" figure can result in a large impact if the loss occurs over a large stretch of shoreline. Using the example above, if 5% of the larval stage of that species is lost due to entrainment, that represents that species' production along about three miles of shoreline (0.05 x 60 miles = 3 miles). The HPF for the various species can be kept separate or can be combined as an overall average figure.

Entrainment at DCPP: Applying ETM to the most recent entrainment studies at DCPP has shown that the cooling system causes significant loss of production along many miles of coastline and over a relatively large offshore area. PG&E, in conjunction with the Regional Board and a technical workgroup including independent scientists, conducted an entrainment study in the late 1990s. The study identified about three dozen species or genera of both nearshore and offshore fish that represent over 90% of the sampled species. The "habitat production foregone" figures for many of the identified species range up to several dozen miles of shoreline or several hundred acres of offshore waters. For example, the study showed that the HPF for Pacific sardines ranged from 72 to 400 acres of offshore waters[11]. For the clinid kelpfish, which is a nearshore species, the study showed that the HPF ranged from about 10 to 33 miles of nearby shoreline[12].

Results of entrainment studies such as this cannot reflect all the variables that may affect populations within a given area – for example, populations may decrease or increase due to seasonal or longer term changes, the habitat within the source water areas is likely to include characteristics that affect particular species and may be of variable quality within the same source water area, etc. These methods do, however, provide a good sense of scale of the overall impacts of a given cooling system. In the case of DCPP, the entrainment sampling

[11] For mean larval duration, proportional mortality loss of 0.03% in a source water area covering 379 square miles resulted in an HPF about 72 acres. For maximum larval duration, a proportional mortality loss of 0.01% over 6,395 square miles resulted in an HPF of about 400 acres of offshore waters.

[12] For mean larval duration, the proportional mortality loss was 31% along a source water area of 33 miles of shoreline, which results in an HPF of about 10 miles of nearshore waters. For maximum larval duration, proportional mortality was 41% from a 78-mile source water body, representing an HPF of about 32 miles of nearshore waters.

process lasted for about two-and-a half years rather than the standard one-year, and the habitat within many of its source water areas is of relatively good quality; therefore, the data may reflect actual entrainment impacts more accurately than studies done elsewhere for shorter times or for more variable habitats.

Overall, the entrainment study results show that DCPP causes a substantial loss of production in local and regional nearshore waters. When considering these losses together, the Regional Board's scientists have estimated that the number of organisms killed by the cooling system in a year is roughly equivalent to the organisms produced annually in 210 to 500 acres of reef and rocky substrate habitat – that is, when summed and averaged, the overall proportional mortality of DCPP would require about 210 to 500 acres of new reef and rocky habitat to produce and replace the number of organisms killed in the cooling system each year. In the offshore waters near DCPP, rocky reef habitat is considered highly productive, so this impact represents a substantial loss to the local and regional offshore environment.

- **Impingement:** Impingement occurs when fish or other organisms are caught on an intake's screening system and are either killed or injured. The impingement rate for an intake is primarily a function of water velocity. The current Clean Water Act regulations (at 40 CFR 125) applicable to cooling water systems establishes a maximum velocity of 0.5 feet per second as the required Best Available Technology. When velocities are below that level, fish are usually able to swim away from the pull of the intake. Impingement rates may also vary seasonally or when schools of fish get close to the intake.

  A 1985-86 impingement study at DCPP showed that the cooling system impinged about 400 fish and 1,300 crabs during the one-year sampling period. This is a relatively insignificant impact when compared to impingement rates at other power plants; however, DCPP operates its intake at velocities greater than 0.5 feet per second and may be required to either make operational changes or provide impingement mitigation.

- **Effects of Thermal Discharge:** The cooling system causes an additional thermal impact when the heated water is discharged back in to the ocean. DCPP is permitted to discharge this water at temperatures up to 20°F above ambient seawater temperature.

  In 1976, PG&E started biological monitoring in nearby marine waters, largely to identify baseline conditions, establish control areas, and to identify effects caused by DCPP's thermal discharge. In 1983, the State Water Resources Control Board issued Order WQ 83-1, which allowed PG&E to withdraw and discharge about 2.6 billion gallons per day of seawater, along with other facility-related discharges. The Order also identified a set of biological impacts predicted to be caused by the temperature increase, though it stated that while these impacts would somewhat degrade beneficial uses, they would still allow beneficial uses to be adequately supported, as required by the state water quality standards. In 1995, the Regional Board established a technical workgroup to start a comprehensive review of the monitoring program data. In 1997, the workgroup published a report identifying a number of impacts that exceeded those that had been predicted. In 1998, PG&E published its own report that came to different conclusions about many of these impacts. The Regional Board staff

reviewed these reports and concluded that these impacts represented a violation of PG&E's NPDES permit. They determined the following differences between predicted and actual impacts:

- Along the intertidal zone, the initial permit had predicted that thermal effects would occur along less than a mile of shoreline. The later review revealed impacts extending about 1.8 miles. There was also an unexpected increase in the amount of bare rock within Diablo Cove's intertidal areas.
- Within the nearby subtidal areas, initial predictions were that the discharge would affect about 40 acres. The actual impact turned out to include about 56 acres of bull kelp habitat, and up to about 105 acres of bull kelp habitat during El Nino events.
- The initial permit predicted that the community structure and population would change in about a third of Diablo Cove during a few months of the year. The actual impacts show continuous major reductions in species and populations within the Cove, including an almost complete loss of some fish and algae species. The thermal discharge has also apparently resulted in a substantial decline in black abalone populations due to an increased occurrence of withering syndrome.

In 2000, the Regional Board staff issued a draft Cease and Desist Order alleging that PG&E was violating several water standards and a provision of its NPDES Permit related to thermal discharges. The draft Order would have required PG&E to submit a report that described how it would modify DCPP to meet conditions of its Permit or submit a proposed mitigation program to address the thermal discharge impacts. Later that year, the Board held a hearing on the draft Order. There were a number of differences between the positions of Board staff, PG&E, and various commenters. The Board did not adopt the Order, but directed its staff to work with PG&E to resolve their differences and to also consider additional mitigation measures that might be needed to address entrainment impacts. The Board staff has continued to evaluate both impacts and potential mitigation measures for DCPP and has developed a draft Consent Judgment with PG&E; however, there are not yet any mitigation measures in place to address the identified impacts.

- **Cumulative Impacts:** DCPP is one of 21 coastal power plants in California that use seawater or estuarine water for cooling. The total NPDES-permitted inflows for these plants is about 17 billion gallons per day. Although some of these plants operate only sporadically and most of the plants do not use their full permitted amount of cooling water, each causes impacts similar to those described above and they cumulatively contribute to the ongoing long-term habitat decline in California's coastal waters[13].

The discussion above illustrates the main impacts associated with DCPP's cooling system. The proposed SGRP would result in the above adverse effects continuing about ten years beyond when they would end if not for the project – with the project, the impacts would end by about

[13] See, for example the California Energy Commission's report, Issues and Environmental Impacts Associated With Once-Through Cooling At California's Coastal Power Plants, June 2005.

2025; without the project, they would end about 2014[14]. Additionally, due to predicted overall declines in ocean conditions in the coming years, those future effects would likely increase in severity[15]. The proposed project therefore represents approximately a decade's worth of continued significant adverse impacts.

4.4.2.4 Analysis of Conformity To Applicable Policies and Legal Requirements

Coastal Act Policies and LCP Provisions: The Coastal Act provisions cited above and applicable to development such as the SGRP maintain, enhance, and where feasible, restore marine resources. They also require that the marine environment be used in a manner that sustains biological productivity and maintains healthy populations of all marine species. Coastal Act Section 30231 specifically requires that biological productivity be maintained, and where feasible, restored, through various means, including by minimizing the adverse effects of entrainment. The LCP also requires development be protective of marine habitat, particularly kelp beds, offshore rocks and reefs, and intertidal areas.

Marine Mammal Impacts: The SGRP's steam generator delivery at the Diablo Intake Cove has a high potential to disturb marine mammals that use the Cove and nearby shoreline areas. The Cove is used as a seal haul-out site during most of the year and sea otters are often present. While these animals are likely used to some level of disturbance due to the ongoing DCPP activities, the steam generator deliveries could result in "take". **Special Condition 4** is intended to reduce the risk of "take" through development by PG&E of a marine mammal protection plan. The plan would include the measures and procedures that PG&E will implement to avoid interactions with marine mammals during vessel movements within 1000 feet of the Diablo Cove breakwater. The plan will require the use of at least two NMFS-approved monitors, will require reporting of any incidents that could be considered "take", and will include a description of the training that will be provided to project personnel on techniques to avoid harming or harassing marine mammals. With the imposition of **Special Condition 4**, the SGRP will be sufficiently protective of marine mammals to conform to this aspect of Coastal Act Sections 30230 and 30231.

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[14] In an October 19, 2006 letter, PG&E stated that DCPP could possibly operate until the end of its current license terms without the SGRP and that the Commission should therefore not consider the adverse effects associated with ongoing use of the DCPP cooling system. However, based on testimony provided by PG&E and other parties during the California PUC proceedings, it is evident that operating the existing generators beyond 2014 would increase safety risks and that it is PG&E's intent and its preferred option is to implement the project. We note that none of the parties to the PUC proceedings disputed PG&E's claim that the steam generators had to be replaced in order for DCPP to operate until the end of its current license periods. We note, too, that PG&E's testimony in those proceedings focused in part on the need for timely replacement of the generators, since delays would increase the risk of failure and would increase the repair and maintenance costs of the existing generators.

[15] See, for example, Orr et. al., Anthropogenic Ocean Acidification Over the Twenty-First Century and its Impact on Calcifying Organisms, Nature, September 29, 2005; Dybas, Cheryl Lyn, On a Collision Course: Ocean Plankton and Climate Change, Bioscience, August 2006; and Vilchis, et. al., Ocean Warming Effects on Growth, Reproduction, and Survivorship of Southern California Abalone, Ecological Applications, April 2005.

Impacts Caused by the Proposed SGRP's Use of the DCPP Cooling System: As documented above, the SGRP's use of almost 2.6 billion gallons per day of ocean water for cooling would not conform to Coastal Act provisions requiring that marine biological resources be "maintained, enhanced, and where feasible, restored", and would not protect marine habitats as required by the LCP. The proposed project would cause ongoing and possibly increased adverse effects to marine resources along several miles of the California coast. Additionally, and as noted above, continuing degradation of the ocean environment due to causes beyond DCPP – such as global warming, ocean acidification, loss of fish stocks, etc. – suggest that the effects of future impacts associated with DCPP are likely to be more severe than they have been in the past. The proposed project's ongoing withdrawal of over two billion gallons per day of the habitat provided by seawater does not allow it to "maintain" biological resources or "sustain the biological productivity of coastal waters", as is required by Coastal Act Section 30230. Neither does its use of ocean water conform to the requirement that the adverse effects of entrainment be minimized, as is required by Coastal Act Section 30231. The only way the proposed SGRP could conform to these requirements would be through avoiding the use of once-through cooling.

Mitigating Impacts Caused by the SGRP's Use of the DCPP Cooling System: The studies cited above identifying the impacts of DCPP's cooling system have also resulted in consideration of a number of mitigation approaches to avoid, minimize, or provide compensatory mitigation for the cooling system's adverse effects[16]. As noted previously, the Regional Board considered in 2003 a draft Consent Judgment to allow continued DCPP operations and to ensure adequate mitigation of its impacts. Most of the effort towards identifying mitigation options has been led

[16] Mitigation sequencing: One of the main purposes of mitigation is to provide a functional replacement of the habitat or ecosystem functions that would be lost due to a proposed project; that is, to develop mitigation that results at minimum in "no net loss" of habitat or functions. The general approach to selecting and implementing an appropriate mitigation approach for a given project is to first avoid the impacts, to then minimize the impacts, and to finally compensate for the impacts that remain. The CEQA Guidelines at Section 15370 include a similar sequence for selecting mitigation. The third step, compensatory mitigation, also includes a preferred sequence – to first create environmental conditions similar to those being lost; to next restore or enhance conditions similar to those being lost; and to finally preserve or protect an area that provides habitat value. It is generally preferable to select "in-kind" mitigation; that is, to develop mitigation sites with habitat similar to that being adversely affected, rather than to develop "out-of-kind" mitigation. Similarly, it is generally considered better to develop mitigation on-site rather than off-site.

As the selection of an appropriate mitigation approach moves down through the mitigation sequence, the ratio of the amount of mitigation needed to compensate for lost habitat goes up. In most cases, the "no net loss" standard requires that the selected mitigation site be sized to provide more habitat or functions than those lost at a project site; that is, mitigation is often required to be provided at greater than a 1:1 ratio. This higher ratio is needed due to a number of mitigation characteristics. For example, it often takes years (or decades) for an enhanced or restored mitigation site to provide a similar level of ecosystem functions as that of the level at the project site. A higher ratio therefore makes up for the lost time when the mitigation habitat did not fully function. Similarly, when mitigation is needed to replace lost high-quality habitat, a restoration or enhancement mitigation site will often be larger than the project site to reflect the overall lower quality of the habitat that comes about through mitigation.

To reflect these characteristics, mitigation ratios can range from as low as 1:1 when mitigation is certain, immediate, and of equivalent value as the lost habitat, to 30:1or higher for lower quality or delayed mitigation to make up for the loss of high-quality habitat. For example, if a proposed project results in the loss of 1 acre of high quality wetlands, the mitigation requirement could be that 30 acres of similar wetlands be preserved.

by the Board staff pursuant to establishing conformity to Clean Water Act requirements. The Board implemented a technical work group consisting of Board staff, staff from the Department of Fish and Game and PG&E, and several independent scientists to help determine what mitigation measures might be feasible to address the impacts identified above. The primary mitigation options were described and evaluated in Board staff reports and in Diablo Canyon Power Plant: Independent Scientists' Recommendations to the Regional Board Regarding "Mitigation" for Cooling Water Impacts, a report prepared by the technical work group's independent scientists. While Clean Water Act conformity involves a different set of requirements than the Coastal Act, the Board's efforts provide helpful guidance about how to determine appropriate and feasible mitigation for the proposed SGRP.

The Board has considered several variations of a mitigation "package" to address the range of DCPP impacts. Mitigation elements considered are described below.

- **Avoidance and minimization:** The Regional Board staff and its working group evaluated the feasibility of DCPP avoiding the impacts entirely through use of alternative systems that would use little or no seawater, such as cooling towers, dry cooling, and experimental methods such as fine mesh screens. They concluded, however, that alternative closed cooling systems were too costly (up to approximately $1.3 billion) to be feasible. They also considered relocating the intake and outfall structures further offshore to reduce their biological effects, but again concluded that moving the structures would be too costly and would primarily change the location of many of the impacts. They considered the installation of fine mesh screens over the DCPP intake, but this, too, was considered infeasible, in large part because the technique is still experimental and the limited studies on the system suggest it may not be effective. The overall conclusion of these studies is that there are no feasible methods to avoid or minimize the entrainment and thermal impacts associated with the cooling system. Without avoiding or minimizing these impacts through use of an alternative cooling system, the SGRP would not maintain or enhance marine biological resources and would therefore not conform to Coastal Act Section 30230.

- **Compensatory mitigation:** The studies cited above also evaluated several forms of mitigation that might compensate for the cooling system impacts. The benefits and concerns of each are briefly discussed below.

  - **Artificial Reefs:** The coastal area near DCPP has a relatively high abundance of rocky tidal and subtidal habitat. As noted above, the Board's scientists determined that annual production losses caused by DCPP's entrainment impacts could be largely mitigated through creation of from 210 to 500 acres of artificial reef habitat. The cost estimates for creating this amount of reef would range from about $10.6 million to $26 million (in 2003). However, because the DCPP area has such a relatively high proportion of this habitat type, this option would require significant additional study to determine whether artificial reefs would provide meaningful mitigation. There may be few locations available where reefs could be placed or where they would result in the necessary level of mitigation.

This option, if part of an eventual settlement agreement between the Regional Board and PG&E, would require review and approval under a separate CDP application. PG&E has objected to this approach, in large part based on its contention that the economic costs of DCPP's entrainment are only about $26,000 per year and that the cost of the reefs would be "wholly disproportionate" to the costs of the impacts. This calculation is based largely on including only those costs associated with the potential value of adult fish that could have been caught had they not been entrained as eggs or larvae. This economic approach does not take into consideration the ecosystem and food web value of those eggs and larvae, and as such, is insufficient for determining feasibility or conformity for purposes of Coastal Act compliance.

- **Fish Hatchery:** This option was considered but rejected, since it would result in potential benefits to only a few of the many species adversely affected by entrainment. Using hatcheries for mitigation also raises concerns about whether the released fish will affect the genetic diversity of the base population.

- **Marine Habitat Restoration:** Although the marine habitat near DCPP is largely in good condition, there are some opportunities to restore degraded areas. The primary option identified is along the shoreline of Montana de Oro State Park, just to the north of the Diablo Canyon lands. The main method of restoration proposed, however, would be to limit public access to this area of the shoreline. While the impacts of public access appear to be the primary cause of habitat degradation along the State Park's shoreline, limiting access would require a substantial change in the area's management and may run counter to Coastal Act provisions that largely support increased access to the shoreline. This option, too, would require additional study and would be subject to CDP review.

- **Abalone Research:** Because abalone is one of the significant species directly affected by DCPP's thermal discharge, one of the mitigation options considered was to provide funding for abalone research. Again, this option would have limited benefit since it would benefit just one of the hundreds of types of organisms affected by the DCPP cooling system. However, it is being given further consideration by the Department of Fish and Game in part to support their marine enhancement goals.

- **Use of PG&E Marine Labs:** One option considered is to allow the use of PG&E's marine laboratories by nearby educational groups; however, this option would not necessarily result in mitigation for the identified impacts.

- **Funding for Marine Reserves:** Marine reserves would likely provide mitigation for some of the DCPP cooling system impacts, and some of this mitigation would likely be relatively high quality. While this mitigation option could result in substantial benefits, including direct benefits to some of the species entrained in DCPP's cooling system, for purposes of Coastal Act conformity, the Commission generally does not consider funding in and of itself an adequate mitigation measure and so does not consider such a proposal sufficient. This option would require substantial additional planning to identify with certainty how the funds would be used and what benefits would accrue.

- **Funding for the CALCOFI Program:** The California Oceanic Cooperative Fisheries Investigation (CALCOFI) is a joint effort of several federal and state agencies studying California's marine environment. It has focused on identifying long-term trends in offshore plankton communities and their effects on various aspects of the marine ecosystem. Similar to the above issue, however, it would not necessarily result in appropriate mitigation for the impacts identified at DCPP, as most of its data collection takes place further offshore and the data collection may not directly benefit the marine communities affected by DCPP.

- **Funding for the Central Coast Ambient Monitoring Program:** This program provides several forms of monitoring of conditions in and along the nearshore waters in the Central Coast area. Again, similar to the above, however, neither funding nor ambient monitoring represent mitigation for the identified DCPP impacts.

- **Conservation Easement:** The Regional Board considered including a form of conservation easement as part of its mitigation approach. The easement would have limited development within about 2,000 acres of shoreline and upland areas in the northern part of the Diablo Canyon lands between Fields Cove (just north of DCPP) and Coon Creek (just south of the boundary with Montana de Oro State Park. The coastal trail approved by the Commission as part of DCPP's ISFSI project is within this area. The easement would have allowed for ongoing agricultural practices and limited public access within this area. The draft agreement also called for protecting through Best Management Practices about 547 acres in the Coon Creek watershed to ensure that ongoing cattle grazing activities do not further degrade the nearshore environment. The draft agreement would have also required PG&E to provide a $200,000 endowment for easement stewardship costs.

  The agreement as proposed in the draft Consent Judgment mentioned above included provisions that would have limited the proposed easement's effectiveness. In a September 2005 letter, Commission staff identified several of these provisions as key deficiencies that would have resulted in conflicts with public access conditions of the CDP issued by the Commission for the ISFSI project. The proposed language also included a "termination clause" that would have allowed PG&E to opt out of the easement if any agency required any additional conditions affecting the power plant's cooling water system. While overall supportive of using a conservation easement to provide mitigation, Commission staff was concerned that this settlement language would fall short of providing an adequate level of protection or mitigation.

As noted above, these mitigation options have been considered as a part of a draft Order and draft Consent Judgment, but none have been implemented. There is still disagreement among the Board, PG&E, the Department of Fish and Game, and Commission staff about which mitigation measures are necessary and feasible. Although PG&E had agreed to the draft Consent Judgment, the Regional Board directed its staff to consider whether a different mix of mitigation measures might be more suitable. The agreement has also been on hold pending a decision in

federal court on a challenge to the U.S. EPA's recent rules about how once-through cooling intakes are to comply with the federal Clean Water Act. The Board has also deferred its decision to determine how the Commission will implement the public access requirement of PG&E's ISFSI project to allow coordination of the two agency's mitigation approaches and requirements. Board members have expressed less interest in the easement option in part due to concerns about how public access will mesh with the easement. However, the Commission's public access condition requires the access to be protective of the area's sensitive resources and is to be managed in part of a sensitive resource inventory of the area.

In 2005, Regional Board staff provided an update on the mitigation options, noting that there was still disagreement between the staff and PG&E on certain issues but that the involved parties were considering funding of marine protected areas as a main mitigation option. At this point, however, the adverse effects of DCPP's cooling system remain largely unmitigated.

4.4.2.5 Conclusion

Regarding marine mammals, as noted above, with imposition of **Special Condition 4**, the SGRP will be adequately protective of marine mammals and therefore conform to this aspect of the marine resource protections of Coastal Act Sections 30230 and 30231.

Regarding cooling system-related impacts, results of the studies cited above show that the DCPP cooling system causes significant adverse and largely unmitigated impacts to the local and regional marine environment. The proposed SGRP would result in similar impacts and would cause those impacts to continue for at least ten years beyond when they would otherwise end.

As noted above, there have been several efforts to determine what mitigation measures would be feasible to avoid or minimize the cooling system's impacts. None of the avoidance or minimization options is considered feasible, so approval of the SGRP would require continued use of the cooling system. As noted above, only avoidance of once-through cooling effects would result in the proposed project's conformity to the provisions of Coastal Act Sections 30230 and 30231 requiring that marine resources be maintained, that biological productivity be sustained, and that the adverse effects of entrainment be minimized. Additionally, although some of the compensatory mitigation measures described above are feasible, none would provide the level of protection needed to "maintain, enhance, and where feasible, restore" those resources. Therefore, based on the studies cited and the information provided above, the Commission finds that the project as proposed does not conform to Coastal Act Sections 30230 and 30231 and to LCP Section 23.07.178. However, because DCPP is considered a "coastal-dependent" industrial facility[17], the Commission may therefore evaluate the proposed SGRP under Coastal Act Section 30260, which allows such projects to be approved in some instances even when they are found to be inconsistent with other Coastal Act provisions. The analysis and findings related to Section 30260 are in Section 4.4.7 of this report, below.

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[17] DCPP is considered "coastal-dependent" pursuant to Coastal Act Section 30101, which defines a coastal-dependent development or use as that which "requires a site on or adjacent to the sea to be able to function at all."

DiabloCanyonCEm Resource

From: Bill Denneen [bdenneen@kcbx.net]
Sent: Wednesday, February 10, 2010 10:12 AM
To: DiabloCanyonEIS Resource
Cc: letters@thetribunenews.com; Letters@ntslo.com
Subject: NRC Hearing Feb. 9th

BI-1

Editor,

I was arrested in front of Diablo in 1978 because PG&E did NOT know what they would do with the nuclear waste. I was told the problem would be taken care of after it was created. I assume that meant the Yucca Mountain storage site.

Here we are 32 years later with no functioning storage site and the waste building up at Diablo. I suggest the large casks of nuclear waste be stored in the backyards of the Nuclear Regulatory Commission rather than upwind to where I live-----Nipomo.

Bill Denneen 1040 Cielo Lane, Nipomo, 93444 929-3647

publication and I urge you to read Rochelle Becker's article.

Rochelle Becker goes way back with me when she was a young kid, and she came to me and said, how do I become active, environmentally? And I think I got her started. Yes!

Okay. I want to go back to the 1960's. No one wants a copy? No one wants to hand them out? Oh, well. They are here, and he's going to hand them out. He said he's going to hand them out. One.

I go back to the 1960's, in which I was asked to talk about the--see, I'm a biologist--about the biology of nuclear radiation, and I was speaking with a guy named Ralph Vernon--maybe you heard his name--Ralph was wonderful. He was a geologist. Anyway, I talked about the effects of nuclear radiation on DNA. That's what I was concerned with. G-1

Ralph talked about an earthquake fault near Diablo. PG&E said there's no earthquake faults, we've studied it, there's none within 50 miles of Diablo. And as you may know, two have been discovered since. PG&E missed them, and they had it--No. There's no earthquake faults near Diablo. And they were adamant. That's just the beginning of PG&E's influence. And by the way, they have Proposition, I G-2

1 think it's what? 15, on the next election. Vote "no,"
2 by the way.
3 Okay. We'll move along in time to the G-3
4 sixties, and in '78, I'm proud to say that I was
5 arrested. How many people can brag about being
6 arrested? I was arrested in front--yes! Compliments.
7 I was arrested in front of Diablo. My question was:
8 What are you going to do with the nuclear waste? I
9 was told: Don't worry about it, we'll take care of it,
10 we're all set, we're working on it. That was back in
11 '78.
12 They didn't know what they were going to
13 do with the nuclear waste, and they said don't worry
14 about it, we'll take care of it. I think they were
15 talking about a place called Yucca Mountain, or
16 something like that.
17 Anyway, here we are, a few years later
18 from back in '78, when I was arrested. What are they
19 doing with the nuclear waste? Storing it on site,
20 upwind from where I live. I am--I'm old, but I would
21 like to live as long as I can and not get irradiated.
22 Anyway, I suggest--I'm going to finish up,
23 I think my time's running out--by suggesting this
24 nuclear waste is being stored, stored--stored right
25 next to the nuclear power plant, subject to terrorist

G-3 - cont

attack, subject to earthquakes that they said weren't, wouldn't happen around here. It's being stored there.

What's going to happen when there's a earthquake fault like down in Chile. Woo-woo. It's going to be interesting. Anyway, that's what--I suggest they take that nuclear waste, put it in those big cement storage things, and put them in the backyards of the Nuclear Regulatory Commission and the members of PG&E, the CEOs of PG--they deserve that in their backyards. Thank you.

MR. CAMERON: Okay. Thank you. Thank you very much, Bill. Eighty-five. That's quite a testament.

We're going to go to Sheri Lewis, David Weisman and Judy EvereD.

Sheri.

MS. LEWIS: Hi. I'm Sheri Lewis from San Luis Obispo. Diablo Canyon Nuclear Power Plant is located in an area of known and newly-discovered earthquake faults. NRC guidelines do not permit a reactor to be on or near faults, and yet, because Diablo Canyon was already built, the license was grandfathered in. Now there is a new fault, the shoreline fault, and PG&E wants to relicense the plant for 20 more years.

DiabloCanyonCEm Resource

From: Diane Dolden [dianedolden@gmail.com]
Sent: Tuesday, April 13, 2010 10:06 AM
To: DiabloCanyonEIS Resource
Subject: License Renewal for Diablo Canyon

I attended the NRC meeting on March 3rd in San Luis Obispo, California. I wish I had spoken. If I had I would have said something like the following....I come tonight as a resident of the area and in the southern wind direction for a potential toxic potentially deadly plume from Diablo Canyon if there were to be an accident. I am glad that I came tonight to hear what different people have to say about the re licensing of Diablo Canyon Nuclear Power Plant. I am encouraged to hear that the workers have such faith in management and their safety practices. I am glad the workers who spoke have pride in the company they work for. The plant workers stated their longevity in the area, their importance in the community, their contributions to the community. That is great. BUT there is one thing that most people fail to mention in the following after 'Nuclear power is environment friendly. Nuclear has little carbon emission. Nuclear power is our answer to reducing our dependence on fossil fuels. Nuclear power provides jobs"... What is failed to be mentioned is the elephant closet. We do NOT know how to safely dispose of the waste. The radioactive waste has a half-life of THOUSANDS of years(Meaning it will be poisonous and toxic to the environment around the exposure area for much,much longer. How can we responsibly say we will ensure the waste will be safe until it is harmless to the environment around it.). Diablo, and other nuclear power plants, were sold to local residents as if the minor detail of long term waste was taken care of. There would be no on-site,long term storage. There have been repeated reports of problems of using Yucca Mountain since the inception of the idea. Unfortunately these problems were shoved under the carpet for many,many years and Yucca Mountain continued to receive a lot of money over the years. What do we have to show? Only recently has the Obama administration severely cut the funding for Yucca Mountain, the fatally flawed nuclear repository for the nation. All the nuclear waste produced at the Nuclear power site site will be stored on site. Are the storage casks up to standards? Can they withstand potential earthquakes, tsunamis and other natural or human disasters? CE-1

We need to thoroughly study the newly discovered seismic faults that run in the area. CE-2

We need to make sure the on site nuclear waste storage is as safe as can be and take into account that the possibility for another Yucca Mountain is far, far in the future (Look how long it took to finally, sort of unofficially, shelve Yucca Mountain.). CE-3

We need to make sure we have no underground pipes or other contamination as in Vermont.(The company running the nuclear power plant denied that the pipes even existed until faced with unequivocal evidence to the contrary. Apparently they were able to prevent seepage into the major river near the plant recently. Apparently even more recently there have been rreports of an incredibly toxic chemical associated with nuclear power found to have seeped into the ground around the plant.) CE-4

We need to make sure that Diablo does not have the personnel and safety problems that San Onofre has reported to have had lately.

Before we re-license Diablo Canyon or other nuclear Power plants we need to seriously consider the real downsides and the potential risks to the populations living around the plants. The question is not if an accident will happen, but when. It won't matter if the accident is due to human or other forces out of our control. We also need to seriously resolve the waste problem.Temporary on cask open storage is not the solution. We will only be increasing the amount of on site waste storage. CE-5 CE-6

CE-7

Additionally as long as the plant continues to run, they need to immediately stop OTC (once through cooling). The billions of gallons of ocean water used for cooling purposes needs to be stopped immediately. The marine organisms that the water contains are killed on a daily basis. It has to have a negative effect on marine animals including the fish populations. Our local fishing industries face collapse. OTC does not help our marine animals and eco systems.

I think we need to thoroughly investigate all factors and find viable solutions before we more forward to relicense.

Thank you for your consideration,

Diane Dolden
Oceano, CA

1 management of spent fuel as dry cask storage may be
2 obsolete before the end of the current license.
3 We will submit additional detailed
4 comments before the end of the scoping period, and I
5 thank you very much for this opportunity to speak to
6 you and address our concerns. Thank you.
7 MR. FULLER: Thank you, Ms. Moffatt. Next
8 we'll hear from Carl Dudley, and then after him Mr.
9 James Byerley, and then finally Sonja Swift.
10 MR. DUDLEY: Good evening. I'm Carl
11 Dudley. I'm a resident of San Luis Obispo, San Luis
12 Obispo County. To answer one question, to start off
13 with, how many power plants have been opened since
14 Three Mile Island? There's been at least two, because
15 Three Mile Island happened in 1979. So we've had the
16 two here that have at least been opened.
17 I believe that the relicensing process BF-1
18 needs to continue, but the first and foremost issue is
19 soundness and safety. And I challenge anybody from
20 the NRC, the employees of PG&E, that if there is
21 something wrong, to get it out in the public so that
22 it is fixed.
23 After that, nothing else really matters,
24 other than the safety and soundness. I trust the NRC.
25 I trust the "evil," big company PG&E, and I trust

their employees, and I specially trust Mr. Womack and other people like him, that are retired, know the intricacies of the plant and are still here. I look at them as the "canaries in a tunnel." If they're still here, we're still okay. BF-1 - cont

And I believe that we do have to go forward with this. I do believe that solar, wind, wave, all have a place to play in our energy needs, but I do not believe that they can give the power, on a consistent basis, that a nuclear power plant can give. BF-2 BF-3

I believe that Diablo Canyon, in our area, has been an excellent citizen of our community. They have given a lot to the nonprofit community, and it's not only to nonprofits in general, but to nonprofit organizations that fight against them. So I think it's a strange bedfellow but it does happen, and I think that says a lot about them. It says a lot about the regulatory process. BF-4

There was a question that was brought up about the earthquake fault. I believe that that should definitely be studied. BF-5

This process, though, should not be stopped, in spite of that. If there is a serious issue with the earthquake fault, then I believe the

DiabloCanyonCEm Resource

From: Carl Dudley [cdudley@kcbx.net]
Sent: Monday, April 12, 2010 3:24 PM
To: Stuyvenberg, Andrew
Subject: DCPP Environmental Impact

Follow Up Flag: Follow up
Flag Status: Flagged

Commissioner Stuyvenberg;

My name is Carl Dudley, a 26 year resident of San Luis Obispo. I'm writing this email in support of the relicensing of Diablo Canyon Nuclear Power Plant. I also want to apologize for taking your (and the other commissioners) time. However I didn't want you to think that the community as a whole is supportive of the half truths and accusations I assume you've received from the folks against the renewal.

BZ-1

I don't have a science background but do observe the movement of people. Many of the original employees at the plant are exercising their retirement, but have chosen to continue to live near the plant. You have your own inspectors that also live and play near the plant. More important, their families are being raised near the plant. For these reasons I believe the plant continues to be safe and will for years to come. I do, however, expect BZ-2 nuclear operating license to be revoked if at any time the operation of the plant is deemed inadequate.

There is much talk of the new earthquake fault near the plant. I don't believe this should have anything to do with the renewal process. As I see it if this fault is too big of a threat for the plant to withstand, then I hope the NRC will revoke the operating permit immediately not and waiting for the expiration of the current plant operating license.

BZ-3

The 1400 +/- employees that make up the DCPP workforce offer much to our Community. They buy our products, assist with community and school activities, and volunteer with our numerous (we have over 1100 – but that's another story) non-profit organizations. PG&E has also been a big contributor of our tax base and donations to our Community.

I believe you should all do your job with an open mind. By doing so you will be able to offer the environmental reasons why PG&E, and DCPP in particular, have earned the right to continue the relicensing process with a successful conclusion in a timely manner.

Carl Dudley

1 If we have questions, other types of
2 questions, we're going to have the NRC staff talk to
3 you after that. So you had a question?
4 MS. EVERED: Well, yes. Well, I'm very
5 grateful for this opportunity for the community to
6 make an input, and I'm grateful for the way this is
7 organized.
8 My questions would be what are the
9 testings being done on the ocean these days, because
10 as you originally got your permit from the Water
11 Board, the State Water Board, there were many poisons
12 that were going to be accumulating in the ocean, like
13 mercury and cadmium and arsenic, and so on, and these
14 are very worrying as they build up, and I'm wondering
15 what testing you'll be doing, or will do.
16 MR. CAMERON: Okay. This is Judy Evered
17 who asked that question, and this is a matter for the
18 state agencies who do that.
19 Drew, do we have a quick answer for the
20 types, the agencies who might who might be doing that,
21 or should we talk to Judy after the meeting?
22 MR. STUYVENBERG: [off-mike]
23 MR. CAMERON: Yes, please. If we have
24 that other mike, I think we'll bring it up to you.
25 MR. STUYVENBERG: I would actually offer a

A-1

in its plant relicensing application.

"This Commission will not be able to adequately and appropriately exercise its authority to fund and oversee Diablo Canyon's license extension without these AB 1632 issues being fully developed. Sincerely, Michael R. Peavey, president, California Public Utilities Commission." Thank you.

MR. CAMERON: Thank you very much, David. We can go to Judy Evered now. Then we're going to go to Ed Valentine, Lauren Brown and Hugh Wadman. And this is Judy, Judy Evered.

MS. EVERED: Thank you. Good afternoon. I've come a long way to this hearing, because I think it's the most important issue we can deal with. We have a little control over, we hope.

I live in Santa Barbara and we're 40 years overdue for The Big One, and they've researched underneath of Santa Barbara and it doesn't look good. And I don't think any area along this coastline is a safe area because we're in the Ring of Fire, and it's in a place where there have been numbers of point nine earthquakes, many more than I had thought. I thought there was just the Alaskan one. A-2

And now the 8.8 one in Chile has moved the axis of the Earth one second plus. And if it could do

A-2 - cont

that, I'm sure it can ruin Diablo Canyon Nuclear Power Plant. And another thing about the Chilean earthquake was it stretched 300 kms. That means that if something happened in Santa Barbara, 80 miles away, it could happen here too.

So it's--I concur with Congresswoman Capps' assessment that this has to be truly comprehensive.

A-3

So I'm suggesting that the NRC has great responsibility now to not only stop 20 more years but potentially close the plant, and I'm very curious, right now, of how many people would consider--it seems like a dramatic and uncalled-for need, but I would suggest it's the only rational thing to do. Humans can be rational, at times. So I'd like to see how many people in the audience today would consider closing the plant to prevent future deaths and destruction, and terrible, terrible times.

Oh. There are a few. We have two--oh, quite a few. How many? Two, four, six, eight, ten.

MR. CAMERON: Okay. Thank you.

[Applause]

MS. EVERED: I think that that's the only way to go--personally.

MR. CAMERON: Thank you very much, Judy.

1 expect NASA, and the Office of Surgeon General, and
2 the National Institutes of Health, and the Centers For
3 Disease Control, to act responsibly about scientific
4 information, and to educate the public about what we
5 can and cannot expect from science, I would really
6 hope that the NRC rejects this particular approach to
7 postponing the relicensing effort.
8 If there are other reasons to postpone it,
9 let the proposers suggest those. But I would rather
10 not see science be manipulated or distorted for this
11 purpose. Thank you.
12 MR. CAMERON: Thank you, Dave. Judy, are
13 you ready? This is Judy Evered.
14 MS. EVERED: I'm from Santa Barbara, and
15 I'm the only one here from there, but we're very
16 interested because we know that we're in the plume of
17 the downwind from Diablo. So some--I've been very, AX-1
18 very interested in nuclear power for many years,
19 because we lost our son at the age of six years. Our
20 first born was in England when the Windscale nuclear--
21 well, it was called Atom Research, had an explosion,
22 and it didn't get reported in the Sunday, or the
23 London Times. It merely said the explosion was under
24 control, and that they threw 200 gallons of
25 contaminated milk into the Irish Sea. But of course

AX-1 - cont

1 they didn't tell people that it was polluted until
2 about maybe a week after the accident.
3 So my son drank a lot of milk, and we
4 didn't know that it was going to kill him. So he died
5 about four years later, and we're pretty certain that
6 was the reason. There was no other thing. So cancer
7 is caused by radiation, and they're finding, now, that
8 a lot of small exposures are as bad as one big one,
9 and sometimes much worse.

AX-2

10 So I followed earthquakes, because they're
11 often associated with the dangers of nuclear power.
12 Now, for instance, Lucy Jones, the earthquake
13 specialist from CIT, said that the earth can be moved
14 10 feet in a second with ground motion. And I guess
15 we haven't talked much about ground motion. There's
16 been talk of tsunamis here, and in 2004, a 98-foot
17 high tsunami originated in Thailand, and we're not
18 safe anywhere, really. I have to be amused, to think
19 that we can understand and predict earthquakes, when
20 some of them originate 25 miles underground.
21 In 1975, PG&E engaged six seismologists,
22 really clever, well-researched people, and they asked
23 that these seismologists would prove that it's safe,
24 Diablo Canyon is safe. But the outcome of that--
25 probably it took a year--for them to come to the

AX-2 - cont

1 conclusion that it would take a 100 men or a 100
2 people more than a 100 years, perhaps, to actually try
3 to prove something like that.

AX-3

4 But to get to another point, it doesn't
5 take an earthquake, or an accident, to kill people
6 from nuclear power. There's some brilliant research
7 done by someone called Jay Gould & Associates, and he
8 reported this work in a book called "The Enemy
9 Within," and I guess he's meaning nuclear power is an
10 enemy because it kills. And he did--he was a very
11 clever statistician, and he went to the health
12 departments in many counties where they had a nuclear
13 power plant. And he proved that up to 50 miles, there
14 was more cancer than over 50 miles, and under a 100
15 miles, there was less, but over a 100 miles, still
16 less. So he did this for 50 plants throughout the
17 country.
18 Now he didn't do Diablo Canyon, but we can
19 be sure that it's happening here.
20 For instance, in, I think it was 1994,
21 there was a public meeting in San Luis Obispo, that
22 about a dozen of us came up from Santa Barbara to
23 hear, and people there were furious at the amount of
24 cancer. There was a doctor there that said he was
25 going to stop being a doctor because too many of his

patients had lung cancer. And then people from Pismo Beach, I remember saying they were furious at the NRC. They said you are killing us. And that fits right in with Jay Gould's research. And so you don't need an earthquake to be killed by nuclear power pollution. AX-3 - cont

So I think that's just about all I need to say for now. I'm writing a book about Diablo Canyon, the protests that were made in '81, and the thousands of people who were against the nuclear plant. Not the people in the nuclear plant, because we think that there should be economic conversion, because more workers are needed for wind, solar, thermal, and so on, than are needed in nuclear power, without the expense of nuclear power, and without the dangers.

So thank you for your attention.

MR. CAMERON: Thank you, Judy. And now we're going to hear from Joe Boysen.

MR. BOYSEN: My name is Joe Boysen, and I live in Sunset Palisades, and have for about 22 years. And I was here today, so I'm not really addressing any of my remarks to the NRC people, because I think they have heard about as much as they want to hear from me. I'm hoping to reach people in the audience who are perhaps of a like mind.

I hope we can count on the NRC. I think AY-1

February 9, 2010

To: The Nuclear Regulatory Commissioners.

RE: the application to extend the two reactors at Diablo Canyon Nuclear Power plant a further 20 years.

Dear Commissioners,

There are three compelling studies/ reasons for you to deny this application.

CM-1

1. Radiation kills surrounding populations. The precise research shows statistical evidence of increasing deaths downwind from nuclear plants. This is in a book by Jay Gould and others called "The Enemy Within".

CM-2

2. Conditions conducive to accidents are present at Diablo Canyon especially in regard to the earthquake factor and the two aging plants. Charles Perrow, the author of "Normal Accidents", maintains the absence of an accident at Diablo Canyon Nuclear Plant is because not sufficient time has yet elapsed for an accident to happen. He advocates these reactors should be closed down immediately.

CM-3

3. Compelling arguments to not continue expanding nuclear power are found in the book: "Nuclear Power is Not the Answer", by Helen Caldicott. Her research covers almost all the reasons why Diablo Canyon reactors should not be given longer lives. Waste is an overriding problem. Environmental racism and enormous costs are also well exposed by this researcher.

The arguments found in the above three books involve outstanding thinking about these reactor flaws and potential damage to humans.

Please facilitate the reading of these books by your staff and aides who will I trust write at least a one page conclusion of the results outlined for your honest attempt to predict the future and rationally decide on no extension time for reactors Diablo 1 and 2.

This is morally imperative. A precautionary action is needed now.

Judith Evered, a member and co-chair of the Santa Barbara Women's International League for Peace and Freedom.

Contact information:

(805) 685-8822 (805) 720-4336 PO Box 8153 Goleta CA. 93118

1/27/2010
75 FR 4427

April 11, 2010

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RECEIVED
2010 OCT 27 PM 4:05
RULES AND DIRECTIVES BRANCH USNRC

Mr. Andrew Stuyvenberg, Project Manager
U.S. Nuclear Regulatory Commission
Mail Stop: 0-11F1
Washington, D.C. 20555-0001

Dear Mr. Stuyvenberg,

This letter is sent to extend my thanks and appreciation to the Nuclear Regulatory Commission (NRC) for taking the time last month to conduct the necessary environmental scoping meetings in San Luis Obispo…thus giving our local communities an opportunity to provide input on which issues should be considered in the Environmental Impact Statement (EIS).

CJ-1

This letter is intended to encourage the NRC to directly address Diablo Canyon's economic impacts on the local economy, and educational facilities in the local area. Because of the Diablo Canyon Power Plant, Pacific Gas and Electric Company is the largest private employer in San Luis Obispo County, with more than 1,600 head-of-household jobs, which are short in supply no matter how strong or weak the economy happens to be at the time.

Furthermore, this company is the largest property taxpayer in the county, accounting for more than $24 million in receipts for the fiscal year 2009/2010, with a significant portion going to local educational institutions.

I have no doubt whatsoever that the environmental document must evaluate all of the relevant issues in a fair, equitable, and balanced manner. Thank you very much for your consideration.

Sincerely,

Lee Ferrero

Lee Ferrero
President/Chief Executive Officer (Retired), Private Industry Council (PIC)
of San Luis Obispo County, Inc.
1720 14th Street
Los Osos, CA 93402

cc: Kim Greene (NRC)

SUNSI Review Complete
Template = ADM-013

E-RIDS = ADM-03
Add = A. Stuyvenberg (AL53)
N. Ferrer (nbf)

DiabloCanyonCEm Resource

From: R. Fryer [richard.e.fryer@gmail.com]
Sent: Thursday, March 04, 2010 10:48 AM
To: DiabloCanyonEIS Resource
Subject: Additional comments following the March 3 hearings

These comments are amended and expanded from my verbal comments at the hearing in San Luis Obispo Wednesday afternoon, 3-4-2010.

Thanks to the NRC for the opportunity to comment on the proposed relicensing of PG&E's Diablo nuclear plant.

I think that nuclear power is an important part of California's power mix. The safety record at Diablo is admirable - and thank you to the NRC for the role you play in keeping nuclear power a safe inexpensive resource. BL-1

Mothers For Peace said at the meeting that we had to depart from the hypothetical and get real.

OK, I agree with them on that. Disasters from terrorism or from 'fires in the containment pond' - both concerns voiced at the meeting seem very hypothetical to me - no citation of possible failure modes or historical event suggests either - or any other event in the history of US nuclear power plants. BL-2

Another audience member feared the leakage of (several nasty elements - I didn't catch them).

So we need to consider the alternatives. All power sources have some pros and cons. And the 'cons' for nuclear power sure seem benign to me compared with other choices. BL-3

One audience member promoted solar power (pv). I also am an investor in solar panels. And the taxpayers paid for almost half of them - PG&E ratepayers (I'm guessing here) pay for another part by requiring PG&E to store my power during the day for my useage at night. Already my power bill has grown (faster than my healthcare cost!) to rival my grocery budget. If citizens had to pay the full cost of widespread pv/solar power it would be the largest cost in our budget - not a nice thing for all of us on fixed incomes, as I am. Perhaps this isn't on your agenda, however, as it's based on affordability - not environmental damage!

To avoid destruction of our economy, we must consider fossil fueled power - the only power source that competes with the low cost of nuclear. Coal as a power source does REAL - not HYPOTHETICAL environmental damage. Coal fired plants produce nitrous products - particulates (recently blamed for much of the arctic melting) - CO2 of course - and radioactive ash! (It is low level waste, but it's going into the ecosystem now - and that's not hypothetical!) These are REAL byproducts that ARE BEING INJECTED into the environment from plants in every state. (It seems to me that environmentalists should be campaigning to replace EVERY coal fired plant with nuclear!)

I am a constituent of both Adam Hill and Lois Capps whose statements you have taken today. I have let both them know that in requesting a delay while studies are being done that they are NOT REPRESENTING MY INTERESTS! While appropriate studies should be done, they can proceed concurrently to the NRC's work. BL-4

I recommend the NRC to proceed with the relicensing process, and I hope that the result is a successful relicensing of Diablo for PG&E.

I have MS degrees in Physics (Michigan State) and Computer Science (Chico). My professional career was primarily as an Avionics Computer engineer working for the US Navy at China Lake, but I have also worked in private industry as a digital computer project manager and have consulted in computer security. I have taught both short courses and university courses and was an instructor at CalPoly for 5 years. I am now retired. I do not know anyone that works for PG&E.

Richard Fryer

Pismo Beach

being a hearing, there are later opportunities to petition for a hearing opportunity, if new information comes up, that appears to be problematic from somebody's perspective.

So it's not the only set of opportunities but it's the one that's formally mentioned at the start. So there are a number of other options.

MR. CAMERON: Okay, thanks, Drew. And I would just ask Mr. Boyson, or anybody else in the audience, if you have any suggestions on how the NRC can notice these meetings, in terms of cable TV, or whatever, if you could just talk to our public affairs representative, Lara Uselding, who's right there, and tell them about that, that would be helpful.

Let me see if there's anybody else besides Mr. Boyson who has a question now.

Yes, sir.

MR. FRYER: I'm Richard Fryer. I live in Pismo Beach. I'm interested that you're asking for input on other options for power generation in this case. I wonder if there's any way that your EIR, or some related part of the, I guess documentation, can be provided in a form that's easy for the public to understand. C-1

For example, if we didn't have Diablo, if

C-1 - cont

1 it was not licensed, what would a comparable coal or
2 oil-fired plant do to the environment? I think that
3 kind of thing can speak to the citizen perhaps better
4 than an over-extensive report that is full of
5 technical jargon.
6 MR. CAMERON: Okay. Two important points
7 there, and Drew, you might want to talk to this. One
8 is an analysis of what the costs and benefits of other
9 options are in terms of generating electricity.
10 But I think also, to make it as user-
11 friendly, understandable as possible. Can you just
12 talk, briefly, to that.
13 MR. STUYVENBERG: Sure. In terms of the
14 alternatives analysis, which you described, comparing
15 the environmental impacts from other means of
16 generating electricity to the environmental impacts of
17 Diablo Canyon, that's what our document strives to do.
18 So that's what we'll be putting together over the
19 coming months.
20 In terms of making it more accessible, I
21 definitely hear what you're saying. You know, we're
22 looking at it on an ongoing basis and how to make that
23 more readable and more accessible to the public. I
24 would like to take your suggestions for how to do that
25 later on, if you're still around.

we're going to have Richard Fryer, and after Mr. Fryer we'll have David--and I'm sorry if I don't get these names exactly right--Hafemeister. Sorry. And then after that we'll have Duane Woddell.

Mr. Fryer.

MR. FRYER: Thank you. I'm Richard Fryer, and these are my own words, that I just hastily jotted them down, so I apologize if it's not as smooth as some of you have been able to bring off.

I have MS degrees in physics and computer science. I had a career in aircraft computers until I retired from that, and I taught five years at Cal Poly in the electrical engineering department.

First, I'd like to say that I think C-2 nuclear power is a very important component of California's energy mix, and I'm pleased that Diablo has played a very safe role in that process. They've got an admirable safety record. I also appreciate NRC's, not only the opportunity to speak here today, but also the due diligence you play in helping keep nuclear power safe for us.

Mothers For Peace says that we need to consider the real world, and we need to consider what's real versus what's hypothetical. Well, in the real world, we know that oil and coal-fired plants

have terrible side effects for the environment. Let's see. Coal generates nitrous oxide, puts particulates in the atmosphere, and even--not even mentioning carbon dioxide output--also puts radioactive waste, the ash that's produced. C-2 - cont

Those are real effects and we know our grandchildren are going to live with those side effects, not the hypothetical ones that what happens if there's a fire in the containment pond.

Another aspect of that is that in the real world, we have to consider economics. I also am an investor in solar panels, but I'm aware that if it were not for the taxpayers kindly helping to pay for those, and if it were not for--I don't know if the taxpayers in this case pay for it, or if it's Diablo, or PG&E has to pay for it, but somebody provides the batteries that let me use my electricity at night instead of during the daytime.

Were it not for that, I think solar power would cost five times what ordinary power costs. Already, power is almost as much of my budget as my grocery bill. If it jumped five times, I'd probably have to move out of state.

I think that's most of my comments here. C-3

I would like to also say--unfortunately, I see Adam

C-3 - cont

1 Hill has left. I am a constituent of his, and also
2 Lois Capps. If they read their e-mails, they will
3 both know that their requests for delays do not
4 represent what I think my interests are, and I think
5 that any studies that need to be done--and I do hope
6 that such studies are done--that I think those should
7 be done concurrently.
8 MR. CAMERON: Thank you, Mr. Fryer.
9 Next we have Mr. David Hafemeister, and
10 then we'll have Duane Waddell and then Jeff Lewis.
11 MR. HAFEMEISTER: Hi. Good to be here.
12 I'm almost as old as Bill Denneen, and you'll realize
13 that when you hear my talk. It's going to be a little
14 different today.
15 A little bit of history, and then where do
16 I come out today. In 1975, the--not that the United
17 States had a perfect record on nonproliferation, by
18 the way. In 1975, the Germans and the French were
19 about to export six or seven enrichment and
20 reprocessing plants, and it ended up, since I was
21 working initially with Senator John Glenn, who became
22 the lead senator on nonproliferation matters, who had
23 a very large hand of writing the Nuclear
24 Nonproliferation Act of 1978, having hearings with
25 David Lilienthal, Hans Beta, Kissinger, and so forth.

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April 9, 2010

Andrew Stuyvenberg, Project Manager
U.S. Nuclear Regulatory Commission
Mail Stop: O-11F1
Washington, DC 20555-0001

Dear Mr. Stuyvenberg,

I would like to thank the Nuclear Regulatory Commission (NRC) for conducting the environmental scoping meetings in San Luis Obispo in March, 2010, and giving the local community a chance to provide input on what issues should be considered in the Environmental Impact Statement (EIS).

I am writing to encourage the NRC to address Diablo Canyon's economic impacts on the local economy and educational facilities in the area. Because of Diablo Canyon Power Plant, Pacific Gas and Electric Company is the largest private employer in San Luis Obispo County with more than 1,600 jobs. Additionally, the company is the largest property tax payer in the county paying more than $24 million for the fiscal year 2009/2010 with a significant portion going to local educational institutions. I truly believe that the environmental document must evaluate all of the relevant issues in a fair and balanced manner. BR-1

I look forward to reading the draft environmental document later this year. Thank you in advance for your consideration.

Sincerely,

Jim Galusha
CEO
Silverado Stages, Inc.

1 you.

2 MR. CAMERON: Okay. Thank you, Lynne.
3 We're going to go to Dwight Goggans and then O.V.
4 Harkee and Ann Harkee. This is Dwight Goggans coming
5 up.

6 MR. GOGGANS: Thank you. My name is
7 Dwight Goggans, a long-time resident, recently retired
8 from the California Highway Patrol. At the time of my
9 retirement, I was the assistant chief in our Division
10 Office, which is responsible for all the coastal
11 counties from Santa Cruz to Ventura.

12 Prior to that, I served as the commander
13 of our local San Luis Obispo Area Office. Prior to
14 that, I served as the commander of our local office.

15 I've also served in Los Angeles,
16 throughout the San Francisco Bay Area, and our
17 headquarters in Sacramento.

18 During my career, I spent a lot of time R-1
19 involved in emergency planning and emergency incident
20 response. So I'd like to focus my comments today on
21 that area. I realize that's not specifically an
22 environmental issue, but I think it speaks directly to
23 quality of life in this county.

24 It's my belief that the cornerstones of
25 proper and effective incident response involve

R-1 - cont

1 planning and preparation prior to any incident, and
2 coordination and communication during the incident.
3 As a direct result of Diablo Canyon being
4 here, this county enjoys some of the greatest
5 planning, preparation, cooperation, and communication
6 among any emergency service providers I've ever worked
7 with. There's some obvious advantages. Because of
8 Diablo Canyon, we have one of the most state-of-the-
9 art emergency operation centers in the state, located
10 on the Sheriff's Department grounds just north of the
11 city.
12 It's a facility that provides all
13 emergency service providers, both public and private
14 agencies, the opportunity to get together whenever we
15 have any kind of emergency incident, not just an
16 incident involving Diablo Canyon, and manage that
17 incident in an effective, cooperative manner.
18 Diablo Canyon has also worked with the
19 local emergency service providers to develop what we
20 call the Diablo Plan, which s how we would respond to
21 any incident that occurs out at the facility.
22 But what I think is equally important
23 about the Diablo Plan is we can use that as a
24 framework for any kind of emergency incident that were
25 to occur in this county. If we were to have a train

R-1 - cont

derailment, that released significant amounts of a hazardous material in this county, we could go to the Diablo Plan and use that as framework to respond to that emergency in the most effective way possible.

Additionally, Diablo Canyon coordinates very regular drills for us to work no our response and mitigation process. Because of those drills, we are much more effective as emergency service providers in this county than any other county I've ever worked in.

So basically, I'd just like to say that because of Diablo Canyon, we have what I consider to be one of the best, if not the best, emergency service systems in the State of California.

MR. CAMERON: Thank you, Dwight.

O.V. Harkee. Mr. Harkee? Are you guys good? Okay. Thank you.

Let's go to Peggy Koteen and then Joanne Main and Sheila Baker, in whatever order you want to come up. And this is Sheila; right? Sheila Baker.

MS. BAKER: Hello. I am Sheila Baker. Today, I emptied a five gallon bucket of water from a bucket that had some algae in it, and this was on the campus of Cal Poly, and about less than a half a mile from that site is, exists a greenhouse that has been conducting an algae study for bioenergy.

1 call another boat, they go, "Hey, Johnny, you got your
2 ears on?" meaning have you got your radio turned on.
3 I'm glad the NRC has got its ears on tonight. We have
4 talked about some of these things before but we are
5 again doing so.
6 I do want to talk to you about fish and AR-1
7 fishermen. We are told by health professionals to eat
8 more fish, but the fish we can find to eat often comes
9 from far away. Our local coast is getting "fished
10 out," is getting more empty.
11 In an effort at conservation, fishermen
12 are severely restricted in where they can fish, what
13 they can fish, and how much. Some of them have gone
14 out of business, consequently, and that, in the State
15 of California, called by a Pew study from some years
16 back, the state with the fifth largest ocean-related
17 economy in the world. The biggest fisherman of them
18 all, Diablo, is still in business, and even asking to
19 be relicensed for another 20 years on top of the
20 current expiration date after 2025.
21 How does Diablo take fish? Diablo uses
22 2.45 billion gallons of sea water per day to cool its
23 turbines. That is not just water they are using.
24 That is fish, fish larvae, and invertebrates. They
25 catch live fish, as has been explained earlier, is

AR-1 - cont

1 called impingement. In 2008, Diablo had to shut down
2 because of so many jellyfish were plugging up its
3 intakes.
4 In 2004, it was San Onofre Nuclear Plant
5 which was stopped by masses of sardines.
6 One time, Diablo even caught a live scuba
7 diver that way.
8 But that is not even the worst. More
9 disastrous is what is called entrainment. Many, many
10 fish larvae and invertebrates are sucked into the
11 plant and killed that way.
12 That's what does the real damage. That is
13 what does the damage to future generations of fish,
14 because the breeding stock is being depleted. There
15 are some who say that fish produce so many eggs, so
16 many larvae, that it does not really matter that much.
17 But here we get to the issue of cumulative
18 impact. Year after year, fewer fish are producing
19 fish, to the point where eventually, a population may
20 collapse.
21 Think of it. Extending the license would
22 be a death warrant for how many more fish in the
23 future? Are we going to get to the point where there
24 will be no fish in the water to worry about? The sea
25 water would then, indeed, be just sea water.

AR-1 - cont

Of course the water quality control people have been trying to do something about this problem for years. Various approaches have been tried over the years, but basically they have not succeeded in finding a way and making it stick.

This very month, though, the State Water Board will come out with new regulations to control the damage done by once-through cooling, to finally satisfy the requirements of the environmental--of the EPA.

Coastal power plants will be required to reduce their impact on marine life, about ninety, or is it 95 percent of what would be the impact, if they changed over to cooling towers.

Nuclear plants are not exempt this time. They will be required to do studies about how to reduce their impact, and they will be required to report on these studies three years after the new OTC policies went into effect. So that would be, hopefully, three years from now.

AR-2

And then by December 2021, they are supposed to be in compliance with the policy. So why would we, at this point, already extend the nuclear power plant licenses? We need to know the results of seismic studies, and we need to know how the marine

AR-2 - cont

AR-3

1 impacts are going to be reduced, in accordance with
2 the new OTC regulations.
3 And the NRC should also address--now this
4 is kind of a separate issue--whether it makes any
5 sense, any more, to have large power plants generating
6 electricity, and to send that power over long
7 transmission lines to distant cities.
8 If I remember correctly, there's supposed
9 to be about a 15 percent loss over long transmission
10 lines. Some recognition of that fact is already seen
11 by the newer facilities that are being built closer to
12 where the power is needed.
13 And so it's my opinion that the California
14 Energy Commission and the PUC, who have not approved
15 this application to extend Diablo's license, that they
16 need to do so, need to look at this first. They have
17 the duty to do that. They need to decide whether
18 large coastal power plants are what is best for the
19 energy needs in our future. Thank you.
20 MR. CAMERON: Thank you. Thank you,
21 Henriette. Supervisor Patterson.
22 MR. PATTERSON: I first want to take a
23 moment to thank the NRC for responding to local
24 requests to have multiple hearings, here, in San Luis
25 Obispo. The Diablo Canyon Nuclear Power Plant has

1 And out of that, the law passed, and I
2 went on into the State Department. And also along the
3 way we passed laws on sanctioning, the big sanction
4 laws, later on, with the Senate Foreign Relations
5 Committee, that sanctioned India and Pakistan for
6 their explosions.
7 So what we did is we killed the plutonium
8 economy, and it was my job to go with the Carter lead,
9 Professor Joe and I, down to Oak Ridge, and Hanford--
10 not Hanford--whoops--South Car--Barnwell, South
11 Carolina, and basically shut down the fast breeder
12 reactor and reprocessing programs.
13 Okay. That's interesting, but what do you V-1
14 do if you don't reprocess, is the bottom line? Our
15 theory then was, of course, that we were going to have
16 a viable Yucca Mountain, and we got laws passed that
17 said you'd have a mill per kilowatt hour to pay for
18 that, and when this policy was rolled out, we had--DOE
19 rolled it out, and it was seven or so DOE people and
20 one State Department person.
21 So that happened 25 years ago, and of
22 course we have above-ground storage. I'm not--if you
23 rank the problems with nuclear power, I believe they
24 are first, proliferation, second, safety, and third,
25 waste.

Now if you want to get rid of nuclear power--now where do I come out in this today, 35 years? I've gone on to do other things. Where do I come out today is that--I do want to talk about process. I'm not going to give any bottom lines here.

But I think a process has to somehow use V-2 quantification, and one of my favorite units is deaths per kilowatt hour. So if you're promoting something, and you've always got to consider the opposite. If we don't do A, we've got to do B.

Well, why don't you do a simple calculation, that if you really want to save lives, do that calculation.

Now if we want to get rid of nuclear power V-3 and you're really a good moral person, you'd say, well, I want to save lives.

Well, then you come to a very interesting situation. Should we shut them down near large cities, first, or--I know there's a seismic fault here of course--or in small cities, that somehow you have to rationalize--is this really a local issue, or is it an international issue?

Then you can say, well, let's get rid of all of nuclear power. Well, now, then that's 20 percent, and remember, we're growing, unfortunately,

V-3 - cont

at one percent or so a year in electrical growth. And yes, I have photovoltaics on my roof and I've passed laws having to do with alternates, and written books on alternates as well.

So those aren't going to come on that fast. So in the transition region, we have this 20 percent, 100 gigawatts, that we've got to do something with, and I of course hope it'll go away. But the bottom line, if they all went away, well, I think what else is there but coal. Natural gas, the price has gone too high and the supply isn't as large.

V-2 - cont

So the process is that--in conclusion, please try and quantify as much as you can, in terms of both costs and deaths per kilowatt hours, and also consider more than the local. I consider myself more of an internationalist than a localist, and so I don't know how I'll be received at the next parties I go to after saying this. But that's the way I am. Thank you.

MR. CAMERON: Thank you, Mr. Hafemeister. Next, we'll have Duane Waddell. After Mr. Waddell, we'll have Jeff Lewis, and then Andrew Christie.

MR. WADDELL: My name is Duane Waddell. I live north of Cayucos, Swallow Creek Ranch. Since we, the public, will be subsidizing this business venture,

Jan W. Haynes
6970 Canada Vista
San Luis Obispo, CA 93401
Tel # 805-543-7107

March 5, 2010

Chief, Rulemaking & Directives Nuclear Regulatory Comm Washington, DC DiabloCanyonEIS@nrc.gov	Andrew L. Stuyvenberg NRC Project Manager Washington, DC andrew.stuyvenberg@nrc.gov	Kim Green NRC Project Manager Washington, DC kimberly.green@nrc.gov

Dear NRC:

My husband and I are 14-year residents of San Luis Obispo (SLO) County.

We are writing to ask that the Environmental Impact Statement for relicensing Diablo Canyon Power Plant take into consideration the following:

1. The critical importance of nuclear energy: Nuclear energy is the only large-scale, cost-effective method we have of producing increasing amounts of energy while reducing green house gas emissions. The energy produced by Diablo Canyon is carbon-free and makes up 20% of our electricity. We want to see its use increased. By contrast, coal-electric plants are responsible for over 1/3 of the United States' green house gas emissions. If we lose facilities like Diablo Canyon we would slide backward, and be even more dependent on coal and gas. BM-1

2. The economic significance of Diablo Canyon to SLO County: PG&E is the largest private employer here w/ over 1500 employees and a payroll of over $150 million. It's also the largest property tax payer in the County and generates innumerable benefits such as emergency response network, charitable contributions, and goods/services used locally. Diablo Canyon is a major component of the overall health of this County. BM-2

3. Safety: We believe that safety should be PG&E's first priority, particularly in light of Diablo Canyon's unique location near earthquake faults. However, considering Diablo's 20-year safety record, its construction, continuous seismic monitoring, and NRC's authority, there would be no additional safety benefit to delay the plant's relicensing. BM-3

4. Recycling nuclear waste: Please look to the example of other countries and work to reverse the outdated policy against recycling spent fuel. 95% of the used fuel from reactors could be recycled, giving us a valuable energy source & reducing storage issues. BM-4

We wholeheartedly support the prompt relicensing of Diablo Canyon Power Plant. Due to the long time frame involved in relicensing, any studies the NRC deems necessary should be done concurrent with the relicensing process. Any delay in licensing would have serious, negative consequences on SLO County, on our nation's air quality, and on the world's environment. BM-5

Thank you for your consideration.

Sincerely,

Jan W. Haynes

Jan W. Haynes
San Luis Obispo, California

1 is something we should look at in the future, and I
2 know France and Japan are also doing that. It's
3 probably the best, the very best solution. Thank you.
4 MR. CAMERON: Thank you, Mr. Waage. Next
5 we have Shelly Higginbotham. After that, we'll go to-
6 -we just got a new one, Ms. Lawver. And then the last
7 speaker we'll have is Mr. Boysen.
8 MS. HIGGINBOTHAM: Good afternoon. I'm
9 Shelly Higginbotham. Thank you for the opportunity to
10 speak. When considering the relicensing, I'd like you AC-1
11 to consider these comments. The 20 year record of
12 Diablo Canyon. I've lived in the community for 30
13 years. I've raised my children here. I live
14 downwind. So I'd like you to consider the 20 year
15 record. The catastrophic implications, economically,
16 should the plant case to exist, and they've already
17 been addressed here, from the employment base, the
18 school districts, the tax base, and it's just not
19 coastal, it affects Lucia Mar, and it affects Paso
20 Robles, and we just read about that in the paper
21 today, and we'd be very naive not to consider the
22 economics of this plant.
23 The benefits of having inexpensive and
24 reliable power, that we all enjoy every single day.
25 And how will we substitute that power of 3 million

homes? How do we substitute that in a short amount of time? Please consider that. AC-1 - cont

I am hopeful that you will allow the relicensing process to continue while the seismic investigations are continuing. They should be parallel. And there was a comment, a few minutes ago, from a gentleman about safety drills, and in Pismo Beach, I did participate with our emergency operations, and I can assure you that they are an ongoing process with Cal Fire, with Diablo Canyon, with all of the emergency personnel, in coordination with the schools, and we have put our whole Public Works Department online, and they've gone to evacuation sites, and it is rehearsed, it is practiced, and it is constantly ongoing, and we are hyper-vigilant in that. So thank you very much. AC-2 AC-3

MR. CAMERON: Thank you, Ms. Higginbotham. Next we're going to have Ms. Lawver, and then Mr. Boysen. We're going to finish up with Mr. Boysen. After Mr. Boysen, Dave Wrona from NRC is going to sum up for us.

Ms. Lawver. I hope I'm getting that name correct too.

MS. LAWVER: Perfectly. M.C. Lawver, citizen, resident, San Luis Obispo County. I came

1 from the San Luis Obispo County Board of Supervisors,
2 and then we're going to go to Betsy Umhofer from
3 Congresswoman's Capps' office, and then we're going to
4 go to Bill Denneen.
5 Yes, please.
6 MR. HILL: Good afternoon, and I'd like to E-1
7 thank the NRC for being here in our community. I'm
8 Adam Hill from the San Luis Obispo County Board of
9 Supervisors, representing District 3 in which Diablo
10 Canyon Nuclear Power Plant resides. Next week, our
11 board has on its agenda a letter supporting PG&E's
12 application to the California Public Utilities
13 Commission, to fund further seismic studies that would
14 include three-dimensional reflection mapping and other
15 advanced geophysical techniques.
16 Thus, I am here today to ask the NRC to
17 consider two requests.
18 First, I ask the NRC to fully integrate
19 and assess all the information that will come from
20 these seismic studies in both your safety and
21 environmental reviews.
22 Furthermore, it is imperative that you not
23 rely on your generic frameworks, but, rather, than you
24 incorporate site-specific criteria and data into your
25 reviews.

E-1 - cont

1 Secondly, I have sent the chairman of the
2 NRC a letter asking that the license renewal
3 application for Diablo Canyon Nuclear Power Plant be
4 delayed until the seismic studies are complete.
5 I do so because I believe this is the most
6 logical and responsible way to proceed. If, however
7 the NRC believes it is best to allow the license
8 renewal process to proceed concurrent to the
9 additional seismic studies, I'm going to ask the NRC
10 not to complete the process until those studies are
11 complete.
12 Our community fully recognizes the
13 significance of the Diablo Canyon Nuclear Power Plant
14 to our county and to our state. PG&E is a crucially
15 important component of our local economy and it is a
16 good corporate citizen.
17 That said, I believe my constituents, PG&E
18 and the NRC, would be best served by a process that is
19 comprehensive, site-specific, and also logically
20 graduated.
21 Thank you.
22 MR. CAMERON: Okay. Thank you very much,
23 Supervisor Hill. And this is Betsy Umhofer from
24 Congresswoman Capps' office.
25 MS. UMHOFER: Thank you. Hello. I'm

1 Canyon, and the whole reason that I drove down here--I
2 live in Atascadero, I have for 41 years, I'm 45 years
3 old, I'm married and have three young children. And BC-1
4 the whole reason I drove down here today was to try to
5 convey to people in this audience right now, the
6 safety that is encouraged at Diablo Canyon Nuclear
7 Power Plant.
8 I've been an electrician for 20 years, and
9 10 years of those has been at Diablo Canyon. And I
10 can tell you right now, that it's the safest place
11 I've ever worked. The safety commitment is there.
12 Every morning, when we go to work, the first thing we
13 do is we have a crew meeting, and at that crew
14 meeting, the first question asked is are there any
15 safety or human performance issues that anybody would
16 like to discuss.
17 And invariably, there's always somebody in
18 the crew, there's 35 of us electricians out there,
19 there's always somebody that raises their hand and
20 says, yes, you know what? this happened to me
21 yesterday. And we all learn from that.
22 And at Diablo Canyon, the management at
23 Diablo Canyon not only expects that but they encourage
24 it. And just like one of the speakers before me
25 mentioned, there's never been an issue that I have

BC-1 - cont

seen, or I have heard of, as far as nuclear safety or personal safety, that has been brought up, that has not been addressed at some point, whether that be that same day, depending on the severity of the issue, or maybe a week or two later. But the safety issues that are brought up at Diablo Canyon are always addressed, and I feel very strongly about that, because like I said, I have there young children and I'm raising them in Atascadero.

I might not be in the plume, I'm not even really sure what that is, but I'm close enough, that I know that if my children--my children are safe, and that, as parents, I'm sure all of you--everybody that is a parent understands that. My children are safe and I feel very--very good about that.

Another thing that we do at Diablo Canyon also is any job that we perform, we are expected to have a questioning attitude. And that's a great human performance tool. And when management expects you to have a questioning attitude, what that means to me is if there's something that I'm not really sure about with the job that I'm asked to perform, is I'm to--I'm to stop. I'm to stop and say, hey, time out. I'm going to ask for direction here. You know what? There's something about this that is just not right,

BC-1 - cont

and every single time before that job is performed, before that maintenance is performed, that issue is addressed, to my satisfaction, and it always has been.

I would like for the NRC--first of all, thank you for giving me the opportunity to come here today. And I would like the NRC to take these issues, and what I'm saying about safety, please take these into account when you do your review for the relicensing of Diablo Canyon. Thank you.

MR. FULLER: Thank you, Mr. Holloway. Next we'll have Mr. Steve Zawalick, and then after him Mr. Will Landreth, and then we have--I'm going to apologize, the last name is Moffatt and I cannot read the first name. So--okay. So after that, Ms. Moffatt.

So Mr. Zawalick.

MR. ZAWALICK: Hi. Thank you very much for letting us all speak, and say our piece. I appreciate it. Thank you, everyone here, and those that will watch this eventually on TV, for listening.

My name is Steve Zawalick. I didn't grow up in California. I grew up in Wisconsin. I was an only child. I grew up in the country, so I spent the vast majority of my childhood out in the woods or on the water, and I'm an environmentalist, and I care

Swanson. This is Sandy Jack.

MR. JACK: Good afternoon, everyone. It's my pleasure to be here. It's something different for me. What should the NRC look at in the EIR? I've heard a lot of comments; a lot of good things. The job of the EIR is to identify all of the potential impacts on the environment, and I would like to see, among some of the others, first of all, you start with the history of Diablo Canyon, its safety, transparency, and air quality.

We have to be cognizant of, and should L-1 review the replacement cost to the consumer and business as a comparison for all other types of alternative energy that might be undertaken. Impact on jobs. I mean, let's face it. This state, right now, we need some jobs. The whole country needs jobs.

And Diablo Canyon I think has somewhere around 15-, 16-, 1700 jobs. I'm not sure of the number. Tax revenues. You heard from the school L-2 superintendent. There are a lot of different organizations, all the way from charities to school programs, some of the arts programs, that receive monies as a result of Diablo Canyon. What is the replacement cost?

How is that going to impact everyone?

Risk to human life versus the economic impact to the region. I think those have to be done in detail and I think that ties into some of the other comments. Degree of impact to the environment. It has to be a balanced approach. L-2 - cont

We look at air quality, we look at water quality, alternative types, impacts on the communities within the region. Based upon what I've learned so far, I see no particular reason to delay the application process, and would concur with the previous speaker, that the seismic study be concurrent with the application process. Thank you. L-3

MR. CAMERON: Thank you, Sandy.

Sally. Sally Krenn.

MS. KRENN: Good afternoon. Thank you for the opportunity for giving me to speak. My name's Sally Krenn and I'm a Pacific Gas & Electric biologist, and I've worked along the Diablo Canyon lands for over 30 years now. I'm not as old as Bill Denneen, but up there. This is in reference to the state level oversight of coastal land management, and I just wanted to share with you the team that PG&E has, of biologists, archaeologists, engineers, and some of the programs that we conduct to protect our local natural and cultural resources.

8250 San Diego Road
Atascadero, CA 93422

April 12, 2010

Mr. Andrew Stuyvenberg, Project Manager
U.S. Nuclear Regulatory Commission
Mail Stop: O-11F1
Washington, DC 20555-0001

Dear Mr. Stuyvenberg,
Normally I'm a member of the silent majority when it comes to writing letters but I am so disillusioned with what has been happening in Washington lately that I was indeed impressed that you and your staff would take the time, and expense to journey to San Luis Obispo County to hold an Environmental Scoping Meeting that included someone like myself. Moreover, I was impressed that you seemed to actually listen to what I and others had to say so please accept my thanks for that opportunity.

I've lived in California for 29 years and have some knowledge of Environmental Impact Reviews (EIR) and I'm a firm believer that we should fairly consider all aspects of any project that is being proposed. It is so important that those making the final decision have all the facts and can consider the total impact on not only the environment but the people who will be impacted by the project. BY-1

This brings me to my request that you fully consider, during the EIR, the total cost to this community should PG&E's Diablo Canyon license extension not be granted. PG&E has, in my opinion, been a good neighbor and is constantly concerned about the safety of Diablo Canyon and the people in the surrounding communities. PG&E's earthquake experience is second to none and I believe they would make the tough decision if it ever became necessary. A loss of an employer and neighbor of this caliber would have a devastating impact on all of us that live and work in the area.

Please have all aspects of the review run concurrently and insist on a fair and balanced review of the relevant issues when conducting the environmental review.

Respectfully yours,

William S. Jack

not on behalf of the plant.

And what I would say, if you look at Diablo Canyon, particularly, the NRC is looking at the environmental, I would suggest that there would be a much larger impact to the county of San Luis Obispo, and the State of California, if Diablo Canyon were to go away, because just as much as I am a part of this county, my wife, my family, my kids--everything--we have grown, we're a part of this community, it would be much more environmental impact if there were no Diablo Canyon.

AH-1

Diablo is, has been a fantastic environmental steward. I've been driving that access road for a number of years, and I look at the things that I do, I do look at the thing that my peers do in the community, and, you know, we're soccer coaches, we're worship team leaders, we're active in a number of things. We're docents. We're a lot of things to this community.

So I look at the environmental, and again, just a real simple statement. I think that for Diablo Canyon to not be here would be a far greater impact than the impact Diablo Canyon is going to make in terms of relicensing for 20 years. The way I see it, relicensing for an additional 20 years is zero impact,

AH-1 - cont

because it has grown and it is a part of the community, just like I am here today. That's all I have. Thank you.

MR. CAMERON: Okay. Thank you, Chris. Chris Ungar. Then Barbara Scott.

MR. UNGAR: Thank you. I'm Chris Ungar and I'm a trustee of the San Luis Coastal Unified School District, and I'm here to talk tonight about the financial impact of the power plant to our school district as a public service. As most of you know, billions of dollars have been cut from school districts throughout California. Thousands of layoffs of teachers and program cuts have affected countless children throughout our state.

Because of the complexity of the state revenue system, which is, in part, based on property taxes, we're fortunate enough to have the power plant in our jurisdiction and within our boundaries. We received several million dollars in property taxes because of PG&E and because of the nuclear power plant.

This directly benefits our children and our community. Without this, we would lay off teachers, classified staff, including teacher's aides, custodians, and other members of our community.

MS. KARIM: Hi. Good morning. Or good afternoon. Sorry. Ermina Karim. I'm here today representing the San Luis Obispo Chamber of Commerce and our roughly 1500 small business members within the region. I'd like to thank the Nuclear Regulatory Commission for the opportunity to provide input today.

The San Luis Obispo Chamber of Commerce believes that our community's quality of life, which is the basis of our great economic prosperity, is predicated upon, among other things, our clean air and water, our healthy and balanced economy, our excellent schools, and of course as a mother of a 4-year-old, our great personal safety.

But better speakers than I have already addressed safety in schools, so I'll focus my comments on the environment and economy.

Our Chamber is very focused on the urgent need to reduce fossil fuel consumption, minimize our community's GHG emissions, and are very active in promoting business involvement in energy and resource conservation. To this end, PG&E has been a tremendous community partner in this effort. AA-1

For this reason, we would like to better understand the air quality emissions that would result from replacement power. And like many other speakers AA-2

AA-3

1 today, we are focused on the economic impact that
2 Diablo Canyon has on our community in the way of
3 taxes, direct and indirect employment, and of course
4 considerable charitable activities that the plant
5 currently has on our local communities.
6 We look forward to better understanding
7 the social, environmental, and economic impacts, and
8 we thank you again for the opportunity to comment.
9 MR. CAMERON: Thank you, Ms. Karim. Next
10 we'll have Ed Waage. I'm sorry. I'm probably not
11 getting that right.
12 MR. WAAGE: It's "Waggee."
13 MR. CAMERON: "Waggee." Thank you. After
14 that, we'll have Shelly Higginbotham and then Joe
15 Boysen.
16 MR. WAAGE: Good afternoon. I'm Ed Waage.
17 I'm also on the city council for Pismo Beach but I am
18 speaking on my own behalf. I'd like to touch on three
19 benefits of Diablo Canyon to our local community and
20 to the State of California. The first is it does
21 complement California's push for solar power. I
22 installed solar panels on my rooftop about two and a
23 half years ago, and at nighttime, the sun sets and I
24 have no solar power. I rely on, for example, baseload
25 power, like Diablo Canyon, for my nighttime

1 go to jail over this, but I don't think it will be
2 today.
3 MR. CAMERON: Thank you, Mr. Boysen. Next
4 we have Ms. Willow Walking Turtle, and after her, we
5 will entertain one more, Ms. Tracey Vardas.
6 MS. KELTEY: I have my turtle here, so you AE-1
7 hear a turtle speaking. I dedicate this to all the
8 turtles who might be out in the ocean, dying of
9 ionizing radiation in different parts of the world.
10 Also I want to thank Mr. Boysen. He took a lot of my
11 ideas, and I'm glad he said them. I stand on a giant,
12 and I appreciate that.
13 I also dedicate this to my father who's a
14 vet in the Second World War. He went to Hiroshima and
15 Nagasaki and "mopped up," what they called "mop-up."
16 They didn't have any kind of protective gear. He
17 came home, and about 17 years later, he died of
18 lymphosarcoma from the exposure that he got at
19 Nagasaki. Clean up. Mop up.
20 I'm going to give you a poem. You've
21 probably heard this before. I don't want to stay
22 long.
23 "Humankind did not move the web of life.
24 We will remain a strand in that web. Whatever we do to
25 web, we do to ourself." It's a quote from Chief

Seattle in 1850.

AE-2

I feel that nuclear power violates, tremendously, the web of life. And Einstein, the father of relativity, made the statement: Splitting the atom changed everything, save people's way of thinking.

So I think we all need to start changing our way of thinking, and not supporting a form of energy that poisons the whole planet. I thank you, choose safely.

MR. CAMERON: Thank you.

Next we have Ms. Tracey Vardas, and then we'll finish up with Mr. David Wrona.

MS. VARDAS: Thank you for allowing me to speak. My name is Tracey Vardas, and some of you may have remembered me as working for the San Luis Obispo County Office of Emergency Services. And I hope that when I tell you that I'm currently a employee of the Pacific Gas & Electric Company, that you don't lose faith in what I have to say to you, because I partnered with many of you for Mothers For Peace, and Nuclear Alliance For Energy--sorry, I may have gotten that one wrong--when we've done our emergency drills and to provide you some information.

But what I'm doing today is talking as a

Andrew Stuyvenberg, Project Manager
U.S. Nuclear Regulatory Commission
Mail Stop: O-11F1
Washington, DC 20555-0001

April 9, 2010

Dear Mr. Stuyvenberg,

Thank you for giving our local community a chance to provide input on some issues to be considered in the Environmental Impact Statement regarding Diablo Canyon Power Plant.

I am writing to encourage the NRC to address Diablo Canyon's economic impacts on the local economy. BV-1

As you are aware, Pacific Gas and Electric Company is the largest private employer in San Luis Obispo County.

But PG&E also has a huge impact on local vendors such as myself...and there is a significant trickle down effect because of it.

Since 1989, PG&E has hired my firm to provide graphic design work for various DCPP projects...in turn, I have hired other employees to support the work and I have purchased tremendous amounts of supplies, printing and advertising from local vendors. All of this supports every other aspect of our local community from banking to housing to shopping...it's endless.

I represent many, many other small businesses who do work for PG&E in San Luis Obispo - and they have proven to be an honest, fair and wonderful company to work for.

I realize that you have MANY factors to consider, but I want to make sure you keep in mind that there are far more than 1,600 jobs and far greater than $24 million in tax dollars generated by DCPP.

Thank you for your consideration.

Sincerely,

Catherine

Catherine L Kornreich

kornreich design associates, inc.
730 Pacific Street • San Luis Obispo California 93401 • Fax (805) 541-8673 • Phone (805) 541-8602

Before it is licensed, you need to say what is going to happen to that waste. Thank you. S-2 - cont

MR. CAMERON: Thank you, Sheila.

Peggy, are you ready, or should we go--Peggy. Okay. This is Peggy Koteen. And then we'll go to Joanne Main.

MS. KOTEEN: Thank you for letting me speak. I consider myself an environmentalist, and I am terribly conservative about global warming and I do support true, clean energy. I do not see nuclear power as clean. How can it be considered clean when there's no true disposal of the waste? Let's not fool ourselves. There's no Yucca Mountain. And even if there, how could we transport the nuclear waste safely there? T-1

I do not want to see Diablo relicensed. It frightens me to hear those people in the audience who have accolades about Diablo because of the jobs they bring here, because of the tax dollars that work to help our schools. You know, recently, it reminds me of a company that's been in the news, a company that we thought was reliable, that had high standards. That company is Toyota. That company brings jobs all over the world, you know, benefits its employees, brings great tax dollars to different places, and I'm T-2

T-2 - cont

1 sure their benefit nonprofit groups too.

T-3

2 But we now know that that company, Toyota,
3 chose to weight their own profits over human lives.
4 And that might be a few hundred human lives, a few
5 thousand, tens of thousands. Well, what is nuclear
6 waste? What's that risk? Very serious. It's not
7 going to be a few hundred lives, if there's a problem
8 there. It's going to be generations of lives.
9 Now we now more clearly understand the
10 government may have been faulty in their oversight of
11 Toyota. I'm concerned about that with nuclear plants
12 too. So I just want to reiterate that, you know, it's
13 better that we not begin the relicensing process until
14 we have a very secure storage for the rest of the
15 nuclear waste, and there are other alternatives. You
16 know, if we can take individual responsibility for
17 reducing our own, change our own lifestyles to reduce
18 global warming, on a very small minor level, each of
19 us. But if we're looking for energy to make our lives
20 easier, maybe we need to take that responsibility and
21 reduce our own energy consumption.

T-4

22 And if that means we need to do that, and
23 not have a Diablo, you know, that's what we need to
24 do. But we can't begin relicensing until we have a
25 clear, solid, secure place for the waste. So thank

T-5

1 Risk to human life versus the economic impact to the
2 region. I think those have to be done in detail and I
3 think that ties into some of the other comments.
4 Degree of impact to the environment. It has to be a
5 balanced approach.
6 We look at air quality, we look at water
7 quality, alternative types, impacts on the communities
8 within the region. Based upon what I've learned so
9 far, I see no particular reason to delay the
10 application process, and would concur with the
11 previous speaker, that the seismic study be concurrent
12 with the application process. Thank you.
13 MR. CAMERON: Thank you, Sandy.
14 Sally. Sally Krenn.
15 MS. KRENN: Good afternoon. Thank you for M-1
16 the opportunity for giving me to speak. My name's
17 Sally Krenn and I'm a Pacific Gas & Electric
18 biologist, and I've worked along the Diablo Canyon
19 lands for over 30 years now. I'm not as old as Bill
20 Denneen, but up there. This is in reference to the
21 state level oversight of coastal land management, and
22 I just wanted to share with you the team that PG&E
23 has, of biologists, archaeologists, engineers, and
24 some of the programs that we conduct to protect our
25 local natural and cultural resources.

M-1 - cont

One of our--we have over 12,500 acres of coast land, and as you, when you conduct your on-site environmental audit, you'll--you cannot overlook the fact that it's a spectacular coastline. It's just gorgeous. And some of the programs we do to keep it so pristine is we use managed grazing.

On the East Coast I know you mow a lot, but we use cows, and our grazing program has actually been used as a field school by Cal Poly, San Luis Obispo, because of the program's use of high density, low impact cattle movement. One of our lessees is actually Bob Blanchard and Mr. Blanchard couldn't make it today.

He was voted, awarded the Cattlemen's Beef Association environmental stewardship award for his practices in San Luis Obispo County. And Bob Blanchard has commented that our goal is to manage this land in such a way, that we are confident that we are not using it at the expense of future generations.

We've been able to see and better understand the importance of grazing animals and maintaining healthy and diverse grassland ecosystems. By alternating the grazing patterns--he calls it the "Pecho Ranch," because historically, this piece of property was a Spanish land grant. So goats are--he

M-1 - cont

also uses goats. By alternating the grazing patterns on this ranch, goats are allowed to eat the more mature brush, open the canopy which then allows more sunlight to reach the ground and new grass to grow.

Areas that previously were undesirable or had overmature plants are now livened up by the impact of animals, thus eliminating any dependence on substitute feeding.

And for any of you have hiked the Point Bouchon or Pecho Coast Trail, which are public hiking trails that we provide, we provide over seven miles of our coastline for recreational hiking, you'll notice that you see more predatory animals. We're a predatory-friendly ranch, and we have bobcats, we have mountain lions, and lots of burrowing owls and critters that prefer grassland habitat over shrubland. Grasshoppers, sparrows, horned larks.

We work--we have a lot of partners. We also work with Cal Fire, and just recently, we burned about 200 acres of a bishop pine grove which is--it's necessary for fire to regenerate new--it's necessary to have fire to regenerate new bishop pine trees.

We also have partnerships with a lot of agencies, such as Fish & Game. We recently, in the last two years, restored steelhead trout habitat. And

M-1 - cont

I'm just--I'm pretty proud of PG&E for participating in these programs, and I just want to share with you the fact that PG&E is making incredible efforts to keep this coastline a pristine state, and the knowledge that this program is shared with many of our partners and agencies. Okay. Well, thank you.

MR. CAMERON: Thank you. Thanks, Sally. Jane. This is Jane Swanson of San Luis Obispo Mothers For Peace.

MS. SWANSON: Yes. I am Jane Swanson. I do speak for San Luis Obispo Mothers For Peace. The statement I will be making this afternoon is kind of a long-range perspective, Big Picture statement, and this evening, Mothers For Peace will point out three specific issues that we are quite sure belong within the scope of the environmental studies. So that will be more specific in this evening.

For now, a review. Our nonprofit group has served a unique role since 1973, when Mothers For Peace made the commitment to pursue available legal challenges to oppose the licensing of the aptly-named Diablo, a nuclear power and radioactive waste storage site built next to an active earthquake fault. Sheri Lewis reviewed that history, so I won't repeat it.

But over the decades, Mothers For Peace

and the National Marine Fisheries Service, ascertain what PG&E's obligations are under the Endangered Species Act, as per the power plant's impacts on the black abalone, which is now, as of 2009, on the Endangered Species list.

Mitigations for all of the plant's impacts must fully mitigate impacts of the past, the present, and the future. Thank you.

MR. CAMERON: Thank you, Mr. Christie. Richard Krenzdorf. After that, we'll have Ermina Karim. And after that we'll have Mr. Ed Waage.

MR. KRENZDORF: Thank you so much. I'm actually going to speak about--well, every time the NRC comes to town, I talk about one subject, and I get a thank you very much, and it goes into the vertical file.

I'm pleased--I'm a "happy camper" this afternoon because there's been more people speaking on the issue of safety, and specifically on the emergency plan, than I think I've heard in many years. Z-1

People who have serious questions with the present setup, such as Jane Swanson who spoke, David Weisman who spoke. People who said everything's fine. The police person who spoke some time ago, the fire person who spoke some time ago say not to worry.

Z-1 - cont

1 And so I'm very pleased individual, to see
2 this subject being talked about at some length. We're
3 dealing today with scoping, what should be in, as the
4 NRC looks through the wealth of material. What should
5 they be looking at? And yes, within safety, the issue
6 of the emergency plan has, like the phoenix, risen,
7 and I would hope the NRC would take a lot of time.
8 When I come to speak, when the NRC comes
9 here, I speak about the adequacy of our emergency
10 plan. Well, we heard people say that the on-site--I
11 think PG&E said the on-site plan works just fine.
12 Maybe so.
13 The police and fire people say it works
14 just fine. Maybe so. Though they don't know any more
15 than I do. Why? Because drills, including the public,
16 have never been held. I've been an employee, 25 years
17 or more, at Cal Poly. We have 20,000 people there on
18 Monday through Friday, and over those 25 years, and
19 more, zero has been tested, to find out the adequacy
20 of the plan.
21 In Paso Robles, a year or so ago, one or
22 two people died from an earthquake. In San Luis
23 Obispo, we realized the necessity of upleveling, and
24 therefore the retrofit program is going on.
25 And then there are the events around the

Z-1 - cont

1 world, most recently in Chile, and then in China, and
2 so on and so forth. But we remain dumbstruck in terms
3 of making sure that we have an emergency plan that's
4 worth the paper that it's been written on.
5 And so I ask the NRC to make it as a
6 condition of going ahead, one of many, the condition
7 that full tests of the emergency plan involving
8 individuals, and not just officialdom, be held at my
9 university, in different communities in the county.
10 Otherwise, we're blowing smoke, and it's time that we
11 find out, in the event of an emergency--the odds are
12 against it--but the whole idea is what happens if it's
13 needed, what kind of program do we have?
14 And that we don't find out some time in
15 the future--whoops--sorry we didn't conduct that, we
16 didn't realize. And so I want to emphasize again,
17 that the NRC, in its scoping, look at the adequacy of
18 the emergency plan, not just on paper, not just for
19 officialdom coming in here, but actually testing it.
20 Schools, hospitals, etcetera, etcetera. Without that,
21 as I said before, we're simply blowing smoke.
22 Thank you so much for giving me the time
23 to speak to you this afternoon.
24 MR. CAMERON: Thank you. Thank you, Mr.
25 Krenzdorf. Ermina Karim.

here today speaking, regarding license renewal. It reminds me of us objectors to the nuclear chain in the industry, and Diablo Nuclear Station, that we opposed licensing in the beginning. We remember Hoskins and Griffith, Hosgri Fault namers, United States Geological Survey, Union of Concerned Scientists as against Diablo as a site of seismic concern. AD-1

The NRC, Public Utilities Commission, Council of Governments, and PG&E, go along forming thermally-intense fission products, appropriately three miles from the Hosgri Fault on the Ring of Fire, till today.

As a person who does oppose licensing renewal, I'd like to speak to the fact that one 1000 megawatt reactor, such as Diablo, creates 500 pounds of plutonium per year. Operating two reactors, two 1000 megawatt reactors at that site, on the average, makes a 1000 pounds of plutonium a year. AD-2

Since 1984, the nuclear industry, you, have made approximately 13 tons of plutonium, which sits on the Ring of Fire, on the Hosgri Fault, and the new fault.

No more plutonium production; no more license. Promoters in the nuclear industry say that no deaths result from this ionizing radiation AD-3 AD-4

1 continuum. Objectors and researchers seek AD-4 - cont
2 epidemiologists, cancer registries and mortality
3 records, anything relating to biological results of
4 environmental exposure.
5 We find agencies and the industry working
6 together. Who will show documents of true exposure,
7 mortality results? Please, no license renewal.
8 Please understand, as living souls,
9 nuclear radiation, as medically contraindicated for
10 biological units, and life forms. Medically
11 contraindicated. 24/7, routine releases from a
12 nuclear facility, low level, high level, however you
13 want to term it, however you want to quantify it--
14 rads, curies. Effluent and environmental exposures
15 result in because for concern. Inform yourselves by
16 reading Dr. Helen Caldicott, Dr. Rosalie Bertell, Dr.
17 Sternglass, Harvey Wasserman, Coughman. No license AD-5
18 renewal. End safety concerns. End fission ionizing
19 radiation products in the nuclear chain.
20 Thank you for allowing public comment. I
21 appreciate this, part of the democratic process, very
22 valid in this community, in this society.
23 MR. CAMERON: Thank you, Mr. Lawver. Next
24 we'll have Mr. Joe Boysen, and we're going to have one
25 more, Ms. Willow Walking Turtle will speak after Mr.

MS. LEVINE: Well, good afternoon. I come to the NRC meetings almost all the time, if they're here, and I'm very grateful to them for coming to our community and listening and hearing us.

I don't know that they altogether hear us, but they do listen, and I'm happy about that. I am a very grateful resident of San Luis Obispo. I am not a scientist, but I do keep myself apprised and aware of what the scientists say.

And I was really very shocked today, when I read that when--I knew that it was against the regulations of the NRC to license a nuclear power next to a fault, and I read that they grandfathered Diablo Canyon because PG&E was excused, because it was unaware of the Hosgri Fault when they decided to build this. And that is what is shocking to me. Q-1

I was aware of the Hosgri Fault. In 1984, I was so aware of it, that I was one of those people that did the civil disobedience and spent three days in jail, to hope that Diablo Canyon would not be built here on the Hosgri Fault.

So it is just so surprising to me that PG&E didn't know about the Hosgri Fault. Isn't that sort of shocking to you all? And that's why I'm still here, hoping that they won't be here forever. Thank Q-2

1 cesium, radioactive cesium 137 into the atmosphere,
2 and even the armed forces would not be able to stop
3 its lethal spread.
4 Open your eyes to the danger of terrorist
5 threats as you consider another 20 years, and then say
6 no.
7 In conclusion, the NRC must include within
8 its scope of study all the outstanding environmental
9 issues, before seriously considering allowing another
10 20 years, which means 35 years from now, of Diablo
11 Canyon operations.
12 The excuse of, quote, ongoing monitoring,
13 unquote, is not a substitute for a thorough assessment
14 of serious problems before considering taking such a
15 drastic and unrealistic step.
16 MR. CAMERON: Thank you, Jane.
17 We're going to go to Robert Lewin, who's
18 the deputy fire chief. Hi, Robert. And then we'll go
19 to Rebecca McMurray and Lynne Levine.
20 MR. LEWIN: I'm Robert Lewin, a deputy O-1
21 chief for the county fire department. Thank you to
22 the NRC staff for allowing us to contribute to the
23 scoping of the environmental review. During the
24 licensing process of Diablo Canyon, during the late
25 '70s and '80s, our fire protection was addressed, MOUs

O-1 - cont

1 were developed as well as emergency plans, and those
2 plans and MOUs have been annually updated.
3 The County Fire does have jurisdiction for
4 fire protection at the plant. We value the
5 cooperative relationship that we share with PG&E's on-
6 site fire dept.
7 The MOU states who has what responsibility
8 for fire protection at the plant. And over time, the
9 last 30 years, the plant has experienced numerous
10 incidents, and those MOU's and emergency plans have
11 been put to good use.
12 The current level of service is effective.
13 It meets the minimum level. the transformer
14 explosion/fire last year clearly demonstrated the
15 value of the on-site PG&E fire department. Their
16 quick response, modern equipment, aggressive training
17 program, and adequate staffing, effectively
18 extinguished a growing fire.
19 No question. Had this not been the case,
20 the plant would have experienced more damage and a
21 longer outage, and could have been not just to one
22 unit, but to both units, resulting in a loss of
23 millions of dollars and a potential threat to the
24 power supply of California.
25 This environmental review should include a

O-1 - cont

1 review of the existing fire prevention programs,
2 including public education and vegetation management.
3 The review should look at the fixed fire protection
4 systems that are currently in place, and the
5 inspection programs, to ensure their adequacy.
6 The review should include that the fire
7 protection personnel, equipment, and training, are
8 adequate to meet the needs of the county for the next
9 licensing period.
10 Further, the review should include a
11 review of the emergency response processes. We are
12 confident that the current level of fire protection
13 service meets the minimum industry standard for fire
14 protection. We need to ensure that over the next
15 licensing period, and ensuring decommission, or
16 conversion, that that fire protection continues to
17 meet or exceed those standards.
18 Fire protection should be included in the
19 environmental review. We are prepared to assist the
20 NRC in providing input to that process. Thank you.
21 MR. CAMERON: Thank you, sir.
22 Rebecca McMurry and Lynne Levin, and then
23 we'll go to D.J. Boyson.
24 MS. McMURRAY: Thank you for this
25 opportunity. I'm Rebecca McMurry, CEO of the Pismo

1 public and the media on behalf of PG&E and Diablo
2 Canyon.
3 But I want to make it clear that I no
4 longer speak on behalf of the company and that I'm
5 here representing myself, and I hope some other people
6 in this community.
7 I'd like to thank the NRC for being here
8 and listening to us today.
9 I made a couple a notes on things I heard, X-1
10 that I wasn't going to mention. You know, as far as
11 the used fuel issue, the waste goes, I'd like to have
12 some consideration given to reprocessing, because
13 ultimately--I mean, the rest of the world is going
14 this successfully and it certainly would be a solution
15 to on-site storage which, for the interim, is more
16 than adequate.
17 The other point I've heard, and I kind of X-2
18 agree with, is that I don't see an advantage to
19 delaying relicensing to conduct seismic studies,
20 because there is an ongoing, robust, seismic studies
21 program that PG&E is required to maintain, and it's
22 not some 20-year-old report sitting on a shelf in a
23 three-ringer binder. It's a very dynamic process.
24 And seismic issues should be looked at when they
25 arise, and that's what's happens now.

X-3

1 The notion that I'd like to suggest,
2 overall, for the environmental studies related to
3 relicensing, is pretty simple. Be reasonable and
4 fair. There's a vast amount of evidence, in many
5 studies, which show that PG&E, and its employees, have
6 been good stewards of the land and waters around the
7 power plant.
8 And they should be required to continue
9 that as part of relicensing. As some people know,
10 some of the most beautiful and pristine tide pools
11 that can be found anywhere, exist around Diablo
12 Canyon, and it's because of restrictions on public
13 access and the efforts of PG&E.
14 Those healthy tide pools also help show
15 that the surrounding environment is flourishing. The
16 actions taken by PG&E to preserve and improve the
17 native vegetation and natural wildlife out there could
18 fill a book, if not more. So I would say please don't
19 require any unnecessary, redundant type of studies
20 that may be put forth.
21 The water around the plant is clean, with
22 healthy sea life. I watched, on more than one
23 occasion, humpback whales feeding in front of the
24 plant for hours, along with seals, dolphins, sea
25 gulls, pelicans.

X-3 - cont

But there is much more than anecdotal evidence. There are volumes of existing documentation and science, showing that any impacts on the environment are minimal.

X-4

In fact, there's just no way to squeeze electricity out of Mother Nature without some kind of impact on the environment. The question is what can we reasonably do to manage those impacts. Wind power kills countless birds, solar produces hazardous waste materials, and both technologies take up lots of land.

But people still support those green technologies. Nuclear is a green technology that produces huge amounts of emission-free baseload power 24 hours a day, and I believe that most people want that.

And finally, please look at and consider, and weigh, those beneficial effects of providing clean energy for 3 million California residents. And where would you get that clean energy, if Diablo were to shut down prematurely?

X-5

And consider the fact that PG&E is preserving for the future thousands of acres of land and miles of coastline out there, in what amounts to a nature preserve. Thank you.

MR. CAMERON: Thank you, Mr. Lewis. Next

1 Boyson, or anybody else, wants to know a little bit
2 more about the hearing process, we'll be glad to,
3 myself included, talk to you about that. But we
4 really need to go on right now.
5 Yes, ma'am.
6 MS. LEWIS: Hi. I'm Sheri Lewis from San
7 Luis Obispo. In Title 10 of the Code of Federal
8 Regulations, Part 73, Section 55, there are--
9 MR. STUYVENBERG: I have to apologize, I
10 don't have my copy with me, but I'll--
11 MS. LEWIS: Well, it's called Physical D-1
12 Protection of Power Plants and Materials, and it's
13 dealing with sabotage and terrorism and stuff. When
14 I--it was made effective May 2009, in a very detailed
15 way. I read it before that--not before that time--but
16 I read what they had before that, and it was much more
17 general.
18 The newer one, of last year, is very
19 detailed, and explicit, and the nuclear industry has
20 had ten months to comply to these.
21 Several plants have asked for extensions
22 of varying lengths. For example, Virginia Electric,
23 and Carolina, and others, and PG&E has asked for an
24 extension.
25 The deadline for compliance to that

D-1 - cont

1 physical protection is March 31st of this year, that's
2 the end of this month, and PG&E has asked for an
3 extension to next June, or a year, so June of 2011.
4 I'm wondering if there has been any
5 nuclear power plant that has not asked for an
6 exemption to the deadline, because I'm thinking, if
7 you have rule that must be followed, that are very
8 detailed, very explicit, and everybody asks for an
9 exemption, and it's granted, to they ever have to
10 comply, or can--then the rule is ineffective, if
11 people don't have to comply.
12 So my question is--of course there's still
13 a month to go and you may get some more exemption
14 requests--has any nuclear power plant not asked for
15 exemption to the deadline?
16 MR. CAMERON: Okay. Thank you. Thanks,
17 Sheri. I don't know if we have information on that
18 but we certainly might be able to find out about that,
19 and point noted about how many exceptions are granted.
20 Drew, any--or Troy--I think Troy Pruett
21 may be able to give us some information on that.
22 MR. PRUETT: Again, my name's Troy Pruett.
23 I'm the deputy director for the Division of Reactor
24 Safety in Region IV, and I will agree that a large
25 number of facilities did ask for exemptions to delay

attack, subject to earthquakes that they said weren't, wouldn't happen around here. It's being stored there.

What's going to happen when there's a earthquake fault like down in Chile. Woo-woo. It's going to be interesting. Anyway, that's what--I suggest they take that nuclear waste, put it in those big cement storage things, and put them in the backyards of the Nuclear Regulatory Commission and the members of PG&E, the CEOs of PG--they deserve that in their backyards. Thank you.

MR. CAMERON: Okay. Thank you. Thank you very much, Bill. Eighty-five. That's quite a testament.

We're going to go to Sheri Lewis, David Weisman and Judy EvereD.

Sheri.

MS. LEWIS: Hi. I'm Sheri Lewis from San Luis Obispo. Diablo Canyon Nuclear Power Plant is located in an area of known and newly-discovered earthquake faults. NRC guidelines do not permit a reactor to be on or near faults, and yet, because Diablo Canyon was already built, the license was grandfathered in. Now there is a new fault, the shoreline fault, and PG&E wants to relicense the plant for 20 more years.

D-2

D-3

How many faults are to be found before the grandfathering will stop? If the NRC had the caution not to allow a nuclear reactor near fault lines, why are they ignoring that wisdom now, to allow relicensing? I'd like to address the storage of high-level radioactive waste. Spent fuel rods are stored in pools under 20 feet of water, for years, and then need to be removed and stored elsewhere as the pools fill up.

There still has not been a viable solution to the problem of permanent long-term storage. The dry cask system on site is only temporary and is guaranteed safe for 100 years.

But some of the isotopes being stored inside are extremely dangerous, if accidentally exposed to the biosphere. Some of these isotopes have half-lives of thousands and even millions of years. Are we really able to protect these casks for such a long period of time? Will we be around that long? And all this is for energy now?

Consider that length of time. The pyramids in Egypt were built less than 5000 years ago. It's unbelievable. I always thought that was a very long time. Can you imagine keeping these casks intact for 5000 years? The cave paintings in France are

D-3 - cont

1 thought to be 16,000 years old. Native Americans have
2 been here for 20,000 years and more. The half-life of
3 plutonium 239 is 24,000 years. Are we going to be
4 able to keep these casks safe for about as long as
5 native Americans have been on this continent?
6 The first Homo sapiens were only 150,000
7 years ago in Africa. That's still not the half-life
8 of uranium 235, which is 700 million years.
9 So we are creating high-level nuclear
10 waste that lasts forever, and all for energy we need
11 now. This is absurd. It's ridiculous. Who is going
12 to be responsible for keeping this storage? Our
13 grandchildren? Our descendants way down the line,
14 four or five generations each century? How many
15 centuries? All for energy now.
16 And it's not just the casks. Earthquake,
17 sabotage, terrorist attack, all expose the biosphere
18 to these poisons.
19 The dry cask storage they have now will be
20 filled up by the time the present license has expired.
21 Do we want to allow for even more radioactive waste
22 by relicensing?
23 Thank you.
24 MR. CAMERON: Thank you, Sheri.
25 Now David. It's David Weisman.

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Stephen C. Lieberman

April 10, 2010

Andrew Stuyvenberg, Project Manager
U.S. Nuclear Regulatory Commission
Mail Stop: O-11F1
Washington, DC 20555-0001

Dear Mr. Stuyvenberg,

I would like to thank the Nuclear Regulatory Commission (NRC) for conducting the environmental scoping meetings in San Luis Obispo in March 2010. I found the meetings to be very informative and beneficial to the local community.

I am writing to encourage the NRC to evaluate the Diablo Canyon Power Plant's socioeconomic benefits to the community in the Environmental Impact Statement (EIS). I have served my community as a volunteer firefighter and two-term elected official. During my time in the fire service, I served with several PG&E employees who not only lived in my community, but deeply believed in service to the community. These employees raised their children here, they coached youth sports here, and they own homes here. Serving as a City Councilmember and Mayor, I constantly needed to remind myself that I served the entire city of Grover Beach, not just a vocal minority. With that being said, I believe that the environmental document must be fair and balanced in evaluating the relevant issues for the benefit of all of San Luis Obispo County's residents. BT-1

I look forward to reading the draft environmental document later this year. Thank you in advance for your consideration, and please contact me with any questions or if you would like to discuss my letter in more detail.

Sincerely,

Stephen Lieberman

1 We've got tornadoes and hail, and other things that
2 create "dimpled darlings" out of your cars.
3 But the fact is we do have problems like AZ-1
4 you. There's faults in Missouri. There's faults all
5 over the world. There was recently a Japanese nuclear
6 power plant that experienced a direct hit by a
7 earthquake. They inspected it. It's up and running.
8 I'm not saying it's a perfect world. As far as
9 solar, I tried to price solar for my home, so I could AZ-2
10 have a carbonless green footprint.
11 Yes. Thirty-, $40,000, you can have one.
12 They're there. But let me tell you a little bit
13 about the NRC from my years of experience. Since
14 1978, I have slept with reactors on nuclear
15 submarines, lived with them for years. I have worked
16 with the NRC, and trust me, I hate to work with them
17 on a good day but I'd rather not work with them on a
18 bad day either. They are very thorough, very direct,
19 and they don't leave a stone uncovered. And that's
20 their job. Their complete job is to ensure that we
21 produce safe electricity using nuclear power for
22 peaceful application.
23 If we had not used nuclear power as a
24 weapon in World War II, I don't believe any of us
25 would be here, talking, today. We'd be using it all

1 over. And several other things. I have worked for
2 TVA, Exelon. I've been all over the country with
3 nuclear power plants. My primary job for Calhoun
4 Station was to be in charge of valves required to
5 perform safety-operated functions, to shut down the
6 plant if anything were to occur, for any reason.
7 And I spent ten years of my life
8 researching it, to make it better, to improve
9 operation. In 1980's, nuclear power plants were
10 running about 84, 85 percent capacity factor. Well,
11 today, now, they're pushing high in the nineties, with
12 unreal success. I didn't believe they could ever ring
13 another megawatt out of a nuclear power plant.
14 Today, they're going to power upgrades,
15 successfully. They've reextended licenses several
16 ways, one by getting a five-year extension through
17 license granted through construction. A little
18 oversight there, not a bad oversight, but a good
19 thing, because they weren't running for five years.
20 They were being built.
21 So these were allowed. And today, they've AZ-3
22 examined our--we've been challenged, we're extending
23 licenses for power plants. Our country cannot whip up
24 any more power right now. Everybody is running with
25 minimum extra surplus energy on the grid. You don't

1 have it. It's growing at a phenomenal rate.

2 These extensions, the 20 year extension, AZ-4

3 they go all the way back to the plant current license

4 basis. I hear about people talking they're not

5 current, they're not this. Nothing's current. Have

6 you looked at your financial records? The same thing.

7 You have to--it's a dynamic situation. As new

8 technology arises, we're updating, improving things

9 rigorously, every time. We constantly raise the bar.

10 Victor Petrenko, in the Olympics,

11 recently, lost. Why? Because the bar raised and the

12 system changed. The system is working for us. We are

13 making improvements in nuclear power that I never

14 believed possible. And the NRC, along with several

15 other organizations, such as INPO and WANO, constantly

16 peer pressure for us to improve, improve, improve.

17 And findings are routine in our business,

18 because we want to know what's going on with our

19 plants. They're there for a purpose, so that we can

20 learn and improve. Sometimes bad news is also a

21 little bit a good news, because you learn from it, you

22 improve, and you perform in the community, responsible

23 manner. I believe that PGE--I've worked with them for

24 the past six months, over the past 10 years, off and

25 on--is a very responsible thing.

AZ-4 - cont

1 You heard from your own peers in your
2 community that work for this company, even retirees,
3 scuba divers, and everything, what it's like there.
4 It is a wonderful plant, very upbeat attitude, and I'm
5 proud to be associated with them. Thank you very
6 much.
7 MR. FULLER: Thank you, Mr. Linden. Next
8 we'll have Mark Phillips, and after Mr. Phillips,
9 we'll have Jack Biesek or "Bysek." I hope I'm not
10 messing that name up too badly.
11 Mr. Phillips.
12 MR. PHILLIPS: Good evening. My name's
13 Mark Phillips. I'm a registered professional engineer
14 in the State of California, mechanical engineer, and I
15 have several comments I'd like to make. Regarding the
16 Shoreline Fault, I'd like to echo the statements of
17 several other people that say that we should be
18 studying that, up-front, we should find out what we
19 can from a complete study of that, with all the tools
20 that we have at our disposal. That should be like
21 order number one of priority.
22 The fact that it's not, to me, just tells
23 me how much PG&E doesn't really want to know. You
24 know, they don't want to look at something if they're
25 afraid the answer might not be something they want to

state.

And lastly, nuclear energy is a critical ingredient if California and the United States are to reduce production of CO2 and other greenhouse gases. Thank you for the opportunity to speak.

MR. CAMERON: Thank you, Larry.

MR. WOMACK: I hope it was not too long.

MR. CAMERON: Just a little bit, but was very articulate so--at any rate, this is John. John Lindsey. And then we're going to go to Charlie Smith.

MR. LINDSEY: First of all, I'd like to thank the Nuclear Regulatory Commission for allowing us to make these comments to the public. Second of all, my name's John Lindsey and I am a PG&E employee. As a kid growing up in Sonoma County in Northern California, I fell in love with the ocean by doing quite a bit of diving off the coast of Sonoma County and Marin County.

At that point I joined the Navy and spent 24 years in the Navy, and had the opportunity to dive throughout the world, from the Red Sea, the Indian Ocean, to the Eastern Pacific, Western Pacific.

And in 1990, I began my career at Diablo Canyon, and was asked to join the PG&E dive team, and I said of course. I could tell you that over my years

AU-1

AU-1 - cont

of diving into the intake cove--the intake cove, by the way, is 32 feet deep. Consequently, the currents going into the intake structure are very gentle, less than a foot per second, and doing bar rack inspections, you could actually see the fish swimming in and out of the bar racks, and, you know, large divers, like myself, were never impinged upon the bar racks. And just, just the number of fish and marine mammals, and invertebrates, were just amazing.

I could tell you that the coast lying along Diablo Canyon is some of the richest and most diversified, and healthy waters I've ever had the opportunity to dive in before. Along with diving in the intake, I've had the opportunity to dive in the discharge cove, and once again, the discharge cove is an amazing place to dive in, and I wish that all of you could actually see that. It is really remarkable.

Along with the subtidal areas of our coastline, along this particular coast, I could tell you that the intertidal zones are just as productive, and rich and healthy, as the subtidal areas. I usually take my kids, my son and my daughter, to the intertidal zones, and we explore the tide pools in Montana de Oro State Park. And I could tell you that the contrast between Montana de Oro tide pools--we--I think we love them to

AU-1 - cont

1 death, and the tide pools along the Diablo Canyon
2 coastline, once again, is a stark contrast.
3 The tide pools along the Diablo Canyon
4 coastline are absolutely pristine, with a tremendous
5 amount of life and diversity. Now where the land
6 meets the sea is the intertidal zone. But also the
7 land, the land stewardship program that Diablo, that
8 PG&E sponsors, is also remarkable. I think Sally
9 Krenn said it eloquently, when she talked about Bob
10 Blanchard and his managed grazing on the north
11 property.
12 Once again, it's just remarkable, the
13 stewardship that PG&E has practiced on the Diablo
14 Canyon lands. And I just want to say thank you very
15 much for your time, and have a great night.
16 MR. CAMERON: Thank you very much. And
17 this is Charlie Smith.
18 MR. SMITH: I'm Charlie Smith from
19 Templeton. I don't represent anybody, just myself.
20 Last month, I was able to speak to two local students
21 who went to the Copenhagen conference, and I asked
22 them, was nuclear power brought up as part of the
23 solution for climate change. They were very
24 surprised, because many of the leaders there in
25 Copenhagen mentioned that nuclear power had to be part

1 you.

2 MR. CAMERON: Thank you. Thank you very

3 much, Peggy. And Joanne. Joanne Main.

4 MS. MAIN: Good afternoon. And I want to

5 thank the NRC for hosting this event today, and to

6 listening to all of our comments and considering them

7 with the mountain of work that you have ahead of you

8 to do.

9 I am currently the president and CEO of

10 the Atascadero Chamber of Commerce. The Chamber is a

11 diverse organization of business professionals working

12 together for a better community. The board of

13 directors developed, adopted and published a public

14 policy guide which provides direction for developing

15 positions on legislation and other public policy

16 issues.

17 The relicensing of the Diablo Canyon Power U-1

18 Plant fits into this policy guide. We believe, in

19 order to maintain a solid economic base, and to

20 compete effectively in this century, we must continue

21 to improve our infrastructure systems, particularly in

22 the area of power.

23 Infrastructure investment provides the

24 foundation for accelerated business growth, capital

25 investment, and improved quality of life.

U-1 - cont

Issues we would like for you to take into account, in addition to the obvious environmental review, as you review the license renewal of Diablo Canyon Power Plant, are as follows. We'd like you to keep in mind the economic impact on our local economy and schools. We'd like you to keep in mind the effects of local taxes collected. The effects on the local direct employment as Diablo is the largest employer in our county.

Atascadero houses many of the workers, and their purchasing power is evident in our community. Finally, investigate the effects on local vendors and contractors that have worked in unison, over the years, to keep the plant operational and safe.

U-2

I would encourage the NRC to not delay the relicensing process of the Diablo Canyon Power Plant. I know the Diablo Canyon Power Plant operates in a safe manner, always keeps seismic upgrades in their sights at all times, and addresses this issue under their current license.

If the plant is not safe, it would not be operating at this time. Please do not delay the process, as a delay would not result in additional safety benefits. Thank you for your time.

MR. CAMERON: Thank you, Joanne. Next,

DiabloCanyonCEm Resource

From: Ted Martino [ted@apitrailers.com]
Sent: Monday, April 12, 2010 11:01 AM
To: Stuyvenberg, Andrew
Cc: Butterfield, Laurie; jimarkinson@apitrailers.com; Diane Martino
Subject: PG&E Diablo Cyn Power Plant
Attachments: DOC108.PDF

Follow Up Flag: Follow up
Flag Status: Flagged

Hello Mr. Stuyvenberg,

CC-1

Please consider the attached letter in your evaluation of Diablo Canyon Power Plant.
In a time when our State is faced with so many daunting challenges the additional layoffs, the loss of revenue, and power shortages would be devastating.

I thank you in advance for your time & consideration.
Regards,
Ted Martino

api
Atlas Performance Industries, Inc.
Office: 1916 West Stowell Rd. Santa Maria, CA 93458
Mail PO BOX 5754 Santa Maria, CA 93456

Telephone: 805.928.8689
Fax: 805.928.9190
Website: www.apitrailers.com

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April 8, 2010

Andrew Stuyvenberg, Project Manager
U.S. Nuclear Regulatory Commission
Mail Stop: O-11F1
Washington, DC 20555-0001
andrew.stuyvenberg@nrc.gov

Dear Mr. Stuyvenberg,

I would like to thank the Nuclear Regulatory Commission (NRC) for conducting the environmental scoping meetings in San Luis Obispo in March, 2010, and giving the local community a chance to provide input on what issues should be considered in the Environmental Impact Statement (EIS).

I am writing to encourage the NRC to address Diablo Canyon's economic impacts on the local economy and educational facilities in the area. Because of Diablo Canyon Power Plant, Pacific Gas and Electric Company is the largest private employer in San Luis Obispo County with more than 1,600 jobs. Additionally, the company is the largest property tax payer in the county paying more than $24 million for the fiscal year 2009/2010 with a significant portion going to local educational institutions. I truly believe that the environmental document must evaluate all of the relevant issues in a fair and balanced manner. CC-2

I look forward to reading the draft environmental document later this year. Thank you in advance for your consideration.

Sincerely,

Ted Martino

Ted Martino
Owner
Atlas Performance Industries, Inc.
1916 W. Stowell Rd.
Santa Maria, CA 93458

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1 review of the existing fire prevention programs,
2 including public education and vegetation management.
3 The review should look at the fixed fire protection
4 systems that are currently in place, and the
5 inspection programs, to ensure their adequacy.
6 The review should include that the fire
7 protection personnel, equipment, and training, are
8 adequate to meet the needs of the county for the next
9 licensing period.
10 Further, the review should include a
11 review of the emergency response processes. We are
12 confident that the current level of fire protection
13 service meets the minimum industry standard for fire
14 protection. We need to ensure that over the next
15 licensing period, and ensuring decommission, or
16 conversion, that that fire protection continues to
17 meet or exceed those standards.
18 Fire protection should be included in the
19 environmental review. We are prepared to assist the
20 NRC in providing input to that process. Thank you.
21 MR. CAMERON: Thank you, sir.
22 Rebecca McMurry and Lynne Levin, and then
23 we'll go to D.J. Boyson.
24 MS. McMURRAY: Thank you for this P-1
25 opportunity. I'm Rebecca McMurry, CEO of the Pismo

Beach Chamber of Commerce. Pismo Beach Chamber is supportive of the relicensing application submitted by PG&E to the NRC. P-1 - cont

Diablo Canyon Power Plant is a significant driving force to the economy not only in Pismo Beach, but all over our county and the surrounding areas. We believe that this study should take a long, strong look at the socioeconomic impacts on our county and our communities. As PG&E and Diablo are huge contributors to our tax base, to unemployment, both at the plant and in outside contractors and suppliers outside of the plant, the impact that it has on our tourism industry in Pismo Beach, with the annual outages and the outside workers that come in, as well as contributions to various charitable organizations.

Additionally, we feel that the seismic study should take place concurrent with the application and review process. As PG&E continues to study the seismic issues, as is regulated by the NRC, all along, not just in a relicensing application, and as a delay of the application process would not result in additional safety benefits. Thank you for your time. P-2

MR. CAMERON: Thank you, Rebecca.

And Lynne. Lynne Levine.

1 the oceanography studies, the people that do
2 maintenance out there, the people that operate the
3 plant, have come here, repeatedly, and told you it's
4 okay, we've look at it and it's okay.
5 So that's all. Thank you.
6 MR. FULLER: Thank you. Next we have Will
7 Landreth and then Ms. Moffatt. And then we'll hear
8 from Mr. Carl Dudley.
9 Mr. Landreth. Did Mr. Landreth leave
10 before we had a chance to hear from him? It seems so.
11 Okay. Ms. Moffatt. Oh. And could you please state
12 your first name. Thank you.
13 MS. MOFFATT: I sure will. My name is
14 Carolyn Moffatt. I'm president of the San Luis Harbor BE-1
15 Commission. As the nearest neighbor to PG&E Diablo
16 Canyon Power Plant, the district wishes to ensure that
17 the following five issues are addressed prior to
18 relicensing. The first cannot be overemphasized, so
19 it's not redundant, nor is it manipulative. The
20 district believes the precursor to any discussion of
21 relicensing must be a comprehensive evaluation of the
22 hazards of seismic activity.
23 PG&E is currently conducting additional
24 studies and three-dimension mapping. The relicensing
25 application should be put on hold until such time that

1 these studies are complete, have undergone a BE-1 - cont
2 significant level of rigorous peer review, and have
3 shown that the plant can continue to operate and store
4 waste safely.
5 This is not only common sense. It should
6 be economically prudent in the long run.
7 The second issue that we've been asked to BE-2
8 address is economic impact of the one mile water
9 exclusion zone around the plant on the livelihoods of
10 commercial fishing fleet, which are cumulative and
11 incremental when added to the impacts of the marine-
12 protected areas. What does this zone actually
13 accomplish? How effectively can it be enforced for
14 security purposes?
15 The zone should either be lifted or
16 factually justified. By comparison, there is not a
17 no-fly zone over the plant.
18 The third item that we'd like to address, BE-3
19 the harbor district lies less than a half an hour
20 downwind from Diablo Canyon, given the prevailing
21 meteorological conditions. There continue to be
22 shortcomings in the ability of the district, the
23 county, PG&E, and OES, to provide for safe evacuation
24 from the port and beach facilities in the event of an
25 incident at the plant.

Specifically, but not exclusively, this relates to the ability of emergency response vessels to respond to the harbor due to excessive shoaling near the near-shore facilities which require annual maintenance dredging. The lack of facilities for water-based evacuation at Point San Luis lighthouse as well. Absent a U.S. Coast Guard present at the Port San Luis, a number of security and safety functions fall to the district's harbor patrol. BE-3 - cont

These concerns should be addressed prior to relicensing of the plant for an additional 20 years.

An additional impact that we'd like to address is that of the once-through cooling system for the ecosystem support, supporting forage and habitat of marine species adjacent to the plant. BE-4

This should be evaluated and directly and indirectly mitigated. Cooling alternatives should be evaluated in project level detail. Finally, the EIR/EIS for temporary dry cask storage facility works for a hundred years, or until Yucca Mountain was opened in 18 years, and did not include relicensing. The elimination of Yucca Mountain requires a new EIR/EIS for waste management for relicensing. This should include evaluation of new technologies for BE-5

BE-5 - cont

1 management of spent fuel as dry cask storage may be
2 obsolete before the end of the current license.
3 We will submit additional detailed
4 comments before the end of the scoping period, and I
5 thank you very much for this opportunity to speak to
6 you and address our concerns. Thank you.
7 MR. FULLER: Thank you, Ms. Moffatt. Next
8 we'll hear from Carl Dudley, and then after him Mr.
9 James Byerley, and then finally Sonja Swift.
10 MR. DUDLEY: Good evening. I'm Carl
11 Dudley. I'm a resident of San Luis Obispo, San Luis
12 Obispo County. To answer one question, to start off
13 with, how many power plants have been opened since
14 Three Mile Island? There's been at least two, because
15 Three Mile Island happened in 1979. So we've had the
16 two here that have at least been opened.
17 I believe that the relicensing process
18 needs to continue, but the first and foremost issue is
19 soundness and safety. And I challenge anybody from
20 the NRC, the employees of PG&E, that if there is
21 something wrong, to get it out in the public so that
22 it is fixed.
23 After that, nothing else really matters,
24 other than the safety and soundness. I trust the NRC.
25 I trust the "evil," big company PG&E, and I trust

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April 9, 2010

Andrew L. Stuyvenberg
Nuclear Regulatory Commission
Mail Stop 0-11F1
Washington, DC 20555-0001

via e-mail; USPS delivery to follow

re: PG&E Diablo Canyon License Renewal: Environmental Impact Statement

Dear Mr. Stuyvenberg,

Port San Luis Harbor District has enjoyed a mutually beneficial relationship with our neighbor, PG&E, for many years. Whether the issue has been cooperation on projects of community benefit (Coastal Clean Up Day), management of coastal access (Pecho Coast Trail) or support for the District's efforts at energy conservation, PG&E has been a good neighbor and partner.

The District has, over the years, actively participated in and commented on the review and permitting process for PG&E projects.

PG&E has applied for relicensing to extend by twenty years the operating life of its two reactors (currently expiring 11/02/24 and 8/26/25).

The District will divide our comments on issues to be addressed in the environmental scoping process into two parts: those of direct impact on and specific to Port San Luis Harbor District, and those of a more general nature and of concern to the larger community.

District concerns:

CI-1

1 **Socio-economic studies**: While the District recognizes that the socio-economic impacts of relicensing will be reviewed as a part of the EIS, and while the District recognizes the significant financial benefit to both the District and the community at large of continued operation (employment, unitary tax revenues), the District wishes to see an evaluation of the impact of the one mile exclusion zone on local fishing and fishing support businesses. Commercial and recreational fishermen are currently prohibited from fishing within this zone; this, in conjunction with Marine Protected Areas (MPAs), the

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Add = A. Stuyvenberg (ALS3)
N. Ferrer (nbf)

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potential for closure of fishing grounds for the development of wave energy projects, and other regulatory closures, has a cumulative impact on the livelihoods of commercial fishermen and the shore based businesses that support both them and recreational fishermen. Given the absence of a no-fly zone over DCPP, and given the disparity between this closure of state waters and the access granted in the waters off San Onofre NPP, is this continued closure of state waters justified? **The District requests that the environmental documents address the justification for the one mile exclusion zone in the waters off the plant.** CI-1 - cont

2 **Marine Safety**: The coast of California has a limited number of opportunities for mariners to seek refuge from weather, or to address mechanical problems, in safety. Certain parts of the coast are more unforgiving, with fewer opportunities for safe harbor, than others. Until the institution of the exclusion zone around DCPP, the cove at Diablo Canyon was accessible to mariners as a harbor of refuge. **The District requests that the security benefits of the exclusion zone, if shown to exist, be weighed against the safety impacts of the loss to mariners of a harbor of refuge, and that the cove be considered a harbor of refuge.**

3 **Emergency operations:** Emergency planning is an ongoing exercise with continual refinement and improvement in preparing for the greatest level of public safety in the event of an emergency. In the past, in response to PG&E's application for the development of the Independent Spent Fuel Storage Installation (ISFSI), the District commissioned a study by Douglas Wood and Associates on emergency planning and preparedness. The District, PG&E and the County of San Luis Obispo have worked diligently to implement the recommendations in this study. In response to increasing public visitation and access to the coast, additional concerns in emergency planning are apparent. Specifically, there is currently no ability to conduct a water based evacuation from the Point San Luis Light Station. Additionally, constant shoaling of near shore waters in the harbor, periodically and minimally mitigated by the District's dredging operation, impacts the ability of District to launch and/or haul out public safety vessels, both ours and those of USCG Station Morro Bay. **The District requests that the environmental documents address the need for continual improvement in emergency planning and response, specifically related to water evacuation from Point San Luis, and to the impacts on public safety of the shoaling of near shore facilities.** CI-2

4 Peer reviewed studies should focus on the entrainment by DCPP of larvae of commercial and recreational fin and shell fish species, including but not limited to all rockfish species, lingcod, black cod, cabezon, California halibut, demersal fishes caught by trawlers (rex sole, dover sole etc.), market squid, abalone, kellets whelk and sea urchin. **The District requests a review of scientific studies or data to support or refute any measurable negative** CI-3

effects on the abundance of local (i.e. accessible to fishermen out of Port San Luis) populations of these species from the continued operation of DCPP, specifically the once through cooling system. CI-3- cont

General comments of concern, but not specific to the current environmental review:

1 **Seismic studies:** While the District understands that seismic studies are an ongoing effort, we also recognize the impact of the recently discovered (November 2008) off shore fault adjacent to Diablo Canyon. The District believes it proper and prudent that the seismic studies now underway be completed prior to continuation with the relicensing application, and further, that said seismic studies undergo rigorous peer review and document the ability of the plant to continue to both operate and store waste safely for the expected duration of any relicensing period (operation) and indefinitely thereafter (storage). **The District requests that the relicensing documents include a rigorous, peer reviewed study of the potential for compromise of both the reactor buildings and the ISFSI as a result of a seismic event.** CI-4

2 The District submitted comments on the EIR conducted for the ISFSI, requesting that the EIR address the potential for plant relicensing. This was not included in the EIR. Given that the Yucca Mountain Repository project has been cancelled, the impacts of relicensing on the ISFSI should be addressed in detail in the environmental review of the relicensing application, including the evaluation of new technologies for the management of spent nuclear fuel. **The District requests that the environmental documents address the impacts on the ISFSI should relicensing occur, and that, if necessary, this should include a project level analysis of spent fuel management.** CI-5

The District thanks you for the opportunity to comment on the scoping for the environmental review of PG&E's application to relicense the Diablo Canyon Power Plant

Sincerely,

Carolyn Moffatt

Carolyn Moffatt
President, Board of Commissioners

c: PG&E, Tom Jones
CPUC, Public Advisor

April 11, 2010

Andrew Stuyvenberg, Project Manager
U.S. Nuclear Regulatory Commission
Mail Stop: O-11F1
Washington, DC 20555-0001

Dear Mr. Stuyvenberg,

I would like to thank the Nuclear Regulatory Commission (NRC) for conducting the environmental scoping meetings in San Luis Obispo in March 2010, and giving the local community a chance to provide input on what issues should be considered in the Environmental Impact Statement (EIS).

As a local business person, and a resident of Avila Beach. I am writing to encourage the NRC to address Diablo Canyon's economic impacts on the local economy and educational facilities in the area. Because of Diablo Canyon Power Plant, Pacific Gas and Electric Company is the largest private employer in San Luis Obispo County with more than 1,600 jobs. Additionally, the company is the largest property tax payer in the county paying more than $24 million for the fiscal year 2009/2010 with a significant portion going to local educational institutions. I truly believe that the environmental document must evaluate all of the relevant issues in a balanced manner. CB-1

I look forward to reading the draft environmental document later this year. Thank you in advance for your consideration.

Sincerely,

Laura Murphy

Laura Murphy
Morris & Garritano Insurance, San Luis Obispo
and
Resident of Avila Beach
PO Box 2197
Avila Beach, CA 93424

Cc: Kim Greene (NRC)

DiabloCanyonCEm Resource

From: Myracles [myracles@sbcglobal.net]
Sent: Monday, April 12, 2010 10:58 AM
To: Stuyvenberg, Andrew
Subject: NRC FOR DCPP ENVIRONMENTAL IMPACT STATEMENT

Follow Up Flag: Follow up
Flag Status: Flagged

April 11, 2010

Andrew Stuyvenberg, Project Manager
U.S. Nuclear Regulatory Commission
Mail Stop: O-11F1
Washington, DC 20555-0001

Dear Mr. Stuyvenberg,

Thank you and the Nuclear Regulatory Commission (NRC) for conducting the environmental scoping meetings in San Luis Obispo in March. Giving the local community a chance to provide input on what issues should be considered in the Environmental Impact Statement (EIS) is very important.

I am writing to encourage the NRC to address Diablo Canyon's economic impacts on the local economy and educational facilities in the area. With out Diablo Canyon Power Plant, and Pacific Gas and Electric Company, San Luis Obispo County would be greatly impacted. Without the 1,600 jobs they provide, and the tax revenue they generate, our County's economy, and education system would be harmed greatly. I believe that the environmental document must evaluate all of the relevant issues in a fair and balanced manner. CD-1

I look forward to reading the draft environmental document later this year. Thank you in advance for your consideration.

Sincerely,

Brian Myracle

8570 Corriente Rd.
Atascadero,Ca

1 been a fixture here--well, actually, the process has
2 been going on since the mid '60s, and there is a lot
3 of passion revolving around the plant, and I think
4 it's very important that the community have an
5 opportunity to "weigh in."
6 I want to thank all of you also for taking
7 advantage of this opportunity to speak directly to the
8 NRC about your concerns relative to the plant. I know
9 tonight's meeting is focusing on scoping for the
10 environmental impact report for the relicensing of the
11 plant. But before I make my comments relative to the
12 scoping, I want to comment about the relicensing.
13 I've been following this for the past AS-1
14 several months. As you all know, there's been a new
15 earthquake fault discovered off the plant. They are
16 calling it the Shoreline Fault. The California Public
17 Utilities Commission has asked for a thorough analysis
18 of that fault and its connectivity to other faults
19 offshore. Our Assemblyman Sam Blakeslee has also made
20 the same requests of the NRC to postpone any
21 relicensing procedures until we have the full data on
22 that newly-discovered Shoreline Fault.
23 And I have to concur with the California
24 Public Utilities Commission as well as Assemblyman
25 Blakeslee. I think it's premature to pursue licensing

at this point in time. It's been stated that the relicensing process--and the NRC has completed about fifty of those, I understand, and there's still another twenty or twenty-five actually in process now. But they take an average of about five years to complete, and here we are with reactors that are 14 to 15 years, under their current license, left to operate. AS-1 - cont

And we need to keep that in mind. That the plant is licensed to operate for another 14 or 15 years. We have an opportunity, during that time, to do a thorough analysis of the seismic potential off of the coast. We have additional time to review and analyze alternatives to nuclear power for electrical generation, renewable technologies, and other energy-producing means are rapidly developing. They're becoming more and more cost-effective, by the day, literally, and so we need to keep that in mind. AS-2

And we also need to keep in mind that the more money we invest in this process, the more difficult it is to alter that process or back out of that process as we move along. AS-3

So I think we need to be more logical in the pursuit of relicensing for Diablo Canyon and we need to be more physically responsible in that AS-4

pursuit.

AS-4 - cont

Relative to the issues of greatest concern to me is obviously that newly-discovered earthquake fault. We've just, in recent weeks, seen the devastation of earthquakes throughout the world, and it could happen here, and I have to ask, are we tempting fate here, with moving forward, without having all the information that can be available to us, within the next year or two, if we focus our energy and effort on completing the seismic studies of those faults?

AS-5

So that's a huge concern to me. Another issue is I think in the environmental analysis we need to take a robust look at alternative technologies, energy efficiency and conservation, and do the economic analysis that goes along with that, to see what alternatives are available to us.

AS-6

The once-through cooling that has been proven to be a significant impact on marine resources off our coast, we need to consider that, we need to take a look at the on-site storage, both the dry cask storage and the cooling ponds that they now use. For many years, they were beyond their design capacity because we didn't have alternatives for storage, so we need to take a very close look at the storage options,

AS-7

the long-term storage opportunities.

Do we have it? Are we going to have a storage facility, here, in San Luis Obispo County, indefinitely, because there's no place else for that nuclear waste to go?

AS-7 - cont

So that's very much a part of it, in my mind. I think we ought to focus our energy and efforts, here, in the next year or two, on analyzing, again, the newly-discovered fault offshore, and see how that would potentially impact the future of Diablo Canyon Nuclear Power Plant. It's the fiscally responsible and sensible thing to do, and I would hope that the NRC would recognize that fact, and help us move forward with those analyses. Thank you.

AS-8

MR. CAMERON: Thank you very much, Supervisor. We're going to go to Larry Womack, and John Lindsey, and Charlie Smith, right now, and this is Larry.

MR. WOMACK: Thank you for this opportunity to speak before you this evening. By way of background, I first settled in San Luis Obispo County in 1978. I'm now a resident of South County, where my wife and I are raising our two young children. I retired from PG&E in 2004. I am not under the employment of PG&E nor am I spokesman for

1 You heard from your own peers in your
2 community that work for this company, even retirees,
3 scuba divers, and everything, what it's like there.
4 It is a wonderful plant, very upbeat attitude, and I'm
5 proud to be associated with them. Thank you very
6 much.
7 MR. FULLER: Thank you, Mr. Linden. Next
8 we'll have Mark Phillips, and after Mr. Phillips,
9 we'll have Jack Biesek or "Bysek." I hope I'm not
10 messing that name up too badly.
11 Mr. Phillips.
12 MR. PHILLIPS: Good evening. My name's
13 Mark Phillips. I'm a registered professional engineer
14 in the State of California, mechanical engineer, and I
15 have several comments I'd like to make. Regarding the BA-1
16 Shoreline Fault, I'd like to echo the statements of
17 several other people that say that we should be
18 studying that, up-front, we should find out what we
19 can from a complete study of that, with all the tools
20 that we have at our disposal. That should be like
21 order number one of priority.
22 The fact that it's not, to me, just tells
23 me how much PG&E doesn't really want to know. You
24 know, they don't want to look at something if they're
25 afraid the answer might not be something they want to

hear. So they don't look, or they don't look very hard, or they don't look very soon. BA-1 - cont

A lot of people that work for PG&E have come up here and told you how great it is to work for them, and how they'd like to stay here and live in this area, and they like the paycheck they're getting. It's all very understandable. It's also why you don't really want PG&E being the ones doing this sort of work, because they have such a vested interest in the outcome. They're not independent, or, or--I mean, they, they have their agenda. So those sorts of things bother me. BA-2

I'm really getting tired of people saying things that don't turn out to be true, that don't be turned out to be backed up by facts. One of the worst is--well, I mean, nuclear power, in terms of new plants, is horrifically expensive. BA-3

The cost per kilowatt hour generated ranges from 50 to 21 cents by one study. That compares with about 7.5 cents for wind. So we're talking two to three times more expensive for nuclear.

People try to say that nuclear's going to, you know, save us, global climate-wise. That's also a fallacy. A dollar spent on nuclear will remove about 5 to 8 kilograms of carbon, but for that same dollar, BA-4

BA-4 - cont

1 you can remove 13 kilograms of carbon by--with wind.
2 And if you use energy efficiencies, what
3 they call negawatts, the watts that you don't use, you
4 can save 50 to a 100 kilograms per dollar spent.
5 So clearly, if global warming is the
6 issue, if that's what we're trying to accomplish, then
7 spending it on renewables and wind is the smart,
8 sensible way to go. Spending it on nuclear power is
9 suicidal. In particular, when you consider how long it
10 takes to build a nuclear power plant, it's even more
11 suicidal.
12 One of the biggest problems we have here,
13 though, is the problem of trust. People in this
14 community need to trust PG&E, we need to trust the NRC
15 that things are going to be handled in a sensible
16 manner, in an honest manner.
17 That would be great if that were true, but
18 the evidence, again, doesn't support that. I'm
19 looking particularly at what's been going on up at the
20 Vermont Yankee Plant. There's a gentleman up there,
21 Ernie Gunderson, who used to work for the owners of
22 that plant, he found many violations of NRC
23 regulations, he went to his boss to tell him about
24 these and was promptly fired.
25 He worked, as best he could, to try and

BA-4 - cont

1 expose these, and got no help from the NRC. Again and
2 again, in his story, he talks about how the NRC did
3 not help him at all.
4 He found out that--he was the one that
5 found out that there were underground pipes at this
6 plant. The operators of this plant denied it for over
7 a year. And where was the NRC? Where was the NRC,
8 the watchdog, the people that are supposed to be
9 verifying this stuff? Nowhere to be found.
10 It was Ernie Gunderson who finally found
11 that they, there were pipes under there, and these
12 pipes are leaking radiation tritium, even now.
13 He--the operators of the plant have lied
14 several times, they've been fined twice so far,
15 they've had horrible accidents there, the transformer
16 fire, a cooling tower collapse, and they've lost
17 nuclear fuel.
18 These are some of the reasons why the
19 Vermont legislature voted not to extend the license
20 for this plant. It's the only time that's happened.
21 Vermont's the only state that has the ability to do
22 that, and they looked at the record of Vermont Yankee
23 and said no, we do not--we don't want any more of
24 this. So they just recently, in the last few days,
25 voted to not re, you know, renew that license.

From Mark Phillips

Nuclear Power: Climate Fix or Folly?

Amory B. Lovins, Imran Sheikh, and Alex Markevich

April 2008 *RMI Solutions* article "Forget Nuclear," updated and expanded by ABL 31 Dec 2008

Nuclear power, we're told, is a vibrant industry that's dramatically reviving because it's proven, necessary, competitive, reliable, safe, secure, widely used, increasingly popular, and carbon-free —a perfect replacement for carbon-spewing coal power. New nuclear plants thus sound vital for climate protection, energy security, and powering a vibrant global economy.

There's a catch, though: the private capital market isn't investing in new nuclear plants, and without financing, capitalist utilities aren't buying. The few purchases, nearly all in Asia, are all made by central planners with a draw on the public purse. In the United States, even new 2005 government subsidies approaching or exceeding new nuclear plants' total cost failed to entice Wall Street to put a penny of its own capital at risk during what were, until autumn 2008, the most buoyant markets and the most nuclear-favorable political and energy-price conditions in history—conditions that have largely reversed since then.

This semi-technical article, summarizing a detailed and documented technical paper[1], compares the cost, climate protection potential, reliability, financial risk, market success, deployment speed, and energy contribution of new nuclear power with those of its low- or no-carbon competitors. It explains why soaring taxpayer subsidies haven't attracted investors. Capitalists instead favor climate-protecting competitors with lower cost, construction time, and financial risk. The nuclear industry claims it has no serious rivals, let alone those competitors—which, however, already outproduce nuclear power worldwide and are growing enormously faster.

Most remarkably, comparing all options' ability to protect the earth's climate and enhance energy security reveals why nuclear power *could never deliver* these promised benefits even if it *could* find free-market buyers—while its carbon-free rivals, which won more than $90 billion of private investment in 2007 alone[2], do offer highly effective climate and security solutions, far sooner, with higher confidence.

Uncompetitive Costs

CV-1

The Economist observed in 2001 that "Nuclear power, once claimed to be too cheap to meter, is now too costly to matter"—cheap to run but very expensive to build. Since then, it's become severalfold costlier to build, and in a few years, as old fuel contracts expire, it is expected to become severalfold costlier to run.[3] Its total cost now markedly exceeds that of coal- and gas-fired power plants, let alone the even cheaper decentralized competitors described below.

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[1] A.B. Lovins & I. Sheikh, "The Nuclear Illusion," *Ambio*, forthcoming, 2009. RMI Publ. #E08-01, preprinted at www.rmi.org/images/PDFs/Energy/E08-01_AmbioNuclIllusion.pdf, to be updated in early 2009 for publication.

[2] Justin Winter for Michael Liebreich (New Energy Capital, London), personal communication, 1 Dec 2008, updating that firm's earlier figure of $71b for distributed renewable sources of electricity. The $90b is bottom-up, transaction-by-transaction and excludes M&A activity and other double-counting. Reliable estimates of investment in no-carbon (recovered-waste-heat) or relatively low-carbon (fossil-fueled) cogeneration are not available, but total global cogeneration investment in 2007 was probably on the order of $20b or more.

[3] Due to prolonged mismanagement of the uranium and enrichment sectors: *Nuclear Power Joint Fact-Finding*

CV-1 - cont

Construction costs worldwide have risen far faster for nuclear than for non-nuclear plants. This is not, as commonly supposed, due chiefly to higher metal and cement prices: repricing the main materials in a 1970s U.S. plant (an adequate approximation) to March 2008 commodity prices yields a *total* Bill of Materials cost only ~1% of today's overnight capital cost. Rather, the real capital-cost escalation is due largely to the severe atrophy of the global infrastructure for making, building, managing, and operating reactors. This makes U.S. buyers pay in weakened dollars, since most components must now be imported. It also makes buyers worldwide pay a stiff premium for serious shortages and bottlenecks in engineering, procurement, fabrication, and construction: some key components have only one source worldwide. The depth of the rot is revealed by the industry's flagship Finnish project, led by France's top builder: after three years' construction, it's at least three years behind schedule and 50% over budget. An identical second unit, gratuitously bought in 2008 by 85%-state-owned Électricité de France to support 91%-state-owned vendor Areva (orderless 1991–2005), was bid ~25% higher than the Finnish plant and without its fixed-price guarantee, and suffered prompt construction shutdowns for lax quality.

The exceptionally rapid escalation of U.S. nuclear capital costs can be seen by comparing the two evidence-based studies[3,4] with each other and with later industry data (all including financing costs, except for the two "overnight" costs, but with diverse financing models—*cf.* cols. 3 *vs.* 4):

Date	*Source*	*Capital cost (2007 $/net el. W)*	*Levelized busbar cost, 2007 $/MWh*
7/03	MIT[4]	2.3	77–91
6/07	Keystone[3]	3.6–4.0	83–111
5/07	S&P	~4	
8/07	AEP	~4	
10/07	Moody's	5–6	
11/07	Harding	4.3–4.6	~180
3/08	FPL filing	~4.2–6.1 [3.1–4.5 overnight]	
3/08	Constellation	[3.5–4.5 overnight]	
5/08	Moody's	~7.5	150
6/08	Lazard	5.6–7.4	96–123
11/08	Duke Power	[4.8 overnight]	

As the Director of Strategy and Research for the World Nuclear Association candidly put it, "[I]t is completely impossible to produce definitive estimates for new nuclear costs at this time…."[5]

By 2007, as Figure 1 shows below, nuclear was the costliest option among all main competitors, whether using MIT's authoritative but now low 2003 cost assessment, the Keystone Center's mid-2007 update (pink bar), or later and even higher industry estimates (pink arrow).[6] For plants ordered in 2009, formal studies haven't yet caught up with the latest data, but it appears that their

(June 2007, Keystone Center, www.keystone.org/spp/documents/FinalReport_NJFE6_12_2007(1).pdf) estimated new fuel contracts will rise from the canonical ~0.5c/kWh to ~1.2–1.7c for open or ~2.1–3.5c for closed fuel cycles.

[4] This is very conservatively used as the basis for all comparisons in this article, but we show some later variants.

[5] S. Kidd, *Nucl. Eng. Intl.*, 22 Aug 2008, www.neimagazine.com/storyprint.asp?sc=2050690.

[6] All monetary values in this article are in 2007 U.S. dollars. All values are approximate and representative of the respective U.S. technologies in 2007 except as noted. Capital and fuel costs are levelized over the lifespan of the capital investment. Analytic details are in ref. 1, and for the underlying 2005 analysis, in A.B. Lovins, "Nuclear Power: Economics and Climate-Protection Potential," RMI Publ. #E05-14, 6 Jan 2006, www.rmi.org/images/PDFs/Energy/E05-14_NukePwrEcon.pdf, summarized in A.B. Lovins, "Mighty Mice," *Nucl. Eng. Intl.*, pp. 44–48, Dec 2005, www.rmi.org/images/PDFs/Energy/E05-15_MightyMice.pdf.

CV-1 - cont

new electricity would probably cost (at your meter, not at the power plant) around 10–13¢/kWh for coal rather than the 9¢ shown, about 9–13¢/kWh for combined-cycle gas rather than the nearly 10¢ shown, but around 15–21¢/kWh for new nuclear rather than the 11–15¢ shown.[7] However, nuclear's decentralized competitors have suffered far less, or even negative, cost escalation: for example, the average price of electricity sold by new U.S. windfarms *fell* slightly in 2007.[8] The 4.0¢/kWh average windpower price for projects installed in 1999–2007 seems more representative of a stable forward market, and corresponds to ~7.4¢/kWh delivered and firmed—just one-half to one-third of new nuclear power's cost on a fully comparable basis.

Non-central-station competitors

Cogeneration and efficiency are "distributed resources," located near where energy is used. Therefore, they don't incur the capital costs and energy losses of the electric grid, which links large power plants and remote wind farms to customers.[9] Wind farms, like solar cells[10], also require "firming" to steady their variable output, and all types of generators require some backup for when they inevitably break. Figure 1 reflects these costs.

Making electricity from fuel creates large amounts of byproduct heat that's normally wasted. Combined-cycle industrial cogeneration and building-scale cogeneration recover most of that heat and use it to displace the need for separate boilers to heat the industrial process or the building, thus creating the economic "credit" shown in Figure 1. Cogenerating electricity and some useful heat from currently discarded industrial heat is even cheaper because no additional fuel is needed, so no additional carbon is released—only what the factory was already emitting.[11]

End-use efficiency, by far the cheapest option, wrings more (and often better) services from each kilowatt-hour by using smarter technologies—substituting brains for dollars and carbon. That's mainly how California has held per-capita electricity use flat for the past 30 years, saving ~$100

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[7] Based, as in Figure 1, on the June 2007 Keystone findings adjusted to Moody's May 2008 capital cost, on the assumption that a somewhat stronger dollar might partly offset escalation. Anecdotal reports suggest that real capital cost escalation remains rapid in Europe and Asia, depending on exchange rates: for example, eight recent Asian plants look to end up costing ~$4/W, consistent with mid-2007 U.S. cost estimates.

[8] From 4.8 in 2006 to 4.5¢/kWh, 0.9¢ higher than shown in Figure 1. U.S. wind turbines became 9% costlier during 2006–07, and may rise another ~10% in 2008, largely because rapid growth bottlenecked some key component supplies, but capacity factors improved too: *e.g.*, the average kW of Heartland wind projects installed in 2006 produced 35% more electricity than one installed in 1998–99, due mainly to better-designed turbines, higher hub heights, and better siting. All windpower data in this paper are from R. Wiser & M. Bolinger, "Annual Report on U.S. Wind Power Installation, Cost, and Performance Trends: 2007," USDOE/EERE, LBL-43025, May 2008, www1.eere.energy.gov/windandhydro/pdfs/43025.pdf. All windpower prices are net of some minor Renewable Energy Credit trading and of the U.S. Production Tax Credit whose levelized value is 1.0¢/kWh, far smaller than subsidies to central thermal power plants: D. Koplow, "Energy Subsidy Links Pages," Earthtrack (Washington DC), 2005, http://earthtrack.net/earthtrack/index.asp?page_id=177&catid=66.

[9] Distributed generators may rely on the power grid for emergency backup power, but such backup capacity, being rarely used, doesn't require a marginal expansion of grid capacity, as does the construction of new centralized power plants. Indeed, in ordinary operation, diversified distributed generators *free up* grid capacity for other users.

[10] Or *any* other plant. Solar power isn't included in Figure 1 because its delivered cost varies greatly by installation type and financing method. As will be shown in Figure 5 below, photovoltaics (PVs) are currently one of the smaller sources of renewable electricity, and solar thermal power generation is even smaller. However, PVs have probably *already* passed cost crossover with new coal, gas, or nuclear plants, as summarized on p. 6 below.

[11] A similar credit for displaced boiler fuel can even enable this technology to produce electricity at negative net cost. The graph conservatively omits such credit (which is very site-specific) and shows a typical positive selling price. The cogeneration results shown are based on actual projects considered representative by a leading developer.

CV-1 - cont

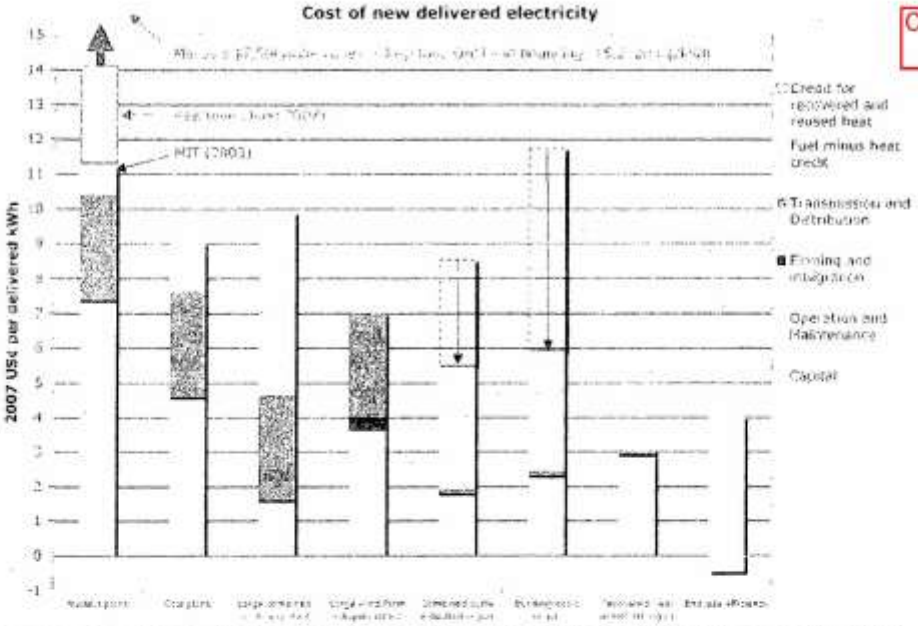

Figure 1: An apples-to-apples comparison of the cost of making and delivering *a new firm kWh of electrical services in the United States, based on empirical ~2007 market costs and prices.*

billion of investment to supply electricity, while per-capita real income rose 79% (1975–2005). Its new houses, for example, now use one-fourth the energy they used to. Yet California is further accelerating all its efficiency efforts, because there's so much still to save. McKinsey has found that efficiency can profitably offset 85% of the normally projected growth in U.S. electricity consumption to 2030.[12] Just using all U.S. electricity as productively as the top ten states now do (in terms of Gross State Product per kWh consumed, roughly adjusted for economic mix and climate) would save about 1,200 TWh/y—~62% of the output of U.S. coal-fired plants.[13]

Saving electricity costs far less than producing and delivering it, even from *existing* plants. California investor-owned utilities' efficiency programs cost an average of 1.2¢/kWh in 2004, and 83 Pacific Northwest utilities' cost 1.3¢/kWh.[14] The national average is about 2¢, but hundreds of utility programs (mainly for businesses, where most of the cheap savings are) cost less than 1¢.[15]

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[12] McKinsey&Company, "Reducing U.S. Greenhouse Gas Emissions: How Much at What Cost?," National Academies Summit on America's Energy Future, Washington DC, 14 Mar 2008, slide 7.

[13] Preliminary RMI analysis (K. Wang, kwang@rmi.org, personal communications, Dec 2008).

[14] C. Rogers, M. Messenger, & S. Bender, "Funding and Energy Savings from Investor-Owned Utility Energy Efficiency Programs in California for Program Years 2000 Through 2004," Aug 2005, www.energy.ca.gov/2005publications/CEC-400-2005-042/CEC-400-2005-042-REV.pdf; Tom Eckman, 1 May 2008 Northwest Power Planning Council memo "Conservation Savings—Status Report for 2005–07," www.nwcouncil.org/news/2008/05/5.pdf. For total societal cost, add ~30–80% depending on the sector.

[15] *E.g.*, S. Nadel, *Lessons Learned*, NYSERDA 90-8, ACEEE, 1990. These 1980s results remain valid today because most U.S. utilities have invested so little in efficiency that their opportunities are more like those of the 58 firms

CV-1 - cont

A major power engineering firm helped investment firm Lazard compare observed U.S. prices, finding that efficiency and many renewables cost less than a new central plants (Figure 2).[16]

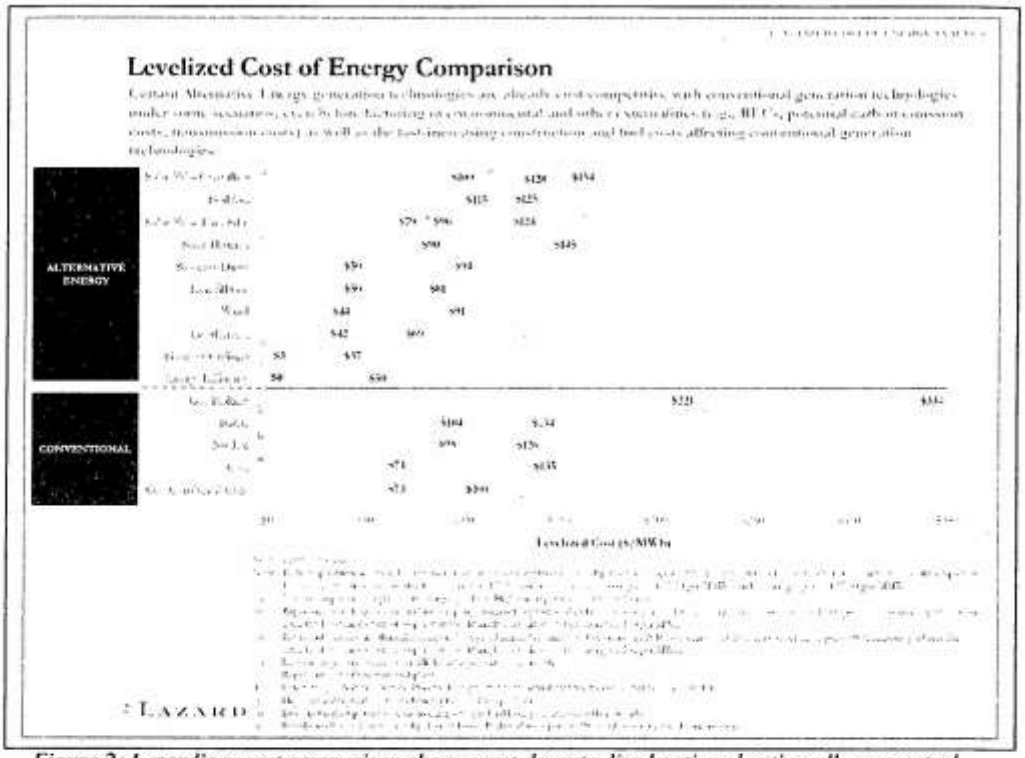

Figure 2: Lazard's recent comparison shows most decentralized options beating all new central stations; this chart omits cogeneration, overstates wind costs, and understates nuclear costs.

Why these comparisons understate nuclear power's uncompetitiveness

These conventional results and assessments greatly understate the size and profitability of today's electric-efficiency potential. In 1990, the utilities' think-tank EPRI and RMI, in a joint article, assessed that potential respectively as ~40–60% and ~75%, at respective average 2007-$ costs of about 3 and 1¢/kWh.[17] Now both those estimates look conservative, for two reasons:

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whose 237 programs through 1988 yielded median program costs of 0.3¢/kWh for industrial savings, 0.9¢ for motor rebates, 1.2¢ for loans, and 1.4¢ for new construction rebates.

[16] Lazard (New York), "Levelized Cost of Energy Analysis, v. 2.0," June 2008. www.nuinmeetings.org/Presentations/2008%20EMP%20Levelized%20Cost%20of%20Energy%20-%20Master%20June%202008%20(2).pdf.

[17] A. Fickett, C. Gellings, & A.B. Lovins, "Efficient Use of Electricity," *Sci. Amer.* **263**(3):64–74 (1990). The difference, analyzed by E. Hirst in ORNL/CON-312 (2001), was nearly all methodological, not substantive (A.B. & L.H. Lovins, "Least-Cost Climatic Stabilization," *Ann. Rev. En. Env.* **16**:433–531 (1991), www.rmi.org/images/PDFs/Energy/E91-33_LstCostClimateStabli.pdf, at pp. 8–11): *e.g.*, EPRI excluded but RMI included saved maintenance cost as a credit against efficiency's capital cost, so their respective average costs of commercial lighting retrofits (~1986 $) were +1.2 and −1.4¢/kWh; EPRI examined potential savings only to 2000

CV-1 - cont

- As EPRI agrees, efficiency technologies have improved faster than they've been applied, so the potential savings keep getting bigger and cheaper.[18]
- As RMI's work with many leading firms has demonstrated, integrative design can often achieve radical energy savings at *lower* cost than small or no savings.[19] That is, efficiency can often *reduce* total investment in new buildings and factories, and even in some retrofits that are coordinated with routine renovations.[20]

Wind, cogeneration, and end-use efficiency already provide electrical services more cheaply than central thermal power plants, whether nuclear or fossil-fuelled. *This cost gap will only widen*, since central thermal power plants are largely mature and getting costlier, while their competitors continue to improve rapidly. Indeed, a good case can be made that photovoltaics (PVs) can *already* beat new thermal power plants: if you start in 2010 to build a new 500-MW coal-fired power plant in New Jersey, plus an adjacent photovoltaic (PV) power plant, then before the coal plant comes online in 2018, the solar plant will produce a slightly larger amount of annual electricity at lower levelized cost, but with 1.5× more onpeak output, and the PV manufacturing capacity used to build your plant can then add 750 more MW *each year*.[21] Of course, the high costs of conventional fossil-fuelled plants would go even higher if their large carbon emissions had to be captured—but this coal/solar comparison assumes a carbon price of *zero*.

The foregoing cost comparison is also conservative for four important *additional* reasons:

- End-use efficiency often has side-benefits worth 1–2 orders of magnitude (factors of ten)

(including 9–15% expected to occur spontaneously) while RMI counted the full long-term retrofit potential; and EPRI assumed drivepower savings 3× smaller and 5× costlier than EPRI adopted elsewhere in the same *Sci. Amer.* article. RMI's assessment summarized a 6-volume 1986–92 analysis of ~1,000 technologies' measured cost and performance (RMI/COMPETITEK, *The State of the Art* series, 2,509 pp., 5,135 sourcenotes, later summarized in the *Technology Atlas* series now maintained by spinoff firm E SOURCE, www.esource.com).

[18] RMI estimated that during 1984–89, U.S. efficiency potential roughly doubled while its real cost fell by threefold. Since 1990, mass production (often in Asia), cheaper electronics, competition, and better technology, according to James K. Rogers PE, cut the real cost of electronic T8 ballasts by >90% to 2003 (while lumens per watt rose 30%), turned direct/indirect luminaires from a premium to the cheapest option, and cut the real cost of industrial variable-speed drives by ~83–97% (some vendors of midsize motors now give them away). Compact fluorescent lamps became 85–94% cheaper during 1983–2003; window air-conditioners got 69% cheaper since 1993 while becoming 13% more efficient; and low-emissivity window coatings became ~84% cheaper in just five years.

[19] Integrative design produces these expanding (not diminishing) returns to efficiency investments: A.B. Lovins, "Energy End-Use Efficiency," 2005, www.rmi.org/images/PDFs/Energy/E95-28_SuperEffBldgFrontier.pdf, further elucidated in the senior author's five public lectures, "Advanced Energy Efficiency," delivered at Stanford's School of Engineering in March 2007 and posted at www.rmi.org/stanford. RMI's recent redesigns of over $30 billion worth of industrial projects consistently found ~30–60% energy savings on retrofit, typically paying back in 2–3 years, and ~40–90% savings in new projects, nearly always with *lower* capital cost.

[20] For example, an RMI design for retrofitting a 200,000-ft² curtainwall office building when it needed reglazing anyhow could save three-fourths of its energy at slightly *lower* cost than the normal 20-year renovation that saves nothing: A.B. Lovins, "The Super-Efficient Passive Building Frontier," *ASHRAE J.*, pp. 79–81, June 1995, www.rmi.org/images/PDFs/Energy/E95-28_SuperEffBldgFrontier.pdf.

[21] This is simply because PVs can ride down the cost curve (they'll clearly continue to get 18% cheaper for each doubling of cumulative global production volume, which is nearly doubling every year), they produce the most output on summer afternoons when most utilities' loads peak, and they can start producing energy and revenue in year one, reducing their financial risk. Many technological and institutional breakthroughs are in view that could well make PVs' costs drop even faster than their historic cost curve. Thomas Dinwoodie, SunPower Corporation, Systems (Founder and CTO), Richmond CA, "Price Cross-Over of Photovoltaics vs. Traditional Generation," 2008.

CV-1 - cont

more than the saved energy.[22]

- End-use efficiency and distributed generators have 207 "distributed benefits" that typically increase their economic value by an order of magnitude.[23] The *only* "distributed benefit" counted above is reusing waste heat in cogeneration.
- Integrating variable renewables with each other typically saves over half their capacity for a given reliability[24]; indeed, diversified variable renewables, forecasted and integrated, typically need *less* backup investment than big thermal plants for a given reliability.
- Integrating strong efficiency with renewables typically makes both of them cheaper and more effective.[25]

New nuclear power's uncompetitiveness is clear without these five conservatisms and overwhelming with them. As we'll see, the marketplace concurs—and that's good news for climate.

Uncompetitive CO_2 Displacement

CV-2

Nuclear plant operations emit no carbon directly and rather little indirectly[26]. Nuclear power is therefore touted as the key replacement for coal-fired power plants. But this seemingly straightforward substitution could instead be done using *non*-nuclear technologies that are cheaper and faster, so they yield more climate solution per dollar and per year.

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[22] *E.g.*, ~6–16% higher labor productivity in efficient buildings, higher throughput and quality in efficient factories, better clinical outcomes in efficient hospitals, fresher food in efficient refrigerators, better visibility with efficient lighting, etc. Just counting such side-benefits can, for example, double the efficiency gains in a U.S. steel mill at the same cost.

[23] The biggest of these come from financial economics: *e.g.*, small fast modular projects have lower financial risk than big slow lumpy projects, and renewables hedge against fuel-price volatility risk. These 207 phenomena are explained and documented in an *Economist* book of the year: A.B. Lovins, E.K. Datta, T. Feiler, K.R. Rábago, J.N. Swisher, A. Lehmann, & K. Wicker, *Small Is Profitable: The Hidden Economic Benefits of Making Electrical Resources the Right Size*, 2002, Rocky Mountain Institute (Snowmass CO), www.smallisprofitable.org.

[24] For windpower in the three power pools that span the central U.S. from Canada to Texas: J. Traube, L. Hansen, B. Palmintier, & J. Levine, "Spatial Interactions of Wind and Solar in the Next Generation Utility," Windpower 2008, 3 Jun 2008 (to be posted shortly at ert.rmi.org).

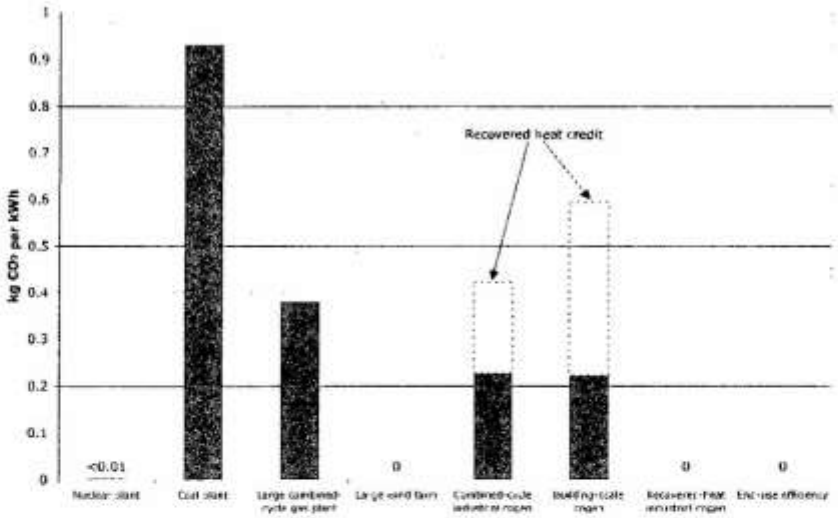
[25] *E.g.*, an integrated retrofit of efficiency, demand response, and 1.18 MW of PVs at the Santa Rita Jail in Alameda County CA easily met a 10%/y IRR hurdle rate—the $9-million project achieved a present-valued 25-year benefit of $15 million and hence would have made money even without its $4-million state subsidies—because on the hot afternoons when the PVs produced the most power, the efficient jail used little, leaving a bigger surplus to resell to the grid at the best price. Or my own household can run on ~120 average W (a tenth the U.S. norm), obtainable from 3 m^2 of PVs—a system cheaper than connecting to wires 30 m away. If built today, my household would need only ~40 average W, from 1 m^2 of PVs—a system cheaper than connecting to wires already on the side of the house. Both these comparisons assume free electricity; their point is that superefficient end-use can make the breakeven distance to the grid, beyond which it's cheaper to go solar than to connect, drop to about zero.

[26] We ignore here the modest and broadly comparable amounts of energy needed to build any kind of electric generator, as well as possible long-run energy use for nuclear decommissioning and waste management or for extracting uranium from low-grade sources and restoring mined land afterwards. B.K. Sovacool, *En. Pol.* **36**:2490–2953 (Aug 2008) surveyed these issues. He screened 103 published studies of nuclear power's energy inputs and indirect carbon emissions; excluded the 84 studies that were older than 10 years, not in English, or not transparent; and found that the other 19 derived gCO_2e/busbar kWh figures ranging from 1.4 to 288 with a mean of 66, which is roughly one-seventh the carbon intensity of combined-cycle gas but twice that of photovoltaics or seven times that of modern onshore windpower. This comparison, or its less favorable dynamic equivalent described by A.B. Lovins and J. Price in 1977 (*Non-Nuclear Futures*, Ballinger, Cambridge MA, Part II), is however scarcely relevant, since the unarguable *economic opportunity cost* shown in this section is far more important and clear-cut.

CV-2 - cont

As Figure 2 shows, various options emit widely differing quantities of CO_2 per delivered kilowatt-hour:[27]

Figure 2: Operating CO_2 emitted per delivered kWh



Coal is by far the most carbon-intensive source of electricity, so displacing it is the yardstick of carbon displacement's effectiveness. A kilowatt-hour of nuclear power does displace nearly all the 0.9-plus kilograms of CO_2 emitted by producing a kilowatt-hour from coal. But so does a kilowatt-hour from wind, a kilowatt-hour from recovered-heat industrial cogeneration, or a kilowatt-hour saved by end-use efficiency. And all three of these carbon-free resources cost far less than nuclear power per kilowatt-hour, so they save far more carbon per dollar.

Combined-cycle industrial cogeneration and building-scale cogeneration typically burn natural gas, which does emit carbon (though half as much as coal), so they displace somewhat less net carbon than nuclear power could: around 0.7 kilograms of CO_2 per kilowatt-hour[28]. Even though cogeneration displaces less carbon than nuclear does per kilowatt-hour, it displaces more carbon than nuclear does *per dollar spent on delivered electricity*, because it costs far less. With a net delivered cost per kilowatt-hour approximately half of nuclear's (using the most conservative comparison from Figure 1), cogeneration delivers twice as many kilowatt-hours per dollar, and therefore displaces around 1.4 kilograms of CO_2 for the same cost as displacing 0.9 kilograms of CO_2 with nuclear power.

Figure 3 compares different electricity options' cost-effectiveness in reducing CO_2 emissions, counting both their cost-effectiveness (kilowatt-hours per dollar), and any carbon emissions:

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[27] Conservatively assuming industry claims that nuclear power indirectly emits about one-seventh as much carbon as the mean of the 19 studies analyzed by Sovocool's literature review (ref. 26), and similarly omitting the probably even smaller carbon footprint of renewables, recovered-heat cogeneration, and efficiency.

[28] Since its recovered heat displaces boiler fuel, cogeneration displaces more carbon emissions per kilowatt-hour than a large gas-fired power plant does.

CV-2 - cont

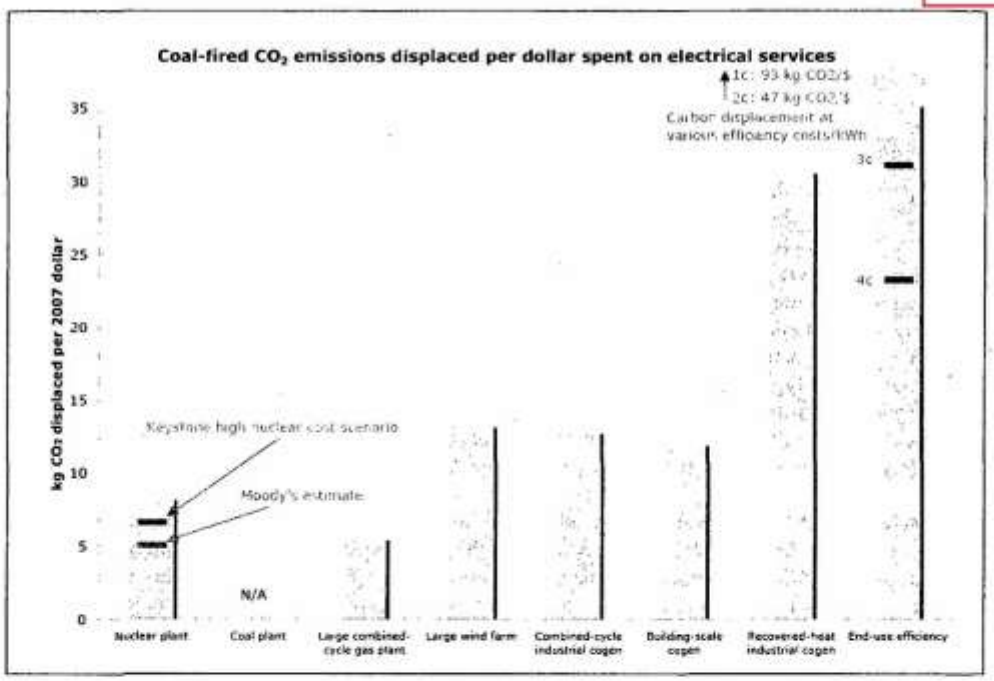

Figure 3: How much net carbon emissions from coal-fired power plants can be displaced by buying a dollar's worth of new electrical services using different technologies. Note that realistic efficiency investments' carbon savings are far above the upper-right corner of the chart.

Nuclear power, being the costliest option, thus delivers less electrical service per dollar than its rivals. So not surprisingly, it's also a climate-protection loser, surpassing in carbon emissions displaced per dollar only centralized, non-cogenerating combined-cycle power plants burning natural gas[29]. Firmed windpower and cogeneration are at least 1.5 times more cost-effective than nuclear at displacing CO_2—or about 3 times using the latest nuclear cost estimates. So is efficiency at even an almost unheard-of seven cents per kWh. Efficiency at normally observed costs, say around one cent per kWh, beats nuclear by about 10–20-fold.

New nuclear power is so costly that shifting a dollar of spending from nuclear to efficiency protects the climate severalfold more than shifting a dollar of spending from coal to nuclear. Indeed, under plausible assumptions, spending a dollar on new nuclear power *instead of* on efficient use of electricity has a worse climate effect than spending that dollar on new coal power!
If we're serious about addressing climate change, we must invest resources wisely to expand and accelerate climate protection. Because nuclear power is costly and slow to build, buying more of it rather than of its cheaper, swifter rivals will instead reduce and retard climate protection.

[29]However, at long-run natural-gas prices lower than assumed here (a levelized 2007-$ cost of $7.72 per million BTU) and at today's high nuclear costs, the combined-cycle plants may save more carbon per dollar than nuclear plants do. This may be true even at the prices assumed here, if one properly counts combined-cycle plants' ability to load-follow, thus complementing and enabling cleaner, cheaper variable renewable resources like windpower.

Questionable Reliability

CV-3

All sources of electricity sometimes fail, differing only in how predictably, why, how often, how much, and for how long. Even the most reliable giant power plants are intermittent: they fail unexpectedly in billion-watt chunks, often for long periods. Of all 132 U.S. nuclear plants built (52% of the 253 originally ordered), 21% were permanently and prematurely closed due to reliability or cost problems, while another 27% have completely failed for a year or more at least once. The surviving U.S. nuclear plants produce ~90% of their full-time full-load potential, but even they are not fully dependable. Even reliably operating nuclear plants must shut down, on average, for 39 days every 17 months for refueling and maintenance, and unexpected failures do occur too. To cope with such intermittence by both nuclear and centralized fossil-fuelled power plants, which typically fail about 8% of the time, utilities must install a roughly 15% "reserve margin" of extra capacity, some of which must be continuously fuelled, spinning ready for instant use. Heavily nuclear-dependent regions are particularly at risk because drought, a serious safety problem, or a terrorist incident could close many plants simultaneously.

Nuclear plants have an additional disadvantage: for safety, they must instantly shut down in a power failure, but for nuclear-physics reasons, they can't then be quickly restarted. During the August 2003 Northeast blackout, nine perfectly operating U.S. nuclear units had to shut down. Twelve days of painfully slow restart later, their average capacity loss had exceeded 50 percent. For the first three days, just when they were most needed, their output was below 3% of normal.

The big transmission lines that highly concentrated nuclear plants require are also vulnerable to lightning, ice storms, rifle bullets, cyberattacks, and other interruptions.[30] The bigger our power plants and power lines get, the more frequent and widespread regional blackouts will become. Because 98–99 percent of power failures start in the grid, it's more reliable to bypass the grid by shifting to efficiently used, diverse, dispersed resources sited at or near the customer.

A portfolio of many smaller units, too, is unlikely to fail all at once: its diversity makes it more reliable even if its individual units are not.[31] The same logic applies to the two renewable electricity sources—windpower and photovoltaics—whose output varies with weather or daytime. Of course the sun doesn't always shine on a given solar panel, nor does the wind always spin a given turbine. Yet if properly firmed, both windpower, whose global potential is 35 times world electricity use[32], and solar energy, as much of which falls on the earth's surface every ~70 minutes as humankind uses each year, can deliver reliable power without significant cost for backup or storage.[33] These variable renewable resources become *collectively* reliable when diversified in type and location and when integrated with three types of resources: steady renewables (geothermal, small hydro, biomass, etc.), existing fuelled plants, and customer demand response.

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[30] A.B. & L.H. Lovins, report to DoD republished as *Brittle Power: Energy Strategy for National Security*, Brick House (Andover MA), 1981, posted with summaries #S83-08 and #S84-23 at www.rmi.org/sitepages/pid114.php; Defense Science Board, *More Fight, Less Fuel*, 13 Feb 2008, www.acq.osd.mil/dsb/reports/2008-02-ESTF.pdf

[31] These arguments are elaborated and documented in ref. 23.

[32] C.L. Archer and M.Z. Jacobson, "Evaluation of global windpower," calculated at 80 m hub height, www.stanford.edu/group/efmh/winds/global_winds.html.

[33] Wiser & Bolinger, ref. 8, p. 27, document 11 recent U.S. utility studies showing that even variable-renewable penetrations up to 31% generally cost <0.5¢/kWh to "firm" to central-plant reliability standards. The two studies that found costs up to 0.8¢ didn't assume the sub-hourly market-clearing that most grid operators now use.

CV-3 - cont

Such integration uses weather forecasting to predict the output of variable renewable resources, just as utilities now forecast demand patterns and hydropower output. In general, keeping power supplies reliable despite large wind and solar fractions will require *less* backup or storage capacity than utilities *have already bought* to manage big thermal stations' intermittence. The myth of renewable energy's unreliability has been debunked both by theory and by practical experience.[34]

Large Subsidies to Offset High Financial Risk

CV-4

The latest U.S. nuclear plant proposed is estimated to cost $12–24 billion (for 2.2–3.0 billion watts), many times industry's claims, and off the chart in Figure 1 above. The utility's owner, a large holding company active in 27 states, has annual revenues of only $15 billion. Even before the current financial crisis, such high, and highly uncertain, capital costs made financing prohibitively expensive for free-market nuclear plants in the half of the U.S. that has restructured its electricity system, and prone to politically challenging rate shock in the rest: a new nuclear kilowatt-hour costing, say, 18 cents "levelized" over decades implies that the utility must collect ~30 cents to fund its first year of operation.

Lacking investors, nuclear promoters have turned back to taxpayers, who already bear most nuclear accident risks, have no meaningful say in licensing, and for decades have subsidized existing nuclear plants by ~1–5¢/kWh. In 2005, desperate for orders, the politically potent nuclear industry got those U.S. subsidies raised to ~5–9¢/kWh for new plants, or ~60–90 percent of their entire projected power cost, including new taxpayer-funded insurance against legal or regulatory delays. Wall Street still demurred. In 2007, the industry won relaxed government rules that made its 100 percent loan guarantees (for 80%-debt financing) even more valuable—worth, one utility's data revealed, about $13 billion for a single new plant, about equal to its entire capital cost. But rising costs had meanwhile made the $4 billion of new 2005 loan guarantees scarcely sufficient for a single reactor, so Congress raised taxpayers' guarantees to $18.5 billion. Congress will soon be asked for another $30+ billion in loan guarantees, or even for a blank check. Meanwhile, the nonpartisan Congressional Budget Office has concluded that defaults are likely.

Wall Street is ever more skeptical that nuclear power is as robustly competitive as claimed. Starting with Warren Buffet, who recently abandoned a nuclear project because "it does not make economic sense," the smart money is heading for the exits. The Nuclear Energy Institute is therefore trying to damp down the rosy expectations it created. It now says U.S. nuclear orders will come not in a tidal wave but in two little ripples—a mere 5–8 units coming online in 2015–16, then more if those are on time and within budget. Even that sounds dubious, as many senior energy-industry figures privately agree. In today's capital market, governments can have at most about as many nuclear plants as they can force taxpayers to buy. Indeed, the big financial houses that lobbied to be the vehicles of those gigantic federal loan guarantees are now largely gone; a new Administration with many other priorities may be less supportive of such largesse; and the

[34] The nuclear industry's claim that because a modern economy needs highly reliable electricity, it also needs "24/7" power *stations* of billion-watt scale is absurd. *No* power source is 100% reliable; that's why utilities must use redundancy and elaborate operating techniques to ensure reliable supply despite unpredictable failures, which are especially damaging when the failed units are large. The same proven techniques apply similarly, but more easily, to large numbers of diverse renewables whose variable elements can be readily forecast. Without exception, more than 200 international and 11 U.S. studies have found this (see ref. 1, pp. 22–27). Wind-rich regions of Germany, Spain, and Denmark have already proven it by meeting 20–39% of all annual electrical needs (and at times over 100% of regional needs) with variable renewables, without encountering instability nor significant integration costs.

CV-4 - cont

"significant" equity investment required to qualify for the loan guarantees seems even less likely to come from the same investors who declined to put their own capital at risk at the height of the capital bubble. The financial crisis has virtually eliminated private investment in big, slow, risky projects, while not materially decreasing investment in the small, fast, granular ones that were already walloping central plants in the global marketplace.

The Micropower Revolution

CV-5

While nuclear power struggles in vain to attract private capital, investors have switched—and the financial crisis has accelerated their shift[35]—to cheaper, faster, less risky alternatives that *The Economist* calls "micropower"—distributed turbines and generators in factories or buildings (usually cogenerating useful heat), and all renewable sources of electricity *except* big hydro dams (those over ten megawatts). These alternatives surpassed nuclear's global capacity in 2002 and its electric output in 2006. Nuclear power now accounts for about 2 percent of worldwide electric capacity additions, *vs.* 28 percent for micropower (2004–07 average) and probably a good deal more in 2007–08.[36]

Despite subsidies generally smaller than nuclear's, and many barriers to fair market entry and competition[37], negawatts (electricity saved by using it more efficiently or timely) and micropower have lately turned in a stunning global market performance. Figure 5 shows how micropower's actual and industry-projected electricity production is running away from nuclear's, not even counting the roughly comparable additional growth in negawatts, nor any fossil-fuelled generators under 1 megawatt.[38]

The nuclear industry nonetheless claims its only serious competitors are big coal and gas plants. But the marketplace has already abandoned that outmoded battleground for two others: central thermal plants *vs.* micropower, and megawatts *vs.* negawatts. For example, the U.S. added more windpower capacity in 2007 than it added coal-fired capacity in the past five years combined. By beating *all* central thermal plants, micropower and negawatts together provide about half the world's new electrical services. Micropower alone now provides a sixth of the world's electricity, and from a sixth to more than half of all electricity in twelve industrial countries, though the U.S. lags with ~6%.

In this broader competitive landscape, high carbon prices or taxes can't save nuclear power from its fate. If nuclear did compete only with coal, then far-above-market carbon prices might save it; but coal isn't the competitor to beat. Higher carbon prices will advantage all other zero-carbon resources—renewables, recovered-heat cogeneration, and negawatts—as much as nuclear, and will partly advantage fossil-fueled but low-carbon cogeneration as well. The nuclear industry doesn't understand this because it doesn't consider these competitors important or legitimate.

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[35] New Energy Finance found only a 4% drop in 3Q08 renewables financing, and recent data suggest a robust, even growing, solar sector despite grave financial distress and accelerating decline in the central-station business.
[36] A thorough database of industry and official data sources is posted and updated at www.rmi.org/sitepages/pid256.php#E05-04. Similar renewable energy data are at www.ren21.net.
[37] A policy agenda for removing many of these obstacles is in the last section of *Small Is Profitable* (ref. 31).
[38] Data for decentralized gas turbines and diesel generators exclude generators of less than 1 megawatt capacity.

CV-5 - cont

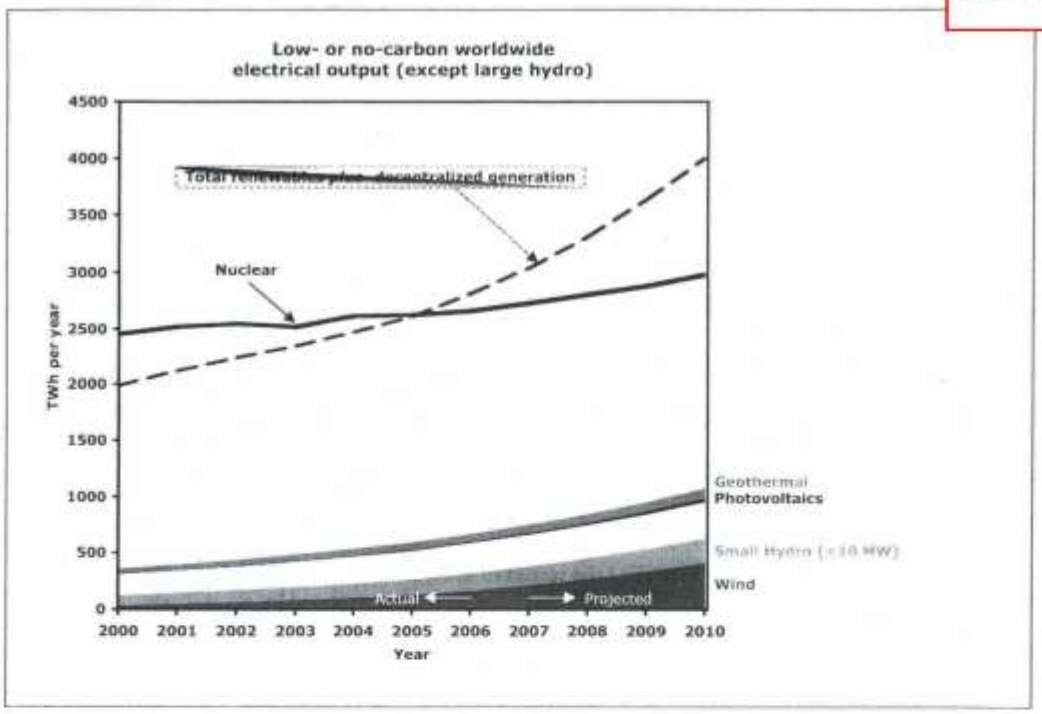

Figure 5. Global electricity produced, or projected by industry to be produced, by decentralized low- or no-carbon resources—cogeneration ("CHP"), mostly gas-fired, and "distributed" renewables (those other than big hydroelectric dams). Micropower got over $100 billion of new private capital in 2007—roughly an eighth of total global energy investment.

Small Is Fast, Low-Risk, and High in Total Potential

Small, quickly built units are faster to deploy for a given total effect than a few big, slowly built units. Widely accessible choices that sell like cellphones and PCs can add up to more, sooner, than ponderous plants that get built like cathedrals. And small units are much easier to match to the many small pieces of electrical demand. Even a multi-megawatt wind turbine can be built so quickly that the U.S. will probably have a hundred billion watts of them (matching its nuclear capacity) installed before it gets its first one billion watts of new nuclear capacity, if any. As noted earlier, this speed reduces financial risk and thus makes decentralized, short-lead-time projects more financeable, especially in hard times.

Despite their small individual size, and partly because of it, micropower generators and electrical savings are already adding up to huge totals. Indeed, over decades, negawatts and micropower can shoulder the entire burden of powering the economy. The Electric Power Research Institute (EPRI), the utilities' think-tank, has calculated the U.S. negawatt potential (cheaper than just running an existing nuclear plant and delivering its output) to be two to three times nuclear power's 19 percent share of the U.S. electricity market; RMI's more detailed analysis found even

CV-5 - cont

more. Cogeneration in factories can make as much U.S. electricity as nuclear does[39], plus more in buildings, which use 69 percent of U.S. electricity. Windpower at acceptable U.S. sites can cost-effectively produce several times the nation's total electricity use[40], and other renewables can make even more without significant land-use, variability, or other constraints. Thus just cogeneration, windpower, and efficient use—all profitable today—can displace nuclear's current U.S. output ~6–14+ times over. This ratio becomes arbitrarily large when photovoltaics are included.

Nuclear power, with its decade-long project cycles, difficult siting, and (above all) unattractiveness to private capital, simply cannot compete. In 2006, for example, it added less global capacity than photovoltaics did, or a tenth as much as windpower added, or 30–41 times less than micropower added. Renewables other than big hydro dams won $56 billion of private risk capital; nuclear, as usual, got zero. China's distributed renewable capacity reached seven times its nuclear capacity and grew seven times faster. And in 2007, China, Spain, and the U.S. each added more windpower capacity than the world added nuclear capacity. The nuclear industry does trumpet its growth, yet micropower is already bigger and is growing 18 times faster.[41]

Security Risks

President Bush has rightly identified the spread of nuclear weapons as the gravest threat to America. Yet that proliferation is largely driven and greatly facilitated by nuclear power's flow of materials, equipment, skills, and knowledge, all wrapped in an innocent-looking civilian disguise. (Reprocessing nuclear fuel, which President Bush tried to revive, greatly complicates waste management, increases cost, and boosts proliferation.) Yet acknowledging nuclear power's market failure and moving on to secure, least-cost energy options for global development would unmask and penalize proliferators by making bomb ingredients harder to get, more conspicuous to try to get, and politically costlier to be caught trying to get. This would make proliferation far more difficult, and easier to detect in time by focusing scarce intelligence resources on needles, not haystacks.[42] The new Administration has an extraordinary opportunity to turn the world away from its rush toward a "nuclear-armed crowd" by setting a good example in domestic energy policy and by helping all developing countries with the nonviolent, cheaper, faster energy alternatives that are already winning in the market.[43]

Nuclear power has other unique challenges too, such as long-lived radioactive wastes, potential for catastrophic accidents, and vulnerability to terrorist attacks. But in a market economy, the technology couldn't proceed even if it lacked those issues, so we needn't consider them here.

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[39] O. Bailey and E. Worrell, "Clean Energy Technologies: A Preliminary Inventory of the Potential for Electricity Generation," LBNL-57451, Apr 2005, http://repositories.cdlib.org/lbnl/LBNL-57451/.

[40] U.S. Department of Energy, *20% Wind Energy by 2030*, www.20percentwind.org/20p.aspx?page=Report, Ch. 2, p. 2.

[41] All documented in ref. 1.

[42] A.B. and L.H. Lovins and L. Ross, "Nuclear power and nuclear bombs," *Foreign Affairs* **58**(5):1137–1177 (Summer 1980), www.foreignaffairs.org/19800601faessay8147/amory-b-lovins-l-hunter-lovins-leonard-ross/nuclear-power-and-nuclear-bombs.html or www.rmi.org/images/other/Energy/E05-08_NukePwrEcon.pdf, and *Foreign Affairs* **59**:172 (1980). Had that paper's market-driven strategy been adopted 28 years ago, the world would not today be worrying about Iran and North Korea.

[43] This would satisfy the intent of the "nuclear bargain" in Article IV of the Non-Proliferation Treaty. See also C.A. Ford (Hudson Institute), "Nuclear Technology Rights and Benefits: Risk, Cost, and Beneficial Use under the NPT's Article IV," Conference on "Comparing Electricity Costs," NPEC/Carnegie Corporation of New York, 1 Dec 2008.

Conclusion

CV-6

So why do otherwise well-informed people still consider nuclear power a key element of a sound climate strategy? Not because that belief can withstand analytic scrutiny. Rather, it seems, because of a superficially attractive story, an immensely powerful and effective lobby, a new generation who forgot or never knew why nuclear power failed previously (almost nothing has changed), sympathetic leaders of nearly all main governments simultaneously, deeply rooted habits and rules that favor giant power plants over distributed solutions and enlarged supply over efficient use, the market winners' absence from many official databases (which often count only big plants owned by utilities), and lazy reporting by an unduly credulous press.

Isn't it time we forgot about nuclear power? Informed capitalists have. Politicians and pundits should too. After more than half a century of devoted effort and a half-trillion dollars of public subsidies, nuclear power still can't make its way in the market. If we accept that unequivocal verdict, we can at last get on with the best buys first: proven and ample ways to save more carbon per dollar, faster, more surely, more securely, and with wider consensus. As often before, the biggest key to a sound climate and security strategy is to take market economics seriously.

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Mr. Lovins, a physicist, is cofounder, Chairman, and Chief Scientist of Rocky Mountain Institute (www.rmi.org), where Mr. Sheikh, an engineer, was a Research Analyst (now a graduate student in the Energy and Resources Group at the University of California at Berkeley), and Dr. Markevich, a physicist and management consultant, was a Vice President until mid-2008. Mr. Lovins, a student of this subject for over four decades, has consulted for scores of electric utilities, many of them nuclear operators. Published in 29 books and hundreds of papers, his wide-ranging innovations in energy, security, environment, and development have been recognized by the Blue Planet, Volvo, Onassis, Nissan, Shingo, and Mitchell Prizes, a MacArthur Fellowship, the Benjamin Franklin and Happold Medals, ten honorary doctorates, an Hon. AIA and FRSA, Foreign Membership of the Royal Swedish Academy of Engineering Sciences, and the Heinz, Lindbergh, Right Livelihood, and World Technology Awards. He advises governments and major firms worldwide on advanced energy and resource efficiency and its integration with energy supply, and recently led the technical redesign of more than $30 billion worth of facilities in 29 sectors to achieve very large energy savings at typically lower capital cost.

The authors are grateful to RMI Senior Fellow Dr. Joel Swisher PE for insightful comments and to many cited and uncited sources for research help. A technical paper (www.rmi.org/sitepages/pid257.php#E08-01) preprinted for *Ambio* (Royal Swedish Academy of Sciences) supports this summary with full details and documentation (ref. 1), and will be updated for press in early 2009. RMI's annual compilation of global micropower data from industrial and governmental sources is periodically updated at www.rmi.org/sitepages/pid256.php#E05-04.

April 8, 2010

Andrew Stuyvenberg, Project Manager
U.S. Nuclear Regulatory Commission
Mail Stop: O-11F1
Washington, DC 20555-0001

1/27/2010
75 FR 4427
(3)

RECEIVED
2010 OCT 27 PM 4:0
RULES AND DIRECTIVES BRANCH USNRC

Dear Mr. Stuyvenberg,

I would like to thank the Nuclear Regulatory Commission (NRC) for conducting the environmental scoping meetings in San Luis Obispo in March 2010, and giving the local community a chance to provide input on what issues should be considered in the Environmental Impact Statement (EIS).

CX-1

I am writing to encourage the NRC to address Diablo Canyon's economic impacts on the local economy and educational facilities in the area. I own C & S Industrial Coatings which is a Woman Owned Small Business and I supply paint to Diablo Canyon. Diablo Canyon is my #1 customer. I would have to take a very serious look at closing my business if Diablo Canyon were no longer here to do business with. Because of Diablo Canyon Power Plant, Pacific Gas and Electric Company is the largest private employer in San Luis Obispo County with more than 1,600 jobs. Additionally, the company is the largest property tax payer in the county paying more than $24 million for the fiscal year 2009/2010 with a significant portion going to local educational institutions. I truly believe that the environmental document must evaluate all of the relevant issues in a fair and balanced manner.

I look forward to reading the draft environmental document later this year. Thank you in advance for your consideration.

Sincerely,

Ginger Schenk - Owner
C & S Industrial Coatings
983 S. 4th St Unit A
Grover Beach, CA 93433

SUNSI Review Complete
Cc: Kim Greene (NRC)
Template = ADM-013

E-RIDS = ADM-03
Add = A Stuyvenberg (Also)
N. Ferrer (NBF)

DiabloCanyonCEm Resource

From: Pete Schneider [pete.schneider@iesupply.com]
Sent: Sunday, April 11, 2010 4:53 PM
To: Stuyvenberg, Andrew
Subject: Support Letter for Diablo Canyon Power Plant
Attachments: Diablo Support Letter.docx

BU-1

Mr. Andrew Stuyvenberg,
Please see the attached letter expressing Independent Electric Supply's show of support for the Pacific Gas & Electric, Diablo Canyon Nuclear Power Plant. Thank you for your time and consideration.

Peter Schneider
Manager
IES Paso Robles / San Luis Obispo
Ph: (805)227-4592 / 781-0169
Fax: (805)227-4597 / 781-0179
Cell: (805)674-2098
Email: pete.schneider@iesupply.com

Independent Electric Supply,

Paso Robles (805)227-4592 Fax (805)227-4597

San Luis Obispo (805)781-0169 Fax (805)781-0179

April 8, 2010

Andrew Stuyvenberg, Project Manager

U.S. Nuclear Regulatory Commission

Mail Stop: O-11F1

Washington, DC 20555-0001

Dear Mr. Stuyvenberg,

I would like to thank the Nuclear Regulatory Commission (NRC) for conducting the environmental scoping meetings in San Luis Obispo in March, 2010, and giving the local community a chance to provide input on what issues should be considered in the Environmental Impact Statement (EIS).

I am writing to encourage the NRC to address Diablo Canyon's economic impacts on the local economy and educational facilities in the area. Because of Diablo Canyon Power Plant, Pacific Gas and Electric Company is the largest private employer in San Luis Obispo County with more than 1,600 jobs. Additionally, the company is the largest property tax payer in the county paying more than $24 million for the fiscal year 2009/2010 with a significant portion going to local educational institutions. I truly believe that the environmental document must evaluate all of the relevant issues in a fair and balanced manner. BU-2

I look forward to reading the draft environmental document later this year. Thank you in advance for your consideration.

Sincerely,

Peter Schneider

Branch Manager, Central Coast

DiabloCanyonCEm Resource

From:	jayklaus [jayklaus@tcsn.net]
Sent:	Thursday, February 25, 2010 3:35 PM
To:	DiabloCanyonEIS Resource
Cc:	Stuyvenberg, Andrew
Subject:	75 FR 4427, amended comments
Attachments:	NIRS principles for on-site storage of HLNW, 10-07-09.doc

Environmental Scoping Comments

To: License Renewal Diablo Canyon Nuclear Plant in San Luis Obispo, CA County, Scoping Meeting, March 3, 2010 in San Luis Obispo, CA.

Subject: 75 FR 4427

Date: February 25, 2010

Submitted by Klaus Schumann, Paso Robles, CA 93446; Ph: (805) 238-4454.
I am unable to personally attend the March 9th Scoping meeting.

In light of the seismic issues at Diablo and the most recent developments at the Vermont Yankee plant, I hereby amend my previous comments and request that the following replace my submission dated 2-20-2010.

I. Stay of process request

BJ-1

Before considering the following scoping comments, I request that the NRC stay the license renewal process and work with the State of California to review state-required seismic studies. The seismic issues set Diablo apart from any other nuclear plant in the US. Common sense requires that the State of California seismic studies be completed before the re-licensing process moves forward.

II. Introduction:

My name is Klaus Schumann. I reside in San Luis Obispo County [SLO], roughly 23 miles from the Diablo Canyon Nuclear Plant (Diablo). I have been interested in nuclear waste issues at least since 1995. In April, 1996, the County established a public committee, the San Luis Obispo Nuclear Waste Management Committee, of which I was a founding member. This committee was chaired by County Supervisors Evelyn Delaney and Shirley Bianchi and met regularly until early 2002. It heard a wide variety of experts, including speakers from the US Department of Energy, the California Department of Transportation, California Highway Patrol, the County Office of Emergency Services and the Physics Department of Cal Poly.

In February of 1998, I drafted the chapter on " on-site storage options" for the Committee's final report to the County. I recommended an Independent Spent Fuel Storage Installation (ISFSI) using dry casks for the Diablo Canyon Plant as a means of temporary storage for the accumulating spent fuel wastes.

III. Background:

BJ-2

1. Highly Radioactive Nuclear Waste ("spent fuel") is accumulating at Diablo as a regular by-product of electricity production. Diablo was first designed, built and licensed for about 570 waste units, called spent fuel assemblies (SFA's). These were to be stored in the plant's two water-filled pools for no longer than 5 years. Today, Diablo stores more than six times the originally licensed amount on-site. Diablo will continue to

accumulate spent fuel at its plant site to an estimated 6,500 SFA's by the time the present licenses expire (2025). If Diablo receives a license renewal for another 20 years, it will produce additional SFA's also to be stored indefinitely at the plant site. BJ-2 cont'd

2. Since the inception of nuclear plants, the US government has tried to develop long range means of dealing with the wastes, such as a central permanent repository in Yucca Mountain, NV, or "re-processing" [cancelled during the Ford and Carter administrations]. Thus far, however, these efforts have been without success and there are still no concrete solution in sight. In fact, President Obama has just recently cancelled the funding for Yucca Mountain. He is now calling for a "Blue Ribbon Commission" on nuclear waste, something in discussion since at least 1995. Clearly, much larger quantities of "spent fuel" will be stored at Diablo for a much longer time than predicted and planned for by the NRC and PG&E.

3. Today, Diablo's pools contain far more radioactivity than the reactors, yet are located outside the containment domes. In late 2000, a Nuclear Regulatory Commission (NRC) study came to the conclusion that fires in "high density" pools are possible with consequences "comparable to reactor accidents." The possibility of such fires at Diablo is a direct consequence of PG&E changing Diablo's original "low density pool" design to "high density" in 1986, which allows the storage of a much greater number of SFA's by packing them closer together ("re-racking").
In 2005, a report by the National Academy of Sciences (NAS), mandated by the US congress and entitled "Safety and Security of Commercial Spent Nuclear Fuel" stated:

"that successful terrorists attacks on spent fuel pools, though difficult, are possible".
and
"If an attack leads to a propagating zirconium cladding fire [spent fuel pool fire], it could result in the release of large amounts of radioactive materials" [Summary for Congress, Page 2, (2) and (3)].

The NAS report recommends SFAs reconfiguration in the pools and the addition of independent sprinkler systems, as well as further studies on spent fuel vulnerabilities.

4. Before re-racking in 1986, fires in Diablo's pools were virtually impossible. That is probably the reason that its pools were constructed outside of the containment domes.
Now, in worst case scenarios, fires in either of Diablo's pools could lead to widespread radioactive contamination. This is due to the volatility of some of the more than 200 radioisotopes contained in high level radioactive waste ["spent fuel"], such as Cobalt 60
and Strontium 90. This is especially true of Cesium 137, because it has the consistency of talcum powder. Unfortunately, Cesium 137 is the most abundant isotope in spent fuel [21% in 10 year old fuel]. Most of the off-site contamination in the 1986 Chernobyl accident was due to Cesium 137, dispersed by a slow burning fire. There it contaminated an area roughly four times the size of SLO County. Each of Diablo's pools contains far more radioactivity than the reactors and about 20 times more Cesium 137 than was dispersed at Chernobyl. Cesium 137 contamination requires evacuation of the population for about 300 years. Clean-up would run in the hundreds of billions of dollars. Moreover, in earthquake country, there is the additional concern that beyond-design-basis seismic events could cause similar results.

IV. Developments since 2005:

Moreover, since the 2005 ISFSI licensing, the following significant developments have taken place:
1. An ISFSI has become available at the Diablo plant site.
2. The NAS has issued recommendations and findings in the above mentioned report. BJ-3
3. Another active seismic fault ("Shoreline") was recently discovered near the plant.

BJ-3 cont'd

4. The time for the next "big one" earthquake from this segment of the San Andreas Fault system is getting closer every day. The last one at Fort Tejon occurred in 1857. The average time span between "big one" quakes is supposedly 175 years.
5. The State of California is presently conducting seismic studies for the Diablo area.
6. The national repository at Yucca Mtn. will become available much later than previously assumed, possibly not at all. PG&E estimated the year 2017 during the 2005 ISFSI license procedure. As a consequence, the waste will stay at Diablo far longer than NRC, PG&E and the citizens of SLO County believed. BJ-4
7. President Obama has established a "Blue Ribbon" commission on Nuclear Waste Storage solutions.
8. In June, 2006, the Ninth Circuit of the United States Court of Appeals agreed with the San Luis Obispo Mothers for Peace that the environmental effects of a terrorist attack on the dry cask storage facility at Diablo Canyon must be taken into account. The National Environmental Protection Act requires an EIS. This decision was upheld by the US Supreme Court. BJ-5
9. A second pending Mothers for Peace (MFP) law suit in front of that same Court.
It contends
a. that the weak and undocumented 8 page Environmental Assessment the NRC produced is no substitute for the required EIS;
b. that the NRC has failed to provide documentation to support the NRC's conclusion that even "a successful terrorist attack" on the dry casks would have "no significant impact" on the environment;
c. that the NRC hides its reasoning behind **a** veil of secrecy, even though MFP is asking that any protected information be made available only to its attorney, who has the necessary security clearances, and to not members of MFP or to the public.
d. that the NRC has refused to consider credible attack scenarios that could result in a fire and a significant release of radioactive materials from the casks.
10. Radioactive tritium, a known carcinogen, has been discovered at dangerous levels in groundwater at the Vermont Yankee nuclear plant. Underground leaking pipes are now threatening to contaminate the Connecticut River, a source for drinking water. Just yesterday (2/24/10), the Vermont state senate decided on a 26:4 vote to end operation of the reactor in 2012. [THE TRIBUNE, 2/2/10 pg. A4, and 2/25/10 Pg. A5]
Tritium has now tainted at least 27 of the nation's aging reactors.

V. Personal Comments and Conclusion:

BJ-6

I offer the attached "Principles for Safeguarding Nuclear Waste at Reactors", (NIRS 10-07-09) **as part of my comments [by e-mail attachment and as a copy at the end below].** These principles were developed by the Nuclear Information and Resource Service (www.nirs.org) and are supported by more than 150 US organizations (as of 10-07-09), including the Sierra Club, Natural Resources Defense Council, Public Citizen, Physicians for Social Responsibility, Union of Concerned Scientists and many concerned local organizations such as Mothers for Peace and Alliance for Nuclear Responsibility.

In addition, I respectfully submit the following comments:
Given the extraordinary dangers inherent in spent fuel and the possible catastrophic consequences of mishaps during spent fuel storage at Diablo, the NRC must include all spent fuel concerns in the EIS for Diablo re-licensing. The ongoing inseparable relationship between the pools and the ISFSI must be included and should not be dismissed or avoided by the fact that the ISFSI is separately licensed.
The 9/11 terrorist attack brought the issue of nuclear waste storage at plant sites into renewed focus. BJ-7
Regrettably, all studies on spent fuel pool vulnerabilities thus far have been based on present day threats and assumptions that do not take future developments into account. This is despite of the fact that spent fuel remains dangerous to human health for at least 1 million years (EPA estimate). For example, future airplanes could be much heavier and loaded with much more fuel, terrorists could get their hands on much more destructive weapons.

BJ-8

Moreover, the newly discovered "Shoreline" fault just 1,800 feet from the plant requires further seismic studies. The seismic risk at Diablo could be revised beyond the design basis (7.5 Richter scale). As a reminder: when Diablo was constructed the oversight of the Hosgri fault near the plant required $ 2 Billion retrofitting at rate payer's expense. Let's not repeat that costly mistake!

In conclusion, after all of the above, I request
1. that Diablo's re-licensing be put on hold until the California seismic studies are completed, the Presidential "Blue Ribbon" commission has done its work and the pending Mothers for Peace law suit has been decided.
2. that the attached " Principles of Safeguarding Nuclear Waste" be at once implemented as a condition to Diablo's re-licensing.
3. that the NRC require, at a minimum, implementation of the NAS recommendations.
4. that the NRC reconsider the "environmentally superior alternative" as outlined in the SLO County EIR for the ISFSI, i.e., accelerated transfer as a means to return the pools to low density as soon as possible.
5. that a top to bottom review of aging parts in the pools be undertaken with special attention to embrittlement of aging pool components. The recent tritium leaks at 27 older plants and the shutdown of Vermont Yankee in 2012 could point to a faster rate of deterioration of components than previously assumed due to subjection to higher rates of radiation and heat for prolonged periods of time.

Finally, I believe that the citizen of SLO County deserve the best and most safe designs and methods in spent fuel storage at Diablo. Until now, this is not what they have gotten.
If SLO County is to face another 20 years of spent fuel production with no alternative of storage other than on-site, it is imperative that the NRC attaches conditions to the re-licensing which returns the pools to the original low density design. The newly constructed ISFSI allows PG&E to do this in a cost effective manner.
The following " principles of safeguarding nuclear waste at reactors" [copied in below and in the attachment], should be made part of the conditions of re-licensing.

NIRS Principles
for
Safeguarding Nuclear Waste at Reactors

NIRS Contact: Mary Olson
Nuclear Information and Resource Service
Southeast Office
PO Box 7586 Asheville, North Carolina 28802
828-252-8409 cell 828-242-5621
maryo@nirs.org www.nirs.org

Submitted to the US Nuclear Regulatory Commission on 10-20-09 at the Pismo Beach, CA public meeting on Generic EIS for License Renewal of Nuclear Plants and at the NRC EIS Scoping process meeting on 2-9-10 at the Embassy Suites in SLO.
By
Klaus Schumann, 26 Hillcrest Drive, Paso Robles, CA 93446; (805) 238-4454.

[NOTE: These principles were developed by the Nuclear Information and Resource Service (NIRS) and are supported by more than 150 political, environmental and citizen organizations throughout the US. (Count on 10-07-09).]

The following principles are based on the urgent need to protect the public from the threats posed by the current vulnerable storage of commercial irradiated fuel. The United States does not currently have a national policy for

the permanent storage of high-level nuclear waste. The Obama administration has determined that the Yucca Mountain site, which has been mired in bad science and mismanagement, is not an option for geologic storage of nuclear waste. Unfortunately, reprocessing proponents have used this opportunity to promote reprocessing as the solution for managing our nuclear waste. Contrary to their claims, however, reprocessing is extremely expensive, highly polluting, and a proliferation threat, and will actually complicate the management of irradiated fuel. Nor will reprocessing obviate the need for, or "save space" in, a geologic repository.

The United States has a unique opportunity to re-evaluate our nuclear waste management plan. We can make wise decisions about safeguarding radioactive waste or go down the risky, costly, and proliferation prone path towards reprocessing.

The undersigned organizations' support for improving the protection of radioactive waste stored at reactor sites is a matter of security and is in no way an indication that we support nuclear power and the generation of more nuclear waste.

BJ-9

➢ **Require a low-density, open-frame layout for fuel pools:** Fuel pools were originally designed for temporary storage of a limited number of irradiated fuel assemblies in a low density, open frame configuration. As the amount of waste generated has increased beyond the designed capacity, the pools have been reorganized so that the concentration of fuel in the pools is nearly the same as that in operating reactor cores. If water is lost from a densely packed pool as the result of an attack or an accident, cooling by ambient air would likely be insufficient to prevent a fire, resulting in the release of large quantities of radioactivity to the environment. A low density, open-frame arrangement within fuel pools could allow enough air circulation to keep the fuel from catching fire. In order to achieve and maintain this arrangement within the pools, irradiated fuel must be transferred from the pools to dry storage within five years of being discharged from the reactor.

➢ **Establish hardened on-site storage (HOSS):** Irradiated fuel must be stored as safely as possible as close to the site of generation as possible. Waste moved from fuel pools must be safeguarded in hardened, on-site storage (HOSS) facilities. Transporting waste to interim away-from-reactor storage should not be done unless the reactor site is unsuitable for a HOSS facility and the move increases the safety and security of the waste. HOSS facilities must not be regarded as a permanent waste solution, and thus should not be constructed deep underground. The waste must be retrievable, and real-time radiation and heat monitoring at the HOSS facility must be implemented for early detection of radiation releases and overheating. The overall objective of HOSS should be that the amount of releases projected in even severe attacks should be low enough that the storage system would be unattractive as a terrorist target. Design criteria that would correspond to the overall objective must include:

- Resistance to severe attacks, such as a direct hit by high-explosive or deeply penetrating weapons and munitions or a direct hit by a large aircraft loaded with fuel or a small aircraft loaded with fuel and/or explosives, without major releases.
- Placement of individual canisters that makes detection difficult from outside the site boundary.

➢ **Protect fuel pools:** Irradiated fuel must be kept in pools for several years before it can be stored in a dry facility. The pools must be protected to withstand an attack by air, land, or water from a force at least equal in size and coordination to the 9/11 attacks. The security improvements must be approved by a panel of experts independent of the nuclear industry and the Nuclear Regulatory Commission.

➢ **Require periodic review of HOSS facilities and fuel pools:** An annual report consisting of the review of each HOSS facility and fuel pool should be prepared with meaningful participation from public stakeholders, regulators, and utility managers at each site. The report must be made publicly available and may include recommendations for actions to be taken.

➢ **Dedicate funding to local and state governments to independently monitor the sites:** Funding for monitoring the HOSS facilities at each site must be provided to affected local and state governments. The affected public must have the right to fully participate.

➢ **Prohibit reprocessing:** The reprocessing of irradiated fuel has not solved the nuclear waste problem in any country, and actually exacerbates it by creating numerous additional waste streams that must be managed. In addition to being expensive and polluting, reprocessing also increases nuclear weapons proliferation threats.

In addition, PG&E employees donate thousands of dollars and many hours of time to our local schools. We consider this a valuable resource which contributes to the education of our students and to the San Luis Coastal Unified School District community. Thank you.

MR. CAMERON: Thank you very much. And this is Barbara Scott.

MS. SCOTT: Thank you. My name is Barbara Scott, and I bought a newspaper, in case you hadn't noticed that a plane had gone into an IRS building. And I thought about the safety of Diablo, immediately. The fact that it could happen--this is a disgruntled person. How many disgruntled employees, how many "crazies," in psychological terms, who fly planes? We have no restriction on flying over Diablo as far as I know, and I want to point that out. AJ-1

And as far as Diablo being part of the community, of course it is, and the idea that we could have an alternative windmill, or geothermal, or solar, aspect to this, and really reduce the possibility of having harmful, spent fuel rods sitting in our back yard. Thank you. AJ-2

MR. CAMERON: Thank you, Barbara. We're going to go to Jim Bennett next, and then to June,

Excel Cleaning, Inc.

6180 WHITE OAK LANE
SAN LUIS OBISPO, CALIF. 93401
(805) 543-6513

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RULES AND DIRECTIVES BRANCH USNRC

April 10, 2010

Andrew Stuyvenberg, Project Manager
U.S. Nuclear Regulatory Commission
Mail Stop: 0-11F1
Washington, DC 20555-0001

Dear Mr. Stuyvenberg,

Our company very much appreciated the environmental scoping meetings held here in San Luis Obispo, CA. last month. We have lived and run a well established business here in San Luis Obispo for 40 years, and are very interested in what is going on with the Diablo Canyon Power Plant. We liked the meetings, and were glad to be included to give our input on issues that should be considered in the Environmental Impact Statement.

Our main issue would be for the NRC to address the financial impact the Diablo Power Plant has on our economy. The plant employs almost 2,000.00 people, and pays millions of dollars in taxes. Just these two issues have a direct impact on each and everyone of our families. The money that goes into our educational facilities is huge. CL-1

These issues, along with many more must be evaluated in a fair manner. We will be interested in reading the draft environmental document later this year. Thank you for your consideration.

Sincerely,

Kathy Silverman

Kathy Silverman, President
Excel Cleaning, Inc.
6180 White Oak Lane
San Luis Obispo, CA. 93401

SUNSI Review Complete
Template = ADM-013

E-RIDS = ADM-03
Add = A. Stuyvenberg (ALS3)
N. Ferrer (nbf)

1 death, and the tide pools along the Diablo Canyon
2 coastline, once again, is a stark contrast.
3 The tide pools along the Diablo Canyon
4 coastline are absolutely pristine, with a tremendous
5 amount of life and diversity. Now where the land
6 meets the sea is the intertidal zone. But also the
7 land, the land stewardship program that Diablo, that
8 PG&E sponsors, is also remarkable. I think Sally
9 Krenn said it eloquently, when she talked about Bob
10 Blanchard and his managed grazing on the north
11 property.
12 Once again, it's just remarkable, the
13 stewardship that PG&E has practiced on the Diablo
14 Canyon lands. And I just want to say thank you very
15 much for your time, and have a great night.
16 MR. CAMERON: Thank you very much. And
17 this is Charlie Smith.
18 MR. SMITH: I'm Charlie Smith from
19 Templeton. I don't represent anybody, just myself.
20 Last month, I was able to speak to two local students AV-1
21 who went to the Copenhagen conference, and I asked
22 them, was nuclear power brought up as part of the
23 solution for climate change. They were very
24 surprised, because many of the leaders there in
25 Copenhagen mentioned that nuclear power had to be part

of the solution.

This was something they didn't expect, and, to me, that was really good news. I know, in listening to some of the speakers here, a question came up. I know everybody's talking about switching to solar power, solar panels. My question is, if we have a 7.5 earthquake, what's going to survive? The Diablo Canyon or a bunch of solar panels?

I don't know if that issue has been addressed, or not, the durability of solar panels to earthquakes. Even the windmills, I'm sure, can be very vulnerable in an earthquake.

The issue--again, if you want to push for solar power, I feel that within ten years, a lot of us are going to be driving plug-in hybrid cars. If you want to charge your car up overnight, you're not going to do it with solar panels.

MR. CAMERON: Okay. Thank you, Charlie. The next three speakers. Dave Christy. Judy Evered, and Joe Boysen.

MR. CHRISTY: Hi. I'm Dave Christy from San Luis Obispo. I got interested in this issue, when I saw, in a recent newspaper article, the proposal that the relicensing effort be postponed until the completion of the 3-D seismic studies that are

AV-1 - cont

AV-2

City of Morro Bay

Morro Bay, CA 93442
(805) 772-6200

February 23, 2010

Gregory B. Jaczko, Chairman
c/o Annette L. Vietti-Cook, Secretary of the Commission
U.S. Nuclear Regulatory Commission
Mail Stop O-16G4
Washington, DC 20555-0001

RE: Relicensing application for Diablo Canyon Nuclear Power Plant

Dear Chairman Jaczko:

As individual council members, we believe that the urgent state and national economic crisis impacting our local constituents warrants action because of the immediate fiscal implications of the license renewal process for the Diablo Canyon Nuclear Power Plant. Currently, the full council chose to postpone action on relicensing pending further information. A year ago, the City Council of Morro Bay sent a letter supporting state legislation requiring PG&E to do expedited, advanced seismic studies for Diablo Canyon Nuclear Power Plant. However, As the elected representatives of a California community within the fallout zone of the Diablo Canyon Nuclear Power Plant, we would like to request that the NRC place a "stay" on the application for relicensing these reactors that was filed by Pacific Gas & Electric in November, 2009, with the exception of seismic studies that should be expedited. CO-1

We have a significant interest in seeing that the seismic studies mandated by our elected state assemblyman, Dr. Sam Blakeslee, and facilitated through the requirements of the California Energy Commission and the decision of the California Public Utilities Commission, be completed before any further taxpayer or ratepayer monies are invested in the relicensing process. At this time of serious fiscal crisis—in our city as well as at the state and national level—there are no extra funds available to spend on processes that may be redundant or counterproductive. Seeking the answers to unknown seismic questions may be the most cost-effective way to safeguard the economics and reliability of our power supply.

On November 22, 2008, PG&E announced that an earthquake fault had been discovered 1800 feet offshore of the Diablo Canyon Nuclear Plant. Until that date, the Hosgri Fault—capable of a 7.5 magnitude earthquake and two miles offshore of Diablo—was the only seismic safety concern. The California Energy Commission has recommended that: "PG&E should use three-dimensional geophysical seismic reflection mapping and other advanced techniques to explore fault zones near Diablo Canyon. PG&E should report on their progress and their most recent seismic vulnerability

FINANCE	ADMINISTRATION	FIRE DEPT.	PUBLIC SERVICES
595 Harbor Street	595 Harbor Street	715 Harbor Street	955 Shasta Avenue
HARBOR DEPT.	CITY ATTORNEY	POLICE DEPT.	RECREATION & PARKS
1275 Embarcadero Road	955 Shasta Avenue	850 Morro Bay Boulevard	1001 Kennedy Way

CO-1 - cont

assessment for Diablo Canyon in the 2009 IEPR." In addition, the California Public Utilities Commission conditioned funding of the PG&E license renewal feasibility study with the requirement that the utility bring he results back before the CPUC for analysis before the CPUC will decide if it is cost effective for the utility to proceed. The Utility has yet to fulfill these requirements, and yet the NRC has accepted their application. We would like to see the NRC work with our state legislature and regulators—combining their seismic expertise and resources—to expedite these thorough and up-to-date seismic studies before investing time and money in the subsequent relicensing procedures.

As a community whose principal economic base is derived from tourism, we are concerned that Morro Bay might suffer the same consequences as were experienced in Niigata, Japan, as a result of the July 16, 2007 earthquake, which shut down the neighboring Kashiwazaki-Kariwa nuclear plant. As the Associated Press reported on August 4, 2007,

> "Hotels and inns in Kashiwazaki, the Niigata Prefecture city hardest hit by a magnitude-6.8 earthquake on July 16, have suffered roughly 30,000 cancellations for room reservations, city officials said Friday. According to the tourism office, sales at beach houses equipped with lodging facilities in the city are about 10 percent of those in a normal year. Even though there was no damage to the facilities from the quake, they suffered massive cancellations, with roughly 80 percent of the tourists citing concerns over a radiation leak."

In addition, the Japanese Atomic Energy Commission, in their presentation delivered at the GLOBAL conference in September 2007, reported:

> "As the release of radioactivity to the sea attracted much attention from the mass media, many tourists cancelled their planned summer visit to the Chuetsu coast and the tourism industry on the coast was damaged severely as the summer is the high season for the industry."

The seismic unknowns at Diablo Canyon could equal or surpass today's "knowns." Further research is the only responsible action. California has waited over thirty years for an offsite solution to safe storage of high-level radioactive waste, and the only proffered solution is now scuttled. Waiting until our "radioactive levies" break places California's economic and human future at risk.

We are encouraged by the support shown for these expedited studies by our California regulators and state legislature. In the interest of openness and transparency, we invite the NRC to work in an efficient manner with California in order to move this process forward.

Respectfully Submitted,

Noah Smukler
Council Member

Betty Winholtz
Council Member

cc: Lois Capps, U.S. Congresswoman
Barbara Boxer, U.S. Senator

DiabloCanyonCEm Resource

From: Deb Spatafore [debspat@charter.net]
Sent: Friday, April 09, 2010 3:27 PM
To: Stuyvenberg, Andrew
Subject: Relicensing Diablo Canyon

BO-1

Dear Mr. Stuyvenberg,
When considering the relicensing of the Diablo Canyon plant, please ask the Board to thoughtfully consider the economic support Diablo Canyon provides for our schools. While other school districts are suffering from lack of funds, property taxes from Diablo Canyon in San Luis Coastal Unified School District provide a buffer from State budget cuts to education. I am sure that these funds play an integral role in the excellent scores achieved by SLCUSD students on standardized tests and the high esteem in which our schools are held.
Sincerely
Deb Spatafore

Deb Spatafore
1303 Garden Street
San Luis Obispo CA 93401

DiabloCanyonCEm Resource

From: Jim Stevens [JStevens@atascaderoglass.com]
Sent: Friday, April 09, 2010 7:18 PM
To: Stuyvenberg, Andrew
Cc: LNB5@PGE.com
Subject: Diablo Canyon
Attachments: Diablo support letter.doc

Please see attached letter of support for Diablo Nuclear Power plant. BP-1

Respectfully,

Jim Stevens
jss@atascaderoglass.com

ATASCADERO GLASS INC

License No. 453652, C-17

April 8, 2010

Andrew Stuyvenberg, Project Manager
U.S. Nuclear Regulatory Commission
Mail Stop: O-11F1
Washington, DC 20555-0001

Dear Mr. Stuyvenberg,

I would like to thank the Nuclear Regulatory Commission (NRC) for conducting the environmental scoping meetings in San Luis Obispo in March, 2010, and giving the local community a chance to provide input on what issues should be considered in the Environmental Impact Statement (EIS).

I am writing to encourage the NRC to address Diablo Canyon's economic impacts on the local economy and educational facilities in the area. Because of Diablo Canyon Power Plant, Pacific Gas and Electric Company is the largest private employer in San Luis Obispo County with more than 1,600 jobs. Additionally, the company is the largest property tax payer in the county paying more than $24 million for the fiscal year 2009/2010 with a significant portion going to local educational institutions. I truly believe that the environmental document must evaluate all of the relevant issues in a fair and balanced manner. BP-2

I look forward to reading the draft environmental document later this year. Thank you in advance for your consideration.

Sincerely,

Jim Stevens
Vice President

8730 El Camino Real, Atascadero CA, 93422 – (805) 466-2644 (805) 466-2795 Fax

www.atascaderoglass.com

recent great quakes.

AN-1

The dozen faults in the vicinity of Diablo Canyon Nuclear Power Plant are also on this Ring of Fire. Add to that the quake in Haiti, and we are reminded that tectonic plates are moving and we need to take them into account. Okay. On to our prepared scoping comment.

In the NRC environmental review for PG&E's license renewal application, Mothers For Peace requests that the issue of new seismic information and potential environmental impacts of postulated severe accidents be included.

Although seismic issues are codified as category one, or generic, in the NRC license renewal environmental protection rule, the NRC does allow for the identification and analysis of new, significant information.

Furthermore, the National Environmental Policy Act focuses on environmental impacts which are considered in the site-specific supplement to the generic Environmental Impact Statement. The environmental review takes into account the environmental effects of postulated plant accidents that might occur during the license renewal term.

Mothers For Peace thus argues that the

AN-1 - cont

1 issue of the potential for environmental impacts as a
2 result of seismic activity on the newly-discovered
3 fault is within the scope of this license renewal
4 process.
5 On November 14th, 2008, PG&E notified the
6 NRC that preliminary results from ongoing studies by
7 PG&E, and the U.S. Geological Survey, indicated the
8 presence of a result, referred to as the Shoreline
9 Fault, approximately 25 kms. in length and located
10 approximately one km. offshore from Diablo Canyon.
11 PG&E and the NRC attempt to placate the
12 public with assurances that the newly-discovered
13 Shoreline Fault adds no additional risk to a severe--
14 no additional risk of a severe accident.
15 In the January 20th, 2010 NRC Summary of
16 January 5, 2010 Meeting with PG&E regarding Shoreline
17 Fault--that was a title--it was, quote: Concluded that
18 any damage due to secondary faulting is very unlikely
19 and the impact on the Diablo Canyon Power Plant
20 seismic core damage frequency is negligible. Unquote.
21 PG&E admits in this same summary, however,
22 that data collection and interpretation are not
23 complete.
24 Mothers For Peace asserts that the
25 discovery of the Shoreline Fault is significant and

AN-1 - cont

has serious implications for environmental impacts during the renewal term. The consequences of an earthquake on this unreviewed fault has the potential to cause a grave accident at Diablo Canyon Nuclear Power Plant, resulting in considerable environmental impacts.

PG&E has not provided evidence, or reasonable assurance, that the newly-discovered Shoreline Fault will not adversely affect the operations at Diablo Canyon during the license renewal period. Data is incomplete, studies have not been completed, an independent analysis has not yet been performed. Barbara Byron of the California Energy Commission spelled this out in her statement.

Mothers For Peace argues that PG&E and the NRC cannot legitimately claim the impact--I'll start that sentence again. Mothers For Peace argues that PG&E and the NRC cannot legitimately claim the impact of the Shoreline Fault to be, quote, negligible, unquote, until studies are complete.

The burden of proof lies with the applicant, not with Mothers For Peace. The NRC cannot draw a conclusion favorable to the applicant unless and until a complete and independent study provides objective evidence to support such a conclusion.

AN-1 - cont

1 The NRC cannot meet the licensee renewal
2 rule requirements until the new earthquake fault has
3 been proven to be within the current licensing basis.
4 Mothers For Peace seeks five things. One. A
5 completed, thorough study of the Shoreline Fault and
6 its interactions with other faults in the area. Two.
7 Independent and peer-reviewed analysis of the
8 significance of the data. Three. Analysis of the
9 effects of an earthquake on transformers, containers,
10 piping, and the mechanical and electrical equipment
11 that are not built to withstand a significant seismic
12 event. Four. Analysis of the effects of an
13 earthquake on ageing seismic components. And finally,
14 a delay of the license renewal process until the
15 results of these studies have been examined.
16 MR. CAMERON: Thank you, Jane. We're
17 going to show a video of Rochelle, Rochelle's
18 comments, and I'm going to turn these lights out so
19 you can see it.
20 [Videotape of Rochelle Becker shown]
21 MS. BECKER [on video]: Good evening. My
22 name is Rochelle Becker and I'm executive director of
23 the Alliance For Nuclear Responsibility. I'd like to
24 thank the NRC for allowing this unusual presentation
25 tonight, but we are on our way, as we speak right now,

March 3, 2010, 1:30 session of NRC scoping meeting in San Luis Obispo

TO: NRC Staff

FROM: SAN LUIS OBISPO MOTHERS FOR PEACE

RE: SLOMFP assessment of NRC scoping functions over 37 years

My name is Jane Swanson, and this afternoon I am speaking for the San Luis Obispo Mothers for Peace. This statement takes a long-range perspective. At the evening session SLOMFP will present 3 very specific scoping issues that fit within NRC criteria.

Our non-profit group has served a unique role since 1973, when SLOMFP made the commitment to pursue available legal channels to oppose the licensing of the aptly-named Diablo: a nuclear plant and radioactive waste storage site built next to an active earthquake fault. Over the decades we have conducted an on-going assessment of the scoping of issues considered and not considered by the Nuclear Regulatory Commission. Now, 37 years later, we offer the executive summary of our decades long study.

SLOMFP sees an adverse trend in the NRC's failure to interface with the real world. The agency has created a fictional reality- bubble, a labyrinth of rules and regulations that does not connect with the world inhabited by other federal agencies or the general public. BK-1

I will offer just three examples of issues that have great potential for damaging the environment.

EXAMPLE 1: THE CALIFORNIA COAST IS AN EARTHQUAKE ZONE:

The NRC (then the Atomic Energy Commission) in 1984 and 1985 licensed Diablo's two reactors, despite the fact that it was and remains against NRC regulations to allow nuclear facilities to be sited next to major, active earthquake faults. The Hosgri has not gone away; new faults have been discovered but not thoroughly studied. Include new seismic information as you consider another 20 years, and just say no. BK-2 BK-3

EXAMPLE 2: THERE IS NOWHERE TO STORE RADIOACTIVE WASTES

The NRC consistently ignores the reality that there is no location, plan, or technology in place or on the horizon to isolate radioactive waste from the biosphere for the required quarter of a million years – or a million years if you accept EPA standards. The agency has already given 57 license extensions to other plants. Include the problems of additional wastes as you consider another 20 years, and just say no. BK-4 BK-5

EXAMPLE 3: NUCLEAR PLANTS ARE TARGETS OF TERRORISTS

The Department of Homeland Security, the FBI and other federal agencies state that nuclear facilities are, by definition, targets of terrorists. And yet the NRC does not protect nuclear facilities with no-fly zones. Neither does it require nuclear plant operators to protect reactors or radioactive wastes from attack from the air. NRC regulations consider it sufficient to out-source "mitigation" of any such attack to the military. In the real world, a fire in a spent fuel storage pool or cask would release radioactive Cesium-137 into the atmosphere, and even the armed forces would not be able to stop its lethal spread. Open your eyes to the dangers of terrorist threats as you consider another 20 years, and just say no. BK-6 BK-7

CONCLUSION:

The NRC must include within its scope of study ALL the outstanding environmental issues, before seriously considering allowing another 20 years of Diablo operations. "On-going monitoring" is not a substitute for thorough assessment of serious problems. BK-8

has conducted an ongoing assessment of the scoping of issues considered, and not considered, by the Nuclear Regulatory Commission. So now, 37 years later, we offer the executive summary of our decades-long study.

Mothers For Peace sees an adverse trend in the NRC's failure to interface with the real world. The Agency has created a fictional reality bubble, a labyrinth of rules and regulations that does not connect with the world inhabited by other federal agencies or by the general public. I will offer just three examples of issues that have great potential for damaging the environment.

Example number one. The California coast is an earthquake zone. The Nuclear Regulatory Commission, at that time the Atomic Energy Commission, in 1984 and '85, licensed Diablo's two reactors, despite the fact that it was, and remains against NRC regulations, to allow nuclear facilities to be sited next to major active earthquake faults. N-1

The Hosgri Fault is still there and will be forever. New faults have been discovered but not thoroughly studied. Include seismic information, new seismic information as you consider another 20 years, and then say no. N-2

Example number two. There is still N-3

nowhere to store radioactive waste virtually forever. N-3 - cont
The NRC consistently ignores the reality that there is no location, no plan, no technology in place, or on the horizon to isolate radioactive waste from the biosphere for the required quarter of a million years, or one million years, if you take EPA standards.

The NRC Web site still refers to Yucca Mountain as the solution. It's still there. And the Agency has already given 57 license extensions to other plants. Include the problems of additional N-4
wastes as you consider another 20 years and just say no.

Example number three. Nuclear plants are N-5
targets of terrorists. The Department of Homeland Security, the FBI, and other federal agencies state that nuclear facilities are, by definition, targets of terrorists. And yet the NRC does not protect nuclear facilities with no-fly zones.

Neither does it require nuclear plant operators to protect reactors or radioactive wastes from attack by air.

NRC regulations consider it sufficient to outsource, quote, mitigation, unquote, of any such attack to the military. In the real world, a fire in a spent fuel storage pool, or a cask, would release

cesium, radioactive cesium 137 into the atmosphere, and even the armed forces would not be able to stop its lethal spread. N-5 - cont

Open your eyes to the danger of terrorist threats as you consider another 20 years, and then say no. N-6

In conclusion, the NRC must include within its scope of study all the outstanding environmental issues, before seriously considering allowing another 20 years, which means 35 years from now, of Diablo Canyon operations. N-7

The excuse of, quote, ongoing monitoring, unquote, is not a substitute for a thorough assessment of serious problems before considering taking such a drastic and unrealistic step.

MR. CAMERON: Thank you, Jane.

We're going to go to Robert Lewin, who's the deputy fire chief. Hi, Robert. And then we'll go to Rebecca McMurray and Lynne Levine.

MR. LEWIN: I'm Robert Lewin, a deputy chief for the county fire department. Thank you to the NRC staff for allowing us to contribute to the scoping of the environmental review. During the licensing process of Diablo Canyon, during the late '70s and '80s, our fire protection was addressed, MOUs

(entrainment and impingement of fish, thermal effects), severe accident scenarios, new and significant information, air quality, groundwater-use conflicts, archaeological resources, threatened or endangered species…

'Category 1' issues are those the NRC considers generic – meaning common to all plants *and thus not reevaluated in the environmental impact statements for license renewal for each site.* The issues that concern SLOMFP most are considered generic: disposal of high level radioactive waste, safety, geology (seismic), security and safeguards, emergency preparedness, need for power, economic feasibility…

However, if you can tie your concern to a Category 2 issue, it might be considered within the scope. Examples:

Seismic concerns (Category 1) + severe accident scenario + new information (Shoreline Fault) (Category 2)

Terrorism + severe accident scenario

On-site high-level radioactive waste storage + seismic + severe accident scenario

For more information on scoping, refer to… Frequently Asked Questions on License Renewal:
http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1850/sr1850_faq_lr.pdf

PG&E's Environmental Report is recommended reading:
http://www.nrc.gov/reactors/operating/licensing/renewal/applications/diablo-canyon/dcpp-er.pdf

PG&E's License Renewal Application:
http://www.nrc.gov/reactors/operating/licensing/renewal/applications/diablo-canyon/dcpp-lra.pdf

OBJECTIONS OF SAN LUIS OBISPO MOTHERS FOR PEACE TO PG&E'S APPLICATION FOR ANOTHER 20 YEARS OF DIABLO OPERATIONS:

Earthquakes:

CP-1

- The license renewal application is premature since the results of many studies requested by the California Public Utilities Commission (CPUC) and the California Energy Commission (CEC) are not complete. These studies include a 3D study of the new Shoreline Fault (to be completed sometime in 2013), ,economic and environmental costs and benefits of extended operation, plant reliability, available alternatives, and other studies as required by AB 1632.

- It is contrary to NRC regulations to license a nuclear facility next to an active, major earthquake fault. However, the NRC "grandfathered" the license for Diablo, accepting PG&E's excuse that it was unaware of the Hosgri Fault, located within 3.5 miles of the plant, when it first invested billions of ratepayer dollars in building

the plant. The NRC is prohibited by its own regulations from taking into account corporate profits rather than public safety, but that is exactly what it did.

- The recently discovered Shoreline Fault, less than one mile offshore of the Diablo site, has not been thoroughly studied, and it clearly exacerbates an already precarious situation. The central coast of California is riddled with earthquake faults, including the Hosgri, Shoreline, Pecho, Olson, San Luis Bay, Crowbar, N40W, Los Osos, San Miguelito, Cambria, West Huasna, Oceano, and Widmer Avenue. CP-2

- The Diablo Canyon facility includes two nuclear reactors and the storage of all the high-level radioactive wastes generated by those reactors since licensing in1984. Most of the spent fuel (which is much more radioactive than the fuel in the reactors) is stored in over-crowded pools. During an earthquake there is the potential of a loss of coolant crucial to preventing uncontrolled fission or a fire, either of which would release radiation into the air. CP-3

Radioactive Waste:

- California law prohibits new plants until/unless the waste issue is resolved. To allow an existing plant to generate radioactive wastes for an additional 20 years would contradict the intent of this law.

- Ross Landsman, NRC inspector for the Midwest region, made the following comments on the Holtec casks of the type being used at Diablo Canyon: "I remain concerned about the safety of the Holtec Dry Casks. The NRC should stop the production of the casks, but they do not have the chutzpah to do it. This is the kind of thinking that causes space shuttles to hit the ground."

Safety :

- Recent NRC inspection reports on Diablo (August, 2009) indicate that PG&E is not meeting industry standards in its identification and resolutions of problems at Diablo. One recent example is that in October, 2009, it was discovered that for 18 months the Diablo Canyon plant had operated with defective control of some of the valves relied upon to flood the Unit 2 reactor with essential cooling water in the event of a serious accident or sabotage. An investigation by the Nuclear Regulatory Commission identified three violations of NRC regulations as the cause of the problem. CP-4

- There are an unacceptable number of human performance problems at Diablo, leading to violations of NRC regulations as well as failures to comply with safety requirements. Extensive re-training has not been effective in reducing the number of incidents.

- In the event of a major radiation release, those advised or choosing to evacuate would all have to drive in the direction opposite the wind carrying the radioactive material. Our few available roads are woefully inadequate. CP-5

Terrorism:

- MFP is currently pursuing a legal challenge in the Ninth Circuit of the U.S. Court of Appeals involving the dry cask storage facility for storing nuclear waste and its vulnerability to terrorist attack, especially from the air. If the court rules in favor of MFP as it did in 2006, the NRC might be ordered to require PG&E to make design changes. [Go to mothersforpeace.org for detailed information.]

CP-6

- The air space over Diablo Canyon Nuclear Power plant is **NOT** a no fly zone.

- Instead of the casks being under berms or concrete and spread out in different locations, they are grouped in clear view from the air or ocean.

- The spent fuel pools are not protected by containment structures, making them vulnerable to terrorist attack.

- The proliferation of fissile material is a constant concern, as these materials have the potential to be used to make weapons if stolen.

Aging and Degradation:

- Diablo was designed in the 1960's. In the ensuing half century, not only have innumerable fixes been deemed necessary to keep the plant running, but replacement parts have become unavailable.

CP-7

Uranium Supply :

CP-8

- Optimistic projections of the availability of uranium fuel supplies show that resource running out in about 2020 – BEFORE the period at stake in the possible Diablo license extensions. [See December 1, 2009 publication of an article by Brian Wang titled "Uranium Supplies are Likely to be Adequate until 2020," available at www.theoildrum.com/]

Cost Concerns:

- Diablo is an out-dated and over-priced plant by any measure. By the time Diablo Canyon was licensed in 1984, it had cost PG&E's ratepayers some $5.5 billion – more than 10 times the original projected cost. Designed in the 1960's, it has needed constant updating and replacement of defective or worn-out parts. The earthquake bracing for Unit 2 was originally installed in mirror image of the plans and was re-done at huge expense. The rate-payer funds that would be required to keep the plant operating an additional two decades would be better spent on alternative technologies that would create additional jobs instead of nuclear waste.

- The dry casks will have to be relicensed every 20 years and, eventually, the waste will have to be transferred to another cask. This is very expensive since each cask costs about $1 million.

- The California Public Utilities Commission (CPUC) and the California Energy Commission (CEC) are in the process of determining whether or not continued reliance on nuclear energy is in the best economic interests of the people of California. PG&E's decision to apply for license extensions 14 and15 years in advance of the expiration of the current licenses raises questions regarding PG&E's intentions toward the coming CPUC and CEC conclusions.

- PG&E spent $16.8 million on a feasibility study analyzing plant equipment and operation to determine whether to apply for a license extension. The study was paid for by PG&E's ratepayers but, even though PG&E has filed the application, the results of the study have not been published.

- A new once-through cooling system, to reduce the unacceptable loss of sea life, is projected to cost $3 billion. Replacement of Diablo Canyon's once-through cooling system, to reduce the unacceptable loss of sea life, is projected to cost $3 billion.

- The costs for relicensing have conservatively been estimated at $85 million.

CONCLUSION:
The history of Diablo Canyon shows that in terms of safety, security, and economics, it is not in the public interest to add an additional 20 years to the operating life of the two reactors at Diablo Canyon. The only advantage would be to the corporate profits of PG&E. PG&E should, instead, apply its considerable resources toward establishing itself as a leader in the development of renewable sources of energy.

CP-9

Contact persons for questions or feedback on this advisory:
Jane Swanson, (805) 595-2605; janeslo@kcbx.net
Jill ZamEk, (805) 710-1143 after 3 pm on weekdays

1 Anything less is not what this community
2 deserves. We need these studies now and we hope you
3 are listening. Thank you.
4 MR. CAMERON: Okay. Karen Swift, and Jeff
5 Buckingham, and Henriette Groot. This is Karen Swift
6 coming up to join us.
7 MS. SWIFT: Good evening, everyone, and
8 thank you, NRC staff, for being here to hear and
9 hopefully listen to public commentary regarding the
10 relicensing of PG&E.
11 I was here earlier this afternoon, between
12 1:30 and 4:30, as well as now, and I've heard
13 perspectives, as everyone has, on the relicensing.
14 Some of those views expressed would like immediate
15 closure of the plant, if that were possible, due to
16 reasonable concerns about there being two major fault
17 lines within the near vicinity of PG&E, one only 1800
18 feet from the plant.
19 I do not need to outline these concerns,
20 once again, because others have been very good at
21 doing so. Others we have heard from would like to
22 have quick renewal, without any further delays, no
23 more seismic surveys.
24 Yet anyhow, there have been two kind of AP-1
25 overlapping views expressed by people. One is

AP-1 - cont

1 economic concern. I understand that most people would
2 like to have job stability, would like PG&E to
3 contribute to the tax base, and would like PG&E to
4 contribute to the school system. Yet we have not
5 looked at other renewable job possibilities. I'd like
6 to mention two studies, recently.
7 One has been by the University of
8 Massachusetts, Political Economy and Research
9 Institute, in which they looked at--I can pass out the
10 survey later, in a moment--they looked at if you were
11 to invest $1 billion into an economic recovery
12 package, for example, that would create four times as
13 many jobs, that would otherwise have been created
14 within the oil industry, which is about equal, if not
15 more jobs, than within the nuclear industry.
16 Another study that has been conducted is
17 that by Navigant Consulting, which shows that if
18 utility companies were to invest--or were to create 25
19 percent of their energy from renewable sources, they
20 would create up to 274,000 jobs.
21 There are many possibilities, and I think
22 people are lacking creativity and looking at solutions
23 into this, and looking at renewal, 15 years from now,
24 when we have yet to come up with new technologies.
25 Photovoltaic, by the day, has become

AP-1 - cont

cheaper. A few years ago it seemed unfeasible. Now people are putting it up, continually. I don't know what it'll be in 15 years, but even General Electric's chief engineer has stated that by 2015 there will be equal amounts of energy--I mean, in terms of money, it will be cheaper, if not equal to current conventional energy production.

AP-2

Another issue that has been expressed is the fear of climate change. Understandable. And nuclear energy, some have said, is necessary to avoid catastrophic climate change. Yet let's look at the UNFCCC conference in Copenhagen which didn't show very much optimism in terms of government doing anything toward this.

So let's not get too far from this topic and let's see. If nothing is done by 2013, the glaciers may melt, who knows what will happen, and we're talking about renewing this plant 15 years from now.

AP-3

I think we need to think about these issues in a broad perspective. We also need to think about the potential of human creativity and new technologies that can be created. Thank you.

MR. CAMERON: Thanks, Karen. And Jeff. Jeff Buckingham.

Karen Swift, 3698 Clark Valley Rd. Los Osos, Ca, 93402
Public commentary regarding PG&E's Diablo Canyon renewal: 2010-03-03

Thank you NRC staff for hopefully taking into consideration public commentary on the relicensing of PG&E's Diablo Canyon plant application.
I am not affiliated with any organization though as a citizen of San Luis Obispo county, my views may reflect those of a larger group.
In the public commentary session between 1:30- 4:30 PM March 3, 2010 we heard views from those who wish to immediately shut down the Diablo Canyon nuclear plant due to safety concerns, particularly derived from there being not one, but two fault lines in the close vicinity of the plant—one a mere 1800 feet from the plant itself.

We also heard views from others who wished for relicensing with minimum delay, without further seismic studies to be completed prior to relicensing.

Yet there are two points of concern that reverberate between the conflicting views.
- One is a concern about the economy,
- The second is a concern about climate change and non-fossil fuel based energy

All are in favor of economic stability, more jobs, money flowing into the school system, and money flowing into the tax base. This in mind, I would like to look at a few studies regarding renewable energy and job creation:

A study released by Navigant consulting shows that if utility companies in the United States were required to produce 25% of energy from renewable sources, up to 274,000 jobs could be created. CQ-1
Another study conducted by the University of Massachusetts Political Economy and Research Institute shows that per $ 1 million investment, the following number of jobs would be created in the following sectors:
Solar: 13.72
Biomass: 17.36
Smart grid: 17.36
Wind: 13.3
Coal: 6.86
Oil and gas: 5.18
Nuclear: 4.2
In regards the NRC's want to hear other options for renewable energy, I would like to name the German renewable energy act as an example. This was designed as a means of encouraging cost reductions based on improved energy efficiency. In this, feed in tariffs have been used to generate more competition and more jobs by giving incentives to every company involved in the energy generation business. This is especially to incentivize small and medium sized companies to invest in, and generate energy from renewable energy sources. Feed in tariffs decreases the initial market barrier for businesses and reduces the cost of production & consumption over a period of time. In Germany, individual households can sell their energy to the grid and make money on it.

Microsoft Word - Job Creation for Investment - Garrett-Peltier.doc

Download (97K) Print (1 page) Plain HTML

Goo

CQ-1 - cont

Job Creation per $1 Million Investment

INDUSTRY	DIRECT	INDIRECT	INDUCED	TOTAL
Reforestation, Land and Watershed Restoration, and Sustainable Forest Management	17.55	12.95	9.2	39.7
Crop Agriculture	9.8	6.5	6.5	22.8
Livestock	6.4	9.1	6.2	21.7
Gas (heavy and civil construction for pipelines - 50% new and 50% repair)	12.05	3.93	5.912	21.888
Mass transit and freight rail construction	13	3.70	5.036	21.738
Roads and bridges: repair	11.1	3.69	5.527	20.317
Conservation (Parks and Land and Water Conservation Fund)	11.45	4.15	4.7	20.3
Water infrastructure	9.96	4.38	5.427	19.764
Aviation	9.7	4.30	5.264	19.266
School buildings	8.65	5.38	5.233	19.262
Building retrofits	7.7	4.70	4.96	17.36
Roads and bridges: new	8.7	3.94	4.834	14.474
Solar	5.4	4.40	3.92	13.72
Biomass	7.4	5.00	4.96	17.36
Smart grid	4.3	4.60	3.56	12.46
Wind	4.8	4.90	3.6	13.3
Electricity generation, transmission, distribution	5.32	4.50	4.696	14.512
Coal	1.9	3.00	1.96	6.86
Financial Industry	3.22	2.34	1.668	7.228
Oil and gas	0.8	2.90	1.48	5.18
Nuclear	1.2	1.30	1.2	4.2

Source: Heidi Garrett-Peltier and Robert Pollin, University of Massachusetts Political Economy and Research Institute.

Note: Multipliers derived using IMPLAN 2.0 with 2007 data. Infrastructure multipliers and assumptions are presented in "How Infrastructure Investments Support U.S. Economy, Employment, Productivity and Growth," Political Economy Research Institute, January 2009.

$1 billion green economic recovery package would create 47 total number of jobs than if spent w/in oil sector —

1 MR. FULLER: Thank you, Mr. Byerley. We'd
2 now like to hear from Sonja Swift. Then after that,
3 like I said, we'll hear from Dave Wrona, to sort of
4 wrap things up for us tonight.
5 MS. SWIFT: Good evening. I appreciate
6 the chance to speak. I can't--tonight, I wonder if BH-1
7 these words will be heard. Like many of the words of
8 the audience, there doesn't seem to be much of a track
9 record for listening to these concerns; but I'll share
10 a few. Let's see. Some other attempts at creating BH-2
11 renewable energy, such as what's been going on in
12 Marin County with the Marin Energy Authority, which is
13 the renewable energy alternative to the sources of
14 power, but still, to be delivered through PG&E's grid.
15 They--well, this is their project, and
16 PG&E doesn't want to cooperate with these other
17 attempts at securing alternative energies, and is
18 adamantly opposing such possibilities.
19 Prop--so in June, on the June ballot,
20 there will be a Prop 16, as it's called, which would
21 mandate any local agencies wanting to sell retail
22 electricity to customers. They would need to first
23 get two-thirds of the local electrics to sign on, and
24 this is kind--you know, if this is passed, it's
25 basically quite likely that it would end local efforts

to create energy cooperatives, and PG&E is using a good $30 million to push Prop 16 forward. So this is an interesting reminder that we are dealing with a monopoly.

In California, although a fee-and-tariff system was implemented, it only allows individual home owners who put up solar panels to sell back excess energy to the grid, until their meter turns to zero.

Further, the size of eligible systems is capped at 5 megawatts per household and individuals are not allowed to put up more solar panels than what would generate their historical power usage.

In my mind, individual homeowners should be able to sell their energy into the grid, without limits. As it is now, you can only do that if you are an energy corporation. A few thoughts to share, think about. I'd encourage you all to vote no on Prop 16.

I heard a few people earlier on BH-3 associating Bob Blanchard and his rotational grazing practices with PG&E's environmental track record, and I just find that rather absurd, given that he leases the land, and I think he was there before Diablo. I just wanted to mention that.

And I live up Clark Valley Road on the same lands I grew up on. I've been here since I was

1 born, and we have a siren in our back valley, and what
2 that siren means is--if it goes off, I need to, with
3 everyone else, run as fast as I can and never return.
4 You know, this is a little insane. So one
5 more thing. While I don't think it's necessary to BH-4
6 restate the concerns regarding seismic activity, let's
7 just not be arrogant, or cage ourselves in denial of
8 this blatant risk. Thank you.
9 MR. FULLER: Thank you, Ms. Swift. We'd
10 like to now hear from Dave Wrona. He's our branch
11 chief in the Division of License Renewal, and Dave,
12 you'll kind a wrap things up for us. thank you.
13 MR. WRONA: Okay. Thank you, Mike. First
14 off, I'd just like to thank everybody for coming out
15 tonight, taking time out of your busy schedules to
16 participate in our environmental scoping process. All
17 the comments we've heard today, earlier in the
18 afternoon and then this evening, will help us define
19 our scoping for the environmental review.
20 All of the comments will be addressed in
21 our environmental scoping summary report, which is
22 currently scheduled to be issued around the October
23 timeframe, or before the DSEIS which is scheduled to
24 be issued in the October timeframe.
25 If you signed up and provided your contact

DiabloCanyonCEm Resource

From: Robert Smith [RSmith@THOMAELEC.COM]
Sent: Monday, April 12, 2010 1:21 PM
To: Stuyvenberg, Andrew
Subject: Letter regarding environmental scoping meetings for Diablo Canyon Nuclear Power Plant
Attachments: 20100412112319.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Mr. Stuyvenberg:

Please accept the attached letter in support of PG&E and their efforts at Diablo Canyon Nuclear Power Plant. CA-1

Rob Smith
CONTROLLER
Thoma Electric, Inc.
(805)543-3850

thoma
ELECTRIC

April 12, 2010

Andrew Stuyvenberg, Project Manager
U.S. Nuclear Regulatory Commission
Mail Stop: O-11F1
Washington, DC 20555-0001

Dear Mr. Stuyvenberg,

I would like to thank the Nuclear Regulatory Commission (NRC) for conducting the environmental scoping meetings in San Luis Obispo in March 2010. I found the meetings to be very informative and beneficial to the local community.

I am writing to encourage the NRC to evaluate the Diablo Canyon Power Plant's socioeconomic benefits to the community in the Environmental Impact Statement (EIS). I believe that the environmental document must be fair and balanced in evaluating the relevant issues for the benefit of the public. CA-2

I look forward to reading the draft environmental document later this year. Thank you in advance for your consideration.

Sincerely,

Edward C. Thoma
Vice President
Thoma Electric, Inc.
3562 Empleo Street, Suite C
San Luis Obispo, CA 93401

3562 Empleo, Ste.C • P.O. Box 1167
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1/27/2010
75 FR 4427

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2010 OCT 27 PM 4:05
RULES AND DIRECTIVES BRANCH USNRC

April 12, 2010

Andrew Stuyvenberg, Project Manager
U.S. Nuclear Regulatory Commission
Mail Stop: 0-11f1
Washington, DC 20555-0001

Dear Mr. Stuyvenberg,

Thank you and the Nuclear Regulatory Commission (NRC) holding the environmental scoping meetings in San Luis Obispo in March 2010. I found the meetings to be informative and beneficial to the local community.

I am writing to encourage the NRC to evaluate the environmental benefits of Diablo Canyon Power Plant (DCPP). DCPP provides low- cost, carbon free electricity for nearly three million homes and businesses in northern and central California. In addition, Pacific Gas and Electric Company has demonstrated exemplary environmental stewardship of its nearly 12,000 acres in San Luis Obispo County. I believe that the EIS must be fair and balanced in evaluating all environmental issues. CZ-1

I look forward to reading the draft environmental document later this year. Thank you in advance for your consideration.

Sincerely,
Ned M. Thompson

Ned M. Thompson
Filipponi & Thompson Drilling
P. O. Box 845
Atascadero, CA 93423

SUNSI Review Complete
Template = ADM-013

E-RIDS = ADM-03
Add = A. Stuyvenberg (ALS3)
N. Ferrer (nbf)

1 Betsy Umhofer. I'm the district representative for
2 Congresswoman Lois Capps, and I'm here to read the
3 following statement from the congresswoman.
4 Thank you for the opportunity to comment
5 on the environmental issues the Nuclear Regulatory
6 Commission should consider in its review of the
7 proposed license renewal application for the Diablo
8 Canyon Nuclear Plant.
9 I represent the 23rd congressional F-1
10 district in which this facility is located. As a
11 member of the House Energy and Commerce Committee, I
12 am very interested in issues relating to the
13 relicensing process of the nuclear power plants. I
14 appreciate the NRC holding this forum to assess all of
15 the environmental impacts that would result if this
16 plant were to be relicensed.
17 Given the complex scale of this renewal,
18 as well as the complex technical issues contained in
19 the licensee's application, it is critically important
20 that this assessment be comprehensive and independent.
21 The NRC must fully assess and address
22 safety and security impacts, including any measures
23 available to mitigate them as they relate to the
24 environmental reveiw.
25 That means the assessment must include

updated and completed analyses to ensure the surrounding natural and marine environment is protected; the plant, including aging infrastructure, can withstand potential earthquakes and is not vulnerable to a terrorist attack; and that any on-site storage of waste be done safely.

I believe failure to fully assess these issues would do a disservice to the review process, by disallowing a look at the overall collective impacts of this renewal on the environment.

For example, the recently-discovered shoreline fault, less than one mile offshore of the plant, has not been thoroughly studied. This clearly exacerbates an already precarious situation. F-2

The central coast of California has a number of major and active earthquake faults. To reduce the likelihood, or severity of a severe accident due to these faults, the NRC must include severe accident mitigation alternatives, supported by new seismic hazard data as part of this review process.

Only with an all-inclusive review of the safety and security impacts, will the NRC ever be able to come to an accurate conclusion as to the degree of the severity of a planned, or unplanned event, at the

because it has grown and it is a part of the community, just like I am here today. That's all I have. Thank you.

MR. CAMERON: Okay. Thank you, Chris. Chris Ungar. Then Barbara Scott.

MR. UNGAR: Thank you. I'm Chris Ungar and I'm a trustee of the San Luis Coastal Unified School District, and I'm here to talk tonight about the financial impact of the power plant to our school district as a public service. As most of you know, billions of dollars have been cut from school districts throughout California. Thousands of layoffs of teachers and program cuts have affected countless children throughout our state. AI-1

Because of the complexity of the state revenue system, which is, in part, based on property taxes, we're fortunate enough to have the power plant in our jurisdiction and within our boundaries. We received several million dollars in property taxes because of PG&E and because of the nuclear power plant.

This directly benefits our children and our community. Without this, we would lay off teachers, classified staff, including teacher's aides, custodians, and other members of our community.

AI-1 - cont

1 In addition, PG&E employees donate
2 thousands of dollars and many hours of time to our
3 local schools. We consider this a valuable resource
4 which contributes to the education of our students and
5 to the San Luis Coastal Unified School District
6 community. Thank you.
7 MR. CAMERON: Thank you very much. And
8 this is Barbara Scott.
9 MS. SCOTT: Thank you. My name is Barbara
10 Scott, and I bought a newspaper, in case you hadn't
11 noticed that a plane had gone into an IRS building.
12 And I thought about the safety of Diablo, immediately.
13 The fact that it could happen--this is a disgruntled
14 person. How many disgruntled employees, how many
15 "crazies," in psychological terms, who fly planes? We
16 have no restriction on flying over Diablo as far as I
17 know, and I want to point that out.
18 And as far as Diablo being part of the
19 community, of course it is, and the idea that we could
20 have an alternative windmill, or geothermal, or solar,
21 aspect to this, and really reduce the possibility of
22 having harmful, spent fuel rods sitting in our back
23 yard. Thank you.
24 MR. CAMERON: Thank you, Barbara. We're
25 going to go to Jim Bennett next, and then to June,

Now this is Ed Valentine, who's superintendent of the school district.

MR. VALENTINE: Thank you. I think my comments, in looking at the topics that were shared with us earlier, fall into the category of Other. My name is Ed Valentine. I'm the superintendent of the San Luis Coastal Unified School District, and I thought that as the NRC takes commentary on the environmental impact of Diablo Canyon, I thought I might share some of the economic implications of it for us. Within our budgetary prospects, Diablo Canyon generates about 15 percent of the school district budget, or appropriately $11 million. I-1

If we look at it in another way, proceeds from the Diablo Canyon Power Plant funds the education of about one in every seven children in or community.

As this licensing moves forward, obviously from that perspective, we're very supportive that that would move forward, but we would expect that to occur in a prudent and timely way. And thank you for the opportunity to speak. I-2

MR. CAMERON: Thank you very much, Superintendent Valentine.

Lauren. Lauren Brown.

MS. BROWN: I'd like to thank the NRC for

regulations and implementing them.

A lot of times we'd get a question: I had a spill. Do I have to report it? Well, do you feel it has the potential to cause harm to human health or the environment? If they said no, they didn't have to report it. If it was then found to cause a potential for human health--harm to human health and the environment, then they could be fined.

But it would come across, if people happened to discover it, maybe when they went to get a building permit.

What I have found since working with Diablo Canyon is not only do they have to report when they feel an earthquake, or if they have spilled hazardous materials, but they have to report everything that they do, to protect this population. They have to drill on that ability to protect this population, not only within themselves, but also outside with the community. AF-1

So that gives me a very strong commitment, that we have the ability to protect the population of San Luis Obispo County. I didn't leave the county Office of Emergency Services because I was unhappy or because I didn't think things were going well. I left because I feel that this company, PG&E, has an

AF-1 - cont

extremely strong work ethic, and I like their views and policies on safety.

I felt that I could contribute, as an emergency planner, to Diablo Canyon, to continuing those policies and those views on this side of the bench rather than the other side.

AF-2

I'm also very proud of the work that PG&E does in the community. I have a lot of community services that I do. I work with Public Health Department in providing Christmas gifts to local at-need children. I work on a homeless dinner on Christmas Day with my family.

And one of the things, as soon as I came on to PG&E, I was given the ability to work with our employees and our company on those efforts. So they supported me, in my own personal efforts to work in the community, by matching what we were doing.

AF-3

So I'm really proud of the work that we do in this community, and I believe that on a daily basis, we're looking at our seismic ramifications on any of the new studies that are out, and of our environmental impacts, and I believe that we should continue with relicensing, and that it should be concurrent to the current studies, and that we will continue to be a good partner with this community.

today, we are focused on the economic impact that Diablo Canyon has on our community in the way of taxes, direct and indirect employment, and of course considerable charitable activities that the plant currently has on our local communities.

We look forward to better understanding the social, environmental, and economic impacts, and we thank you again for the opportunity to comment.

MR. CAMERON: Thank you, Ms. Karim. Next we'll have Ed Waage. I'm sorry. I'm probably not getting that right.

MR. WAAGE: It's "Waggee."

MR. CAMERON: "Waggee." Thank you. After that, we'll have Shelly Higginbotham and then Joe Boysen.

MR. WAAGE: Good afternoon. I'm Ed Waage. I'm also on the city council for Pismo Beach but I am speaking on my own behalf. I'd like to touch on three benefits of Diablo Canyon to our local community and to the State of California. The first is it does complement California's push for solar power. I installed solar panels on my rooftop about two and a half years ago, and at nighttime, the sun sets and I have no solar power. I rely on, for example, baseload power, like Diablo Canyon, for my nighttime

AB-1

AB-1 - cont

electricity. During the daytime, solar provides additional energy when we have the peak load times during the day. So it's a nice complement between nuclear and solar.

Especially in 2024, when the current license is up, we will need even more baseload to take care of the nighttime, when there is no solar power available.

Also the community is much better prepared, as several others have mentioned, because of Diablo Canyon. I think especially our own city is much better prepared, because of additional planning and preparedness that we've undertaken for Diablo Canyon.

Also, our local economy is much better off from Diablo Canyon. There's large numbers of very well-paying jobs as well as additional stays in our hotels, and people dining in our restaurants during outages.

AB-2

I would ask also that you do not delay the licensing process because of the newly-found earthquake fault. I think those two processes can go forward in parallel.

AB-3

And finally, on the issue of reprocessing, even Energy Secretary Chu has stated that reprocessing

AB-3 - cont

is something we should look at in the future, and I know France and Japan are also doing that. It's probably the best, the very best solution. Thank you.

MR. CAMERON: Thank you, Mr. Waage. Next we have Shelly Higginbotham. After that, we'll go to--we just got a new one, Ms. Lawver. And then the last speaker we'll have is Mr. Boysen.

MS. HIGGINBOTHAM: Good afternoon. I'm Shelly Higginbotham. Thank you for the opportunity to speak. When considering the relicensing, I'd like you to consider these comments. The 20 year record of Diablo Canyon. I've lived in the community for 30 years. I've raised my children here. I live downwind. So I'd like you to consider the 20 year record. The catastrophic implications, economically, should the plant case to exist, and they've already been addressed here, from the employment base, the school districts, the tax base, and it's just not coastal, it affects Lucia Mar, and it affects Paso Robles, and we just read about that in the paper today, and we'd be very naive not to consider the economics of this plant.

The benefits of having inexpensive and reliable power, that we all enjoy every single day. And how will we substitute that power of 3 million

at one percent or so a year in electrical growth. And yes, I have photovoltaics on my roof and I've passed laws having to do with alternates, and written books on alternates as well.

So those aren't going to come on that fast. So in the transition region, we have this 20 percent, 100 gigawatts, that we've got to do something with, and I of course hope it'll go away. But the bottom line, if they all went away, well, I think what else is there but coal. Natural gas, the price has gone too high and the supply isn't as large.

So the process is that--in conclusion, please try and quantify as much as you can, in terms of both costs and deaths per kilowatt hours, and also consider more than the local. I consider myself more of an internationalist than a localist, and so I don't know how I'll be received at the next parties I go to after saying this. But that's the way I am. Thank you.

MR. CAMERON: Thank you, Mr. Hafemeister. Next, we'll have Duane Waddell. After Mr. Waddell, we'll have Jeff Lewis, and then Andrew Christie.

MR. WADDELL: My name is Duane Waddell. I live north of Cayucos, Swallow Creek Ranch. Since we, the public, will be subsidizing this business venture,

W-1

W-1

1 we have the right to know if it's a feasible, money-
2 wise investment of taxpayer money. Before you allow
3 the licensing process to proceed, please furnish us
4 with the report containing the amount of public funds
5 already invested in this power plant, from conception
6 to the current date.
7 Then submit costs for the following
8 phases. Licensing process. According to the paper,
9 that was--that will be 85 million. Taking into
10 consideration the age--taking into consideration the
11 age of the plant, please submit an overall operational
12 budget for breakdown, repairs, extra security,
13 etcetera, for the relicensed 25 years.

W-2

14 Waste storage report and cost. How much
15 storage of waste and cost has occurred to date? What
16 is the cost and how much will be stored during the 16
17 years left under the current permit? How much waste
18 will be generated? How will it be contained and what
19 cost during the relicense, 125 years and the
20 additional 2000 monitoring years?

W-3

21 Please present a cost sheet showing the
22 source of funding, federal, state and new taxes
23 required. After you've completed the budget report
24 covering all the above, please submit an analysis
25 report comparing the cost of relicensing and operating

1 the nuclear plant, and an alternative wind/solar W-3
2 project that would utilize the PG&E coastal property
3 and the areas below, above, and near the existing
4 infrastructure, power lines that stretch from the sea
5 for over a 100 miles inland.
6 I feel such a safe nonlegal approach will
7 be a much wiser and cost-effective development,
8 especially when the long-term waste containment is
9 factored in.
10 Please send copies of these reports to the
11 San Luis Board of Supervisors, and any other parties,
12 interested parties requesting them.
13 in the ad that you submitted, it said W-4
14 issues that should be considered as part of NRC's
15 environmental review of the license application for
16 Diablo Nuclear Power Plant. I think that should say
17 issues that will be considered. Thank you.
18 MR. CAMERON: Thank you, Mr. Waddell.
19 Next we have Jeff Lewis. Then we'll have Andrew
20 Christie, and after that we'll have Richard Krenzdorf.
21 MR. LEWIS: Good afternoon. My name is
22 Jeff Lewis, and I live in Los Osos. Before I get
23 started, I'd like to state that I am a retired PG&E
24 employee, and I mention that only because when I
25 worked for the company, it was my job to speak to the

To:- NRC Scoping Meeting Committee, SLO

3rd Mar '10

From :- W.H. Wadman PhD

805-782 0766

232 Broad St

whuwad@gmail.com

SLO CA 93405

Re :- *Long term safety of spent nuclear fuel*

CT-1

I am concerned that as the protective shield of rapidly decaying fission products diminishes the potential for attempts to divert the transuranics for antisocial or terrorist uses will increase since the deterrent radiation shield diminishes by a factor of ten every hundred years. The plutonium content remains essentially undiminished and mature 'Purex' type technologies might become more easily implemented to isolate bulk plutonium. I am aware that the plutonium from current reactors falls well below preferred weapons grade by virtue of too low a ratio of the 239/240 isotopes. However even this spent fuel grade of plutonium is capable of supporting criticality events . While problems of higher thermal output of the 240 isotope, together with poorer control of ignition triggering, make it a very difficult, **but not impossible source,** for a nuclear weapon.

CT-2

For the forgoing reasons I would argue that as we consider the relicensing of Diablo reactors this is appropriate time to consider how the spent fuel might be made less attractive as a source for misuse. Is one possible method to require some modification of core geometry so that at each refueling fuel elements that are near the end of their useful life are exposed to higher fast neutron fluxes ? The more obvious route is to require reactor operators to include sufficient plutonium from recycled fuels to raise the proportion of the 240 isotope to a level making the plutonium in their spent fuels unusable for bomb devices. Obviously if ,or when, FBR s become widespread the problem will largely be over.

While I realize that the NRC regulatory mandate may be unclear that it currently allows you to respond very energetically to this concern may I suggest this could be a time to ask for the necessary expanded jurisdiction.

I would appreciate any opportunity you can afford to enable me to contribute more to this fairly widely recognized concern.

Thanks! W.H. Wadman

1 This is Hugh Wadman.

2 MR. WADMAN: Thank you for this

3 opportunity to speak. I'm a retired chemist. I was

4 first trained in atomic issues as an undergraduate. I

5 was trained in radiochemistry as a graduate student.

6 I did graduate work using radiochemistry traces in

7 biochemical systems of photosynthesis for my PhD, and

8 I've subsequently taught courses in radiochemistry. I

9 think I have some background.

10 I have one issue which I think is

11 appropriate to the scope. It is the in-scope

12 environmental issues for generic determinations. The

13 one I am concerned with is, I think, of relatively low

14 impact. It is the one which cites the impacts from K-1

15 uranium fuel cycle and waste management. In general,

16 I feel that there is little or no waste risks

17 associated with the present storage of the fuel. I

18 think it is a gross exaggeration to imagine that there

19 is any conceivable way in which that nuclear waste

20 could possibly release, on this society, even a tiny

21 fraction of the radiation exposure which is rooted--we

22 are all routinely subject to from the relatively high

23 levels of radon in this area from rock, volcanic

24 rocks, or from medical sources.

25 It is simply a failure to look at numbers,

K-1 - cont

and I challenge the critics to start delivering numbers instead of wishful thinking. My one concern is that the waste in those casks is two types--fission products that diminish in their intensity of radiation to one-half in every 30 years.

It takes a long while. There is a large level of radiation, initially, but it diminishes very rapidly, and ultimately, what is left is the so-called transuranics of which the one which we've all heard of is plutonium, and that plutonium could conceivably be used for evil purposes. It is in fact a very--the primary purpose that comes to mind is to build a bomb out of it. It is not bomb-grade material. It is almost impossible to make a bomb from the plutonium that is in those casks.

I think that I may misinform, but in fact the "bomb boys" have succeeded in making a very poor quality nuclear bomb directly from that nuclear waste. It would be a tremendous challenge to any terrorist organization to accomplish that fact.

K-2

But as a matter of sort of wearing belt and suspenders, I would like to see the present fuel cycle modified gently, over the next decade or so, to refrain from contributing to that plutonium waste, and remodification is to modify the burning process by

K-2 - cont

1 possibly a modification of the charging of the
2 reactors but more likely by the new fuel charges
3 containing some recycled fuel, which diminishes the
4 availability of the plutonium for bomb-making
5 processes.
6 I would reiterate the last gentleman's
7 comments, that it is very important, in health issues,
8 not to spread false information about cures, and hence
9 because people from taking appropriate actions. For
10 example, scares about vaccines prevent effective
11 vaccination of children and children die as a
12 consequence.

K-3

13 I think we should remember that every
14 single unit of nuclear power that comes out of that
15 nuclear reactor can and will be, for a long time into
16 the future, one unit of power that was not produced by
17 the carbon-based fuels, coal, oil, and the risks
18 associated with carbon dioxide in the atmosphere so
19 transcend any other risks that society faces, that it
20 is absolutely trivial to be concerned with radiation
21 from nuclear power. It stands in the way of dealing
22 with a far more serious challenge from global warming.
23 Thank you for this opportunity to speak.
24 MR. CAMERON: Thank you very much, Hugh.
25 We're going to go to Sandy Jack, Sally Krenn and Jane

1 MR. WEISMAN: Good afternoon. David
2 Weisman, Alliance For Nuclear Responsibility. The
3 words I would read this afternoon are not my own. I'd
4 just like to read the following letter into the
5 record, in the hopes that it will shed some
6 clarification on what we believe is a procedural and
7 timeframe issue surrounding the relicensing of Diablo
8 Canyon. So I will just read this one-page letter into
9 the record.
10 The letter is on the letterhead of the
11 California Public Utilities Commission, Office of the
12 President, June 25th, 2009.
13 Mr. Peter Darby, president, chief
14 executive officer of Pacific Gas & Electric.
15 The letter begins: "Dear Mr. Darby: As
16 required by Assembly Bill 1632, Blakeslee, the Energy
17 Commission completed a comprehensive assessment of
18 Diablo Canyon and San Onofre, and adopted the study
19 and assessment of California's nuclear power plants,
20 AB 1632 report, as part of the 2008 Integrated Energy
21 Policy Report. This AB 1632 study recommended that
22 the CPUC take certain steps to ensure plant
23 reliability when we review PG&E's license renewal
24 feasibility study for Diablo Canyon.
25 "In particular, we need to ensure that we H-1

H-1 - cont

1 thoroughly evaluate the overall economic and
2 environmental costs, and benefits, of a license
3 extension for Diablo Canyon, especially in light of
4 the facility's geographic location vis-a-vis seismic
5 hazard and--excuse me, pardon me--seismic hazard and
6 vulnerability assessment.
7 "As part of this evaluation, PG&E should
8 report on its progress in implementing AB 1632's
9 report, recommendations on Diablo Canyon. The CPUC
10 will be looking to the Energy Commission's independent
11 Energy Progress Policy Report for information and
12 input to its license renewal decisions for Diablo
13 Canyon.
14 "It has come to my attention that PG&E
15 does not believe that it should include a seismic
16 study and other AB 1632 report recommended studies as
17 part of its Diablo Canyon license renewal study for
18 the CPUC.
19 "Apparently PG&E bases its decision on the
20 fact that the Nuclear Regulatory Commission's license
21 renewal application review does not require that such
22 a study be included within the scope of a license
23 extension application.
24 "That position, however, does not allow
25 the CPUC to properly undertake its Assembly Bill 1632

H-1 - cont

1 obligations to ensure plant reliability and, in turn,
2 ensure grid reliability in the event Diablo Canyon has
3 a prolonged or permanent outage.
4 "Therefore, the Commission directs PG&E to
5 perform the following tasks as part of its license
6 renewal feasibility study for Diablo Canyon."
7 And I will report only those ones that
8 directly pertain to the seismic issue.
9 "One. Report on the major findings and
10 conclusions from Diablo Canyon seismic tsunami studies
11 as recommended in the Assembly Bill 1632 report as
12 well as studies that are directed by any subsequent
13 legislative mandates, and report on the implications
14 and findings, and conclusions for the long-term
15 seismic vulnerability and reliability of their plant.
16 "Two. Summarize the lessons learned from
17 the Kashiwazaki-Kariwa plant experience in response to
18 the 2007 earthquake, and discuss the implications that
19 an earthquake of the same, or greater magnitude, could
20 have on Diablo Canyon. In particular, the Commission
21 needs PG&E to evaluate whether there are any
22 additional pre-planning or mitigation steps that the
23 utility could take for the power plant, that would
24 minimize plant outage times following a major seismic
25 event.

"Three. Reassess the adequacy of access roads to the Diablo Canyon plant and surrounding roadways, for allowing emergency personnel to reach the plant and local community plant workers to evacuate. This assessment needs to be, to consider today's local population and not rely on the situation extent when the plant was constructed. H-2

"Four. Conduct a detailed study of local economic impacts that would result from a shutdown of the nuclear plant and compare that impact with alternative uses of the Diablo site. H-3

"Five. Assess low-level waste disposal cost for waste generated through a 20 year plant license extension, including low-level waste disposal costs for any major capital project. H-4

"Six. Study alternative power generation options to quantify the reliability, economic and environmental impacts of replacement power options. H-5

"And seven. Include PG&E's response to the nuclear-related data requests and recommendations in future integrated energy policy reports.

"PG&E's rate case, D0703044, specifically linked PG&E's license renewal feasibility study for Diablo Canyon to the Assembly Bill 1632 assessment and PG&E is obligated to address the above-itemized issues

PACIFICWEST ENERGY SOLUTIONS, INC.

1/27/2010
75FR 4427
(4)

April 8, 2010

Patrick A. Weller, LEED AP
Executive Vice President
PacificWest Energy Solutions, Inc.
178 S. Fourth Street, Suite 203
Grover Beach, CA 93433
Tel: (714) 265-7585
pweller@pacwestes.com

Andrew Stuyvenberg, Project Manager
U.S. Nuclear Regulatory Commission
Mail Stop: O-11F1
Washington, DC 20555-0001

Dear Mr. Stuyvenberg,

I would like to thank the Nuclear Regulatory Commission (NRC) for conducting the environmental scoping meetings in San Luis Obispo in March 2010, and giving the local community a chance to provide input on what issues should be considered in the Environmental Impact Statement (EIS).

CY-1

I am writing to encourage the NRC to address Diablo Canyon's economic impacts on the local economy and educational facilities in the area. Because of Diablo Canyon Power Plant, Pacific Gas and Electric Company is the largest private employer in San Luis Obispo County with more than 1,600 jobs. Additionally, the company is the largest property tax payer in the county paying more than $24 million for the fiscal year 2009/2010 with a significant portion going to local educational institutions. I truly believe that the environmental document must evaluate all of the relevant issues in a fair and balanced manner.

I look forward to reading the draft environmental document later this year. Thank you in advance for your consideration.

Sincerely,

PacificWest Energy Solutions, Inc.

Patrick A. Weller

Patrick A. Weller, LEED AP
Executive Vice President

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PACIFICWEST
ENERGY SOLUTIONS
Conservation, Generation, Innovation

E-RIDS=ADM-03

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Template = ADM-013

Add = A. Stuyvenberg (AL53)
N. Ferrer (nbf)

NORTH COAST ENGINEERING, INC.
Civil Engineering • Land Surveying • Project Development

April 8, 2010

Andrew Stuyvenberg, Project Manager
U.S. Nuclear Regulatory Commission
Mail Stop: O-11F1
Washington, DC 20555-0001

Dear Mr. Stuyvenberg,

I would like to thank the Nuclear Regulatory Commission (NRC) for conducting the environmental scoping meetings in San Luis Obispo in March 2010, and giving the local community a chance to provide input on what issues should be considered in the Environmental Impact Statement (EIS).

Diablo Canyon Nuclear Power Plant has been a huge asset to our area. Not only does it produce clean energy, it is one of the most efficient and well run plants in the United States. I am proud to have the facility in our community. BS-1

I am writing to encourage the NRC to address Diablo Canyon's economic impacts on the local economy and educational facilities in the area. Because of Diablo Canyon Power Plant, Pacific Gas and Electric Company is the largest private employer in San Luis Obispo County with more than 1,600 jobs. Additionally, the company is the largest property tax payer in the county paying more than $24 million for the fiscal year 2009/2010 with a significant portion going to local educational institutions. With the state of our economy in California, I believe that the benefit that plant brings to the community is tremendous.

I truly believe that the environmental document must evaluate all of the relevant issues in a fair and balanced manner.

I look forward to reading the draft environmental document later this year. Thank you in advance for your consideration.

Sincerely,

Larry Werner, President/CEO
North Coast Engineering
725 Creston Road Suite B
Paso Robles, CA 93446

Steve White
P.O. Box 630
Cambia, CA 93428

earth_works@att.net
earth_works@

Prepared for U.S.NRC Environmental scope meeting March 3, 2010
Re: PG&E Application License Renewal DCNPP

One of my concerns is the threat of the continued operation of the OTC system at DCNPP with regards to the accumulated death and injury to marine life, specifically the Green Sea Turtle...an endangered species. Not only because of entrainment and thermal effects but additionally due to underwater noise pollution caused by the massive impeller/pumps used to move the estimated 2.5 billion gallons of sea water each day through the system. Many researchers are becoming concerned including the U.S. Navy, who witnessed detrimental effects to sea mammals during sonar data transmission experiments. I heard a marine biologist interviewed telling us that in busy shipping lanes, the acoustic effect on sea life who depend on sound extensively, such as whales, would be similar to "running a vacuum cleaner in your house 24/7". I saw no mention of underwater noise pollution due to round the clock operation of OTC impeller/pumps listed in PG&E's Environmental Report. CR-1

Another area of concern is a major accident at DCNPP due to catastrophic seismic event such as the greatest California earthquake ever recorded, the Fort Tejon Quake, that occurred on January 9, 1857. The 7.9M quake was centered 48 mile NE of Diablo near Parkfield on the San Andreas Fault. Approximately 400 times more energy was released in that quake than was released during the 6.5M 2003 San Simeon event. U.S.G.S. has tracked an occurrence history of earthquakes of this magnitude in the nearby vicinity at a frequency of 143 to 200 years. CR-2

According to the Southern California Earthquake Data Center, this immense quake left an amazing surface rupture scar over 225 miles along the San Andreas fault. As a result of the shaking, the current of the Kern River (125 mi. East of epicenter, approx.) was turned upstream, and water

CR-2 - cont

ran four feet over its banks. The waters of Tulare Lake were thrown upon its shores, stranding fish miles from the original lake bed. The waters of the Mokelumne River (150 miles North of epicenter approx.) were thrown upon its banks, leaving the bed dry in places. The Los Angeles River was reportedly flung out of its bed, too. In Ventura the mission sustained considerable damage. Displacement of 30 feet in the Carrizo Plain area.

Elsewhere I read an account by otter hunters offshore the Santa Cruz Island south of Santa Barbara, reporting extensive sections of sea cliffs falling into the ocean.

CR-3

These descriptions of the 7.9M quake along with the knowledge of the two faults in the immediate area, along with all the other concerns surrounding the dirty, dangerous, expensive Diablo Canyon Nuclear Power Plant, are more than enough justification to not only deny license renewal, but also suspend the current license.

I have heard many say that we need PG&E's Diablo Canyon power, that it supplies 8% of California's electric needs (550,000 homes), although aren't the reactors shut down 10% of the time for refueling and maintenance? And isn't 7% of electric energy lost to resistance in transmission and distribution? And I also hear that San Luis Obispo County acquires so much revenue from PG&E. Yet in PG&E's Environmental Report it is stated the company's contribution to San Luis Obispo County is "SMALL". When I looked at the county assessor's revenue summary and the SLO County Chamber of Commerce data, PG&E contributed approx. 4% of SLO County $12.1 billion gross product. For comparison, tourism generates $1.1 billion of that amount and employs 16,610 SLO County residents. Diablo employs about 1,200 people or a little over 1% if the 101,000 workers in SLO County. (REC Solar employs 400 people and they do not have to pay for guarding solar panels for 100,000 years.) Yes, recent annual property taxes PG&E paid were close to $22 million of the county's $425 million property tax revenues, yet the tourist generated transient occupancy tax in unincorporated San Luis Obispo County (basically my area...Cambria) generated $21.8 million tax revenue. It really does looks like if Diablo Canyon is shut down there would be no significant impact to the local economy and then there is the Bloom Box, asking the question ...is the grid on the way out anyway?

DiabloCanyonCEm Resource

From: Michael Wighton [mwighton@ajrefrigeration.net]
Sent: Friday, April 09, 2010 6:54 PM
To: Stuyvenberg, Andrew
Cc: LNB5@PGE.COM
Subject: Diablo Canyon Letter of support
Attachments: DCPP Support Letter.pdf

Mr. Stuyvenberg,

Attached is our letter of support of Diablo Canyon Power Plant for the upcoming hearing. BQ-1

Thank you for your consideration.

Michael Wighton

A & J Refrigeration

4096 Horizon Lane

San Luis Obispo, CA 93401

Ph. (805) 543-7458

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<<...>>

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April 8, 2010

Andrew Stuyvenberg, Project Manager
U.S. Nuclear Regulatory Commission
Mail Stop: O-11F1
Washington, DC 20555-0001

Dear Mr. Stuyvenberg,

I would like to thank the Nuclear Regulatory Commission (NRC) for conducting the environmental scoping meetings in San Luis Obispo in March, 2010, and giving the local community a chance to provide input on what issues should be considered in the Environmental Impact Statement (EIS).

I am writing to encourage the NRC to address Diablo Canyon's economic impacts on the local economy and educational facilities in the area. Because of Diablo Canyon Power Plant, Pacific Gas and Electric Company is the largest private employer in San Luis Obispo County with more than 1,600 jobs. Additionally, the company is the largest property tax payer in the county paying more than $24 million for the fiscal year 2009/2010 with a significant portion going to local educational institutions. I truly believe that the environmental document must evaluate all of the relevant issues in a fair and balanced manner.

I look forward to reading the draft environmental document later this year. Thank you in advance for your consideration.

Sincerely,

Michael Wighton

Michael Wighton, President
A & J Refrigeration
4096 Horizon Lane
San Luis Obispo, CA. 93401

1 Commission, and the Federal Energy Regulatory
2 Commission, as well as the day to day, hour by hour,
3 minute by minute operation of the Northern California
4 electrical power grid.
5 It's with this background that I make the
6 following comments, and I am only going to hit the
7 high points here. Three to five minutes allows no
8 more.
9 My first point. Diablo Canyon is vital to AT-1
10 the Northern California electric grid. Baseload
11 generation capacity and voltage support cannot be
12 easily or quickly replaced. Diablo Canyon produces
13 approximately 20 percent of the energy needs for
14 Northern California and approximately 10 percent of
15 California's energy needs.
16 Arguably, Diablo is the lowest incremental
17 cost source of energy amongst PG&E's generating
18 assets. Possibly only one or two hydro river systems
19 generate at a lower incremental cost. And Diablo
20 operates at a comparatively low all-in cost, or the
21 total cost of operation in going forward, and it is
22 amongst PG&E's best.
23 Diablo's 2300 megawatts of capacity
24 provide a sizeable corner for the California electric
25 system foundation. Energy and capacity are critical,

AT-1 - cont

1 both for the safety of California and to its economy.
2 Diablo provides critical voltage support to the 500
3 kV, or kilovolt, main transmission backbone, the
4 backbone of California's electrical grid.
5 And in particular, Diablo, and some other
6 resources, provide the responsiveness to "push or
7 pull" the reactive power needs of the grid, that many
8 other sources of generation invoked today cannot
9 supply, such as solar or wind power.
10 My second point. Diablo is a diverse
11 energy supply. Not unlike diverse investments, a
12 diverse energy supply is vital to PG&E's customers,
13 others in this room, and me, as well as the vitality
14 of the California economy. Diversification in our
15 electric supply protects us from the annual
16 fluctuations. In the rains, PG&E gets hydro power not
17 only from its own system but also from the Bonneville
18 Power Administration in Washington State, and British
19 Columbia Hydro. Those vary with the annual rainfall,
20 and as the prices of natural gas vary.
21 California fossil generation supplies are
22 predominantly gas-fired. As well as the daily and
23 seasonal fluctuations in wind and solar generation.
24 As such, Diablo provides diversity comparable to the
25 stability of bonds in a diversified retirement

AT-1 - cont

portfolio.

My third point. Geography and limited electrical import capability require California to be more self-sufficient than most of the rest of the United States, where the grid is more interconnected, underscoring the importance for native generation.

Fourth point. The resource planning horizon for energy and capacity needs is underway. The fundamental elements of generation and capacity planning are carried out decades in advance of anticipated need. It is for this reason that PG&E seeks license renewal ten years in advance of license expiration.

With or without Diablo Canyon, I am confident that PG&E will line up the necessary generation to serve its customers. Which brings me to my next point. Costs.

PG&E will recover the full cost of Diablo Canyon. That's a given. Similarly, PG&E will recover the costs of future generation and energy purchases made on behalf of its customers.

As I mentioned in my preceding comment, PG&E will obtain the resources needed to supply its customers. Accordingly, logically, it makes infinite sense to me to continue the operation of Diablo

AT-1 - cont

1 Canyon, whose costs will be fully recovered, rather
2 than to cease Diablo operations, replace it with other
3 supplies, and recover those costs on top of the
4 investment we, the customers, have already made.
5 My last point. Diablo is environmentally
6 friendly. Diablo does not use fossil fuels to produce
7 energy. As such, it has a negligible carbon
8 footprint. California and the United States have set
9 ambitious goals for greenhouse gas reduction.
10 Not only can these objectives be met with
11 a generation portfolio containing nuclear elements,
12 but arguably, must employ substantial environmentally
13 friendly nuclear supplies.
14 In conclusion, Diablo is the preferred
15 California energy choice for today and the foreseeable
16 future. Diablo is a key ingredient of a safe,
17 reasonable cost, California energy portfolio.
18 Resource planning decisions for the next 10 to 30
19 years are being made now, right now.
20 As customers, we don't need, much less
21 want, to pay twice. Allow us to reap the benefit of
22 the investment we've already made in Diablo Canyon.
23 Few resources can provide the generation reliability
24 provided by Diablo. Those needed for minute to
25 minute, day by day, year in, year out needs of this

AT-1 - cont

1 state.

2 And lastly, nuclear energy is a critical

3 ingredient if California and the United States are to

4 reduce production of CO2 and other greenhouse gases.

5 Thank you for the opportunity to speak.

6 MR. CAMERON: Thank you, Larry.

7 MR. WOMACK: I hope it was not too long.

8 MR. CAMERON: Just a little bit, but was

9 very articulate so--at any rate, this is John. John

10 Lindsey. And then we're going to go to Charlie Smith.

11 MR. LINDSEY: First of all, I'd like to

12 thank the Nuclear Regulatory Commission for allowing

13 us to make these comments to the public. Second of

14 all, my name's John Lindsey and I am a PG&E employee.

15 As a kid growing up in Sonoma County in Northern

16 California, I fell in love with the ocean by doing

17 quite a bit of diving off the coast of Sonoma County

18 and Marin County.

19 At that point I joined the Navy and spent

20 24 years in the Navy, and had the opportunity to dive

21 throughout the world, from the Red Sea, the Indian

22 Ocean, to the Eastern Pacific, Western Pacific.

23 And in 1990, I began my career at Diablo

24 Canyon, and was asked to join the PG&E dive team, and

25 I said of course. I could tell you that over my years

Sharon Young

mediation

personnel training

management consulting

1/27/2010

75FR 4427

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2010 OCT 27 PM 4:05

RULES AND DIRECTIVES BRANCH USNRC

April 9, 2010

Andrew Stuyvenberg, Project Manager
U.S. Nuclear Regulatory Commission
Mail Stop: O-11F1
Washington, DC 20555-0001

Sent by fax: 301-415-2002

Dear Mr. Stuyvenberg,

I would like to thank the NRC for holding community meetings in San Luis Obispo last month. The meetings were filled with timely information, allowing our local community to participate in this important process.

In addition to providing carbon-free, efficient power to California, PG&E is a significant economic force in our County. It provides head-of-household jobs and crucial funding for local educational institutions through property tax payments. PG&E is an active corporate citizen, contributing to the support of community non-profits, both financially and through volunteerism. CH-1

I believe that it is vitally important that your analyses include these economic and social impacts. I look forward to reading the draft environmental document later this year.

Best regards,

Sharon G. Young

Resident and Business Owner, Avila Valley

1250 San Luis Bay Drive

San Luis Obispo

California 93405

Phone (805) 595-7674

Fax (805) 595-7674

SUNSI Review Complete
Template=ADM-013

E-RIDS=ADM-03
Add=A. Stuyvenberg (AKS3)
N. Ferrer (nbf)

Apr 09 10 01:24p sharon 8055952898 p.1

1 relicensed every 20 years, infinitum. How is that
2 going to be financed?
3 Our grandchildren are going to have to do that.
4 We're already going to have all the waste
5 from what it's come up with now. Or do we really want
6 20 more years of waste there? I don't think so. So
7 thank you.
8 MR. CAMERON: Thank you, June. And Jill,
9 Jill Zamek, and then we're going to go to Jane
10 Swanson, and then we're going to go to Rochelle Becker
11 on video.
12 MS. ZAMEK: My name is Jill Zamek, and I'm AM-1
13 speaking on behalf of the San Luis Obispo Mothers For
14 Peace. In the NRC environmental review for PG&E's
15 license renewal, Mothers For Peace requests that the
16 issue of inadequate design basis documentation be
17 included. NRC document titled "Frequently Asked
18 Questions on License Renewal of Nuclear Power Plants"
19 states that, quote, the current licensing basis, the
20 CLB, is the particular set of NRC requirements
21 applicable to a licensed operating nuclear power
22 facility. End quote.
23 These CLB changes are noted in documents
24 such as the Final Safety Analysis Report, Technical
25 Specifications and License Amendments.

AM-1 - cont

10 CFR 54.29 requires that, quote, there is reasonable assurance that the activities authorized by the renewed license will continue to be conducted in accordance with the current licensing basis, and that any changes made to the plant CLB in order to comply with this paragraph are in accord with the Act and the Commission's regulations.

Mothers For Peace asserts that the design basis documentation is lacking at Diablo Canyon, and that these design and configuration deficiencies could affect the operability of required equipment, interfere with the functionality of aging structures and components, and raise unreviewed safety questions.

Recent NRC inspection reports identify multiple examples of PG&E making unauthorized changes to its facility.

10 CFR 50.59 allows PG&E to make changes without prior NRC approval, if certain conditions are met. Otherwise, a license amendment is needed.

PG&E has a history of poor implementation of this regulation. An adverse trend has been noted by the NRC inspectors regarding issues related to poor licensing and design basis management.

In the NRC integrated inspection report from August 5th, 2009, noted violations demonstrating-

AM-1 - cont

-and these are all quotes--failure to maintain adequate plant design basis, weakness in the licensee's programmatic processes to evaluate problems associated with maintaining the plant licensing basis; failure to implement the industry 50.59 program; failure to understand when prior NRC approval is required for change to the facility; and failure of the licensee to recognize a condition outside of the plant design basis.

These violations involved a variety of systems--off-site power, spent fuel pool, 500 KV switch yard, containment sump, emergency diesel generators, and explosive mixtures of oxygen and hydrogen.

In the NRC inspection report, from the recent one, February 3rd, 2010, identified an adverse trend in problem evaluation, which includes eleven--quote--11 NRC documented findings with problem evaluation crosscutting aspects.

The inspectors concluded that most of the NRC-identified examples of less-than-adequate problem evaluation during the first two quarters of 2009 were related to a poor understanding of the plant design, licensing basis, or implementation of administrative regulatory programs. End quote.

AM-1 - cont

In April 2009, PG&E completed a root cause analysis of the adverse trend, and concluded that, quote, Diablo Canyon evaluations were focused on meeting historical compliance based on licensing and design positions, or relied on previous evaluations.

The licensee concluded that contributing to this trend was that the complex Diablo Canyon licensing basis is not well understood or communicated.

The inspectors concluded that the licensee's corrective actions, associated with October 2009 apparent cause evaluation, were insufficient to identify and correct past inadequate evaluations that have led to incorrect changes in the plant licensing basis. End quote.

Examples of the adverse trend provided in this inspection report included inadequate 50.59 evaluation of steam generator tube rupture; less-than-adequate replacement reactor head modification design control; and less-than-adequate change evaluation to the facility as described in the final safety analysis update, involving the critical seismic damping values.

Unresolved items in the corrective action following degraded off-site power system; containment sump recirculation valve position interlock failure

AM-1 - cont

1 due to inadequate testing.

2 Given PG&E's demonstrated lack of a clear
3 understanding of the current licensing basis, Mothers
4 For Peace claims that PG&E cannot offer reasonable
5 assurances of its ability to manage the effects of
6 aging into the renewal period.

7 Mothers For Peace seeks a thorough
8 examination of all the discrepancies between the
9 current licensing basis and the plant design basis.
10 All inconsistencies must be rectified and confidence
11 restored, before the NRC can grant a license renewal.
12 Thank you.

13 MR. CAMERON: Thank you. Thank you very
14 much, Jill. And now we're going to go to Jane
15 Swanson, and then will we be ready to play the video?
16 Okay. This is Jane.

17 MS. SWANSON: Yes. Jane Swanson speaking
18 on behalf of San Luis Obispo Mothers For Peace.
19 Before I present our prepared scoping comment related
20 to seismic issues, I want to share a news report that
21 came to our attention over the dinner hour.

22 A 6.4 earthquake is reported to have
23 happened in Taiwan at dawn on Thursday. So that was
24 just a very few hours ago. Taiwan of course is on the
25 Ring of Fire, along with Chile and Japan, sites of

deeply about Mother Earth, and the planet that we've been given to take care of.

And I figured it was only natural for me to speak here tonight, because this is all about the environmental impact of this operation, and should we continue.

I think it's important that we all realize that we are not in an ideal situation. As a civilization, we have issues. There are too many people on this planet and population control is not on the table as a discussion topic yet. That being said, electrical demand in this country is not decreasing any time soon. It's a serious issue. BD-1

You know, we've tried our best at, you know, energy efficiency measures, and I can't find another place in my house for a fluorescent light bulb. But, nonetheless, we keep having people--we keep buying things at Best Buy. We keep increasing the electrical demand load, including--now we're going to talk about using electrical cars, which would be a huge increase in electrical demand.

I spent the vast majority of my adult life studying nuclear power. When I was a child in high school, I grew a plant in radioactive water and mapped the nutrient flow. That's what we did in high school BD-2

BD-2 - cont

1 in Wisconsin.

2 I got degrees in nuclear power, nuclear
3 engineering, a degree in physics from the University
4 of Wisconsin-Madison. I've been licensed to operate a
5 research reactor and have a certificate for a senior
6 reactor operator license at Diablo. My current job,
7 I'm involved in oversight at this facility, and I'm--
8 part of my job is I look at the problems. I look at
9 the organizational impact of what we're doing, why
10 we're doing it, and is it the right thing to do.

11 And I work daily with the Nuclear
12 Regulatory Commission and I--you know, I'm proud to
13 call them peers. I think they're doing an excellent
14 job out there, and they're doing the right thing, and
15 I think a lot of people have issues with trust here,
16 and that's a big thing. You know, we need to trust
17 people. There's a pause there, okay, on purpose.

18 We need to trust seismologists because
19 they've spent their lives studying that. We need to
20 trust engineers. They've spent their lives studying
21 that. Okay.

22 I understand there's fears out there,
23 there's concerns, but at some point you can't do
24 everything. You need to trust. And the people who
25 are in charge of this power plant, the people who do

BD-2 - cont

1 the oceanography studies, the people that do
2 maintenance out there, the people that operate the
3 plant, have come here, repeatedly, and told you it's
4 okay, we've look at it and it's okay.
5 So that's all. Thank you.
6 MR. FULLER: Thank you. Next we have Will
7 Landreth and then Ms. Moffatt. And then we'll hear
8 from Mr. Carl Dudley.
9 Mr. Landreth. Did Mr. Landreth leave
10 before we had a chance to hear from him? It seems so.
11 Okay. Ms. Moffatt. Oh. And could you please state
12 your first name. Thank you.
13 MS. MOFFATT: I sure will. My name is
14 Carolyn Moffatt. I'm president of the San Luis Harbor
15 Commission. As the nearest neighbor to PG&E Diablo
16 Canyon Power Plant, the district wishes to ensure that
17 the following five issues are addressed prior to
18 relicensing. The first cannot be overemphasized, so
19 it's not redundant, nor is it manipulative. The
20 district believes the precursor to any discussion of
21 relicensing must be a comprehensive evaluation of the
22 hazards of seismic activity.
23 PG&E is currently conducting additional
24 studies and three-dimension mapping. The relicensing
25 application should be put on hold until such time that

4.2 Comments Submitted During the 2015 Scoping Period

9/01/2015
80FR37664

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2015 AUG 18 PM 3:45
RULES AND DIRECTIVES BRANCH USNRC

August 10, 2015

To Whom It May Concern,

This letter is in regard to re-licensing Diablo Canyon Nuclear Power Plant.

As a longtime resident of Avila Beach, I am familiar with "outages" at Diablo, in which extra workers come in to do maintenance and repair. The plant itself, from a neighbor's perspective, appears to be safe and well monitored.

However, my concerns are about the waste. Consider a property owner who builds a beautiful house on the coast. He neglects to put in a bathroom. The neighbors complain and he builds an outhouse and assures the neighbors, the health department, the mortgage company, that the waste will be stored in drums, temporarily, until hauled away. While it's a silly example, it illustrates the fact that even human waste which will eventually break down, must be safely disposed of and would not be allowed to accumulate. 001-L011-1

Not only is the most toxic substance, Plutonium stored in our neighborhood, but 30,000 pounds of it sits in thin stainless steel spent fuel containers in an area of 13 earthquake faults. These containers are not designed for over 20 year storage. There's no aging management designed into these thin canisters. Neither can they be inspected for cracks. It's clear that the plant must be shut down. The longer it runs, the more highly radioactive waste it generates.

It is your responsibility to deny re-licensing for Diablo Canyon Nuclear Power Plant. 001-L011-2

Sincerely,
Sylvia Alcon

PO Box 442
Avila Beach CA
93424
sjalcon@att.net

SUNSI Review Complete
Template = ADM – 013
E-RIDS= ADM-03
Add= M. Wentzel (mjw2)

speak.

OPERATOR: Okay. Thank you. And as a reminder that if anyone on the phone would like to make a comment, please queue up by pressing star one.

MS. ANDERSON: Hi, I'm Amy Anderson from Santa Maria. And although I'm 30 miles downwind of Diablo, I don't think that's far enough. 002-T002-34

And I'm here with Santa Barbara County Action Network. And I want to remind you as you're considering the relicensing that California's goal, and it's an admirable one, is to increase clean, renewable, carbon free energy by 33 percent by 2020.

And it's absurd to call a form of energy that produces the most toxic substance in the world, plutonium, either clean or safe. There's no where to ship or store the 30 thousand pounds of plutonium already onsite.

And to produce more shows a clear lack of foresight and imagination. And the longer we keep the unsafe, dirty energy, the longer we have to wait for safe, clean alternatives.

So, please deny the relicensing of Diablo. Because Diablo stands in the way of our clean energy future. And it stands on 13 earthquake faults.

And once what should take it's place is wind

and solar, which we have ample supplies of both here. And they also come, it's been shown, with two to 11 times more jobs than either fossil fuels or nuclear power.

002-T002-34 cont'd

So, we could relicense and continue with a dirty, dangerous energy for -- until 2045, so for 30 years. Or, we can go ahead with clean energy now and have at least twice the jobs.

I think that's a very easy choice.

(Applause)

MR. HAGAR: Okay, Operator, is there any of the people on the phone that want to make comments now?

OPERATOR: At this time there are no questions on the phone.

MR. HAGAR: I'm sorry, say again?

OPERATOR: At this time there are no questions on the phone.

MR. HAGAR: Okay. No questions. So, Jane Baxter and then Charles Varni. Charles are you here?

MR. VARNI: I am.

MR. HAGAR: Okay, good.

MS. BAXTER: Hi, I'm Jane Baxter. I live 30 miles downwind in Santa Maria. And there are many issues that I feel should lead the Commission to deny renewal of this plant.

MR. GREENING: Yes, I am.

MS. ANDERSON: So, hello. My name is Kaila Anderson and I'm the project coordinator for the Economic Vitality Corporation here in San Luis Obispo County. Thank you for having me here. I just want to briefly speak about the economic benefits that Diablo Canyon Power Plant brings, not only to this region, but to California as a whole. And it also does so in an environmentally conscious way. 003-T001-68

So, the first thing -- oh, I'm going to speak very briefly because a lot of my comments were -- a lot of my issues were addressed earlier.

So, I know that Lynn Compton brought up the fact that the two units at Diablo produce enough energy to meet most of the needs of the Californians here in Northern Central California, and this is nearly 10 percent of California's energy portfolio and more than 20 percent of the power that PG&E produces as a whole.

And then for 30 years Diablo Canyon has continued to safely produce clean and reliable energy without using greenhouse gases, which is extremely important, thus avoiding 6 or 7 million tons per year of greenhouse gases that would otherwise be emitted by conventional generation resources.

And then lastly I just want to touch on that

nuclear energy produces more clean air energy than any other source and it is the only one that can produce large amounts of electricity 24 hours a day, 7 days a week.

003-T001-68 cont'd

And then just to conclude, the EVC as an organization, we stand behind PG&E and the work that Diablo Canyon does and the economic benefit that it brings to this county. Thank you.

(Applause)

MR. HAGAR: The speaker after Eric Greening will be Terri Strickland. Terri, are you here?

(No audible response)

MR. HAGAR: Okay.

MR. GREENING: Thank you. I am Eric Greening, and you're interested in new information that has come up since this process started. On May 30th, 2015 published in the Journal of Geophysical Research an article by Mark. R Legg and three other co-authors entitled, "High Resolution Mapping of Two Large-Scale Transpressional Fault Zones in the California Continental Border Lands: Santa Cruz-Catalina Ridge and Ferrelo Faults." We're talking about faults that had thought not to be capable of large earthquakes now appearing to be capable of large earth quakes. They are

PUBLIC SUBMISSION

As of: 9/1/15 5:06 PM
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Tracking No. 1jz-8kv2-kr2j
Comments Due: August 31, 2015
Submission Type: Web

Docket: NRC-2009-0552
Notice of Receipt and Availability of Application for Renewal of Diablo Canyon Nuclear Power Plant License

Comment On: NRC-2009-0552-0026
Diablo Canyon Power Plant, Units 1 and 2; Notice of Intent to Prepare an Environmental Impact Statement

Document: NRC-2009-0552-DRAFT-0076
Comment on FR Doc # 2015-15921

7/11/2015
80 FR 37664

E-RIDS = ADM-03
Add = Mr. Weidenfeld (mfs)

Submitter Information

Name: Anthony Armini
Address:
109 Gardenia Way
Nipomo, CA, 93444
Email: Tonya339@charter.net

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RECEIVED
2015 SEP -1 PM 5:26
RULES AND DIRECTIVES BRANCH USNRC

General Comment

Source Review Complete
Template = ADM-013

California is now in a severe drought. We need water, new water, to make our environment and our economy healthy again and the only way to get it seems to be desalination. The people of California are in favor of building Desal plants.

004-L085-1

Diablo Canyon already desalinates water for its own use.
The plant can produce 1.5 million gallons per day and 60% of that can be made available to fight fires and to the public. PG&E and county officials have already agreed to this and are presently planning how and where to pipe the water to help the drought.

Nuclear Electricity is uniquely suited for desalination because to run efficiently a Reverse Osmosis desal plant must have full power 24 hours a day, every day, rain or shine. Solar and wind power are too intermittent to supply continuous power to a desal plant. Solar power plants have a capacity factor of about 25% which means they can only produce full name-plate power and average of 6 hours per day over a one year period. No one would build a large Desal plant and run it only 25% of the time using solar power.

The largest Desal plant in the U S will come on line this fall in Carlsbad, California (near San Diego). It will produce 50 million gallons per day and needs 40 Megawatts of steady electric power. Unfortunately that power will come from burning fossil fuel further adding to our air

pollution.

In the near future, if the drought continues, we will need 15 to 20 Carlsbad size desal plants up and down the California coast. To power these we will need almost 1 Gigawatt more of non-solar, non-wind, power plants further increasing air pollution. More Nuclear Power is the only solution. 004-L085-1 cont'd

Diablo Canyon, and nuclear power in general, not only causes no damage to the environment it can actually improve the environment by producing power and water with no additional pollutants added to our air.

Californians for Green Nuclear Power. I want to mention about the drought. California is now in a severe drought. We need water. We need water to make our environment and our economy healthy again. The only way to get it seems to be desalination. The people of California are in favor of building desal plants.

004-T001-47

Nuclear electricity is uniquely suited for desalination because to run efficiently, a reverse osmosis desal plant must have full power 24 hours a day, every day, rain or shine. Solar and wind power are too intermittent to supply the nice, continuous power that reverse osmosis needs. The largest desal plant in the US will soon come online this fall in Carlsbad, California. That's near San Diego. It will produce 50 million gallons per day, and needs 40 megawatts of steady, electric power. Unfortunately, that power will have to come from fossil fuels exclusively. In the near future, if the drought continues, we will need 15 or 20 Carlsbad-sized plants up and down the California coast. To power this, we will need almost one gigawatt -- that's a billion watts -- more of non-solar, non-wind power, further increasing air pollution. More nuclear power is the only solution.

MR. HAGAR: All right, following Ellie will be Wesley Weisenberger.

San Luis Obispo County Cattlemen's Association
P. O. Box 302
Paso Robles, California 93447

August 18th, 2015

7/1/2015
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(23)

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2015 AUG 26 PM 5:22
RULES AND DIRECTIVES BRANCH USNRC

Cindy Bladey, Office of Administration
Mail Stop: OWFN-12 HOS,
U. S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Dear Ms. Bladey:

Since we were unable to attend the NRC hearing held in San Luis Obispo, Calif. on August 5th, 2015, for the reasons listed below, we would like to go on record in support of the renewal of Diablo Canyon's two operating licenses for another 20 years.

005-L023-1

1. Nuclear energy produces more clean-air energy than any other source and is the only one that can produce large amounts of electricity 24/7.
2. The two units at Diablo Canyon produce a total of 18,000 gigawatt-hours of clean and reliable electricity annually, which is enough energy to meet the needs of more than three million Northern and Central Californians (nearly 10% of California's energy portfolio and more than 20% of the power that PG&E provides throughout its service area).
3. The plant generates more than 20 percent of the electricity used by PG&E customers; with the important contribution of zero-emissions power from nuclear power, more than half of PG&E's electricity is generated from carbon-free sources.
4. Due to its ability to generate zero-emissions electricity 24/7, the plant plays an important role in helping the state to cost-effectively meet its greenhouse gas reduction goals under the Global Warming Solutions Act – AB 32.
5. For 30 years, Diablo Canyon has continued to safely produce clean and reliable energy without greenhouse gases (GHG), avoiding 6 to 7 million tons per year of GHGs that would be emitted by conventional generation resources.
6. Environmental stewardship is one of the cornerstones of PG&E's values, and that commitment is evident throughout the 12,000 acres that make up the land upon which Diablo Canyon sits.
7. Through adherence to Best Management Practices, PG&E sustains the environmental qualities of the Diablo Canyon lands by managing and protecting natural and cultural resources; sharing the resources with communities and educational organizations; practicing sustainable agriculture; and managed access programs to promote environmental appreciation.

Thank you for favorable consideration to renew these two licenses.

Sincerely,

Steve Arnold, President
San Luis Obispo Co. Cattlemen's Association

SUNSI Review Complete
Template = ADM – 013
E-RIDS= ADM-03
Add= M. Wentzel (MSW2)

Hosgri was found by Shell Oil while Diablo was being built. The rest we learned about after. The newly found Shoreline fault crosses within less than 1,000 yards of the reactor's core.

How can we believe that Diablo is strong enough to withstand earthquakes coming from these fault lines if they were not accounted for in the original blueprints in that construction more than 40 years ago? We know that Diablo is just 45 miles from the San Andreas fault. The quake that destroyed Fukushima was twice that distance from the reactors there. Given our short time here, we want to urge you to finally and truly act as independent regulators. We ask you to put the health and safety of the public first, ahead of the short-term needs of PG&E, ahead of the agenda of the nuclear power industry. For the safety of California, we ask you to shut Diablo now, Bonnie Raitt.

MR. HAGAR: After Sherry Lewis will be Joey Ricano. Is that right, Joey?

MS. ASH: Hi, I'm Paula Ash, and I'm here on behalf of Jackson Browne, a musician, activist and board member of Musicians United for Safe Energy. Every day Diablo Canyon takes in 2.5 billion gallons of sea water and discharges that sea water back into the ocean 20 degrees hotter. So much for nuclear power as 006-T001-25

a solution for global warming. It has been estimated by biologists that more than 1.5 billion fish die annually in early life stages as the result of the antiquated cooling system at Diablo Canyon. 006-T001-25 cont'd

While the state water resource control board may be considering creating an interim mitigation fee, this fee won't do anything to address the loss of aquatic life or the real cost of allowing this much ocean warming to go unchecked. Governor Brown has set very serious goals for the reduction of climate change in the near future. We need to do everything we can to meet those goals. Although it's been argued that nuclear power is clean and will help meet climate change goals, because nuclear power plants like Diablo that are at risk of closing can't compete with cheaper natural gas and renewables, this week the EPA announced states will no longer be able to meet their clean energy goals by extending the licenses of these nuclear power plants. 006-T001-26

At a time when the world's oceans are reeling from the effects of over fishing and pollution and ocean acidification threatens the global oceans' ability to produce the marine life that supports all life on earth, including human life, it is unconscionable that this wasteful and unnecessary technology be allowed to continue its assault on the 006-T001-27

Pacific Ocean and to slow our passage to a safe and sustainable energy future. Shut down Diablo Canyon today, Jackson Browne.

006-T001-27 cont'd

MR. HAGAR: I got a little bit out of sync here. This is Sherry, and now Joey Ricano.

MS. LEWIS: Is this the one? It's this one? My name is Sherry Lewis. I'm with Mothers for Peace. I want to read portions of a new contention regarding adequacy of severe accident mitigation alternative analysis prevented by David Jackson in contention to the NRC -- well, probably wasn't the NRC, but I'm getting mixed up. Anyway, PG&E's severe accident mitigation analysis is inadequate to satisfy the National Environmental Policy Act implementing regulations because PG&E's evaluation of potential mitigation measures is not based on a sufficiently rigorous or up-to-date analysis of seismic risks.

As a result, PG&E's evaluation of the comparative costs and benefits of measures to prevent or mitigate the effects of a severe earthquake does not sufficiently credit the cost effectiveness of mitigation measures. PG&E's seismic hazard analysis is insufficiently rigorous and relies on outdated or unjustified methods and assumptions. Given the inadequacies of PG&E's seismic hazard analysis, which

Ashley will be Anthony Kalvans. Is that right Anthony? You're next.

MS. ASHLEY: Can you hear me? Okay, thank you. Thank you NRC for this opportunity. And thank you Mothers for Peace for bringing this awareness to me. 007-T002-40

Forgive me for not recalling the lecturer who brought this unforgettable statement to my attention. He said, during the time of slavery in this country, the debates were not about how to free the slaves. But rather, how to make life better for the slaves.

So much power was produced by Denmark's wind farms just recently that the country was able to meet the domestic electricity demand and export power to Norway, Germany and Sweden.

Other countries seem to understand that economically solar and wind power are proving to be the cheapest forms of energy production. Nuclear energy is no longer cost effective here or anywhere.

I realize I am echoing points that have been made. The issue here surely is not whether Diablo Canyon is safe or for how long and against what odds.

But rather, how can we work together to transition now to solar, wind and other renewable energy sources so that we can continue to have good jobs.

Continue to have all the power we need and then some. Save money and eliminate the threat of harm to humans and other living things.

007-T002-40 cont'd

We must do this now. It is the right and only thing left to do. Although I am not a spokesperson for Mothers for Peace, I thank them for the resolved courage, their exhausting research and relentless dedication to this cause. They rock the cradle.

(Applause)

MR. HAGAR: and the speaker after Anthony will be Kathleen Stevens. Is Kathleen here? Then we'll go to Gina Mori.

MR. KALVANS: Can everyone hear me okay? Give me a thumbs up if you can hear me okay. Okay. Good. Sorry, I do this a lot. So, I want to make sure everyone can hear me.

My name is Anthony Kalvans. I am a past, present and current Director of San Miguel Community Services District in northern San Luis Obispo County. Tonight though, I am speaking on my own time and for my own voice. I am not representing my district.

I am speaking in favor of license renewal for Diablo Canyon power plant as I'm highly concerned about the socioeconomic impacts on San Luis Obispo County under the assessed alternatives license renewal.

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August 31, 2015

U.S. Nuclear Regulatory Commission
Chief, Rules, Announcements and Directives Branch
Division of Administrative Services
Mailstop OWFN-12HO8
Washington, DC 20555-0001

Re: PG&E Diablo Canyon License Renewal: Scoping Comments on Environmental Review; Docket ID NRC-2009-0552

Dear Chief:

Port San Luis Harbor District has enjoyed a mutually beneficial relationship with our neighbor, PG&E, for many years. Whether the issue has been cooperation on projects of community benefit (Coastal Clean-Up Day), management of coastal access (Pecho Coast Trail) or support for the District's efforts at energy conservation, PG&E has been a good neighbor and partner.

The District has, over the years, actively participated in and commented on the review and permitting process for PG&E projects.

The Nuclear Regulatory Commission has asked for comments on the scoping of the environmental review to be conducted prior to a decision on relicensing of the plant.

The District will divide our comments on issues to be addressed in the environmental scoping process into two parts: those of direct impact on and specific to Port San Luis Harbor District, and those of a more general nature and of concern to the larger community.

District concerns:

1 **Socio-economic studies**: While the District recognizes that the socio-economic impacts of relicensing will be reviewed as a part of the EIS, and while the District recognizes the significant financial benefit to both the District and the community at large of continued operation (employment, unitary tax revenues), the District wishes to see an evaluation of the impact of the one mile exclusion zone on local fishing and fishing support businesses. Commercial and recreational fishermen are currently prohibited from fishing within this zone; this, in conjunction with Marine Protected Areas (MPAs), the potential for closure of fishing grounds for the development of wave energy projects, and other regulatory closures, has a cumulative impact on the livelihoods of commercial fishermen and the shore based businesses that support both them and recreational fishermen. Given the absence of a no-fly

008-L077-1

zone over DCPP, and given the disparity between this closure of state waters and the access granted in the waters off now retired San Onofre NPP, is this continued closure of state waters justified? The District will also address this concern to the appropriate federal agencies involved in the original determination of the need for this exclusion. **The District requests that the environmental documents address the justification for the one mile exclusion zone in the waters off the plant.** 008-L077-1 cont'd

2 **Marine Safety**: The coast of California has a limited number of opportunities for mariners to seek refuge from weather, or to address mechanical problems, in safety. Certain parts of the coast are more unforgiving, with fewer opportunities for safe harbor, than others. Until the institution of the exclusion zone around DCPP, the intake cove at Diablo Canyon was accessible to mariners as a harbor of refuge. **The District requests that the security benefits of the exclusion zone, if shown to exist, be weighed against the safety impacts of the loss to mariners of a harbor of refuge, and that the intake cove be considered a harbor of refuge.**

3 **Emergency operations:** Emergency planning is an ongoing exercise with continual refinement and improvement in preparing for the greatest level of public safety in the event of an emergency. In the past, in response to PG&E's application for the development of the Independent Spent Fuel Storage Installation (ISFSI), the District commissioned a study by Douglas Wood and Associates on emergency planning and preparedness. The District, PG&E and the County of San Luis Obispo have worked diligently to implement the recommendations in this study. In response to increasing public visitation and access to the coast, additional concerns in emergency planning are apparent. Specifically, there is currently no ability to conduct a water based evacuation from the Point San Luis Light Station. Additionally, constant shoaling of near shore waters in the harbor, periodically and minimally mitigated by the District's dredging operation, impacts the ability of the District to launch and/or haul out public safety vessels, both ours and those of USCG Station Morro Bay. **The District requests that the environmental documents address the need for continual improvement in emergency planning and response, specifically related to water evacuation from Point San Luis, and to the impacts on public safety of the shoaling of near shore facilities.** 008-L077-2

The District thanks you for the opportunity to comment on the scoping for the environmental review of PG&E's application to relicense the Diablo Canyon Power Plant

Sincerely,

Bill Barrow
President, Board of Commissioners

cc: PG&E, Tom Jones
PG&E, John Shoals

and solar, which we have ample supplies of both here. And they also come, it's been shown, with two to 11 times more jobs than either fossil fuels or nuclear power.

So, we could relicense and continue with a dirty, dangerous energy for -- until 2045, so for 30 years. Or, we can go ahead with clean energy now and have at least twice the jobs.

I think that's a very easy choice.

(Applause)

MR. HAGAR: Okay, Operator, is there any of the people on the phone that want to make comments now?

OPERATOR: At this time there are no questions on the phone.

MR. HAGAR: I'm sorry, say again?

OPERATOR: At this time there are no questions on the phone.

MR. HAGAR: Okay. No questions. So, Jane Baxter and then Charles Varni. Charles are you here?

MR. VARNI: I am.

MR. HAGAR: Okay, good.

MS. BAXTER: Hi, I'm Jane Baxter. I live 30 miles downwind in Santa Maria. And there are many issues that I feel should lead the Commission to deny renewal of this plant. 009-T002-35

009-T002-36

But I would like to address one issue that's been addressed time and time again tonight, which is the seismic activity and it's unknown impact on the plant.

I myself studied the history of seismic activity over the last two decades to get an idea of what's been happening around my home. And Santa Maria in a 30-mile radius over the last two decades has averaged just about two small quakes a year.

And I was sort of amazed as I'm looking at this data base. It was just like still huge. And I'm thinking, ha. I found out that there were in 2013 68 quakes within a 30-mile radius of Santa Maria.

We have yet to address the cause of those. Someone has mentioned fracking earlier. And wastewater injection is something that the geological survey has indicated can create numerous small quakes.

And at this point, they're starting to wonder the impact that has on the larger quakes. And whereas at first it was just written off, no these are small quakes, there's no implication that they could lead to the big one.

Now I think there's a much bigger question, why have we had so many quakes in our area? Is it anything that's being addressed?

And I find it just inconceivable that when

009-T002-36 cont'd

we consider the long range operation of this plant that we are not looking seriously and taking into consideration in the relicensing, the implication that this new information, since the previous license was granted that we have now on seismic activity.

I encourage the Commission to address these issues.

(Applause)

MR. HAGAR: The speaker after Charles Varni will be Sybil Ashley.

MR. VARNI: Hi there. My name is Charles Varni. I live in Oceano downwind. I've got my favorite Einstein quote. That the kind of thinking that created a problem cannot at the same time be the source of its solution.

You folks at the NRC know that you've got a little bit of a credibility problem here in San Luis Obispo. We understand that you were created to first and foremost promote the development of nuclear energy in the United States.

And at the same time, you know, presumably keep it safe. It's a tough line to keep in balance.

There is a new variable on the scene and a couple of people have addressed it. And I think it's really important. I understand that I need to go to a

conservative, say it's only 10 million people. It's more. How many people do you think you can get out of Los Angeles in 18 hours? Because at ten miles an hour, that's how long it would take.

All of them, half, a quarter, 10 percent, 4 percent? Human lives. Plants are dangerous. They're terribly dangerous. Flying a plane is dangerous. I know, I'm a pilot. Driving your car is dangerous. But it's only dangerous to you or the people in the plane. When there's millions of people downwind, it's an unacceptable risk. An earthquake can and will eventually destroy this plant. Do you, as human beings, parents, brothers, sisters, want it on your conscience?

I know some of you feel your jobs are at stake. I know some of you feel winning the argument's at stake. But do you want it on your conscience? If it goes the way I'm saying, do you want it? Do you want to know that a million and a half people died because you wouldn't take a stand? The plant's dangerous. It's old. They built it backwards. That's funny. They built it on a fault. That's not.

MR. HAGAR: Our next speaker will be Milt Carrigan.

MS. BECKER: The Alliance for Nuclear 010-T001-10

Responsibility told you in 2009, 2010, 2011 that the license renewal process for Diablo Canyon was premature. In the spring of 2011, PG&E and the NRC proved us right, and the process was delayed.

010-T001-10 cont'd

PG&E is well aware that California is far from approving 20 more years of operation. In March of 2010, the California Coastal Commission made it clear to PG&E that, the six-month period review under the Coastal Zone Management Act has not commenced and will not commence until we receive the missing necessary data and information. As of last Monday, the Coastal Commission has not received that information.

PG&E told this community in 2010 that the reason they had filed a license renewal request early was because the PUC needed the utility to make a decision, and then submit an application. Supposedly the PUC was concerned that if a license was not granted, they would need at least ten years to replace Diablo. Yet on March 27, 2015, CPUC President Picker, AReiterated that PG&E study of a potential license extension for Diablo Canyon should include 18 criteria. Although the three minutes allowed doesn't allow me to read them, as of today, those 18 criteria have not been met. PG&E has not completed its seismic studies. On January 9th of this year, Dr. Norman Abrahamson, PG&E's

chief technical integrator for the SSHAC report, nonchalantly suggested to the California Independent Peer Review Panel that ground motion data deficiencies will be addressed in PG&E's 2025 update.

010-T001-10 cont'd

On a non-seismic note, alternatives to PG&E's devastating cooling process and permanent storage of radioactive waste are unresolved issues. This past Sunday the local paper quoted PG&E spokesperson as saying PG&E has not made a decision yet, so why are you here? The cost of ignoring our prescient comments has not been borne by the NRC.

Just because the NRC's budget has been cut and the nuclear renaissance has become an expensive nuclear fizzle, there is no reason to restart an expensive premature license renewal process. How are we supposed to provide reasonable input to a process that has no meaning until California determines whether or not we want to invest in continued operation of aging nuclear power plants? Go home, NRC. Wait for PG&E to get its seismic, cooling and waste ducks in a row and quit wasting rate payer money.

MR. HAGAR: Okay, next speaker will be Marty Brown, after Milt. Milt Carrigan, and then Marty Brown. Milt, go for it.

MR. CARRIGAN: The last name's Carrigan,

PUBLIC SUBMISSION

As of: 9/1/15 5:14 PM
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Tracking No. 1jz-8kvc-qtpb
Comments Due: August 31, 2015
Submission Type: Web

Docket: NRC-2009-0552
Notice of Receipt and Availability of Application for Renewal of Diablo Canyon Nuclear Power Plant License

Comment On: NRC-2009-0552-0026
Diablo Canyon Power Plant, Units 1 and 2; Notice of Intent to Prepare an Environmental Impact Statement

7/1/2015 (99)

Document: NRC-2009-0552-DRAFT-0093
Comment on FR Doc # 2015-15921

80 FR 37664

RECEIVED 2015 SEP -1 PM 5:32 RULES AND DIRECTIVES BRANCH USNRC

Submitter Information

Name: Nina Beety

General Comment

I oppose the continued operation of Diablo Canyon NPP due to its numerous serious hazards and risks to the public and environment.

011-L096-1

These include its location near earthquake faults, its ongoing radioactive emissions into the ocean and air, the hacking risk to the plant, its out-of-compliance status on NRC safety rules, and PG&E's deplorable safety record and culture.

Diablo Canyon must be immediately shut down and decommissioned. The danger to the ocean and the West Coast from its continued operation, and the danger from nuclear energy, have been amply demonstrated with the ongoing catastrophe at Fukushima affecting the entire world.

Documentation attached.

Attachments

NRC Comments 8-31-15 - 50-275, 50-323NRC-2009-0552

SUNSI Review Complete
Template = ADM – 013
E-RIDS= ADM-03
Add= M. Wentzel (MW312)

August 31, 2015

Comments

Given the earthquake faults, the ongoing radioactive emissions from the plant, and the hacking risk to the plant, as well as PG&E's deplorable safety record and culture, Diablo Canyon must be immediately shut down and decommissioned. The danger to the ocean, to the West Coast, and the world from nuclear energy has been amply demonstrated with the ongoing disaster at Fukushima. 011-L096-2

The NRC allows Diablo Canyon to continue operating despite holding other NPPs to much higher and stricter standards. The Union of Concerned Scientists reported last year that Diablo Canyon does not comply with federal safety standards.[i] 011-L096-3

Despite the disclosure this year that PG&E used the wrong accident and earthquake data when building safety equipment, and has failed since 1984 to use updated data, the NRC allows Diablo Canyon to remain open.[ii]

Also disclosed was that PG&E and the NRC altered Diablo Canyon's operating license so it would conform.

Diablo Canyon discharges huge amounts of tritium, strontium and cesium into the ocean continually. PG&E stated in 2014 that Diablo Canyon regularly discharges more tritium than Fukushima NPP in its melted down state is pouring into the ocean. 011-L096-4

> That water [in 2012] contained 3,670 curies of tritium, or 136 trillion becquerels, according to the company, almost three-and- a-half times the amount released from the Fukushima plant into the ocean in the period starting May 2011. The plant also discharged cesium-137 and strontium-90, though at lower levels than Fukushima.[iii]

Since it was estimated in June 2014 that 60 PBq of cesium-137 had been released into the ocean from Fukushima[iv], and TEPCO announced that 5 billion Bq of Strontium-90 are released daily into the ocean from Fukushima[v], the questions have to be asked:

- How much less?
- Does it really matter how much less when we are dealing with such virulent poisons, poisons that bioaccumulate up the food chain?

Strontium mimics calcium and is known as the bone seeker.

There are unknown normal airborne releases, as well as periodic high releases when the reactors are re-fueled. These releases are averaged over 365 days, rather than given as the figures per release[vi]. The rain-out amounts from Diablo Canyon emissions combined with Fukushima fallout can only be imagined.

011-L096-4 cont'd

This is very serious and ongoing radioactive contamination of the environment.

011-L096-5

In addition, there is the hazard from the power plant's reliance on grid power.
Arne Gundersen:

> ...the most likely type of a nuclear accident is caused by a loss of offsite power. That is what happened at Fukushima: the power system AROUND the plant broke down. If that happens, not only will the plant not have power, but the street lights won't work. According to the NRC, the street lights DO work. Not only that, but your home lighting won't work and your radio and TV won't work. But according to the NRC, you will be able to contact the outside world by phones or by radio or by television.
>
> But remember the most likely cause of a nuclear accident is loss of offsite power and that has NEVER been part of an emergency plan, assuming that all of that does not work.[vi]

There are increasing attacks to the power grid. PG&E has played a pivotal role in creating the so-called "Smart Grid", which former CIA director James Woolsey calls a stupid grid because of its vulnerability[vii]. PG&E has also aggressively Installed wireless Smart Meters and encouraged network-connected Smart appliances, creating millions of vectors to the power grid and increasing exponentially the possibilities for hacking[a].

These factors put the residents of the region in increased jeopardy. A hacked power grid disconnects essential power for keeping reactor cores and fuel pools cool. Without power, the power plant must rely on generators to turn on instantly at full power and sustain operation for as long as needed.

Fukushima's troubles started before the tsunami. The earthquake cut off electrical power to the plant, and at least some of the generators failed when they were turned on. Journalist Greg Palast in Vulture's Picnic has a long and detailed section on the vulnerability of generators as backup power.

> A page from the notebook of an Emergency Diesel Generator expert, R.D. Jacobs, hired to monitor a test for a nuclear reactor's back-up cooling system.
>
> > This is to record that on my last visit,....I pressed [a company executive] saying that we just did not know what the axial vibration of the crankshaft was doing to the [diesel] units. I was unable to impress him sufficiently.
>
> The diesels were "tested" by turning them on for a few minutes at low power. They worked find. But R.D., a straight shooter, suspected problems. He wanted the motors opened and inspected. He was told by power company management to go to hell.
>
> When we forced the plant builder [in Suffolk County, New York] to test the three Emergency Diesel Generators in emergency conditions, one failed almost immediately (the crankshaft snapped, as R.D.[Jacobs] predicted), then the second, then the third. We named the three diesels "Snap, Crackle, and Pop."
>
> ...I knew that all these diesels were basically designed, or even taken from, cruise ship engine rooms or old locomotives. . I'm not an engineer, but I suspect a motor designed for a leisurely

float n Bermuda is not fit for a life-and-death scramble. So, I asked [an industry insider], "They really can't work at all, the diesels, can they?"

011-L096-5 cont'd

That's when he introduced me to the phrase "crash start."

On a ship, he explained, you would take half an hour to warm up the bearings, and then slowly build up to "critical" crankshaft speed, and only then add the "load." the propeller...

That's for sailing. But in a nuclear emergency, "the diesels have to go from stationary to taking a full load in less than ten seconds."

Worse, to avoid having to buy additional diesels, the nuclear operators turbo-charge them, revving them to 4,000 horsepower in ten seconds when they are designed for half that output.

The result: snap, crackle, pop.

I learned that, at Fukushima, at least two of the diesels failed before the tsunami hit. What destroyed those diesels was turning them on. In other words, the diesels are junk, are crap, are not capable of getting up to full power in seconds, then run continuously for days....

"So, you saying emergency diesels can't work in an emergency?"

"Actually, they're just not designed for it."
Vulture's Picnic, p. 294-297

Scientific American had a very telling graphic with a computer keyboard, a time bomb, and a power plant[x].

I would not visit San Luis Obispo County nor would I live there because of this resident hazard.

011-L096-6

The U.S. government is ultimately at fault for promoting these hazardous power plants in the first place. But even with safety regulations in place, the NRC clearly cannot police itself, and it certainly cannot provide even a bare minimum of safety for the nuclear power plants under its jurisdiction and the people who live in the vicinity.

It is lunacy to continue this extremely toxic method for generating electricity, when the current costs to society and the environment from its continuance are so high and go on permanently into the future. Solar is coming online in increasing levels, and Californians' energy use has been dropping. The cost is too great to allow its continuance one more day.

Shut down Diablo Canyon now.

Nina Beety
Monterey, California
www.smartmeterharm.org

www.healfukushima.org

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[i] http://www.ucsusa.org/news/press_release/diablo-canyon-report-0381.html

[ii] http://www.foe.org/news/news-releases/2015-03-diablo-pge-secretly-used-wrong-data-for-safety-equipment#sthash.8DQl1ReI.dpuf

[iii] http://www.telegram.com/article/20140203/NEWS/302039780/1052

[iv] http://www.nature.com/srep/2014/140304/srep04276/full/srep04276.html

[v] At press conference 8/25/14 http://www.tepco.co.jp/tepconews/library/archive-j.html

[vi] https://www.youtube.com/watch?v=Tk7xzg1T0kk&feature=player_detailpage#t=1574

[vii] http://fairewinds.com/content/white-house-nrc-recommend-50-mile-fukushima-evacuation-yet-insist-us-safe-only-10

[viii] http://www.youtube.com/watch?v=1lF3eywqD-I

[ix] http://www.smartgridnews.com/artman/publish/End_Use_Smart_Homes/Are-smart-homes-a-security-threat-to-electric-power-utilities-5914.html
http://www.forbes.com/sites/kashmirhill/2013/07/26/smart-homes-hack/
http://www.sfgate.com/technology/article/Security-lags-in-protecting-Internet-connected-5153837.php#photo-5734988
http://www.bloomberg.com/news/articles/2015-04-01/turkish-blackout-shows-world-power-grids-under-threat

> "More and more attacks are targeting the industrial control systems that run the production networks of critical infrastructure, stealing data and causing damage," said David Emm, a principal researcher at Moscow-based security company Kaspersky Lab Inc., which advises governments and businesses.
>
> All power use was previously measured by mechanical meters, which were inspected and read by a utility worker. Now, utilities are turning to smart meters, which communicate live data to customers and the utility company. This opens up the systems to hackers...
>
> "Introducing smart meters means you install access points to the electricity grid in private homes," said Reinhard Gruenwald, an energy expert at the Office of Technology Assessment at the German Bundestag, a scientific institution advising German lawmakers. "You can't physically protect those. If criminals are smart enough, they may be able to manipulate them."

http://www.abs-cbnnews.com/business/tech-biz/07/16/14/smart-technology-could-make-utilities-more-vulnerable-hackers
http://www.csmonitor.com/USA/2011/1206/Cyber-security-Power-grid-grows-more-vulnerable-to-attack-report-finds

> Massachusetts Institute for Technology -- "Millions of new communicating electronic devices ... will introduce attack vectors -- paths that attackers can use to gain access to computer

systems or other communicating equipment. That increase[s] the risk of intentional and accidental communications disruptions," including "loss of control over grid devices, loss of communications between grid entities or control centers, or blackouts."

[8] http://www.scientificamerican.com/article/power-hackers/

PUBLIC SUBMISSION

As of: 8/20/15 2:08 PM
Received: August 10, 2015
Status: Pending_Post
Tracking No. 1jz-8kh3-2tkv
Comments Due: August 31, 2015
Submission Type: Web

Docket: NRC-2009-0552
Notice of Receipt and Availability of Application for Renewal of Diablo Canyon Nuclear Power Plant License

Comment On: NRC-2009-0552-0026
Diablo Canyon Power Plant, Units 1 and 2; Notice of Intent to Prepare an Environmental Impact Statement

Document: NRC-2009-0552-DRAFT-0029
Comment on FR Doc # 2015-15921

7/1/2015
80 FR 37664

Submitter Information

RECEIVED
2015 AUG 20 PM 2:14
RULES AND DIRECTIVES BRANCH USNRC

14

Name: Eron Betan
Address:
6515 Via Venado Rd
San Luis Obispo, CA, 93401
Email: eron@impulse.net

General Comment

I live in Squire Canyon, a few miles from the Diablo Power Plant. I have owned my home here for 12 years. If there were to ever be an accident, even a minor one, I can not even imagine the impact that it would have on my life, my family's lives, my neighbor's lives and our community. I never worried about such a scenario until the Fukoshimo disaster. The Fukoshimo disaster proved beyond a doubt that it is possible for a nuclear plant to fail. How is it worth the risk? There are other methods to produce energy that are not dangerous. I recently installed solar panels at my home. They work and are not dangerous to all life. What about the nuclear waste? The waste that exists now will be harmful for a 1000 years , a millennia! You are all aware of all the details I am sure. How many generations of mankind does this plant effect? Your decision will decide this. I want you to know I am concerned about living near the plant enough to consider relocating. I urge you to shut down the Diablo Power Plant. It is the right thing to do, for the people that live here now and for countless future generations.

012-L014-1

SUNSI Review Complete
Template = ADM – 013
E-RIDS= ADM-03
Add= M. Westzel (MSW2)

PUBLIC SUBMISSION

As of: 9/1/15 5:13 PM
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Docket: NRC-2009-0552
Notice of Receipt and Availability of Application for Renewal of Diablo Canyon Nuclear Power Plant License

Comment On: NRC-2009-0552-0026
Diablo Canyon Power Plant, Units 1 and 2; Notice of Intent to Prepare an Environmental Impact Statement

Document: NRC-2009-0552-DRAFT-0091
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(97)

RECEIVED
2015 SEP -1 PM 5:31
RULES AND DIRECTIVES BRANCH USNRC

Submitter Information

Name: Anthony Bisset

General Comment

Hello,
My name is Anthony Allen Bisset.

My entire being opposes Diablo Canyon's license being extended. Not only does it sit on active fault(s)! but the technology employed in this generation of plant is not fault tolerant (no pun intended) and cannot self power in the event of larger power grid emergency. To wantonly extend licenses for reactors that are past their safe operating lifespan guarantees a significant accident will occur. If the NRC even wants nuclear to be part of our long term future, then stellar regulation of plants and accountability of operators is the only way the industry can weather another total failure such as Fukushima. The statistics are just starting to come to light regarding the long-term impact that accident is producing and as the truth comes to light Nuclear power will be in even more disrepute. From where I sit the R in NRC is the primary duty. As a citizen of earth who values low toxicity of my environment I expect Diablo Canyon's operating license to be revoked to safe guard the ocean and surrounding coastal areas from contamination during a large earthquake. 013-L100-1

If the NRC fails to regulate such shoddy plants *we* (which is you) will push harder for sanity to be restored. Without nuclear operators upping their game entirely, it as an industry is a lost cause and I will dedicate a good portion of my ingenuity to making it redundant through optimizing renewables and promoting untapped sources such as geothermal and hydrothermal.

Thank you for upholding your responsibility to yourself, your brothers and your organization by allowing new information to take its appropriate place in your own value systems evolution and ethics.

SUNSI Review Complete
Template = ADM-013
E-RIDS = ADM-03
Add = M. Wright (MSW2)

PUBLIC SUBMISSION

As of: 8/7/15 2:28 PM
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Comments Due: August 31, 2015
Submission Type: Web

Docket: NRC-2009-0552
Notice of Receipt and Availability of Application for Renewal of Diablo Canyon Nuclear Power Plant License

Comment On: NRC-2009-0552-0026
Diablo Canyon Power Plant, Units 1 and 2; Notice of Intent to Prepare an Environmental Impact Statement

Document: NRC-2009-0552-DRAFT-0021
Comment on FR Doc # 2015-15921

7/1/2015
80 FR 37664

Submitter Information

RECEIVED
2015 AUG -7 PM 2:34
RULES AND DIRECTIVES BRANCH USNRC

4

Name: Michael Boyer
Address:
1145 Stonecrest Drive
Arroyo Grande, CA, 93420
Email: michael@michaelboyer.net

General Comment

To Whom It May Concern,

I support the renewal of the licenses for Diablo Canyon Nuclear Power Plant because Nuclear energy produces more clean-air energy than any other source and is the only one that can produce large amounts of electricity 24/7.

014-L004-1

The two units at Diablo Canyon produce a total of 18,000 gigawatt-hours of clean and reliable electricity annually, which is enough energy to meet the needs of more than three million Northern and Central Californians (nearly 10% of California's energy portfolio and more than 20% of the power that PG&E provides throughout its service area).

The plant generates more than 20 percent of the electricity used by PG&E customers; with the important contribution of zero-emissions power from nuclear power, more than half of PG&Es electricity is generated from carbon-free sources.

Due to its ability to generate zero-emissions electricity 24/7, the plant plays an important role in helping the state to cost-effectively meet its greenhouse gas reduction goals under the Global Warming Solutions Act AB 32.

SUNSI Review Complete
Template = ADM-013
E-RIDS = ADM-03
Add = M. Wentzel (mjw2)

For 30 years, Diablo Canyon has continued to safely produce clean and reliable energy without greenhouse gases (GHG), avoiding 6 to 7 million tons per year of GHGs that would be emitted by conventional generation resources.

014-L004-1 cont'd

Environmental stewardship is one of the cornerstones of PG&Es values, and that commitment is evident throughout the 12,000 acres that make up the land upon which Diablo Canyon sits.

Through adherence to Best Management Practices, PG&E sustains the environmental qualities of the Diablo Canyon lands by managing and protecting natural and cultural resources; sharing the resources with communities and educational organizations; practicing sustainable agriculture; and managed access programs to promote environmental appreciation.

Elizabeth Brousse

Welcome, Members of the NRC, to the Beautiful and Unique California Central Coast.

It has been the arena for one of the most challenging battles involving a nuclear power plant in the United States.

If I were to ask who among you receive financial remuneration or contributions for your organization From PG&E or are employed to monitor/review nuclear power plants by the federal government to Raise your hand, I think we can determine that the "public" in this room is highly supportive of the Continued operation of the Diablo Nuclear Power Plant.

The NRC is currently involved in Scoping, one of the initial steps in preparing an environmental impact Study (EIS). We are here to express our researched concerns about the Plant. The NRC is not required To include the public. I am pleased they chose to do so.

To prepare, I obtained a copy of FREQUENTLY ASKED QUESTIONS ON LICENSE RENEWAL OF NUCLEAR POWER REACTORS. You can imagine my reaction when I discovered on Page 4-21-22) the list of issues Precluded from consideration in the Environmental Review. They are:

SAFETY

SECURITY AND SAFEGUARD ISSUES

EMERGENCY PREPAREDNESS

SPENT FUEL DISPOSAL AND STORAGE

NEED FOR POWER

To help guide the newcomer in what constitutes a "new Issue" that the NRC would be interested in Studying they provided the example of the nuisance species water hyacinth which might be affected by Warm water (Page 4-23). If this is the case, I need only look at page 2 of today's Tribune where a Headline reads TOXIC ALGAE BLOOMING FROM CALIFORNIA TO ALASKA. An environmental study of The outflow from Diablo might resolve the question of origin. 015-L036-1

Well, my environmental issue is this: DIABLO CANYON IS NOT NEEDED TO FILL CALIFORNIA'S ENERGY DEMANDS. The California Independent System Operator, CAISO, which oversees energy distribution Throughout California by managing the grid, has expressed concern that there may be times when there Is so much variable wind, solar and other renewable energy being scheduled onto its system that the Other generators, such as nuclear, will have to adjust to accommodate. 015-L036-2

BUT nuclear lacks the flexibility. Nuclear power plants can't safely turn the power off and on. Each time A reactor is powered on, it causes stress on the parts. In order to have a flexible, resilient Energy grid, the power sources must be responsive. Nuclear power is not flexible. Diablo Canyon Will provide 8.5% of the energy to the grid, whether we need it or not. Therefore, it stymies the Growth of rooftop solar and wind, which are very responsive and flexible. 015-L036-2 cont'd

The CLEAN POWER PLAN recently adopted by the EPA does not benefit nuclear facilities. Why? 015-L036-3

*There is NO incentive under their rules to keep uneconomical reactors operating and no incentive To complete building new one

*Existing reactors cannot qualify for emission reduction credit-in-trading program.

*There is no incentive for states to create power up rates for existing reactors.

Source: Tim Judson, Executive Director of IRS

The writing is on the wall for Diablo Canyon. It is time for our Community, our beautiful Central Coast Home, to move on into a future of safe, clean renewable energy. 015-L036-4

Elizabeth Brousse

MOTHERS FOR PEACE

MR. HAGAR: Can you hold it?

MS. BROOSE: Yes; I'll hold it there.

MR. HAGAR: There you go.

MS. BROOSE: Good afternoon, and welcome NRC. If I were -- excuse me, I'm going to cut this to make it possible. My name's Elizabeth Broose, and I'm with Mothers for Peace. To prepare for this occasion, I obtained a copy of this publication by the NRC called Frequently Asked Questions on License Renewal of Nuclear Power Plants. You can imagine my reaction when I discovered, on Page 4-21-22, a list of issues precluded from consideration in the environmental review. They are as follows: safety, security and safeguard issues -- that would be like terrorism -- emergency preparedness, spent fuel disposal and storage, and the need for power. These have all been precluded from consideration. 015-T001-30

To help guide the newcomer, which I am, in what constitutes a new issue that the NRC would be interested in studying, they provided the example of the nuisance species water hyacinth, which might be affected by warm water. This is on Page 4-23. If this is the case, I need only look at the Tribune today and discover, on Page 2, a problem about toxic algae blooming from California to Alaska. Perhaps an 015-T001-31

environmental study by the NRC would show that the warm water being dispelled by our plant is contributing. 015-T001-31 cont'd

My environmental perhaps fall among their list, but I'm going to say it anyway. My environmental issue is this. Diablo Canyon is not needed to fill California's energy demands. The California Independent System Operator which oversees energy distribution throughout California by managing the grid has expressed concern that there may be times when there is just so much variable wind, solar, and other renewable energy being scheduled onto the system that the other generators, such as nuclear, will have to adjust to accommodate. But that's the problem. Nuclear lacks flexibility. Nuclear power plants can't safely turn the power on and off. Each time a reactor is powered down, it causes stress on the parts. In order to have flexible, resilient energy grid, the power sources -- have I already finished -- must be concluded. My concluding sentence, the writing is on the wall, and the song is in the air. It is time for our community -- 015-T001-32

PARTICIPANT: Time.

MS. BROOSE: -- a beautiful central coast, to say goodbye to Diablo. 015-T001-32 cont'd

MR. HAGAR: Following John will be Dr. Robert A. -- help me out -- Greene?

still here Michele?

MS. FLAN: I'm here. Flam.

MR. HAGAR: Flam, pardon me. You're next.

MS. BROOSE: This one? Okay. The nemesis. As I bowed my head during the meditation, I became -- I came to the realization that we are going through transition.

015-T002-20

That's what this is all about. Those of us who are saying that this is clean and green and efficient, and those of us who are saying hey, watch out, we're on the edge, be careful.

Now as a former backpacker, I remember the joy of nearing the top. Thinking will I make it? And learning soon on, you never ask how far. One foot at a time.

This year with Mothers for Peace, the organization I'm with, I really felt that we're nearing the top. Not that the people of PG&E are going to be put out of work, be destitute, form lines of poverty.

No, there will be work. Because there will take time for this plant to fully shut down. But what we're saying is we are moving into a new age. And I became aware of this particularly yesterday.

And some of you who may be members or received the emails from NERS, I received this statement

015-T002-21

that the Clean Power Plan that our President is promoting, the EPA has adopted, is so important. Because as Tim Judson, who is the Executive Director of NERS said, the Clean Power Plan recently adopted by the EPA does not benefit nuclear facilities. 015-T002-21 cont'd

And the reason is this, there is no incentive under their rules to keep uneconomical reactors operating. And no incentive to complete building new ones.

Existing reactors cannot qualify for emission reduction credit and trading programs. And I think PG&E was counting on that. And there is no incentive for States to create power up rates for existing reactors.

So as I said this afternoon so long ago, I think the writing is on the wall. We had musicians here today, and I said, and there is music in the air. We are in transition. Thank you.

(Applause)

MR. HAGAR: Okay. And the speaker after Michelle will be Ace Hoffman.

MS. FLAM: Can I ask one very quick question?

MR. HAGAR: Sure.

MS. FLAM: So, am I to understand that

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August 30, 2015 Submitted via NRC website

Cindy Bladey, Office of Administration
Mail Stop: OWFN-12 H08
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Re: Comments of the World Business Academy on the Notice of Intent to Prepare an Environmental Impact Statement, Diablo Canyon Power Plant, Units 1 and 2

Dear Ms. Bladey:

We encourage the NRC to include and explore the following topics in the scope of its Environmental Impact Statement (EIS) on Diablo Canyon: climate change, energy supply and grid stability, economic impact, earthquake risk and public health risk including increasing cancer and declining infant health.

Nuclear Power is not a Solution to Climate Change and Diablo Canyon is not a Solution to Reduce Greenhouse Gas Emissions

017-L083-1

On September 14, 2014, the World Business Academy released a report entitled "Nuclear Power: Totally Unqualified to Combat Climate Change. The conclusion of this report, which was researched and written partially in response to Dr. James Hansen's endorsement of nuclear power, states:

> "While we at the World Business Academy agree with Dr. Hansen's overall assessment concerning higher standards and the need for action, we believe that the vast resources and time needed to build new nuclear plants on a scale to meaningfully reduce carbon emissions would be better allocated towards the expansion of various renewable energy sources in tandem with hydrogen storage and transport systems. If the impact Dr. Hansen seeks is an expedited and meaningful reduction in global greenhouse gas emissions, the fastest, most economically viable and safest course of action is an all-out effort to ramp up renewable deployment. With the support of the private sector, the growth and innovation in the renewable energy sector will lead to unprecedented adoption of the technologies critical to the future of our species.
>
> If a business fails, the owners face bankruptcy. If nuclear power fails, the world faces radioactive poisons, nuclear terrorism, and the specter of a dangerous future filled with bomb-rattling nations and regional nuclear arms races. We face incalculable expense and unlimited danger dealing

with ever-greater quantities of highly toxic radioactive waste that remains deadly even in small quantities for millennia.

017-L083-1 cont'd

Our civilization immediately needs to deploy on a massive scale non-fossil-fuel energy sources that (1) are safe, renewable, non-toxic, and increasingly inexpensive (as deployed quantities increase) and (2) can begin supplying vast amounts of sustainable energy on a fully distributed basis (i.e., where creation and utilization are both distributed). Given growing demand and limited resources, the U.S. and the nations of the world should invest in the best global energy solutions rather than try to resurrect the failed nuclear option. Efficiency, biofuels, renewables, and hydrogen could revitalize our nation and our planet economically, environmentally, and geopolitically, while ensuring a safe future for all."

Furthermore, we agree with the assessment that Diablo Canyon's electrical output will be a barrier to reaching the ambitious carbon reduction goals set by Governor Jerry Brown and the California Energy Commission. Given that nuclear power is not a flexible, dispatchable resource and provides 24/7 baseload power, it cannot be shut down when an overabundance of power becomes available on the grid. Therefore, it will displace cheaper, renewable resources.

Diablo Canyon is not necessary to meet California's energy demands or for grid reliability

017-L083-2

In the 2013-2014 *Transmission Report*, the California Independent System Operator (CAISO) determined that DCNPP is not a "must run" facility needed to maintain grid support and reliability. Furthermore, the loss of San Onofre's 2,254 MW of nuclear power plant capacity since January 2012 did not result in brownouts, blackouts, or interruptions of power, due to the significant excess power capacity built into the California power grid.

According to the California Energy Commission, in 2012 California's total in-state installed generation capacity was 71,863 MW, of which Diablo Canyon provided 2,240 MW, or 3.1%. Overall, based on California Public Utilities Commission data, the California's nuclear power capacity was over and above the 30% reserve margin maintained in addition to, and on top of, the State's peak summer-energy demand.

PG&E's projected energy load growth for 2011-2022 will be met by a combination of demand side (conservation) and renewable energy installations at the customer site (60%) and through a combination of additional renewable resources, natural gas, and market purchases by the utility (40%). The overall environmental impact and greenhouse gas generation from these renewable sources will be significantly less than that produced by existing nuclear power and fossil fuel base load plants.

Within the Near Term Ratepayers will not Benefit from Diablo Canyon Operation

On October 3, 2014, Friends of the Earth submitted to the California Public Utilities Commission a Petition for the Commission to Initiate a Rulemaking Regarding the Economics of, and Appropriate Method of Compensation for, the Diablo Canyon Nuclear Power Plant. Included as Appendix C of this Petition was the Declaration of utility economic expert consultant Steven Moss, which concludes:

017-L083-3

> "In summary, a comparison of the costs of electricity from Diablo Canyon nuclear reactors with that of electricity procured on the open market (which over the next few years will increasingly be generated by preferred resources) suggests that within a few years, ratepayers would be better off if PG&E were to procure power from other sources or replace these power needs with conservation or other demand reducing strategies."

Now that we have addressed the climate change, energy demand, grid stability, and economic issues impacting the continued operation of Diablo Canyon, we turn to the health and safety issues, which relate to the primary mission of the NRC. As stated in the NRC Mission Statement: "The NRC licenses and regulates the Nation's civilian use of radioactive materials to protect public health and safety, promote the common defense and security, and protect the environment."

Diablo Canyon Poses a Significant Earthquake/Tsunami/Meltdown Risk

017-L083-4

Based on available evidence in the public record, the Academy believes that Diablo Canyon poses a significant radiation risk to the public because it is located near or on multiple earthquake faults and is located in an historic tsunami zone putting it at risk for a Fukushima-like earthquake, tsunami, and meltdown.

The U.S. Geological Survey's 2008 Shoreline discovery prompted PG&E to quickly assess whether the fault—a roughly 12-kilometer-deep, 24-kilometer-long vertical strike-slip that intersects with the nearby Hosgri fault to the north, and lies some 600 meters (1,969 feet) from the plant's power block—is capable of producing an earthquake large enough to damage vital plant components.

The DCNNP was originally built to withstand a 6.75 magnitude quake from four faults, and later upgraded to a 7.5. The Fukushima earthquake registered 9.0 on the Richter scale. Given this 7.5 design, and the fact that DCNPP sits on the coast in an historic tsunami zone, the plant is at risk for a Fukushima-like accident. As a result of the above, Diablo Canyon is the only nuclear plant in the country required to meet three seismic design requirements: the Design Earthquake (DE), the Double Design Earthquake (DDE), and the Hosgri Event (HE).

On Jan. 7, 2011, PG&E submitted its final report on the Shoreline fault to the NRC. It included the determination that the three local earthquake faults could produce about 70 percent greater ground motion than the Double Design Earthquake.

In light of Fukushima, the public called for action to immediately learn the lessons of Fukushima and apply them to insure the safety of U.S. reactors that have seismic vulnerability, such as Diablo Canyon. Unfortunately, the NRC rejected immediate action and implemented a long-term evaluation, under which post-Fukushima updates to determine new seismic source and ground motion characterization for DCNPP will not be done until 2015-2018. The US Nuclear Regulatory Commission (NRC) has stated it is unlikely the permitted "design basis" for DCNPP will stand (in 2018) without requiring modifications.

017-L083-4

In September 2011, Richard Peck, the NRC's chief onsite inspector for DCNPP since 2007, officially reported that the DCNPP was "in violation of its license agreement" due to the safety issues posed by earthquake vulnerabilities. At present, no scientific consensus exists among PG&E, the NRC's Senior Seismic Hazard Analysis Committee (SSHAC), seismic experts, and nuclear power critics as to whether DCNPP can be rendered safe at all, due to ongoing controversies as to the scope of the seismic risk and the true regulatory design basis of the plant.

A 2012 Union of Concerned Scientists (UCS) report on "Seismic Shift" found a *1-in-6 risk of a major earthquake near Diablo Canyon* in every year that the plant is operating, a situation the UCS called "radioactive roulette."

A Fukushima-scale disaster at Diablo Canyon could devastate the Central Coast; destroy California's agricultural industry; envelop Santa Barbara in deadly radiation; and, depending on which way the wind is blowing, require the evacuation of Los Angeles.

Diablo Canyon Poses an Ongoing Cancer Risks to Residents Living Near the Nuclear Plant

017-L083-5

On March 3, 2014, the Academy release a report titled "Report on the Health Status of Residents in San Luis Obispo and Santa Barbara Counties Living near the Diablo Canyon Nuclear Reactors." The report was authored by Joseph Mangano, MPH, an epidemiologist with over 30 peer-review publications in medical and scientific journals.

The main findings and conclusion of the report about local health patterns are that:

1. Since the Diablo Canyon nuclear power plant opened in the mid-1980s, San Luis Obispo County has changed from a relatively low-cancer to a high-cancer county.

2. Due to increases in the San Luis Obispo County cancer rate during 2001-2010, an additional 738 people were diagnosed with cancer.

017-L083-5 cont'd

3. Cancer incidence in San Luis Obispo County rose from 0.4% below to 6.9% above the average for the state of California during the time period of 1988-1990 to 2003-2010. The current rate is the highest of all 20 counties in southern California.

4. Significant rapid increases occurred for the incidence of thyroid and female breast cancer in San Luis Obispo County, both highly radiosensitive cancers.

5. After Diablo Canyon began operating, infant mortality in San Luis Obispo County rose significantly.

6. After Diablo Canyon began operating, child/adolescent cancer mortality in the county rose rapidly.

7. Melanoma incidence in San Luis Obispo County soared from 3.6% above to 130.2% above the state incidence rate during the period from 1988-1990 to 2003-2010, and is now the highest of all California counties.

8. Cancer mortality for people of all ages in San Luis Obispo County rose from 5.1% below to 1.4% above California from 1988-1990 to 2008-2010, making SLO the 25th highest county in the state (up from 43rd highest).

9. The ratio of babies born at very low weight (below 3 pounds, 4 ounces) rose 45.0% higher in the 9 San Luis Obispo County zip codes closest to Diablo Canyon, versus the other more distant 10 county zip codes.

10. The ratio of all-cause mortality rose 47.9% higher in the 9 San Luis Obispo County zip codes closest to Diablo Canyon, versus the other more distant 10 county zip codes.

11. In the 10 zip code areas in Santa Barbara County closest to Diablo Canyon, there was a greater rise in the rates of infant mortality (61.7%), low weight births (40.2%), and total mortality (19.1%), than in the 5 zip codes areas in the city of Santa Barbara, located approximately 90 miles from the plant.

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Report Conclusions and Recommendations:

While many factors can affect disease and death rates, the official public health data presented in this report suggest a probable link between the routine, federally-permitted emissions of radioactivity from the Diablo Canyon nuclear power plant and elevated health risks among those infants, children, and adults living closest to the reactors.

017-L083-5 cont'd

These findings strongly suggest that federally-permitted radiation releases pose a health risk to the public, especially to people living near Diablo Canyon in California. These data also correspond with earlier studies showing significant declines in local disease and death rates after the shutdown of the Rancho Seco nuclear power plant in Sacramento County in 1989.

This report should be followed by additional health studies and shared with elected officials and local citizens so that the public health implications of nuclear power are fully understood, especially as aging reactors continue to operate.

In summary and conclusion, the World Business Academy strongly recommends that the following issues be addressed by the NRC in the EIS on the proposed license renewal of the Diablo Canyon Nuclear Power Plant: climate change, energy supply and grid stability, economic impact, earthquake risk, and public health risk including increasing cancer and declining infant health. 017-L083-6

Sincerely,

Jerry B. Brown

Jerry B. Brown, Ph.D.
Director, Safe Energy Project
World Business Academy
2020 Alameda Padre Serra, Suite 135
Santa Barbara, CA 93103
805-892-4600

STATEMENT FOR NRC
August 5, 2015

SOME OF THE MANY IMPACTS ON THE ENVIRONMENT FROM NUCLEAR GENERATION OF ENERGY THAT CONCERN ME ARE THESE:

DIABLO CANYON IS SITTING ON OR NEAR THIRTEEN EARTHQUAKE FAULTS. CALIFORNIA IS ONE OF THE MOST SEISMICALLY ACTIVE PLACES ON THE PLANET. THE DECISION TO BUILD THIS PLANT HERE 35+ YEARS AGO WAS IN TOTAL CONTRADICTION OF NRC REGULATIONS STATING THAT NUCLEAR FACILITIES SHOULD NOT BE BUILT NEAR MAJOR ACTIVE EARTHQUAKE FAULTS. 018-L037-1

THE HOSGRI FAULT JUST OFF THE COAST FROM DIABLO IS CONNECTED TO THE SAN SIMEON FAULT AND THE SHORELINE FAULT. THE SHORLINE FAULT RUNS 600 METERS FROM THE PLANT AND 300 METERS FROM THE INTAKES.

SEISMIC EXPERTS AGREE THAT IN TERMS OF DESTRUCTIVE SHAKING POTENTIAL DIABLO CANYON IS AT THE VERY TOP OF THE LIST. THIS RISK ALONE JUSTIFIES NOT RELICENSING DIABLO CANYON.

THE FUKUSHIMA 9.0 EARTHQUAKE WAS NOT EXPECTED OR PLANNED FOR – THEY WERE CONFIDENT THAT THEIR REACTORS COULD WITHSTAND ANYTHING MOTHER NATURE COULD DEAL. THEY WERE WRONG. AND THE PEOPLE, THE LAND AND THE OCEAN ARE STILL SUFFERING FROM THEIR ERROR IN JUDGMENT. P G & E IS SO CONFIDENT THAT DIABLO CANYON CAN WITHSTAND THE LARGEST POTENTIAL EARTHQUAKES IN THE REGION, THEY BYPASSED THE INDEPENDENT PEER REVIEW PANEL BEFORE GIVING THEIR REPORT TO NRC. NO ONE KNOWS HOW STRONG THE LARGEST EARTHQUAKE WILL BE.

HOW WOULD 150,000 RESIDENTS BE EVACUATED IF THERE WAS A NUCLEAR DISASTER HERE? ADD TO THAT 100,000 MORE PEOPLE DURING THE TOURIST SEASON. WHERE WOULD THEY GO AND FOR HOW LONG? 018-L037-2

ANOTHER ENVIRONMENTAL CONCERN:

ONCE THROUGH COOLING ENTRAINS 1.5 BILLION MARINE LARVAE EVERY YEAR . DIABLO CANYON HAS BEEN CALLED CALIFORNIA'S LARGEST MARINE PREDATOR. CALIFORNIA COASTAL COMMISSION'S INDEPENDENT SCIENCE REVIEW COMMITTEE CALCULATED DIABLO CANYON'S ONCE THROUGH COOLING AFFECTS 500 MILES OF COASTLINE MARINE ENVIRONMENT WATERS. THIS IS SIGNIFICANT IN TERMS OF LOSS OF OCEAN PRODUCTIVITY EQUAL TO SEVERAL HUNDRED OR SEVERAL THOUSAND ACRES OF ROCKY REEF AND NEAR SHORE HABITAT. 018-L037-3

I COULD GO ON STATING VALID CONCERNS OF THE OPERATION OF DIABLO CANYON FROM OVERCROWDED COOLING POOLS, TO EMBRITTLEMENT OF THE 35+ YEAR OLD REACTOR CORE, AND MORE –

018-L037-4

WE DON'T NEED THE POWER FROM NUCLEAR GENERATION – AND WE DON'T NEED OR WANT THE WASTE. RE-LICENSING DIABLO CANYON UNTIL 2045? MOST OF US IN THIS ROOM WON'T BE ALIVE. DO WE WANT TO BURDEN OUR GRANDCHILDREN WITH THE RESPONSIBILITY OF SECURING AND GUARDING RADIOACTIVE WASTE FOR 1,000'S OF YEARS? I DON'T. NUCLEAR GENERATION IS A DINOSAUR – IT SHOULD BE EXTINCT.

MARTY BROWN
5385 PALMA AVENUE
ATASCADERO, CA. 93422

805-423-8500
brookdiego@gmail.com

only --

MR. HAGAR: Time.

MR. CARRIGAN: We need to stop producing all nuclear waste. Thank you.

MR. HAGAR: Thank you. Okay, following Marty, Tom Campbell. Tom, are you here? Very good, thanks.

MS. BROWN: Good afternoon. Some of the many impacts on the environment from nuclear generation of energy that concern me are these. Diablo Canyon is sitting on or near 13 earthquake faults. California is one of the most seismically active places on the planet. The decision to build this plant here 35 plus years ago was in total contradiction of NRC regulations stating that nuclear facilities should not be built near major active earthquake faults. The Hosgri fault just off the coast from Diablo is connected to the San Simeon fault and the Shoreline fault. The Shoreline fault runs 600 meters from the plant and 300 meters from the intakes. Seismic experts agree that in terms of destructive shaking potential, Diablo Canyon is at the very top of the list. This risk alone justifies not relicensing Diablo Canyon. The Fukushima 9.0 earthquake was not expected or planned for. 018-T001-14

They were confident that their reactors

could withstand anything Mother Nature could deal. They were wrong, and the people, the land, and the ocean are still suffering from their error in judgment. PG&E is so confident that Diablo Canyon can withstand the largest potential earthquakes in the region they bypassed the independent peer review panel before giving their report to NRC. No one knows how strong the largest earthquake will be. How would 150,000 residents be evacuated if there's a nuclear disaster here? 018-T001-14 cont'd

Add to that 100,000 more people during the tourist season. Where would they go, and for how long?

Another environmental concern: once-through cooling entrains 1.5 billion marine larvae every year. Diablo Canyon has been called California's largest marine predator. California Coastal Commission's Independent Science Review Committee calculated Diablo Canyon's once-through cooling affects 500 miles of coastline marine environment waters. This is significant, in terms of loss of ocean productivity equal to several hundred or several thousand acres of rocky reef and near-shore habitat. 018-T001-15

I could go on stating valid concerns of the operation of Diablo Canyon from overcrowded cooling pools to embrittlement of the 35-plus-year-old reactor 018-T001-16

core and more. We don't need the power from nuclear generation, and we don't need or want the waste. Relicensing Diablo Canyon until 2045, most of us in this room won't be alive. Do we really want to burden our grandchildren with the responsibility of securing and guarding radioactive waste for thousands of years? I don't. Nuclear generation is a dinosaur, and it should be extinct. Thank you. 018-T001-16 cont'd

MR. HAGAR: Tom?

MR. CAMPBELL: Yes.

MR. HAGAR: Okay, following Tom will be Dr. Gene Nelson.

MR. CAMPBELL: My name is Tom Campbell. I'm a board member of Musicians United for Safe Energy and a founding member. I'm also executive director of the Guacamole Fund. Both of these are non-profit organizations that work in energy education. In regards with the last speaker spoke about evacuation, this is a billboard that we put up back in the early >80s, 25 of them around town, as there's no commissioners here to see, I'll read it to you. It says, AWarning, Diablo Canyon evacuation zone. I have been asked by Graham Nash, the musician and activist who is also a board member of Musicians United for Safe Energy to read the following statement.

MR. HAGAR: -- Merzoyan. Natalia, you're next.

MR. BROWN: I'm Mike Brown. I'm the Director of the Coalition for Labor, Agriculture and Business of SLO County and I'm also speaking here on behalf of the Coalition of Labor, Agriculture and Business of Santa Barbara County. COLAB of Santa Barbara County has 1,500 members and is the largest civic organization in Santa Barbara County. COLAB of San Luis County has 700 members and contributors and is one of the largest civic organizations in this county. We support relicensing. In fact, we'd like to see further development of the nuclear industry. 019-T001-78

We represent farmers, ranchers, fishermen that were talked about here today, all manner of professional engineering, architectural firms, home builders, general contractors and a whole lot of civic-minded folks out there. And we know that the plant is the county's largest private sector employer. 019-T001-79 It's the largest property tax payer. And in terms of payroll, purchases, direct economic impact, indirect economic impact and imputed economic impact it's worth about $950 million in the economy of Southern SLO County and Northern Santa Barbara County. So per, I think it's slide 5, the economic and social impacts. We hope those

get into the scope. Moreover, as part of that study we think that the NRC should talk to the county assessor in this county about the impact of either phasing out the plant over some period or closing it altogether and what that would mean.

019-T001-79 cont'd

Similarly, our farmers and ranchers pump water to grow your grapes that make wine, that grow your vegetables, that grow your fruit and nuts and grow the feed for the cattle and so forth. And so, a reliable even affordable source of electricity is absolutely essential for our members for your ability to have food and sustenance. So we think it's very important that in terms of that reliability any transitions or anything that that be scoped in and very clearly studied.

019-T001-80

I can tell you this: Before I did this I was a 42-year local government professional and municipal finance expert, and to casually tamper with this could be a huge disaster here. Thank you very much.

(Applause)

MR. HAGAR: Speaker after Natalia will be Debbie Nicholas. Debbie, are you here?

MS. MERZOYAN: Which one do I talk into this one?

MR. HAGAR: This one. Well, hold on a

Statement of Jackson Brown
NRC Scoping Meeting for the Diablo Canyon Nuclear Plant
Aug 5, 2015

Every day Diablo Canyon takes in 2.5 billion gallons of seawater and discharges that seawater back into the ocean, twenty degrees hotter. So much for nuclear power as a solution to global warming.... It has been estimated by biologists that more than 1.5 billion fish die annually in early life stages as a result of the antiquated cooling system at Diablo Canyon. 020-L035-1

While the State Water resources Control Board may be considering creating an interim mitigation fee, this fee won't do anything to address the loss of aquatic life, or the real cost of allowing this much ocean warming to go unchecked.

Governor Brown has set very serious goals for the reduction of climate change in the near future. We need to do everything we can to meet those goals. Although it's been argued that nuclear power is clean and will help meet climate change goals, because nuclear power plants like Diablo that are at risk of closing can't compete with cheaper natural gas and renewables, this week the EPA announced States will no longer be able to meet their clean energy goals by extending the licenses of these nuclear power plants. 020-L035-2

At a time when the world's oceans are reeling from the effects of over fishing and pollution, and ocean acidification threatens the global oceans' ability to produce the marine life that supports all life on earth - including human life - it is unconscionable that this wasteful and unnecessary technology be allowed to continue its assault on the Pacific Ocean, and to slow our passage to a safe and sustainable energy future. 020-L035-3

Shut down Diablo Canyon today!

Jackson Browne

Gallagher, Carol

From: Bruce Campbell <madroneweb@aol.com>
Sent: Tuesday, September 01, 2015 12:47 AM
To: Gallagher, Carol
Subject: [External_Sender] Docket ID NRC-2009-0552 Scoping Comments for DEIS in regards to Diablo Canyon facility license extension

7/1/2015
80FR 37664

(102)

August 30-31, 2015

Bruce Campbell
3520 Overland Ave. # A 149
Los Angeles, CA 90034

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2015 SEP -1 AM 8:26
RULES AND DIRECTIVES BRANCH USNRC

Nuclear Regulatory Commission

To whom it may concern at the NRC and beyond:

These are my written scoping comments as to what should be studied in the DEIS in regards to the proposed 20-year license extension for the Diablo Canyon nuclear power facility.

In my vocal presentation at the afternoon August 5th hearing, I spoke of how Helium-3 was discovered emanating up through the Newport – Inglewood Fault which made scientists conclude that the significant coastal area fault (Newport – Inglewood) is much deeper than earlier thought – since Helium-3 comes up from the earth's mantle. 021-L099-1

From Santa Monica Boulevard south to a few miles offshore San Diego lies the Newport – Inglewood Fault – which is clearly the largest coastal area fault in southern California. Then, I have seen on maps that faults run every which way (with no clear pattern or major faults) in this jumble from Santa Monica Blvd. up to the Point Concepcion area. Then there is the 2000 km. east-west Murray Fracture Zone meeting the North American continent in west-central Santa Barbara County – whose impact appears to have "bent" or "dipped" / pushed the San Andreas Fault further east in that latitude. North of the general Murray Fracture Zone area is about where the largest subsidiary of the San Andreas Fault more or less begins in its south – north stretch. There are three named faults, but they nearly run together so are considered one fault system. The southern segment is the Hosgri Fault, the next segment to the north is the San Simeon Fault, and the segment north of that is the San Gregorio Fault. In fact, one article calls the San Simeon Fault the "San Simeon segment of the Hosgri Fault".

(I note that the Independent Peer Review Panel mentions that the Hosgri Fault seeking "data on the dip (of) the Hosgri Fault near the intersection of the Shoreline and the Hosgri Faults".) Despite interesting results which would have come from such a study, the California Coastal Commission rightly halted the proposed high-energy 3-D Seismic Survey in the coastal area near Diablo Canyon since it would have damaged nearly all marine life in the region.

If the Newport – Inglewood Fault (which is the main coastal fault and more or less parallel with the San Andreas Fault) is so deep that it goes down to the Earth's mantle – thus being able to discover Helium-3 escaping from the fracture, then what is called the "largest subsidiary of the San Andreas Fault" (the Hosgri – San Simeon – San Gregorio Fault system) more or less parallel with the San Andreas Fault in central and into northern California should be a subject of a similar inquiry as to whether Helium-3 is rising up through the fault / fractures to better determine its depth and seismic potential.

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Add= M. Wentzel (mw2)

Here is the July 1st, 2015, Los Angeles Times article about the discovery of Helium-3 rising from the Newport-Inglewood Fault, and it mentioned that that southern California coastal area fault "which was responsible for one of the most destructive earthquakes in southern California history."

021-L099-1 cont'd

Helium finding adds new wrinkle to Newport-Inglewood fault

A long crack splits the sidewalk at Discovery Well Park in Huntington Beach, which is located on top of the Newport-Inglewood fault.

(Allen J. Schaben / Los Angeles Times)

By ROSANNA XIA *contact the reporter*

The text of the article has been redacted.

****

Below this paragraph, I shall copy and paste the link and then the article from the Los Angeles Times on January 9th, 2013, about what some seismologists see as a possibility of a statewide earthquake on the San Andreas Fault. Besides evaluation of the article below .....

021-L099-1 cont'd

****

http://www.latimes.com/news/science/la-sci-big-earthquakes-20130110,0,6874491.story?track=lanowpicks

The text of the article has been redacted.

I spoke at the August 5th hearing regarding the concept of relicensing dangerous reactors many years before the current licenses expire. I spoke about talking with California DMV who informed me that one cannot get their driver's license renewed more than two months in advance of the birthday on which one's license expires. Though a metal vehicle can inflict some damage, but it is not dangerous compared to commercial nuclear reactors which could render most of California uninhabitable.

021-L099-2

If it appeared that it might be sensible to operate a large nuclear reactor either at all or beyond its theorized operating life, then, since it is a complicated facility and process – one might want to start thorough evaluations of the facility 3 years before the operating license expires. Since this Docket # mentions 2009, apparently that is when PG&E got in touch with the NRC in regards to seeking an extension of their operating licenses which are to expire in 2023 and 2025.

This is even more ridiculous than this situation. My mom is 99 and stopped driving when she was 88. Let's say DMV had longer licensing periods... Would it make sense for my mom – say when she was 86 – to get a driver's license lasting 15 years(?) Her eyes, ears, and beyond have deteriorated since she was 86 had she got the theorized 15 year driver's license extension, so that would have been a stupid decision to issue a longer license to her (if she had sought it).

At any rate, it may make sense (once again if seismic setting, state of technology, waste, etc. are all considered) to begin a potential reactor relicensing process 3 years before the current licenses expire, but as I reiterated on August 5th (following a vocal pause), there must be VERY thorough physical evaluations of the entire facility again FOLLOWING the end of any currently operating nuclear reactor license period – assuming that there might be some examination of the actual facility during the reactor license renewal process as well as when I call for such examination FOLLOWING the shutdown of the reactors when their current license(s) expire.

This being said, nuclear reactors began during the race to make the atomic bomb in WWII, and then to justify the nuclear weapons program and otherwise help the nuclear industry (as well as some powerful utilities) is why commercial nuclear power was promoted. Thus, these large reactors should never have operated, let alone operated beyond the life that they were designed to last.

021-L099-3

Also, I object to the process of having an EIS to cover "generic" issues. However, the U.S. nuclear power program is such a hodge-podge of different designs of facilities with differing equipment that it is disingenuous to call many aspects of it "generic". We need LOTS of Diablo Canyon specifics regarding a plethora of issues – certainly including seismic setting, embrittled and vulnerable equipment, radwaste storage situation both in concentration and inadequate Holtec canisters, and much, much more. 021-L099-4

On August 5th, I may have mentioned that I attended Diablo Canyon waste discharge hearings in 1981 and 1982 (I know that I mentioned at the hearing that our group camped out at the Diablo seismic hearings in the fall of 1980). There were pretty high estimates for discharge of various toxic heavy metals into Diablo Cove – along, of course, with discharging warmer water and some radioactivity. 021-L099-5

It would be very helpful if the DEIS could analyze if there is an increase in discharge of quantities of those heavy metals. If so, I would guess that the increase is due to leaching from the pipes. Please recite figures and provide documents which you have that indicate differing levels of heavy metal discharges into Diablo Cove / Pacific Ocean.

So, if figures considered in the DEIS do indicate increasing levels of toxic heavy metals discharged into the cove and ocean, then it likely indicates that as the facility ages further during this operating license period(s) and certainly would age further if there is the insanity of the granting of an operating license renewal for Diablo Canyon's nuclear reactors. 021-L099-6

Have there been any studies or will there be any which evaluate any deleterious impacts to marine organism from exposure and absorption to these toxic heavy metals? Please include and analyze such documents in your DEIS. 021-L099-7

In the DEIS on potential Diablo Canyon reactor relicensing, I would like to see comparative analyses of the estimated differences in the costs for "decommissioning / decontamination" if:

1. Diablo Canyon is shut down – say in a year, so let's say August 31, 2016; 021-L099-8

2. If Diablo Canyon reactors are shut down at the end of their reactor operating license period(s);

And 3. If Diablo Canyon was shut down at the end of the Diablo reactor relicensing period(s).

I understand that there are lists of the most embrittled reactors in the nation – and that Diablo Canyon is one of the few most embrittled in the USA. 021-L099-9

Seeing that PG&E is apparently using cracking flimsy Holtec canisters – some of which were not even loaded correctly – we need a thorough evaluation in the DEIS in regards to plans for spent fuel storage both with the current spent fuel (including some high burn-up fuel used for nearly all this century) as well as what they will do to spent fuel in the future. 021-L099-10

I understand a crack appeared in a Holtec canister after two years – and I heard a recording of a Holtec exec say that a crack will work its way through a Holtec canister in (I forget if it was) 16 or 17 years. Thus, that canister at Diablo likely will not even survive the 20 years for which it is guaranteed. Public safety requires using the most heavy-duty canister existing – apparently one made in Germany. (Let me also remind you that I heard at a San Onofre-related hearing that the Holtec canisters are not designed for repackaging. Discuss potential for repackaging of cracking and then potentially leaking /Holtec radwaste canisters at Diablo Canyon -- and San Onofre too for that matter.

021-L099-11

The DEIS must admit and discuss the stacking / storage of spent fuel rods at the Diablo Canyon facility laden with earthquake faults at a greater concentration than was originally anticipated.

Hopefully, some S.L.O. locals submitted (or shall later in the process) info about how San Luis Obispo County has the highest cancer rate in the State of California – clearly primarily due to its nuclear neighbor.

021-L099-12

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I want to point out the disturbing situation of the NRC suppressing its seismic safety inspector Dr. Michael Peck by never ruling (let alone within the usual 120 days) regarding his dissent which argued that the Diablo Canyon reactors should be shut down until PG&E proves that the facility can withstand damage from any quake which faults in the Diablo Canyon area can deliver.

It has been nearly 5 years since Peck first expressed his concerns. Then it was January 2012 when Dr. Peck wrote his non-concurrence report – formally called a "Differing Professional Opinion", and asked that his report be released. Instead, IT WAS SQUELCHED.

021-L099-13

The DEIS should look into whether any regulations were broken in the squelching of Dr. Peck's concerns and DPO.

ALL COLLUDERS IN SUPPRESSING VITAL SEISMIC OR OTHER SAFETY INFORMATION REGARDING NUCLEAR REACTORS (LET ALONE THESE TWO REACTORS THAT SIT ON 13 EARTHQUAKE FAULTS AND 45 MILES FROM THE SAN ANDREAS FAULT) MUST BE HELD ACCOUNTABLE, FIRED, AND PROSECUTED! Please display all correspondence internal to the NRC, and between the NRC and PG&E in regards to Dr. Peck and his findings from 2010 to the present.

In case you missed that last lower-case sentence, here it is again: Please display all correspondence internal to the NRC, and between the NRC and PG&E in regards to Dr. Peck and his findings from 2010 to the present.

Before I sign off, so to speak, I want to summarize something regarding Diablo Canyon area seismicity one more time. If Diablo wanted an operating license for a new reactor, it would likely be turned down since it clearly does not meet NRC regulations. Dr. Peck and others pointed out that it appears that some faults can deliver seismic blows which the Diablo facility was not built to withstand. And it has been known for decades that the Hosgri Fault system is the largest subsidiary of the San Andreas Fault. Proceed with sampling for Helium-3 testing to discover approximately how deep the fault system extends. It would likely make sense to do sampling for Helium-3 on both the Shoreline Fault and the Hosgri Fault. It could also be interesting to sample for Helium-3 in the San Simeon segment of the fault system – despite seismologists believing that they know that the 3 segments are very connected and thus likely have fairly similar depths – but let research proceed on this in the DEIS regarding Diablo Canyon nuclear reactors relicensing.

021-L099-14

If the Hosgri Fault system was found to be deeper than expected due to sampling for Helium-3, would that throw the Diablo Canyon reactors even more out of seismic compliance?

The DEIS should carefully examine whether indeed the central segment of the San Andreas Fault in California is relatively stable – or whether it can have substantial shaking and energy release from major quakes on other segments of the San Andreas. Helium-3 sampling, and examining the potential for more than one segment of the San Andreas to "let go" nearly simultaneously, while also

examining the likelihood of the Hosgri Fault system "letting go" at a similar time as the San Andreas Fault system, as well as examine the likelihood of the Hosgri Fault system having more than one segment "let go" (or if more than one major coastal fault segment "let go", would that necessarily be associated with major seismic activity on the San Andreas Fault in at least central California, or could such a massive quake occur in the coastal area without much impact on the San Andreas?

The journal Nature recently had an article stating that strike-slip faults are now considered to be able to deliver up to an 8.6 earthquake – which is what was recorded in a 2012 east Indian Ocean earthquake. See this link http://www.nature.com/nature/journal/v490/n7419/full/nature11504.html 021-L099-14 cont'd

Thanks for your consideration of integrating my concerns with your research.

Sincerely yours,

Bruce Campbell

nuclear power. I'm for America. I understand it needs nuclear power to be an economic leader in the free world. Thank you.

(Applause)

MR. HAGAR: Speaker after Bruce Campbell will be Manilla Horowitz. Manilla Horowitz, are you here?

(No audible response)

MR. HAGAR: Then Ace Hoffman, you'll be next.

MR. CAMPBELL: I'm Bruce Campbell from Los Angeles. Hmm, lots of microphones.

MR. HAGAR: The one on the right.

MR. CAMPBELL: So I want to point out a couple of documents. This one's entitled, from the L.A. Times, "Helium Finding Adds New Wrinkle to Newport-Inglewood Fault," and they found helium-3, which they didn't expect to find from the Newport-Inglewood fault. As you may know, there's two obvious major coastal faults in California. One is the Newport-Inglewood fault and one is the Hosgri-San Simeon-San Gregorio fault. So anyway, they found helium-3 which indicates that it goes as deep as the earth's mantle.

021-T001-85

So, and part of this -- a quote from this

article: "Helium, or more accurately the isotope helium-3, is a vestige of the big bang and comes from the earth's mantle, the layer beneath the lower crust, he said. In order for helium to be escaping from the Newport-Inglewood fault the fissure must go deep enough through the lower crust and connect somehow to the mantle, said Bowles, whose study was published in the Journal of Geochemistry, Geophysics and Geosystems." 021-T001-85 cont'd

I will seek another L.A. Times article from this decade which indicated that there could be a statewide quake on the San Andreas fault. I'll also find the date of this, which didn't seem to print out when I printed it this morning.

Also that DEIS should study different segments of faults in the Diablo Canyon area going all at once and the DEIS should consider different segments of the San Andreas fault going all at once in the DEIS.

I was involved with the Diablo Canyon Waste Discharge Permit hearings in 1981 and '2. There's lots of emissions of heavy metals into Diablo Cove. I imagine the high numbers involved with allowing such emissions -- I think they might have -- they might be considering later on when it corrodes more. And so I -- please examine the likely -- the discharges of these heavy metals from -- well, could you please trace in the 021-T001-86

DEIS how things would go over time as far as are there increasing emissions of toxic heavy metals over time due to the piping leaching or due to other things? This needs to be clarified. 021-T001-86 cont'd

Are there any studies assessing any negative impact of these heavy metal discharges on marine organisms or possible negative impact of a cumulative effect of heavy metal discharges and thermal discharges on marine organisms, whether or not you add radioactive discharges? Please make sure such studies are part of the DEIS. 021-T001-87

Also, Holtec is a pathetic company with flimsy canisters and I understand rad waste was loaded improperly into a Holtec canister. It cracked after two years. The Holtec exec says it can leak -- it can go through the whole canister in 16, 17 years. 021-T001-88

MR. HAGAR: Let's wrap it up.

MR. CAMPBELL: And by the way, if things are so clean here in San Luis Obispo County, if not for Diablo Canyon why does this county have the highest cancer rate in the State of California out of 58 counties. 021-T001-89

MR. HAGAR: Your time is up.

MR. CAMPBELL: Fifty-eight counties.

MR. HAGAR: Time. Thank you. Okay. The

tremendous impact on the reliability of the plant.

Such ill preparation is misconduct. Placing the lives of Californians in grave danger. This is consistent with PG&E's corporate behavior. They just don't care.

(Applause)

MR. CAMPBELL: Short, sweet and true. Hi, I'm Bruce Campbell from -- still from LA. On a personal level I'd like to thank the NRC for coming today. However, the whole process is an astounding sham.

I happened to camp out with the Diablo Canyon Task Force of the Alliance for Survival at the Diablo seismic hearings in San Luis Obispo in the fall of 1980. I was particularly concerned I guess the two things that besides being not too far to the south, the things that really struck me were the 7.3 to 7.5 quake in the Hosgri fault zone west of Lompoc, November 4, 1927 and having experienced the LA quake of 1971.

021-T002-53

So, anyway, they opened those seismic hearings in 1980 due to the high vertical ground acceleration readings for the Imperial Valley October 15, 1979 quake. The three-man Atomic Safety and Licensing Board ruled that Diablo Canyon was seismically safe.

Yet shortly before that ruling, Sherman

Salzman of that three-man ASLAB was appointed to a Federal judgeship by President Regan. Just a coincidence. 021-T002-53 cont'd

Anyway, the vertical and horizontal ground acceleration issue from those hearings held in 1980 have never been resolved as far as I'm concerned. And then I haven't gotten into the details about the seismic study where geologist, seismologist Peck got the boot and didn't even know for over a year.

And anyway, I called California DMV and one cannot get one's drivers license renewed until a month before it expires. I can cause damage with my car. But it pales compared to what damage a nuclear power facility can do. 021-T002-54

Because it is a complicated facility, I can see if nukes weren't dangerous and if the facility were sited in a same location, I can see applying for a license renewal say two years in advance. But 14 to 16 years in advance is preposterous.

Also, even if decisions are made at whatever point in this decade, as far as I'm concerned, and I think the document should look into it, when they want to flip the switch to have the license for the license renewal for the reactor to operate -- oh, anyway, they should within a month of that time where

they actually pull the switch, there should be intensive, physical examination of all components of the plant. 021-T002-54 cont'd

This thing was sort of old before they fire it up to begin with because of the problems. Switch blueprints for seismic reinforcements, et cetera, et cetera, for the auxiliary cooling system.

And, lastly I'll go out on the note that nuclear power has the highest carbon emissions of any non-fossil fuel energy source. One example to prove such is two coal fired facilities are need to power one uranium enrichment facility at Oak Ridge, Tennessee. Thank you. 021-T002-55

(Applause)

MR. HAGAR: Did Mark Skinner come back in?

MR. SKINNER: I already spoke.

MR. HAGAR: Already spoke. Okay. And Andrew Christie will be after Carl Dudley. Is Andrew here?

MR. DUDLEY: Thank you. Good evening, my name's Carl Dudley. I am a resident of San Luis Obispo. I'm here speaking for myself, for no one else.

I've never worked for PG&E. And I am taking my home solar probably sometime this month. Also living to the drought, I've let my lawn go brown.

core and more. We don't need the power from nuclear generation, and we don't need or want the waste. Relicensing Diablo Canyon until 2045, most of us in this room won't be alive. Do we really want to burden our grandchildren with the responsibility of securing and guarding radioactive waste for thousands of years? I don't. Nuclear generation is a dinosaur, and it should be extinct. Thank you.

MR. HAGAR: Tom?

MR. CAMPBELL: Yes.

MR. HAGAR: Okay, following Tom will be Dr. Gene Nelson.

MR. CAMPBELL: My name is Tom Campbell. I'm a board member of Musicians United for Safe Energy and a founding member. I'm also executive director of the Guacamole Fund. Both of these are non-profit organizations that work in energy education. In regards with the last speaker spoke about evacuation, this is a billboard that we put up back in the early >80s, 25 of them around town, as there's no commissioners here to see, I'll read it to you. It says, AWarning, Diablo Canyon evacuation zone. I have been asked by Graham Nash, the musician and activist who is also a board member of Musicians United for Safe Energy to read the following statement.

022-T001-17

My friends Jackson Browne, Bonnie Raitt, James Taylor, Linda Ronstadt, David Crosby, Stephen Stills and I started to oppose nuclear power by supporting Proposition 15, the Nuclear Safeguards Initiative, back in 1976. There were six plants under construction that would have been permitted by that Initiative. The Initiative would have stopped those six plants from being constructed.

022-T001-17 cont'd

There were two in operation at that time, Humboldt Reactor up in northern California, and San Onofre No. 1 down by Camp Pendleton. Both of them are gone now, shut down for safety reasons. Of the six I mentioned completed, four have been shut down for financial and safety reasons. Only the two at Diablo Canyon remain, and as everyone knows, they were both built in active, dangerous seismic zones. We have participated many times, raising funds, disseminating information and supporting local grass roots and national organizations to help empower people to act, and will continue to do so in the future. My friends and I sincerely believe that the Diablo Canyon Nuclear Power Plant is an accident waiting to happen.

Please, if just for the sake of our children and our grandchildren, we must try our best to see that the dreadful, expensive accidents like Three Mile

Island, Chernobyl, and Fukushima will not happen here. Thank you.

022-T001-17 cont'd

MR. HAGAR: Okay, following Gene Nelson would be John Stephen.

DR. NELSON: My name is Dr. Gene Nelson, serve on Cal Poly engineering faculty, and currently serve in Cuesta College physical science faculty. I'm the government liaison for Californians for Green Nuclear Power. We're a group of citizens that understand the environmental benefits of the continued safe operation of Diablo Canyon. We focus on evidence-based approaches to understand Diablo's environmental interactions. I wish that the NRC had publicized the advanced sign-up process better. The speakers are fearmongers who had preceded me, some from out of town, are not representative of the strong community support for Diablo Canyon. The local folks in green -- please stand -- are much more representative of the support for clean, reliable, low-cost nuclear power than these out-of-town fearmongers. My comments on the clean air in western San Luis Obispo County that -- excuse me?

PARTICIPANT: I'm not an out of towner.

DR. NELSON: I did not say all of you. Please, hold your comments --

FOR IMMEDIATE RELEASE

Conventional Wisdom About Renewable Energy Sources to be Challenged

Palo Alto, California (January 21, 2015) – The shortfalls of 'renewable' energy sources in addressing climate change will be front and center in two sessions on nuclear power at the Energy and Climate Change Conference (http://www.energyandclimatechange.org), being held January 27-29, at the Hyatt Regency Crystal City, Arlington, Virginia. Both sessions are on Wednesday, January 28, and are panel discussions featuring luminaries in the field. They are chaired by two principals from Thorium Energy of Silicon Valley, Dr. Robert Greene and Dr. Alexander Cannara. This 15th annual conference is sponsored by the National Council for Science and the Environment

023-L031-1

The morning session is entitled ***"Nuclear Energy as a Non-Carbon Energy Option"***. It covers the increased need for nuclear energy and the current state of development and the US and world markets. Panel members include…

Dr. Seth Grae – President and CEO Lightbridge and member of the Civil Nuclear Trade Advisory Committee to the Secretary of Commerce
Dr. Ripudaman Malhotra – Stanford Research Institute International and co-author of: "A Cubic Mile of Oil"
Dr. Jasmina Vujic - Professor Dept. of Nuclear Engineering, Director Nuclear Science and Security Consortium, and Director Berkeley Nuclear Research Center
Sal Golub - Associate Deputy Asst. Secretary for Nuclear Reactor Technologies, U.S. Dept. of Energy

"Current energy discussions are flawed in multiple ways. The source of many of the issues is that they are using a business-as-usual model. They neglect the massive amounts of energy we are going to need to combat ocean change due to acidification, desalination and other modifications needed to correct for climate change and to move away from a carbon combustion standard", stated Dr. Greene. "Renewables are energy sparse. They deliver too little energy per unit of investment. We need to fix the oceans. That alone will take at least an additional 25% more energy globally. We can only accomplish this by taking bigger bites with energy-dense nuclear. We need to start immediately."

The afternoon session is entitled ***"Nuclear Energy Technologies for 2025 and 2050 & Advancing Nuclear-Energy Options"***. As the title implies, this session looks at technologies that should be In place at these future dates assuming that sufficient funding is provided. It reviews the features of Gen IV reactors that make them safer, cleaner and more efficient. Panelists include…

Dr. Stephen Boyd -- CEO, Havelide Systems, Inc.
Rod Adams -- Publisher, Atomic Insights

Dr. Darryl Siemer -- former Consulting Scientist with Idaho National Labs
Dr. John Steinbruner -- Professor of Public Policy, School of Public Policy; Director, Center for International and Security Studies, University of Maryland
Alice Caponiti -- Director for Space and Defense Power Systems, U.S. Dept. of Energy

023-L031-1 cont'd

According to Dr. Cannara, "The nuclear power we've known for over five decades has been the cleanest and safest power source ever deployed by mankind – even safer and cleaner than so-called 'renewables'. Safer, cleaner and more efficient approaches have not been implemented commercially because American reactor design has been frozen." He continued, "In 1962, President Kennedy shared his energy vision in a request to Glenn Seaborg, Chairman of the Atomic Energy Commission (http://tinyurl.com/6xgpkfa). But a decade later we fumbled the ball. We must stop dithering and get to where we should have been if we'd followed Seaborg's and Kennedy's ideas. It's of little import if we keep world temperature rise to 2°C by 2100, if oceans are dead by 2050. This is an Apollo 13 moment -- we have limited time and no room for error."

Thorium Energy of Silicon Valley is an affiliate of ThoriumEnergyAlliance.com, a 501(c3) citizens' activist group dedicated to promoting lasting, safe, efficient, clean, and emissions-free energy solutions for the US and the world through nuclear energy -- particularly Molten Salt Reactors (MSRs) and those based on a Thorium-Fluoride fuel cycle (http://tinyurl.com/nu5o7k5).

One objective is to re-institute nuclear development in the US based on the successful prototypes developed at Oak Ridge National Labs in the 1960's, passed over in the 1970s for political reasons, but now taken up by China and others. And, we wish to remind our President of his wise 2010 statement*: "To meet our growing energy needs and prevent the worst consequences of climate change, we need to increase our supply of nuclear power." JFK might have agreed, but again, we remain behind.

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FOR MORE INFORMATION AND TO SCHEDULE INTERVIEWS CONTACT
Dr. Robert Greene at bobgreenephd@gmail.com, and
Dr. Alexander Cannara at cannara@sbcglobal.net (650 400 3071).

* www.theguardian.com/environment/2010/feb/16/barack-obama-nuclear-reactors

CANNARA@SBCGLOBAL.NET

Molten Salt & Thorium Power for Humanity and Earth

Thorium Energy of Silicon Valley -- Useful Web Links

023-L031-1 cont'd

http://tinyurl.com/6xgpkfa (President Kennedy's 1962 Commission)

www.thoriumenergyalliance.com (US association)

www.itheo.org (international group)

www.thoriumremix.com (useful videos & history)

http://tinyurl.com/m924moj (intro to TESV booth at AGU 2014)

www.energyfromthorium.com/pdf (ORNL documents/reports)

https://plus.google.com/109596373340495798827/posts/fk5rcwoaKBP?cfem=1
(Some ORNL history from participants)

www.the-weinberg-foundation.org/ (Alvin Weinberg Foundation, news,..)

http://tinyurl.com/yb2qgex (2009 conference at Google)

http://tinyurl.com/73p7ler (Sorenson, 2011)

http://tinyurl.com/lvr6827 (Cannara, 2013)

https://www.youtube.com/watch?v=5UT2yYs5YJs&feature=youtu.be
(Chinese MSR development leader speaking at UC Berkeley, 2012)

http://tinyurl.com/nu5o7k5 (MIT contest entry)

https://sites.google.com/site/rethinkingnuclearpower/aimhigh
https://sites.google.com/site/roberthargraves/ (Hargraves)

www.youtube.com/watch?v=a2M81SYQXjI&feature=plcp
www.youtube.com/watch?v=tmCP9ABLGwM&feature=plcp
www.youtube.com/watch?v=t0hgO-iUVGU&feature=plcp
https://www.youtube.com/watch?v=eNkS0eG_SFY&feature=youtu.be
(a 7th grader explains MSR/Thorium)

Molten Salt & Thorium Power for Humanity and Earth

023-L031-1
cont'd

http://tinyurl.com/nxt75cq (how nuclear power fights planet problems)
http://tinyurl.com/kkmyhze (page 7)
http://tinyurl.com/lb478vk (AIP, Williams, 2013)
http://youtu.be/7Ew-iQTTNSE (Killen & Greene, 2014)
https://www.youtube.com/watch?v=UHxJxkVIEck (Killen & Cannara, 2014)
https://www.youtube.com/watch?v=wtQxF_3BSxQ (Cannara, 2014)
http://tinyurl.com/nqfem24 (p20, change Cretaceous to Carboniferous)

http://thoriummsr.com (Thorium MSR [LFTR] information)

http://tinyurl.com/nl9j5fa (DMSR, Hoglund, multiple fuels)

http://indico.cern.ch/event/222140/session/9/material/slides/1?contribId=36
www.youtube.com/watch?v=Hty0JstLFNw (MSFR, Merle-Lucotte, Madden)

http://tinyurl.com/kkmyhze (conventional reactors, fuel, processing & waste, Vujic)
https://www.patreon.com/creation?hid=1940387 (Gordon McDowell on IEER)
http://atomicinsights.com/contradicting-arjun-makhijanis-claim/ (Adams)
http://www.world-nuclear.org/ (general nuclear-power news)

http://www.world-nuclear.org/info/inf62.html Thorium as nuclear fuel)
http://tinyurl.com/jw22w96 (Thorium vs. Uranium, Barton)
http://tinyurl.com/jvvawya (Uranium & Thorium geology)

http://tinyurl.com/4t5ojde http://tinyurl.com/oerwnsu (Chinese MSR efforts)

http://energyrealityproject.com (Climate Reality Project)

https://www.youtube.com/watch?v=zc7rRPrA7rg (nuclear vs.'renewables')
https://www.youtube.com/watch?v=IzbI0UPwQHg (Ben Heard)
http://tinyurl.com/or8axal (but local solar is fine)

http://tinyurl.com/o26sd9k http://youtu.be/FGYQhGNUMCo (radiation facts)
http://newsoffice.mit.edu/2012/prolonged-radiation-exposure-0515 (MIT)
http://t.co/3IMO5Wvc4N (Allison)
http://tinyurl.com/c8vrc8y (Cannara, p19 errata: "Sievert" => "mSievert")
https://www.youtube.com/watch?v=1rW-EwP-DNE (Sandquist)

Books: "Atomic Accidents, "The Sixth Extinction", "A Cubic Mile of Oil"

CIVILIAN NUCLEAR POWER

... a Report to the President—1962

U.S. ATOMIC ENERGY COMMISSION

http://energyfromthorium.com/pdf/CivilianNuclearPower.pdf
or: http://tinyurl.com/6xgpkfa

Molten Salt & Thorium Power for Humanity and Earth

THE WHITE HOUSE
Washington

March 17, 1962

Dear Mr. Chairman:

The development of civilian nuclear power involves both national and international interests of the United States. At this time it is particularly important that our domestic needs and prospects for atomic power be thoroughly understood by both the Government and the growing atomic industry of this country which is participating significantly in the development of nuclear technology. Specifically we must extend our national energy resources base in order to promote our Nation's economic growth.

023-L031-1 cont'd

Accordingly, the Atomic Energy Commission should take a new and hard look at the role of nuclear power in our economy in cooperation with the Department of the Interior, the Federal Power Commission, other appropriate agencies, and private industry.

Your study should identify the objectives, scope, and content of a nuclear power development program in the light of the Nation's prospective energy needs and resources and advances in alternate means for power generation. It should recommend appropriate steps to assure the proper timing of development and construction of nuclear power projects, including the construction of necessary prototypes. There should, of course, be a continuation of the present fruitful cooperation between Government and industry—public utilities, private utilities, and equipment manufacturers.

Upon completion of this study of domestic needs and resources, there should also be an evaluation of the extent to which our nuclear power program will further our international objectives in the peaceful uses of atomic energy.

The nuclear powerplants scheduled to come into operation this year, together with those already in operation, should provide a wealth of engineering experience permitting realistic forecasts of the future of economically competitive nuclear power in this country.

As you are aware, two major related studies are now or will soon be underway. The study being conducted at my request by the National Academy of Sciences on the development and preservation of all our national resources will focus on the Nation's longer term energy needs and utilization of fuel resources. The other study to be launched soon by the Federal Power Commission will determine the long-range power requirements of the Nation and will suggest the broad outline of possible programs of growth for all electric power companies—both private and public—to meet the great increase in power needs. Your study should be appropriately related to these investigations.

The extensive and vigorous atomic power development programs currently being undertaken by the Commission should, of course, be continued and, where appropriate, strengthened during the period of your study. I urge that your review be undertaken without delay and would hope that you could submit a report by September 1, 1962.

Sincerely,

/s/John F. Kennedy

Dr. Glenn T. Seaborg
Chairman
Atomic Energy Commission
Washington 25, D. C.

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON 25, D. C.

OFFICE OF THE CHAIRMAN

November 20, 1962

Dear Mr. President:

I am pleased to submit herewith the report resulting from our "new and hard look at the role of nuclear power in our economy," as requested by you on March 17, 1962. In preparing this report, we have had the benefit of comments and advice from interested offices and individuals within and without the Government. However, the Commission takes full responsibility for the conclusions and recommendations of the report.

023-L031-1 cont'd

The Commission, of course, has concentrated on issues related to the development and use of nuclear power; it has not attempted to appraise the possible effect of major research efforts on the economics of non-nuclear energy sources or on improved transmission methods for either source of energy. However, the study has been greatly aided by the information furnished by the Department of Interior, the Federal Power Commission, and the National Academy of Sciences Committee on Natural Resources.

Those who have participated in the study you requested are agreed that it has proved to be very timely. While the Commission has been proceeding on a considered course in general accord with its 10-year civilian power program adopted in 1958, that program is now on the threshold of attaining its primary objective of competitive nuclear power in high-fuel-cost areas by 1968. However, it became evident with the passage of time that our attention had probably for too long remained focused narrowly on short-term objectives. This restudy made it apparent that, for the long-term benefit of the country, and indeed of the whole world, it was time we placed relatively more emphasis on the longer-range and more difficult problem of breeder reactors, which can make use of nearly all of our uranium and thorium reserves, instead of the less than one per cent of the uranium and very little of the thorium utilized in the present types of reactors. Only by the use of breeders would we really solve the problem of adequate energy supply for future generations.

We believe that it still is necessary for the Government as a interim measure to maintain a substantial program of research and development on advanced types of reactors other than breeder reactors, which are some years away. It appears from the projections made that efficient converter reactors will be required in conjunction with breeder reactors to meet the rapidly growing national demands for electrical power. This Government program over the next several years is also important since it provides the national means for "bridging the gap" between the infancy and maturity

of nuclear power. This interim aid will allow the consolidation of the gains made to date and will permit the national nuclear program to proceed in an efficient and sensible manner toward the development of more efficient and economical converter reactors and eventually breeder reactors.

Furthermore, a vigorous national nuclear power program can be pursued without interfering with a growing coal industry; in fact, all our projections indicate that, even assuming an optimistic forecast of nuclear power development, the use of coal by the rapidly expanding electric generating industry will increase severalfold over the next 40 years.

023-L031-1 cont'd

It should be recognized that, largely as a result of early optimism, we have, in a short space of time, developed a competitive nuclear equipment industry which is over-capitalized and under-used at the present time. This optimism has had some good results in terms of bringing many able technical men, manufacturers, and utility executives into the field, and assuring Congressional and industrial support during the development years.

The optimism has also brought about some difficuties in that unless there are new starts on atomic power plants, the atomic equipment industry will probably dwindle down to fewer manufacturers than would be desirable for a healthy and competitive nuclear industry. Fortunately, it now appears that only relatively moderate additional governmental help will be necessary to insure the building of a substantial number of large, water-type power reactors that will be economically competitive in the high-fuel-cost areas of this country and the world. This would increase public acceptance, keep the nuclear industry healthy, and help to furnish the plutonium necessary for a breeder reactor economy as soon as it can be adequately developed.

In summary, nuclear power promises to supply the vast amounts of energy that this Nation will require for many generations to come, and it probably will provide a significant reduction in the national costs for electrical power.

The Commission unanimously concurs in this report.

Respectfully yours,

Glenn T. Seaborg

Glenn T. Seaborg
Chairman

The President
The White House

Enclosure

www.thoriumenergyalliance.com

http://energyfromthorium.com/pdf/CivilianNuclearPower.pdf
or: http://tinyurl.com/6xgpkfa

Molten Salt & Thorium Power for Humanity and Earth

023-L031-1
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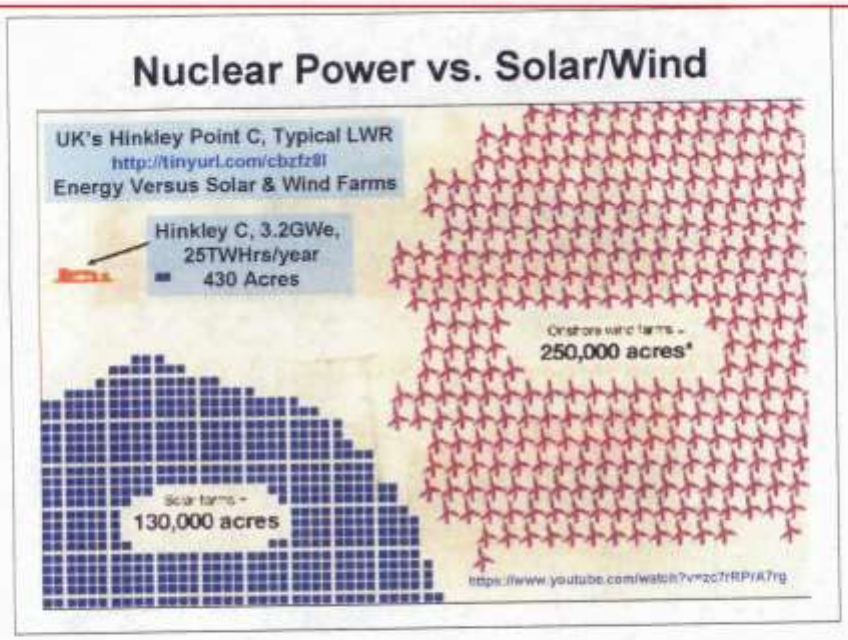

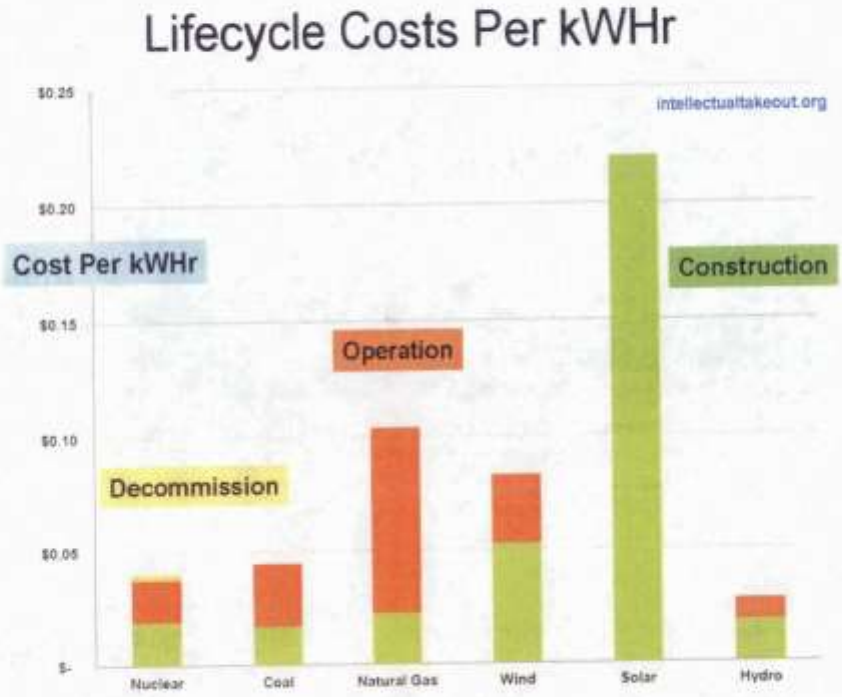

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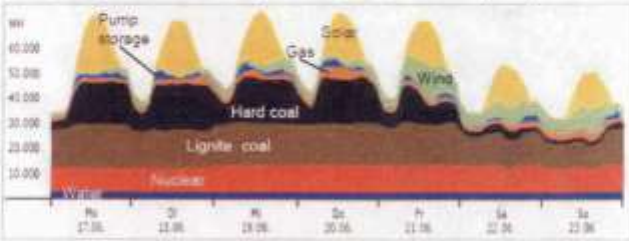
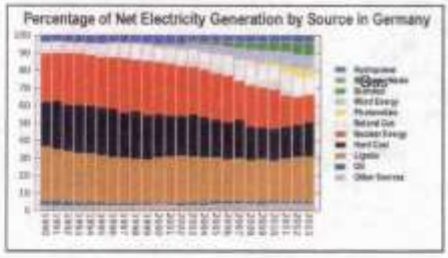
Germany - SIEMENS: Weather-related fluctuation of renewable energy (solar and wind power) with significant influence on operation régime of conventional power plants





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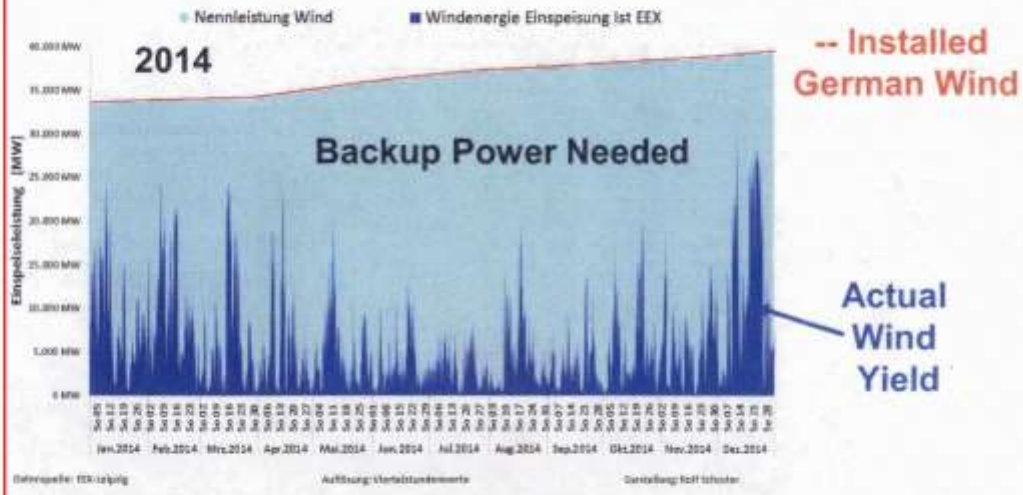
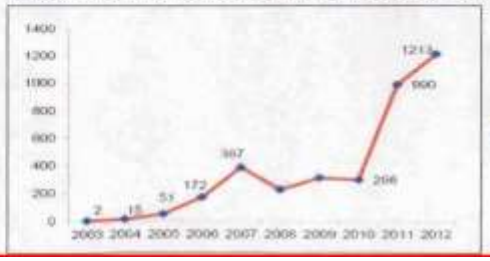


Figure 25. Grid interventions to stabilize the grid by grid operator



Increased Grid Cost
http://tinyurl.com/kyq6ddr

8/31/2015

Dr. A. Cannara
Menlo Park, Calif.
650-400-3071

To: US Nuclear Regulatory Commission

Copy: Governor Brown, Senator Hill, Assemblyman Gordon, SF chronicle Environmentla Editor

Comments on 6 August NRC Public Meeting on Diablo Canyon NPP (DCNPP).

I concur with the decisions NRC has recently made regarding DCNPP's safety... www.pennenergy.com/articles/pennenergy/2015/08/federal-regulators-reject-challenge-to-nuclear-power-plant-safety.html

023-L086-1

And, the Breakthrough Institute has made statements that I fully support... http://thebreakthrough.org/index.php/issues/nuclear/diablo-canyon-nuclear-power-shutdown-risk

California has unfortunately boxed itself in regarding clean energy, largely because of the political strength of natural-gas combustion interests in our state, plus the lack of political will to educate our electorate properly on environmental science and the benefits of nuclear power.

For example, every windmill installed demands gas generation in the amount of at least Nameplate-Power x (1 – CF) to be at the ready. Since wind's CF is <<1, this makes what our California Energy Commission terms "renewable" energy mostly gas-combustion energy.

This reality is compounded by the fact that California has not included nuclear power in its RPS requirements for utilities, and our ISO (CAISO) has not committed nuclear power to a proper position in our Loading Order for generators. Fortunately, other states have not been so foolish. The capstone of our state's unfortunate fumbling is the law preventing new nuclear-power construction until the federal government has provided a home for used nuclear fuel. This naivete effectively has made California an anti-nuclear-power and a pro-combustion-power state.

Thus, my statements are in support of renewal of DCNPP's license and its continued operation as the largest source of truly clean power in Califiornia.

At the 5 June hearing, various incorrect statements were made by opponents of DCNPP renewal, ranging from earthquake/tsunami susceptibility through Pacific waters/fisheries effects. None were based on evidence, but I'll comment on a few below.

a) Earthquake danger – the paleo-history of non-Sierra California is that our Central Valley and coastal regions are dominated by former ocean-sediment beds, punctuated by volcanic intrusions (e.g., Pinnacles, Mt. Diablo…). West of the Valley and San Andreas fault, these former sediments have been pushed sideways and lumped into coastal hills we know as the Coast Range. Tens of millions of years ago, they were part of western Mexico, and have moved with the western slip of the San Andreas by about 2cm/year, in a north-northwest direction. In other words, coastal California is permeated by slip faults. They don't generate large vertical motions when they fail.

023-L086-2

Our state's coastal lands are thus poorly-consolidated, fractured material with low ability to propagate earthquake energy. The location of DCNPP on an area hosting several such faults is taken by some, who don't apparently understand earthquake engineering, to mean the plant is in danger. Quite the opposite – the number of faults in any coastal region of our state is high – we can't walk 1000m in any east-west direction without crossing a slip fault. This makes coastal California very different from regions like the US Northeast, or Japan, where underlying bedrock is very strong and able to transmit earthquake energy great distances. For instance, the New Madrid quake in the 1800s rang church bells in Boston, despite the epicenter being below the southern tip of Illinois. It was felt over an area of about 1 million square miles. In contrast, the 1906 San Andreas quake was felt only within about 7000 square miles.

The thorough PG&E earthquake study of DCNPP's local illustrates both the low energy-transfer capacity of our coastal strata, but the confirming evidence of data recorded at DCNPP during known regional quakes, such as the 2003 San Simeon event. We can couple all this with the engineering reality of nuclear-plant design geometries – reinforced cylinders, hemispheres, etc. to illustrate why DCNPP is earthquake safe. We can even use the August 23, 2011, 5.8 quake in Virginia (in eastern bedrock, to explain why the North Anna nuclear plant there, only 11 miles from the quake's center, suffered no damage and only needed to file the 2nd lowest importance (Notice of Unusual Event) report to the NRC.

b) Related to earthquakes, when they occur on the ocean floor or within shoreline substrata, are tsunami. The Tohoku quake off Japan in 2011 created one of the largest tsunami on record, which reached north-eastern Japan and raised shoreline waves of about 15 meters. This quake was on an undersea subduction interface, where the Pacific tectonic plate drives under the Asiatic plate upon which Japan rides. These are not slip faults. Their motions release what are among our planet's strongest forces. New Madrid pales in comparison to the Tohoku event, which allowed Japan to move some meters closer to North America and its eastern shores to drop a few meters in elevation. The record quake magnitude of about 9.0 in coastal Japan didn't ruin any of its many nuclear reactors, despite well exceeding the shaking N. Anna felt.

023-L086-3

Only the tsunami, which was as high as any of those recorded earlier in Japanese coastal history, was able to subdue a nuclear plant. And that plant had been known to need better protection, even on its 1st day of operation decades earlier. Plants constructed at better elevation or with better seawalls, survived well. Fukushima Dai-Ichi was fated to fail via poor regulation. 023-L086-3 cont'd

What tsunami risk ahs DCNPP, in comparison? There re no tectonic subduction zones within 600 miles of the plant. Closest is the 3-part Juan de Fuca Plate, which released a quake of about 9 in 1700 and a tsunami that reached Japan. But, this plate complex isn't oriented to direct a large tsunami down coastal California and DCNPP is far above sea level. So, let's find a better tsunami source to aim at DCNPP – the 1964 9.3 quake near Anchorage Alaska was felt around the world and raised a 27-foot tsunami that caused damage around the northern Pacific. But even it would not have affected DCNPP because of the plant's elevation.

Some people mentioned evidence of 100+ foot tsunami in Oregon and California coastal cliff strata. These are actually evidence of ancient sea levels – beaches – when global warming had eliminated glaciers and polar ice. That's a part of our planet's history that DCNPP can help us avoid repeating.

c) Pacific fishery effects – California Fish and Game estimates that 1.5 trillion sea-creature larvae are in some way damaged by DCNPP's final cooling system each year. The plant pumps about 2 billion gallons of seawater through this final stage each day. Thus, 1.5 trillion divided by 365 and divided by 2 billion yields about 2 larvae per gallon of water DCNPP pumps. Given the far higher density of larvae in the breeding grounds outside DCNPP's intake bay, this threat seems miniscule. This is borne out by testimony presented to NRC by a retired marine biologist who discussed 490 years worth of data on the subject, and by local fishermen, who, when interviewed, say fishing has never been better in the region, and they have no trouble meeting their catch limits each day. 023-L086-4

A statement made by one DCNPP opponent on 5 June was that the plant's output water was warming the entire US Pacific Coast's waters. The maximum energy delivered via outflowing water is about 6 billion Watts thermal; the Pacific Ocean holds about 200 billion billion gallons. Suppose the California Current (eastern segment of the Japan Current) carries just 1 millionth of the Pacific's water past our coast each year: 1) DCNPP's heated water will be carried southward, leaving northern waters unaffected; 2) DCNPP's heated water will be 365 x 2 billion gallons/year, or 730 billion gallons/year, while the passing current will total 200,000 billion gallons, or about 1/3 of 1%. Variations in solar ocean heating, deep-water upwelling, evaporation and wind effect make the heat content of DCNPP's water outflow irrelevant. 023-L086-5

While c) above is likely unrelated to the NRC's criteria for license extension, it is a commonly-raised attack on DCNPP.

Thank you for the opportunity to comment on the 5 August NRC proceedings in San Luis Obispo.

Dr. Alexander Cannara
Menlo Park, Calif.
650-400-3071

unfortunately, very misled. I don't know exactly why each person is misled who says something about Fukushima or something about Chernobyl, or something about fish near Diablo Canyon, but the facts are, as one of our, actually, marine biologists had to say, that, for instance, the waters are just as productive as they've ever been.

023-T001-42

If you talk to the fishermen in the area, you'll see that they are very happy with what they see as a bounty that's as good as it ever has been. If you do the calculations, people say billions of gallons of water flow through Diablo Canyon's cooling system every day. It's two billion -- a little over two billion.

If they do what the Fish and Wildlife Service says and take the numbers of what they estimate to be the number of entrained fish larvae that might go through the reactor, it turns out to be two per gallon. As a marine biologist will tell you, there are a gazillion fish larvae. This is not the kind of problem you should be concerned with. The problem you should be concerned with is that in order to replace Diablo Canyon, you would need four Hoover Dams. We know Hoover Dam isn't working that well because of climate change. Windmills don't work that well because of climate change, as the Chinese will be happy to explain to you

023-T001-43

from their western wind farms. Solar doesn't work that well when it's cloudy, and solar on homes is great, fine, but it's not great as a farm, covering landscape.

023-T001-43 cont'd

You don't have a mechanism to replace nuclear power because nuclear power was, in fact, invented in order to provide something that humans need, clean energy, high power density energy, very little land required in order to do it. That's why Diablo Canyon is essential to the future, and we should be doing more than that. Thank you.

PARTICIPANT: Nuclear was invented for the atomic weapon.

MR. HAGAR: Okay, hold it. Let's let the speakers up here speak without interruption, please. After Marni, the speaker will be Anthony Armini. Anthony, are you here? All right, good.

MS. MAGDA: Good afternoon. I'm Marni Magda from Laguna Beach, a concerned citizen. I've been following the nuclear issue since I would have been killed when Fukushima took place because I was in Palau. As that tidal wave went toward Oregon, had it come my way, I would've died. I came instead to find out how safe nuclear was in California. I want to say to all of you here, from the bottom of my heart, who believe in nuclear, that all of us who want to address global

shows an increased risk of 31 percent higher risk today then there was from the NRC's one in 23,810 odds that were given on an earthquake strong enough to cause core reactor damage.

If we were to extrapolate that percentage increase over the extended life of a plant until 2045, by 2045 that risk would be somewhere in one in 200. And I'm just wondering how low does that risk have to get before the NRC wakes up and actually does their job and protects the public.

Thank you.

(Applause)

MR. HAGAR: Okay. Hold on Margaret. Margaret is the last speaker I have a card for.

So as she's speaking, you decide -- the rest of you decide if there's anything more you want to say. You'll have an opportunity when she's finished.

MS. CARMAN: Hello. Is this okay? Hi, I'm Dr. Margaret Carman. And I'm a chiropractor in San Luis Obispo. I've practiced here for 23 years. 024-T002-70

And first I want to say, thank you Ms. DiPeri. Thank you. And I want to try to appeal to these people on a different realm then just criminal charges.

I had yet another patient I found out

tonight who died. Fifty-three years old. Three children. And I know we're not supposed to talk about all the health ramifications because oh, we can't prove it.

024-T002-70 cont'd

But, like we were learning, there's low-level radiation that we are all -- we are all taking in. And I just -- what I want to get up here and say, is I would love this wealthy benefactor, I don't know who it's going to be and I don't know what they're going to do.

But I want them to find a job for every single one of you in the NRC. I want them to find some money for you guys so that you will let your higher self in your heart make your decisions.

Everybody's getting up here and getting mad at you. And I want to be mad. But I want to appeal to you from another standpoint of just God, you don't want your kids to be sick.

That young woman, that environmentalist, I really pray for her that when she wants to get pregnant, she hasn't got thyroid cancer and ovarian cancer from going there around Fukushima. Because that is a very real reality for that young woman.

And for all of us. And so, I know I'm the last one to speak. That's pretty amazing. But please,

please, please, decommission this plant and make PG&E pay for the clean up. Thank you. 024-T002-70 cont'd

(Applause)

MR. HAGAR: I just got a note there's somebody on the phone that wants to speak. So operator, do you have somebody there that wants to make a comment?

OPERATOR: Let me just double check real quick. Yes, we have -- has a question. Sir, your line is open.

PUBLIC SPEAKER: Great. Can you hear me at the meeting? Can you hear me?

MR. HAGAR: Yes, we hear you.

PUBLIC SPEAKER: Okay. I just want to make a comment. I listened to all of the personal statements -- personal statement on nuclear power.

And I direct -- I fairly --

MR. HAGAR: Let me interrupt you You're breaking up. We're not hearing you very well. Could you speak a little more directly into the microphone?

PUBLIC SPEAKER: I'm -- okay, I'm -- and there's some -- Can you hear me now?

MR. HAGAR: Yes. That's much better.

PUBLIC SPEAKER: Okay. And to everybody -- merchants of power --

MR. HAGAR: No, you're still breaking up.

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Comment On: NRC-2009-0552-0026
Diablo Canyon Power Plant, Units 1 and 2; Notice of Intent to Prepare an Environmental Impact Statement

Document: NRC-2009-0552-DRAFT-0022
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5

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General Comment

Two key issues to address in the NRCs EIS on extension of Diablo Canyons Nuclear Power Plants licenses

1) destruction of local marine habitat from once-through cooling; and
2) developing technology for inspecting, repairing, and replacing Holtec dry storage canisters

For years, PG&E provided state water authorities with skewed data showing that its Diablo Canyon nuclear power stations daily intake of billions of gallons of water did very little harm to surrounding marine life. However, in the spring of 2000, Diablo Canyon's operators were discovered to have withheld information from environmental regulators for two decades revealing the true effect of the reactors hot water discharges into the coastal waters off Diablo Cove and miles beyond: more extensive thermal plume impact zones than previously admitted and the progressive deterioration of biologically important marine habitat in coastal waters around the reactor. The damage was catastrophic to the indigenous marine life community. These findings had never been reported to state or federal agencies. 025-L005-1
State water authorities viewed the escalating damage as sufficiently severe to press for a cease and desist order against the utility's previously accepted levels of waste heat discharges. Despite documented evidence to the contrary, PG&E argued that no mitigation action was needed. PG&E forced the authorities to back down by threatening to outspend environmental regulators in legal appeals.
How can the public and governmental agencies trust a company displaying such duplicity? Further, the

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Template = ADM-013
E-RIDS = ADM-03
Add = M. Wentzel (mjw2)

025-L005-1 cont'd

intimidation used was in effect blackmail.
PG&E should have been held fully accountable, and in the future be prosecuted to the full extent of the law, if necessary, for all violations.

Safe storage of nuclear waste is the issue of greatest environmental concern at Diablo Canyon. Nuclear waste produces about 5% highly radioactive fission products like cesium, strontium and iodine, making it millions of times more radioactive than fresh uranium fuel. Unshielded, it delivers a lethal dose in seconds and remains a hazard for at least 12,000 human generations. High-level waste is stored outside of containment in pools for at least 5 years, and then transferred to dry container casks. 025-L005-2
The U.S. nuclear industry could have chosen thick CASTOR cast iron casks, with a thickness of 14 to 20, such as those used in Germany. Instead, lower-quality stainless steel canisters with a thickness of 1/2 to 5/8 were selected, putting profit over safety. None of the current U.S. thin steel storage canisters are adequately designed for over 20 year storage; can fail 16 years after a crack initiates; and may start failing in as little as 17 to 20 years with through-wall cracks. A throughwall crack can release millions of curies of radiation into the atmosphere, according to the President of Holtec.
In a marine environments stress corrosion cracking could cause the stainless steel dry storage canisters to crack within 30 years. And there is no current technology to inspect or repair these canisters for cracks, and no current method to replace these canisters.
A 2014 inspection found sea salt crystals on a Diablo Canyon Holtec canister that had only been loaded for only two years. The canister had sea salts and a low enough temperature range to trigger the corrosive environment needed for stress corrosion cracking initiation.
The public has been deceived by P&E. Reports of quality control issues from Holtec employees and NRC employees bring into question how reliable these casks will be over time. Each thin-shelled canister has 20-30 tons of nuclear waste the radioactive equivalent of up to 500 Hiroshima bombs. Permanent local storage of nuclear waste in these casks poses unthinkable hazards.

On a bus tour of the power plant in October 2013, I sat next to a senior member of the Diablo Canyon Independent Safety Committee, who is a leading international expert on safety and probabilistic risk assessment of operating reactors. As our bus came within view of the Plants ghoulish dry cask cemetery for the living dead, he turned to me and said:
We cant build any more nuclear power plants until we know what to do with the waste.
His directness and honesty were in stark contrast to the PR speak Id heard all morning.
Now Im of the opinion that not building new plants isnt enough; we must immediately stop producing more nuclear waste.
The lessons learned from the shutdown of San Onofre will be helpful in taking this critical step.

Submitted to the NRC in San Luis Obispo, CA, on August 5, 2015
Milton Carrigan, 2250 King Ct. #7, San Luis Obispo, CA 93401 (805/457-0778)

not cardigan.

MR. HAGAR: Pardon me.

MR. CARRIGAN: No, that's okay. For years, PG&E provided state water authorities with skewed data that its Diablo Canyon Nuclear Power Station's daily intake of billions of gallons of water did very little harm to the surrounding marine life. However, in the spring of 2000, Diablo Canyon operators were discovered to have withheld information from environmental regulators for two decades, revealing the true effect of the reactor's hot water discharges into the coastal waters off Diablo Cove and miles beyond.

025-T001-11

These included more extensive thermal plume impact zones than previously admitted, and the progressive deterioration of biologically important marine habitat in coastal waters around the reactor. The damage was catastrophic to the indigenous marine life community. These findings have never been reported to the state -- these PG&E findings have never been reported to state or federal agencies. State water authorities viewed the escalating damage as sufficiently severe to press for a cease and desist order against the utility's previously accepted levels of waste heat discharges. Despite documented evidence to the contrary, including their own evidence, PG&E

argued no mitigation action was needed. 025-T001-11 cont'd

PG&E forced the authorities to back down -- the state authorities -- by threatening to outspend environmental regulators in legal appeals. How can the public and governmental agencies trust a company displaying such duplicity? Further, the intimidation used was, in fact, blackmail. PG&E should have been held fully accountable and, in the future, be prosecuted to the full extent of the law, if necessary, for all violations. 025-T001-12

The issue, though, of even greater concern, in terms of the environment, is the issue of the storage of nuclear waste. Because I have such a limited amount of time, I want to share a very quick story before I give you some of the facts. I took a bus tour of the Diablo Canyon nuclear power site -- the plant site. I was privileged to sit next to a senior member of the Diablo Canyon Independent Safety Committee, a leading expert on safety and probabilistic risk assessment of operating reactors. As our bus came within view of the plant's ghoulish dry cask cemetery for the living dead, he turned to me and said, ''We can't build any more nuclear power plants until we know what to do with the waste.'' His directness and honesty were in stark contrast to the PR speak I heard earlier. I say not 025-T001-13

only --

025-T001-13 cont'd

MR. HAGAR: Time.

MR. CARRIGAN: We need to stop producing all nuclear waste. Thank you.

MR. HAGAR: Thank you. Okay, following Marty, Tom Campbell. Tom, are you here? Very good, thanks.

MS. BROWN: Good afternoon. Some of the many impacts on the environment from nuclear generation of energy that concern me are these. Diablo Canyon is sitting on or near 13 earthquake faults. California is one of the most seismically active places on the planet. The decision to build this plant here 35 plus years ago was in total contradiction of NRC regulations stating that nuclear facilities should not be built near major active earthquake faults. The Hosgri fault just off the coast from Diablo is connected to the San Simeon fault and the Shoreline fault. The Shoreline fault runs 600 meters from the plant and 300 meters from the intakes. Seismic experts agree that in terms of destructive shaking potential, Diablo Canyon is at the very top of the list. This risk alone justifies not relicensing Diablo Canyon. The Fukushima 9.0 earthquake was not expected or planned for.

They were confident that their reactors

November 8, 2014
Letters to the Editor
The Tribune

Mr. Deick's letter of November 7th contains opinions not in the realm of reality. Reducing the source of CO^2 emissions by increasing the use of hazardous fissionable nuclides is like crowing about having quit smoking cigarettes by puffing crystal meth. For radiation health physicists like myself who have done the duck-walk in fully-confining personal protective clothing and respirators, trying to dissolve contamination from radioactive debris spilled on laboratory floors and surfaces, the task was depressing, back-breaking, and exposed us to carcinogens as well. It is not an experience we wish to see repeated.

026-L040-1

Any slightly porous surface even "sprinkled" with radioactive fallout will probably, in my experience, need decontamination. In reality, this could mean: Good-bye vineyards, orchards, farms, grazing land and valued living structures. Wherever we fallible humans build and operate fallible machines and components, one or both will fail. Diablo Canyon is not exactly brewing beer out there. If there were a release of their product, we would not expect our neighborhoods to smell like Pabst Blue Ribbon.

Mr. Deick's opinions prompt me to suggest that if his cheers for nuclear power are so glowing, I would offer to help land him a real estate agent's job in Chernobyl, Russia or Fukushima, Japan.

Yours truly,

Sam Casalina, Ph.D *

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* Former AEC compliance officer at SAN office Oakland Calif. 1957-1960 Became an S.H. & H.P. 1961-1997. Most clients thought my work the best.

SC

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NEWS RELEASE

San Leandro, California

Today, KAISER AEROTECH, INC. as a member of the U.S. AEROSPACE ASSOCIATION, honored Dr. Sam L. Casalina for his outstanding industrial hygiene services to Kaiser for the past 25 years.

Dr. Casalina has provided radiation safety and industrial hygiene services since June 1960 for such aerospace fabrication programs as Poseidon, Minuteman, and the Space Shuttle.

His record of decades of compliance under the surveillance of countless regulatory agencies, contractor and military service representatives is testimony reflecting the highest level of professional competence. Dr. Casalina lives in Kaneohe, HI.

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Vice President,
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August 5, 2015

To: Nuclear Regulatory Commission

Comments on notice of intent to prepare an Environmental Impact Statement for the proposed license renewal of Diablo Canyon Nuclear Plant Units 1 and 2, Docket ID NRC-2009-0552

Dear Commissioners,

In 2009, the NRC's Generic Environmental Impact Statement for License Renewal of Nuclear Plants attempted to evaluate the environmental impacts of energy sources that may serve as alternatives to license renewal. It said "To serve as a source of commercial power, photovoltaic systems and concentrating solar power systems would need to work in conjunction with energy storage systems such as batteries." On that basis, you dismissed renewable energy as a viable alternative to the relicensing of a nuclear power plant.

027-L007-1

We pointed out in our comments on the 2009 GEIS what was actually happening with solar power in California at that time, that California does not consist primarily of "homes in remote locations that cannot be easily connected to the transmission grid," that "the GEIS's version of wind and solar power and renewable energy storage technology was cursory, severely out of date or wholly lacking, and of no use in an alternatives analysis that should evaluate the viability of nuclear power plants over a 20-year period that will be marked by increasing costs of plant maintenance and repair, simultaneously with smart grid and renewable energy storage technologies coming on line, as the price of solar and wind power continues to drop, all pointing toward the potential commercial obsolescence of nuclear power within the relicensed period."

Six years later, here we are again. The NRC has replaced its circa-1980 assessment of renewable energy with a new exclusionary strategy: A requirement that any replacement for Diablo Canyon's power be just like Diablo Canyon: A utility-scale, stand-alone source of always-on baseload power.

Dr. Mark Cooper in the new report *Power Shift*, notes this "failure of the NRC to adjust to the changes in the electricity sector," and states that "In the current technological and economic environment this focus is tantamount to an irrational baseload bias and a utility-scale fetish that is out of touch with reality."

Dr. Cooper points out that PG&E echoes the NRC's utility-scale baseload fetish in its Amended Environmental Report, with a focus on "standalone" energy sources. "PG&E also assumes that a significant amount of natural gas generation will be needed to replace the amount of electricity generated by Diablo Canyon. But there are a large number of possible combinations of many resources that can meet the need for electricity in a low carbon environment. PG&E has chosen a single combination that relies on a large amount of gas, which increases the environmental impact of that alternative. More renewables, distributed generation, geothermal, and efficiency would achieve the same outcome with a much more environmental and consumer-friendly impact."

027-L007-1 cont'd

Dr. Cooper notes that: "one need only compare PG&E's Amended Environmental Report with the California Energy Commission documents PG&E relies on. PG&E rejects the option of geothermal energy based on the assumption that a single new geothermal plant would be built in PG&E's service territory. Making the conservative assumption that the PG&E service territory includes half the geothermal resources in the state, geothermal resources are twice as large as Diablo Canyon's capacity. Adding in efficiency and other distributed resources, the alternative energy capacity would be four times the capacity of Diablo Canyon."

Further, "PG&E's analysis of the supply-side of the California electricity sector also obscures a simple fact: non-hydro renewables, i.e. wind and solar, have increased dramatically and are poised to surpass nuclear generation, which has been in decline."

We trust the EIS alternatives analysis will take note of this fact, as well as the fact noted in *Power Shift* that "nuclear power and central station generation are at a severe economic disadvantage as the technologies of distributed generation continue to develop and deploy."

The EIS should analyze and contrast "short-term operating costs, long term total resource costs, including efficiency as a resource, identify the implications of the dramatically declining cost of renewables, and recognize the economic problems of aging reactors in wholesale markets where renewables and efficiency are putting downward pressure on prices."

The EIS should incorporate Power Shift's assessment that the economics and necessity of Diablo's reactors are undermined by a:

- 40 percent increase in the operating cost of aging reactors;
- 40 percent decrease in the cost of wind;
- 60 percent decrease in the cost of solar;
- low-cost energy efficiency technologies that have taken a bite out of load growth;
- demand response that has become an increasingly valuable and effective resource;
- huge investments in storage technologies that are on the brink of redefining the value of intermittent resources; and
- advanced information and control technologies that transform the approach to reliability.

The alternatives analysis should incorporate Dr. Cooper's findings that "aging reactors are more costly than efficiency, wind, gas, and some solar in the near-term. In the mid-term more solar becomes competitive with aging reactors as do several other generation sources, including biomass, geothermal, micro- turbines, and even offshore wind." 027-L007-1 cont'd

In view of the fact that your 2009 GEIS insisted that "to serve as a source of commercial power, photovoltaic systems and concentrating solar power systems would need to work in conjunction with energy storage systems such as batteries," the alternatives analysis in the EIS should acknowledge the April 2015 introduction by Tesla of affordable residential and industrial battery storage systems; the implications of this technology's instant, widespread acceptance; and its projected growth to become a $19 billion industry by 2017. If the EIS does not incorporate such an analysis, we will know that the NRC has again chosen to remain strategically out of date so as to exclude viable alternatives to license renewal.

Finally, the EIS should dispense with PG&E's argument that Diablo Canyon is needed to meet the goals of carbon reduction. Recent projections by the Department of Energy's Energy Information Administration (EIA) based on multiple scenarios for carbon emission reductions found that nuclear power does not help achieve greater carbon emission reductions. 027-L007-2

Per Dr. Cooper, "pointing out that 60% of our current low carbon generation comes from nuclear as a basis for suggesting that nuclear must play a central role in the future decarbonization of the electricity sector is simply wrong as a matter of fundamental economics and totally irrelevant to policy making. The existence of nuclear power is a very old sunk cost.... In the mid- to long-term, none of the existing nuclear reactors will make any contribution to decarbonization. They will all have to be replaced and their future costs, compared to the available alternatives, are all that matters."

In its Clean Power Plan, the EPA concurred, rejecting a proposal to allow states to count 6 percent of existing nuclear generation toward clean energy goals. In its final rule, EPA states "we believe it is inappropriate to base the BSER (Best System of Emission Reduction) on elements that will not reduce CO2 emissions from affected electric generating units below current levels.... Existing nuclear generation helps make existing CO2 emissions lower than they would otherwise be, but will not further lower CO2 emissions below current levels. Accordingly... the EPA is not finalizing preservation of generation from existing nuclear capacity as a component of the BSER."

This should be included in the EIS alternatives analysis.

Thank you for your attention to these issues,

Andrew Christie
Chapter Director

proponents of nuclear power. Where do they live? Do they live within the fallout area? How long have they lived there? Have they raised their families there?

I think that's all part of the environmental impact. And when you're looking at the relicensing for the plant, please take those things into consideration.

And if you agree with me, please don't applaud.

(Laughter)

MR. HAGAR: Okay. The speaker following Andrew will be Linde Owen. Is Linde here? And how about Vita Miller? Okay.

MR. CHRISTIE: Good evening. My name is Andrew Christie. I'm the Director of the San Lucia Chapter of the Sierra Club, speaking on behalf of the Sierra Club's 2,000 members in San Luis Obispo County.

In 2009 the NRC's Generic Environmental Impact Statement for the license renewal of nuclear plants attempted to evaluate the environmental impacts of energy sources that may serve as alternatives to license renewal. 027-T002-58

It said, "historically photovoltaic systems have not been used for commercial power generation, but have been used to power appliances in

027-T002-58 cont'd

homes in remote locations that cannot be easily connected to the transmission gird."

And on that basis you dismissed renewable energy as a viable alternative to relicensing of a nuclear power plant. We pointed out in our comments on the 2009 GEIS what was actually happening with solar power in California at that time.

That California does not consist primarily of homes in remote locations that cannot be easily connected to the transmission grid. That the GEIS's version of wind and solar power and renewable energy storage technology was cursory, severely out of date, or wholly lacking.

And of no use in an alternatives analysis that should evaluate the liability of a nuclear power plant's over a 20-year period. That will be marked by increasing costs of plant maintenance simultaneously with smart grid and renewable energy storage technologies coming online as the price of solar and wind power continues to drop, all point toward the potential commercial obsolescence of nuclear power within the relicense period.

Six years later, here we are again. The NRC has replaced its circa 1980 assessment of renewable energy with a new exclusionary strategy.

A requirement that any replacement for Diablo Canyon's power be just like Diablo Canyon. A utility scale, stand-alone source of always on, base load power.

027-T002-58 cont'd

Dr. Mark Cooper in the new report, Power Shift, notes this failure of the NRC to adjust to the changes in the electricity sector. And states that "in the current technological and economic environment, this focus is tantamount to an irrational base load bias and a utility scale finish that is out of touch with reality."

Dr. Cooper points out that PG&E echos the NRC's utilities scale base load finish in its amended environmental report. With a focus on stand alone energy sources.

He wrote, "PG&E also assumes that a significant amount of natural gas generation will be needed to replace the amount of electricity generated by Diablo Canyon. But there are a large number of possible combinations of many resources that can meet the need for electricity in a low carbon environment.

PG&E has chosen a single combination that relies on a large amount of gas, which increases the environmental impact of that alternative. More renewables distributed generation, geothermal and

efficiency would achieve the same outcome with a much lower environmental and consumer friendly impact."

027-T002-58 cont'd

Make a note, Breakthrough Institute. Your 2009 GEIS insisted that "to serve as a source of commercial power photovoltaic systems and concentrating solar power systems would need to work in conjunction with energy storage systems such as batteries."

We hereby challenge that out of date generic conclusion. And note that the EIS should acknowledge the April 2015 introduction by Tesla of affordable residential and industrial battery storage systems.

The implications of this technology has widespread acceptance. And its projected growth to become a $19 billion industry by 2017.

If the EIS does not incorporate such an analysis, we will know that the NRC has again chosen to remain strategically out of date so as to exclude viable alternatives to license renewal. Thank you.

(Applause)

MR. HAGAR: Maybe I just skipped your card.

MS. OWEN: Should I just go?

MR. HAGAR: Yes, go ahead.

MS. OWEN: Thank you. Good evening and

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August 25, 2015

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80 FR 37644
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RULES AND DIRECTIVES BRANCH USNRC

U.S. Nuclear Regulatory Commission
Cindy Bladey
Office of Administration, Mail Stop OWFN-12H08
Washington, DC 20555-0001

RE: Diablo Canyon Power Plant, Units 1 and 2; Notice of Intent to Prepare an Environmental Impact Statement (EIS)

Dear Michael Wentzel and all involved with the Environmental Impact Statement:

The Environmental Center of San Luis Obispo (ECOSLO) has a 42 year history of protecting and cherishing the San Luis Obispo environment. Over the last three years ECOSLO has also been responsible for documenting and cleaning up Fukushima marine debris.

ECOSLO is concerned about this trend in "stovepiping" data. The completely separate Safety and Environmental reports, being written for the relicensing of Diablo Canyon Nuclear Power Plant (DCNPP), are putting unrealistic restraints on conclusions and possible consequences. **The NRC must take a holistic approach to the intertwined Safety, Economic and Environmental impacts of a DCNPP relicense.** 028-L026-1

ECOSLO knows there are better ways to secure and sustain our energy future than using fifty year old nuclear technology. It is time to rethink the efficacy of nuclear power generation. By the time this expensive EIS for license renewal is done new advances in energy technology will make generating nuclear power even less economical, less flexible and certainly less sustainable. Advances in energy technology are happening every day - just this year the intractable problem of storing the sun's energy has been solved. Storing the sun's energy is way safer and less costly than storing nuclear waste. **The EIS must address advances in alternative and renewable energy.** Those who claim nuclear power as clean energy can only claim the energy generated is cleaner than burning fossil fuels. But even that is a questionable claim when the mining and manufacture of a nonrenewable resource like uranium is included in the equation. **Therefore any EIS must include a comprehensive analysis of actual environmental costs from cradle to grave. It must compare renewable and nonrenewable energy costs on a level playing field.** From the EPA's Clean Power Plan: "..recent trends evidenced in Renewable Energy development, such as rapidly growing investment and rapidly decreasing costs, are not as clearly evidenced in nuclear generation..." **This important finding and the whole Clean Power Plan from the EPA must be factored into the EIS for license renewal.** 028-L026-2

The EIS must address the aging Power Plant and whether the upgrades required by 2025 will be safe and cost effective for energy consumers. One of the biggest concerns of our community is that the 028-L026-3

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E-RIDS= ADM-03
Add= m. Wentzel (mjw2)

028-L026-3 cont'd

aging plant and its waste storage will not be a priority for the utility manager (PG&E) if the plant is not making a profit. The environmental consequences of neglect are too devastating to imagine. **The EIS must include a genuine environmental analysis of safety risks, costs and consequences with projections into the future.**

In December of 2014 Tom Luster, Senior Environmental Specialist for the Ca. Coastal Commission, stated unequivocally that Diablo Canyon Nuclear Power Plant is the largest marine predator on the west coast. The entrainment of billions of gallons of fresh seawater everyday to cool the power plant is affecting sea life for 500 miles in coastal shoreline waters. Mitigations for this dramatic deterioration in marine life are almost impossible. The cooling towers proposed to lower some of this effect may help but their costs range from 2-10 billion dollars and create their own list of environmental impacts.

028-L026-4

Any EIS developed as part of the proposed license renewal must address this loss to the health of the Ocean. Not only through mitigation measures but through a true cost benefit analysis. The cost benefit analysis must address the destructive effects on the whole marine food chain and the health of the ocean as an economic and environmental cost.

The EIS must address effective mitigations. We have 40 years of new marine science to draw from. Evidence is clear that removing huge amounts of larvae, small food fish and planktons could collapse the whole marine life cycle. The world's ocean health is under extreme stress already from toxic plumes, plastics gyres and climate change. **The EIS for license renewal of the Diablo Canyon Nuclear Power Plant must provide a comprehensive study of these added stressors and clear plans for avoiding system collapse within the effected 500 mile radius.**

On behalf of the ECOSLO Board of Directors and the members of ECOSLO,

Mary A. Ciesinski
ECOSLO Executive Director, ECOSLO
executive-director@ecoslo.org

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Notice of Receipt and Availability of Application for Renewal of Diablo Canyon Nuclear Power Plant License

Comment On: NRC-2009-0552-0026
Diablo Canyon Power Plant, Units 1 and 2; Notice of Intent to Prepare an Environmental Impact Statement

Document: NRC-2009-0552-DRAFT-0089
Comment on FR Doc # 2015-15921

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Submitter Information

Name: Madeline Cimone

General Comment

Please do NOT relisensce the operation of the Diablo canyon nuclear power plant. 029-L093-1

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E-RIDS= ADM-03
Add= M. Wentzel (MSW2)

Turned none of this stuff he found.

He had only statistics. -- And so he -- this is all a -- to me it just went -- switch power sources, the power source is on enough would raise fossil fuel.

It has to be very powerful to do that. And there's only one on the horizon. It's nuclear power that now does 20 percent of our power.

So, that's my comment. And I hope that it was heard at the meeting. Thank you.

MR. HAGAR: Okay. Thank you. Operator is there any other speakers on the phone that want to make a comment?

OPERATOR: Not at this time, there's not.

MR. HAGAR: All right, thank you.

MS. COMER: I would like to make a comment. Hi. My name is Gayle Comer and I'm from -- oh, this one? Okay. Los Osos, I'm here for 34 years, a member living here.

And I was motivated after hearing Kathi DiPeri speaking about how it's not just looking at the relicensing problems in the future. But it's happening here right now. 030-T002-72

And as this last gentleman had also said, you know, what are, you know, look at the studies of what's happening right now. But the fact is, is the

plant is not safe right now.

I have lived there. I have had nine miscarriages in my time of being here. I worry about what my sons, who I was able to have, would be experiencing in years from now.

030-T002-72 cont'd

It's not always so prevalent. I have had five friends under the age of 50 die of cancer in this area. Yes, it's not quoted Diablo.

But there needs to be studies. And as they said, there wasn't those studies made. And there is that happening right now. Not in the future or will it happen in the future.

There's three women right now at a school that I participate with, mothers, young mothers with thyroid cancer. You know, I mean, that's five miles as the bird flies from here.

It's not like what will happen ten years from now. But it's happening right now. And the studies were never done. So we don't have it to compare to.

But, you know, there is real risk. And it's happening now. And to let you know that.

(Applause)

MR. HAGAR: Okay. We've gone through the list of speakers. Is there anyone who has a last

and sit right here on these two seats. When it's your turn to speak, you'll be right here. Then after the first speaker -- Lynn, you'll be first -- when I introduce Lynn -- Harvey's already here, but after Harvey speaks -- when Harvey speaks -- when I get up to introduce Harvey, I'll announce the next speaker. So when I call your name, please come sit up here, so you'll be ready to go. Everybody understand what we're going to do? Lynn Compton, you got it. Wait, I'm sorry, Lynn, got ahead of myself. I'm getting anxious about 57 people talking. Operator, I neglected to ask, but did anybody on the phone have a question about the presentation materials?

OPERATOR: No, sir, we didn't have anybody queue up.

MR. HAGAR: Okay, thank you. Thank you for the reminder.

MS. COMPTON: I will set the bar and be short and sweet, as you requested. My name is Lynn Compton. I'm the Fourth District supervisor. A couple of points I would like to make as you're deliberating. Can you hear me now? A couple of points I'd like to make as you're deliberating. The two units located at Diablo Canyon produce a total of 18,000 gigawatt hours of clean, reliable electricity per year.

031-T001-1

This is enough energy to meet the needs of more than 3 million northern and central Californians. Diablo Canyon generates more than 20 percent of the electricity used by PG&E customers, with zero emissions power from nuclear power, and more than half of the electricity is generated from carbon-free sources. Nuclear energy produces more clean air energy than any other source and is the only source that can produce such large amounts of energy 24/7. Lastly, this is important to our local economy, something that's near and dear to my heart. Those were my brief comments, thank you. 031-T001-1 cont'd

MR. HAGAR: Okay, thank you, Lynn. Harvey Wasserman is next, and the next people would be Molly Johnson -- Molly, are you here?

MR. WASSERMAN: Hi there, I'm Harvey Wasserman from nukefree.org. David Crosby is here. We represent, also, Bonnie Raitt, Jackson Browne and Graham Nash, who have submitted statements for the shutdown of the Diablo Canyon nuclear plant. We want the Commission to recognize that we are in favor of full employment for all the operators at Diablo Canyon. It will be shutting down. We hope that the operators at Diablo will stay on for the decommissioning process because they know the plant better than anybody. We also understand that when Diablo is shut, there will be

used to store spent fuel were loaded to the manufacturer's technical specifications particularly as they relate to the proper ratio of older and newer spent fuel. The root cause was determined to be reactor engineering personnel misinterpreting the technical specifications.

At the June 24th, 2015 NRC PG&E 2014 performance assessment in San Luis Obispo Ed Halpin referring to these performance flaws as gaps in excellence. The numerous documented gaps demonstrate the enormous risk we face. The plant should not only be denied relicensing, it should cease to operate now.

(Applause)

MR. HAGAR: After Gary the speaker will be Mike Brown.

MR. CORSIGLIA: Hello. My name is Gary Corsiglia. I'm a resident of San Luis Obispo. I'm a retired electrical engineer from PG&E. I worked on geothermal power plants, on fossil power plants, and I worked at Diablo Canyon Nuclear Plants.

I've heard many people say today earthquake faults are in and around Diablo Canyon. Well, I'd like to say earthquake faults lie in and around every major and minor city in California. How can we as citizens continue to allow that to happen and yet the tallest

032-T001-77

building west of the Mississippi is now under construction in downtown San Francisco on bay fill? We do it because we've studied. We've learned how to do things as engineers, as scientists and as citizens to support that.

032-T001-77 cont'd

Two people lost their lives in Paso Robles when a building fell during an earthquake. I would like to say that Diablo Canyon is a safe plant. I believe it is. I believe the people that work there, the people who designed the plant and that the NRC licensing process continues to make nuclear power plants safe. And I will continue to live here and I will continue to support electrical power.

My son works for Tesla. They sold 11,000 electric vehicles last quarter. Those vehicles are going to be powered by nuclear power that's generated at night because those cars are going to be plugged into people's homes. So please continue supporting Diablo Canyon Nuclear Plant.

(Applause)

MR. HAGAR: Gary, right?

MR. BROWN: Mike Brown.

MR. HAGAR: Mike Brown. Okay. After Mike the speaker will be Natalia --

MS. MERZOYAN: Merzoyan.

destructive testing, in order to directly measure the vessel's level of embrittlement. My question to the NRC staff, how has PG&E kept in compliance with the NRC Regulation 10 CFR 50.61, which includes criteria that limit the amount of RPV embrittlement that the NRC will permit?

Does Diablo have these capsule coupons, and when was the last time that one was removed and examined, and what were the results? In a letter from the NRC to Energy Nuclear Operations in April of 2013, the NRC stated that Diablo Canyon is in the list of the top five most embrittled pressure reactors. Considering this information, how can we be assured that the plant will continue to operate safely if the license is renewed, or even tomorrow? What size of earthquake today would it take to fracture those embrittled RPVs? Thank you.

MR. HAGAR: Let me remind you, too. I have this in mind -- I noticed Molly had a typewritten sheet. If you have your comments in writing, I'd invite you to just hand those comments to the NRC staff. That'll get them on the record, as well, so please consider that. The speaker after David Crosby will be Rochelle Becker, so Rochelle, would you come up here, please?

MR. CROSBY: This is a very partisan thing. I know all of you have opinions about what's really

033-T001-9

important here. I'll make it louder. I'm trying to be nice. I do know how to use a microphone, actually. I'd like to talk about what I think's at stake -- human lives. There are three ways this thing can go wrong. Humans make mistakes.

033-T001-9 cont'd

I've made plenty. You have; everybody has. Human error, pilot error, can put a plant into a meltdown or a blowup, can happen. Mother Nature can kick our ass. There's never been a building built that a big enough earthquake can't knock down. That's the truth. Thirdly, somebody can dive an airplane full of explosives into a pool of spent rods. Any of those things can happen.

You may have opinions about whether they're likely or not, but they can happen. Here's what I want to talk about. If one of those things does happen -- and an earthquake will happen. It's not a matter of if; it's a matter of when. I've sailed this whole coast my whole life. If you have loss of containment or a meltdown, the wind goes from here right down the coast. I've sailed it. I know it does. It's done it for thousands of years -- 12 to 15 knots every afternoon -- 12 to 15 knots. Let's be conservative and say ten miles an hour. Santa Barbara, Ventura, Oxnard, Los Angeles, Orange County. Let's again be

conservative, say it's only 10 million people. It's more. How many people do you think you can get out of Los Angeles in 18 hours? Because at ten miles an hour, that's how long it would take.

033-T001-9 cont'd

All of them, half, a quarter, 10 percent, 4 percent? Human lives. Plants are dangerous. They're terribly dangerous. Flying a plane is dangerous. I know, I'm a pilot. Driving your car is dangerous. But it's only dangerous to you or the people in the plane. When there's millions of people downwind, it's an unacceptable risk. An earthquake can and will eventually destroy this plant. Do you, as human beings, parents, brothers, sisters, want it on your conscience?

I know some of you feel your jobs are at stake. I know some of you feel winning the argument's at stake. But do you want it on your conscience? If it goes the way I'm saying, do you want it? Do you want to know that a million and a half people died because you wouldn't take a stand? The plant's dangerous. It's old. They built it backwards. That's funny. They built it on a fault. That's not.

MR. HAGAR: Our next speaker will be Milt Carrigan.

MS. BECKER: The Alliance for Nuclear

emissions which reduces greenhouse gas emissions by 6 to 7 million tons per year, environmental stewardship of 12,000 acres, vital charitable contributions and event sponsorship for our community, contributions to school education programs.

Our county general fund receives approximately $6.7 million. There are four unified school districts that receive a combined total of approximately $10.5 million, our community college, 1.1 million, our roads, 295,000, and our harbor district 380,000 all due to yearly tax revenue allocations, not to mention the very important head of household jobs provided.

Lastly, I encourage everyone who doubts these benefits to schedule a tour of the plant. PG&E is a welcome part of our community. PG&E does what is asked of them and they do it well. Please renew the licensing, and thank you very much for this consideration.

(Applause)

MR. HAGAR: The speaker after Liz will be Kaila Anderson. Kaila, are you here?

MS. ANDERSON: Yes.

MS. CURREN: Hello, I am Liz Curren from Los Osos and I am speaking for the future generations. 034-T001-067

I have family who experienced the disaster in Fukushima. My granddaughter at the time was two and experienced high levels of radiation from the disaster. And unfortunately as much as the government tried to reassure people everything was fine, it is still not under control. It is still releasing radiation and there have been people who have died. And I don't know why, but I have another family member who has developed inoperable cancer. 034-T001-067 cont'd

And so, in spite of it being a very safe plant, accidents happen, and that's why I am very scared about Diablo Canyon with the waste, the half-life of plutonium is like 24,000 years. It's unforeseeable that there won't be some kind of terrible disaster happening. There's no idea what will be happening in the next hundreds and thousands of years.

So, I just want to say I do live in foggy Los Osos. I have solar panels on my roof and I am very excited to say that those solar panels produce not only enough to power my house, a solar car, but enough to give back to the community and the environment, to PG&E. So, thank you very much.

(Applause)

MR. HAGAR: After Kaila the speaker will be Eric Greening. Eric, are you here?

Some go around to the seismic issue, others run through cooling issue, cooling agents doing emblazonment, terrorist issue have not been met yet, but I understand it has to be addressed in the EIS, as well. I think looking at all of this, in particular looking also the recently discovered cracks or beginning cracks in the dry cask which started two and a half years after the dry cask was put onto the surfaces, the independent spent fuel storage installation. I would urge very much to NRC to look at the writing on the wall, and in particular, pay a lot of attention to the so-called non-action or no-action alternative, as well as also the environmental -- the superior alternative, which I think you're required to look into the EIS because this plant will shut down sometime in the possibly near future. No action alternative means no relicensing. What happens after that? That is something you really want to look at very carefully and should be included in your environmental impact review. Thank you very much.

MR. HAGAR: Following Keay will be Rick Owen.

MR. DAVIDSON: I'm Keay Davidson. I'm one of those out-of-town fearmongers that was attacked 035-T001-38 earlier by someone in the audience, and I'm proud to be

one because I live in San Francisco. I'm a Californian, and this is an issue that's going to affect the entire West Coast, maybe even the nation. It's not just a local issue, as some people seem to think. It's really a planetary issue. I was a science writer for almost 30 years. I worked for the San Francisco Examiner, Chronicle, L.A. Times, papers in Florida. If I learned anything as a science writer is that it is before every technological catastrophe there are always many experts out there, and you should always assume there are quote marks around the word expert, people who teach at universities, people who have illustrious credentials, people who are very arrogant, and they will tell you how ignorant you are.

035-T001-38 cont'd

There are always people like this before every technological disaster who will tell you it cannot happen. They said TMI wouldn't happen. They said Chernobyl wouldn't happen. They said the Challenger space shuttle wouldn't blow up. The odds against that were 1 in 100,000. That was NASA's official estimate, and it blew up anyway. They said the Columbia wouldn't burn up in the atmosphere killing seven astronauts, including a teacher.

They said Fukushima would be fine. Don't worry about it, we're protected, and they weren't.

There are people in Japan today, so-called experts, who now have blood on their hands because they had a lot of influence in the circles of power. My advice to you is don't pay any attention to the Gene Nelsons of the world. They're always out there, and they're just frauds. Second, I want to call everyone's attention to a very important article in the New Yorker, July 20th, one of the best science articles I ever read, scary as shit, about the possibility of a major subduction quake in the Pacific Northwest that could unleash a tsunami that possibly -- we don't really know for sure -- could have impact on Diablo Canyon.

035-T001-38 cont'd

It's not certain. We can't really predict. All we know is there's a lot about the earth's crust we still don't understand. Plate tectonics is still a relatively young science. Tsunami science is incredibly young. We have almost no database to work with so far. We don't want to find out from real-life experience what catastrophes a tsunami hitting Diablo Canyon could unleash on the whole American Southwest and middle West. Please, don't pay attention to the Gene Nelsons. I've learned from experience you can't trust them.

MR. HAGAR: All right, after Rick will be William Gloege, is that right? You're next.

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Comment On: NRC-2009-0552-0026
Diablo Canyon Power Plant, Units 1 and 2; Notice of Intent to Prepare an Environmental Impact Statement

Document: NRC-2009-0552-DRAFT-0019
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RULES AND DIRECTIVES BRANCH USNRC

Submitter Information

Name: Adrianne Davis

General Comment

7/1/2015
80FR 37664

2

To the Nuclear Regulatory Commission,

Regarding Docket ID NRC-2009-0552

The Diablo Canyon Power Plant, Units 1 and 2 must close now and save the time, energy and cost of preparing an
Environmental Impact Statement. There is no perceptible gain except for the power company to delay what needs to be done without delay. Shut it down.

36-L002-1

The prospect of an "incident" happening any day, at any time, involving the plant where if the plant fails and exposes the
California Counties' San Luis Obispo, Santa Barbara, Ventura and beyond, will likely cause a dead zone, prominent for a millennia. It's a plant built in the wrong place and need not be given a license to renew. Never.

What must happen is a decision to shut it down and efficiently plan a Decommission Schedule to start, very soon, with an end date but not 45-65 years later. How many years did it take to build? Quadruple that time and heavily penalize the owner for going overtime and not leaving the beautiful space totally clean. That penalty must be delivered back to the citizens and utilized in nuclear safety programs where it is presently underfunded, in my opinion, and rarely tested.

This plant, Diablo Canyon, is dangerous residue from time when it's purpose was considered a clean process

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E-RIDS = ADM-03
Add = M. Westfyel (MJW2)

built in the best of locations. Now that it is known, thirteen seismic faults makes for a holocaust and its age multiplies the weaknesses in that sacrificial zone. Spent fuel rods add heavily to a commotion of catastrophe. Nobody will get out alive for many miles around. This is not what we want in a good neighbor who is responsible, upfront and truthful about his property.

36-L002-1 cont'd

I ask that you all pay attention to the thought/image of all of your family members living daily in this environment and under a cloud of real destruction, an uncontrolled nuclear incident gone mad. The timer is on.

Thank you,
A.A. Davis
Santa Barbara County
Downwinder

(Applause)

MR. HAGAR: Kathi? And the next speaker will be Kate Kytle. Is Kate here? Then Nancy Shaw.

UNKNOWN: She spoke already.

MR. HAGAR: Okay. Ross Pepper? Gregory Odom? Greg, you'll be next.

MS. DiPERI: Kathi DiPeri, San Luis Obispo. Thirty-five years ago I got arrested protesting the power plant. 037-T002-65

Twenty years ago I attempted to make a citizen's arrest on the CEO of PG&E for child endangerment because he signed a document between county schools to allow children to go to the power plant. To put their hands in a water tank and to teach the kids about marine life.

And I said no, I wouldn't do it because it was an unsafe place to take children. And that there was radiation in an open seawater tank. Especially since they have a permit to dump tritium and other things into the water.

And those of you who know anything about nuclear power plants know that it's unsafe not just because of the seismic. Just not because of where it's at. But because it on a regular basis, a daily basis, vents radioactivity into the environment. 037-T002-66

And I used to go through all the LERs of what PG&E recorded and they found Caesium 137 in pumpkin greens at Cal Poly. They found Caesium 137 in rod cod out of Abala. So if you want to talk about safety issues, there are safety issues on a daily basis just living here. 037-T002-66 cont'd

The other thing is that back then PG&E didn't want to do any studies on the health of the people because if they had data on what was happening with the radiation around the power plant, then they would have data that could incriminate them on what was happening to the health of the people in the area.

So all they were doing were studies on what the hot water did to the biology, to the fish and to the animals. Those animals are continued. It's continued over 35 years now to damage the environment. 037-T002-67

So 35 years later it's kind of crazy that they're trying to do an environmental impact study on what already has been done. Some day, back when I did the arrest -- citizen's arrest on the CEO, I came really close of having a jury trial. 037-T002-68

I came really close to having the CEO tried for child endangerment. And some day I'm going to try one of the NRC members for the same thing because they should be charged criminally.

Not be allowed to mitigate when they do something wrong and just pay a debt. And think that it's okay. They need to stop doing what they're doing. 037-T002-68 cont'd

And then maybe if some of these guys get criminally charged and if there's an accident, maybe their sentence should be that they're the ones who get to clean up and do the decommissioning. And they can live in the surrounding area.

And since it's so safe, they can be the ones to do the clean up. So, I just want to tell you that you're -- in history I look forward to the seventh generation looking back in the history books and seeing that the NRC and PG&E were criminally charged for their lack of -- for their lying to the public.

For their not taking seriously the safety of the people. And it could be any one of you guys. And I hope that you really think about what you do when you make your decisions. Thank you.

(Applause)

MR. HAGAR: After Gregory, Victoria Conner. Is Victoria here? Then Margaret Carman.

MR. ODOM: First of all I'd like to say I don't envy you guys at all having to go around these places and getting blown up by people who don't trust you.

And I enjoy doing a lot of walking.

So, I try to show that I do believe in the environmental aspects of our community. I enjoy what we have. I feel a responsibility to be able to participate and be a part of that.

However, given what your task is here tonight, which is to take input on what we would like to see in the environmental impact, I would like to have you look at the economic vitality of what PG&E gives to our county. 038-T002-56

Not only in the sense of the generation in tax dollars, but also, what they do with small business that they support, that they buy products for -- from.

Also look at where their employees live. And in the -- without using the term fallout zone, but in the surrounding area of the plant. Where do they live? Where do they raise their families?

Also, look at the retirees. Once they've retired, do they leave? They're kind of like the canaries in the cavern if you will because they know the inner workings.

They have a feeling for the plant. They know the safety aspects. And if they're staying here, that's saying -- I think it says a lot.

Also look at the people that are not 038-T002-57

proponents of nuclear power. Where do they live? Do they live within the fallout area? How long have they lived there? Have they raised their families there?

038-T002-57 cont'd

I think that's all part of the environmental impact. And when you're looking at the relicensing for the plant, please take those things into consideration.

And if you agree with me, please don't applaud.

(Laughter)

MR. HAGAR: Okay. The speaker following Andrew will be Linde Owen. Is Linde here? And how about Vita Miller? Okay.

MR. CHRISTIE: Good evening. My name is Andrew Christie. I'm the Director of the San Lucia Chapter of the Sierra Club, speaking on behalf of the Sierra Club's 2,000 members in San Luis Obispo County.

In 2009 the NRC's Generic Environmental Impact Statement for the license renewal of nuclear plants attempted to evaluate the environmental impacts of energy sources that may serve as alternatives to license renewal.

It said, "historically photovoltaic systems have not been used for commercial power generation, but have been used to power appliances in

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Comment On: NRC-2009-0552-0026
Diablo Canyon Power Plant, Units 1 and 2; Notice of Intent to Prepare an Environmental Impact Statement

Document: NRC-2009-0552-DRAFT-0046
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80 FR 37664

53

Submitter Information

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2015 SEP -1 PM 5:17
RULES AND DIRECTIVES BRANCH USNRC

Name: Terre Dunivant

General Comment

FRACKING? Hydraulic fracturing has caused earthquakes to occur more than 100 times normal since oil companies started breaking rocks underground in Oklahoma. Now the California Department of Conservation, Division of Oil, Gas, and Geothermal Resources, in consultation with the State Water Resources Control Board and the Central Coast Regional Water Quality Control Board, have publicly noticed a proposal to expand the current aquifer exemption designation for the Dollie sands of the Pismo formation in the Arroyo Grande oil field (in unincorporated San Luis Obispo county only a few miles from the plant). The proposed aquifer exemption would allow the State to approve Class II injection into the identified area, either for enhanced oil recovery or for injection disposal of fluids associated with oil and gas production. The ground under Diablo Canyon Nuclear Plant is already broken by several faults, and fracking will only add to the earthquake potential in ways no one can predict. Hydraulic fracturing has huge environmental impacts, even without fracking very near to an aging nuclear plant storing decades of hazardous waste onsite that sits on multiple earthquake faults. 039-L053-1

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Add= M. Weinhagel (mjw2)

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Submitter Information

50

Name: Christian Fine

General Comment

Please shut down all nuclear power facilities. Please stop making nuclear waste. 040-L050-1

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Add= m. Weitzel (mjw2)

Diablo Canyon, PG&E has a -- takes a look at seismic risk when you start evaluating what's referred to as core damage frequency. The likelihood that a core damage event will occur.

And then that factors into the severe accident mitigation alternatives process. So it's not as if it's not addressed at all. It's just that the seismic safety of the plant is a process that's addressed separately from the license renewal process.

And that is being addressed specifically right now from the follow on actions or the post-Fukushima follow on actions.

MS. FLAM: Thank you. When I was writing up my comments earlier this afternoon I -- well, I didn't know all of that. And I can't say that I quite understand all of what was just said. 041-T002-22

But, I strongly believe that seismic risks do pose a grave environmental problems. And so I will just go ahead and present my comments as they stand.

Good evening. My name is Michelle Flam and I live in San Luis Obispo, about 15 minutes from Diablo Canyon. Can you -- you can hear me, everyone? Okay.

There are so many current and future environmental problems with this old nuclear power plant in our neighborhood. Beyond site stockpiling of

radioactive waste, problems associated with trying to store that radioactive waste, leaks and cracks in the dry casks.

041-T002-22 cont'd

Embrittlement of unit one's reactor pressure vessel. Once through cooling issues that effect our local marine life and thus our fishing economy. The real possibility of a terrorist attack. And uncharted seismic dangers.

In my mind, the most obvious argument against the proposed license renewal of the Diablo Canyon plant is the now disabled Fukushima Daiichi nuclear power plant. As we sit here this evening, what happened March 17, 2011 in Japan is both an environmental and humanitarian tragedy that continues to be written.

Whether Diablo Canyon would be vulnerable to that kind of tsunami damage that caused the meltdown of three of the Fukushima Daiichi plant's reactors, we do not know. We do know that Diablo Canyon sits on top of a hornet's nest of seismic uncertainty.

Seismic, Seismic, I don't know, you say seismic, I say seismic. Other speakers have already spoken on the dangerous possibilities of this topic -- this topic presents.

But there is -- there's no one in this room,

there's no scientists, no activists, no one sitting on the NRC panel that can predict with any certainty what might happen at that plant were there to be a major earthquake in its vicinity.

041-T002-22 cont'd

But many of us, I think, can safely say that we imagine it would not be pretty. I imagine it would be ugly.

I urge the NRC Commissioners here this evening to imagine how a major accident, seismic or otherwise at Diablo Canyon would affect those of us who live, those of us including the faithful workers at that plant, who live in the shadow of this troubled, old plant.

I urge the Commissioners here this evening to imagine if an accident were to happen at Diablo Canyon, how you would answer questions posed by people in your own communities, perhaps your loved ones. I urge you to image how you would answer those questions that might arise in your own mind.

Thank you for your time and attention. Thank you for traveling to our community to listen to our concerns.

(Applause)

MR. HAGAR: And the speaker after Ace will be Sharon Hoffman.

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55

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RULES AND DIRECTIVES BRANCH USNRC

Submitter Information

Name: Yvonne Floyd

General Comment

Please DO NOT re-license the operation of unit one and two at Diablo Canyon Nuclear Power plant in SanLuis Obispo, CA. The danger to us inhabitants living in the neighborhood of the plant IS TOO GREAT in case of an earthquake and possible malfunction of any of the units to even be considered for a re-licensing. REMEMBER FUKUSHIMA?! We, who live here DO NOT want to experience what those poor Japanese people had to endure. The plant is WAY TOO OLD to re-license and even without an earthquake likely to malfunction in one way or another. 042-L055-1

Even if we are living in relatively small communities we still relish our lives!

Sincerely,
Yvonne Floyd

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Submitter Information

15

Name: Nancy Foley
Address:
964 Balboa Street
Morro Bay, CA, 93442
Email: nackyann@hotmail.com

General Comment

RE: Docket ID 2009-0552
I attended the meeting on August 5th with three friends. There were so many people waiting to comment that we were not able to at that time. Therefore, I wanted to comment here.

After listening to many express their views,(and expertise) pro and con, the bottom line I see, is that the plant is growing older and more vulnerable every day and even though "safety is the first priority" any accident would surely devastate the area for thousands of years to come. There can NOT be ANY reason sufficient enough to warrant the plant's continued operation in the face of that kind of destruction! Please, I urge you--no, I BEG you NOT to relicense Diablo Canyon. It is FAR to dangerous!! Thank you.

043-L015-1

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E-RIDS= ADM-03
Add= M. Wentzel (MSW2)

a former fire chief for the county and had emergency response responsibility for Diablo Canyon for several years. I think when I first heard about the EIS scoping meeting, I was a little reluctant to suggest it should be supported because it seemed like there was too many uncertainties at this point. But I think it's a good idea that we look at some of the uncertainties at this point because when it really comes down to it, we need to look at all the options. The EIS will provide an opportunity to look at alternatives, as well as, perhaps, not relicensing. Costs are going to be the critical issue for everyone here, including the employees.

044-T001-63

I think a smooth transition is important. A decommissioning study to allow for support for the employees, to make sure that there's not too much displacement, and some benefits or some tax reimbursements to offset the impacts is going to be really important. But let's look at the situation as far as costs are concerned. I think the scoping should include a very detailed analysis of the costs involved in alternatives.

If you look at the energy cost and the cost of relicensing, as well as the alternatives, we have to consider how much it costs to build a plant. Generally

speaking, the cost of the construction has been grossly underestimated. As a matter of fact, it costs $5 billion, ten times the original estimates. Replacement of steam generators, reactor heads, transformers, turbine blades and so forth costs over another $1 billion. Dry cask storage system, over $200 billion and rising. Lost revenues associated with shutdowns and delays because of failures of equipment, millions more. What can we expect? We're talking about 30 years from now -- we're going to talk about running this plant for 30 years. What can we expect in the next 30 years?

044-T001-63 cont'd

I think the past performance can give some indication of that. We have had -- it's pretty obvious what's going on is that the cost of Diablo is going up, and the cost of alternatives are going down. I think we should be very careful here. We understand right now that Diablo and some of the other big plants have to actually pay to put energy on the grid sometimes right now, even with the --

PARTICIPANT: Time.

MR. FRANK: -- drought.

MR. HAGAR: Your time is up.

MR. FRANK: Thank you very much for being here.

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Comment on FR Doc # 2015-15921

7/1/2015
@ FR 37664

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RECEIVED
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RULES AND DIRECTIVES BRANCH USNRC

General Comment

From:
Daryl Gale
Los Angeles, CA

To: The NRC EIS Team,

Let us be proactive and not reactive (like TEPCO and the Japanese Government regarding the Fukushima disaster) !
It will be so much less painful, less expensive, less stressful to the local population and the workers.... to not relicense Diablo Canyon now!

045-L094-1

It is far better to deal with the economic/labor issues and the nuclear waste repository issues in the present, from a position of strength and consideration than in the aftermath of an earthquake, tsunami, sea level rise accident or fire/mechanical release which will involve compounded injuries, possible deaths, radiation leaks, transportation nightmares and hysteria and other unforeseen results.

We are currently going through a major energy transition.... As we segue away from fossil fuel use, it is true that we will still need to use some natural gas as a bridge fuel and at night. Battery

technology continuously keeps improving and we can stem the worst effects of climate change if we band together and recognize the necessity of acting on mitigating it. (I live in a solar apartment and drive an electric scooter)

045-L094-1 cont'd

People in general prefer the status quo and are not interested in the stress of making major person sacrifices or behavioral changes unless they are mandated or incentivized through the media, the government, patriotism or financial gain!

It is up to our federal and state governments to lead the way so we do not fall victim to a major environmental catastrophe at Diablo Canyon. We watched and still watch in horror the mismanagement, cancer rates, continual dumping of radioactive water and the 230,000 displaced/evacuated residents of the Fukushima area.

Lets not turn the beautiful, tourist destination of San Luis Obispo into a disaster when we have all the data and recent warning signals from the ongoing tragedy of Fukushima.

It is time for a strategic shift. We need to find a way and a place to move the nuclear waste from Diablo Canyon and San Onofre off the beaches, away from a high density population area and as far away as possible from the excessive amount of earthquake faults that characterize most of California.

We need seriously focus and do research on the nuclear spent waste issue: the securement, the transportation and a permanent repository for it!

Thank you for listening to our testimony on August 5, 2015 and considering the viewpoints of citizens who live, work, recreate and deeply care about the safety and future of California.

Daryl Gale
turtleperson@earthlink.net

free energy, which is really wonderful.

So, I would like to start off with Dr. James Hansen, who as you know, is pro nuclear. And he stated in a recent paper, July 27, 2015, that the sea level will rise. 045-T002-27

It will be much more imminent then has been promoted in the IPCC papers. And the sea level rise will be rising much more in the next two decades.

So, you know, we've been really lucky here. I mean, just because we haven't had any bad earthquakes around San Onofre or Diablo Canyon doesn't mean that they're not going to happen. Or the same thing with tsunamis. 045-T002-28

And because we've been so lucky, it just -- it doesn't mean that it's okay to keep continuing business as usual. I'd like to bring about the insidious concept of collective denial. I would like everyone to consider our society's collective denial.

For example, the people in New Orleans, they didn't think that a hurricane with the magnitude of Katrina could happen. The people in New Jersey and New York didn't conceive of Hurricane Sandy.

Climate change is seriously changing our society. And we can be caught off guard. So, I would really like the NRC to strongly consider how can we go

045-T002-28 cont'd

forward with more nuclear energy until we figure out a way to deal with the waste.

That's a big part of our collective denial. We keep building more plants and creating more waste. And I don't know if it's up to the Federal agencies or State policy. But we've got to deal with the waste before we make more waste.

Thank you.

(Applause)

MR. HAGAR: And the next speaker will be Joseph Mirabile. Is that right, Joseph?

MS. OLIVER: Oh, it's this right here. Thank you. Good evening. I'm Kathy Oliver. I'm a citizen and a rate payer.

And as a citizen and a rate payer from this county, I believe that the health of the smallest organism contributes to that of all of us. However, my sole provider of electricity, Pacific Gas & Electric Corporation, believes in making a profit, as is appropriate for a corporation.

Protection of the marine life at the base of the food chain has not been reviewed as profitable by PG&E. PG&E's Diablo Canyon facility sucks in and kills more then a billion fish in the early life stages during its daily cycle.

TOWN OF FAIRFAX

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August 20, 2015

Cindy Bladey, Office of Administration
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U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Public Comment re Closure of Diablo Canyon Nuclear Plant and Opposition to the Issuance of Permits

Dear Ms. Bladey:

Enclosed please find *Resolution 15-37* adopted by the Town Council of the Town of Fairfax earlier this month, expressing their support of the closure of the Diablo Canyon Nuclear Power Plant, and their strong opposition to the issuance of any further permits for the facility.

Please include the enclosed resolution as part of the public comments opposing any further permits for the Diablo Canyon Nuclear Plant.

Sincerely,

Michele Gardner
Town Clerk

Enclosure

SUNSI Review Complete
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Add= M. Wentzel (msw2)

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RESOLUTION 15-37

A RESOLUTION OF THE TOWN COUNCIL OF FAIRFAX IN SUPPORT OF CLOSURE OF DIABLO CANYON NUCLEAR POWER PLANT

046-L024-1

WHEREAS, Pacific Gas and Electric Co. (PG&E) has submitted its license renewal application to the federal Nuclear Regulatory Commission ("NRC") for Diablo Canyon on November 23, 2009, seeking to extend the licenses for an additional 20 years beyond the current expiration dates of November 2, 2024, for Unit 1 and August 26, 2025, for Unit 2; and,

WHEREAS, the NRC, the California Coastal Commission, the California Department of Toxic Substances Control, and the California State Water Resources Control Board will be considering permits to renew licensing of Diablo Canyon; and,

WHEREAS, since the Diablo Canyon reactors were built, roughly a dozen earthquake faults have been found in the near vicinity; and,

WHEREAS, the Diablo Canyon reactors are 45 miles from the San Andreas fault, half the distance as Fukushima from the earthquake that destroyed it; and,

WHEREAS, one recently discovered fault line, the Shoreline, passes within 700 yards of the two Diablo reactors; and,

WHEREAS, new evidence strongly indicates these fault lines are interconnected; and,

WHEREAS, Dr. Michael Peck, former Nuclear Regulatory Commission chief on-site inspector at Diablo Canyon, has written a lengthy memo warning that these reactors cannot withstand a likely earthquake; and,

WHEREAS, Diablo Canyon is also in a tsunami zone, and its intake pipes are especially vulnerable to damage or destruction from a massive wave; and,

WHEREAS, the damage from a major accident to the health and property of the millions of people downwind and California's economy is essentially inestimable; and,

WHEREAS, there is a substantial likelihood that radiation from a significant accident at Diablo Canyon would adversely affect Marin County and the Town of Fairfax; and

WHEREAS, the owners of Diablo Canyon are only marginally liable for the damage that a disaster would do; and,

WHEREAS, there is no credible plan for what to do with the radioactive waste from Diablo Canyon; and,

WHEREAS, there has never been a credible evacuation plan in case of an accident at these two reactors; and,

WHEREAS, renewable energy, and energy conservation and efficiency can more than offset the electricity from Diablo Canyon;

046-L024-1 cont'd

NOW, THEREFORE, BE IT HEREBY RESOLVED that the Town Council of the Town of Fairfax supports the closure of the Diablo Canyon Nuclear Power Plant and opposes the issuance of any further permits for the Diablo Canyon Nuclear Facility from the NRC, the California Coastal Commission, the California Department of Toxic Substances Control, and the California State Water Resources Control Board;

AND BE IT FURTHER RESOLVED by the Town Council of the Town of Fairfax that this resolution be submitted to the NRC, the California Coastal Commission, the California Department of Toxic Substances Control, and the California State Water Resources Board, to be included as part of the public comments opposing any further permits for the Diablo Canyon Nuclear Facility before these respective boards.

The foregoing Resolution was duly passed and adopted at a regular meeting of the Town Council of the Town of Fairfax, held in said Town on the 5th day of August 2015, by the following vote, to wit:

AYES: COLER, GODDARD, LACQUES, REED
NOES: NONE
ABSENT: NONE
ABSTAIN: WEINSOFF

BARBARA COLER, Mayor

Attest:

Michele Gardner, Town Clerk

2

PARTICIPANT: Greene.

MR. GEESMAN: I'm John Geesman. I'm an attorney for the Alliance for Nuclear Responsibility. I'm also, from 1979 to 1983, a former executive director of the California Energy Commission, and from 2002 to 2008, a member of the California Energy Commission. In both of those capacities, I was responsible for the siting of new power plants. Frankly, this three-minute cattle call is not a process well designed to gather thoughtful comments on how to scope a NEPA document. Under CEQA, we would take as much time as required to allow everybody in the audience to say whatever it was they wanted to say. I think the NRC really ought to be held to the same standard.

I will submit written comments, and I encourage each and every one of you to do the same. My verbal comments focus on joint rupture scenarios for the earthquake faults around Diablo Canyon. This is a particular sore point with the NRC staff. The NRC staff has been criticized for a long time as to the diligence of their seismic assessment of this plant, but there has never been, perhaps, a more shameful episode than its Research Information Letter 12-09, issued in the fall of 2009, which discounted the possibility of a joint rupture between the Hosgri fault and the Shoreline

047-T001-33

fault.

The Alliance for Nuclear Responsibility turned over documents to the Public Utilities Commission of California last year showing that within five months of the NRC staff having been taken in, PG&E acknowledged that it would assess a joint rupture scenario between the Hosgri and the Shoreline fault. It did not share that information with the NRC staff for another 17 months. Last week the Alliance received documents, which it will turn over to the Public Utilities Commission this fall, of joint rupture analyses PG&E has performed, but excluded from the report that it rushed into your hands last September, before it could be reviewed by the state's independent peer review panel. 047-T001-33 cont'd

That analysis was of the Hosgri fault linked up to faults all the way up to the Mendocino triple junction, the Hosgri fault linked to the Shoreline fault, the Hosgri fault linked to the Los Osos fault, and the Hosgri fault linked to the San Luis Bay fault. Those are deterministic analyses, and I strongly implore the NRC staff to include that within its NEPA assessment.

PG&E is the only NRC licensee in the history of the commercial nuclear power plant to ever be 047-T001-34

indicted by the United States Department of Justice for corrupting a federal investigation. In the words of that famous California seismologist, Ronald Reagan, trust, but verify. The NRC staff has shown itself enthusiastically trusting of PG&E. It's time that you start to verify.

047-T001-34 cont'd

MR. HAGAR: Your time's up.

MR. GEESMAN: Thank you.

MR. HAGAR: All right, the speaker after Dr. Greene will be Klaus Schumann.

DR. GREENE: I'm Bob Greene. I'm a board member of Thorium Energy of Silicon Valley, and also a friend of Diablo Canyon. My PhD is in atmospheric physics. Diablo Canyon has an established, excellent, 30-year safety record. This is real experience, not hypothetical scenarios. If you want to talk about hypothetical scenarios, I can guarantee you if we don't get serious about greenhouse gasses, it'll kill all your children and grandchildren. We need to cut back our CO2 generation as much as possible. Renewable sources increase CO2 generation through backup, gas-fired plants.

The rest of the world recognizes the need for more nuclear. There's approximately 70 plants under construction worldwide. In June, the China

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76

Submitter Information

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RULES AND DIRECTIVES BRANCH USNRC

General Comment

The Diablo Canyon Power Plant has served the area for 30 years this month. The plant is an environmental gift to San Luis Obispo County and the whole section of the California Coastal area.

This area is noted for cleaner, clearer air. This is because Diablo Canyon emits no smoke, no soot, no ozone to endanger health of citizens compared to coal, oil and gas plants. 048-L079-1

Diablo Canyon generates base load power of two billion, three hundred million watts of power, day and night, sun or no sun, wind or no wind. This keeps our great State going with tremendous power we want to run our homes, businesses and industry.

Yet it inflicts no health damaging pollutants to harm fauna or flora. The Port San Luis Commercial Fisherman's Association reports catches of fish, squid, shrimp, mussels are increasing significantly over the last ten years. This is undoubtedly due to the clean environment enabled by a large power plant that emits none of the deadly pollutants of conventional fossil fuel plants found elsewhere. 048-L079-2

The Union of Concerned Scientists prepared a document titled, "The Hidden Cost of Fossil Fuels that tells of the unseen health and environmental damage done by conventional power plants and other sources using fossil fuel for power. They reported, "...some energy costs are not included in consumer utility bills, nor are they paid for by companies that produce or sell energy. These 048-L079-3

include human health problems caused by air pollution from the burning of coal and oil; damage to land from coal mining and to miners from black lung disease; environmental degradation caused by global warming, acid rain, and water pollution; and national security costs, such as protecting foreign sources of oil.

048-L079-3 cont'd

"Many of the environmental problems our country faces today result from our fossil fuel dependence. These impacts include global warming, air quality deterioration, oil spills [as with the recent large spill at Refugio Beach near Santa Barbara] and acid rain."

Diablo Canyon power plant and all such plants using the clean power from the nucleus of the atom avoid all these serious, costly, dangerous threats to our citizens and to our environment.

In August of 2011 Scientific American wrote about the health care burden of using fossil fuels. "Burning fossil fuels releases significant quantities of carbon dioxide, aggravating climate change." Climate change is responsible today for the serious drought in California and the West according to an article on the front page of the New York Times, August 21, 2015.

Atomic power avoids all these negative impacts on the environment and on human health. We urge the NRC to do all in its power to see California and the United States switches to this clean, safe, pro environment power source at the earliest possible time. The fate of the planet and all life on it, very much including human life, depends on making this change at the earliest possible time and the NRC is in a vital position to facilitate and speed this change.

Regarding the safety to humans of using power of the atom, the US Navy made a 100% commitment to use of atomic power for all its large vessels such as submarines and air craft carriers (crew of over 6,000 on some carriers) starting in 1955. Since that time an estimated 100,000 crew have rotated through duty on these ships, working, sleeping and eating immediately near very powerful reactors.

In all that time not one crew has been harmed by radiation or any other effect of the reactors. Follow up studies of these crew shows no health impacts after leaving service.

The full commitment of our US Navy to the power of the atom and the 100% success flowing from that commitment proves this power source is safe for people as it is good for the environment.

The Scientific American article "The Human Cost of Energy, Fossil fuels exact the biggest toll in terms of lives lost"(8/16/11) lists this health burden exacted by burning fossil fuels (mean number of cases per year): Pneumonia hospital admissions - 4,040, Cardiovascular ills (hospital admissions) - 9,720, Premature Deaths - 30,100, Acute bronchitis cases - 59,000, Asthma attacks - 603,000, Lost workdays - 5,130,000.

These illnesses and deaths are caused byl emissions of smoke, soot, ozone, in the form of tiny particulate matter resulting from burning fossil fuels. Diablo Canyon's 2,300 Megawatts are produced free of these deadly waste particles that go into the air and then into our lungs. Waste from Diablo Canyon energy production is securely and carefully stored in thick concrete casks that are further encased in stainless steel. This waste has a 100% perfect safety record of never harming a single human in the 60+ years of atom power use.

Diablo Canyon will soon furnish desalinated water to locally to benefit health and environment.

In conclusion, regarding environmental damage there is no comparison between these two base load power sources for producing electricity.

048-L079-3 cont'd

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General Comment

To the NRC:

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Diablo Canyon will soon begin supplying desalinated water from it's on site desalination plant to local communities. This plant receives electricity from Diablo Canyon's two atomic reactors, so it is run on emission free electricity.

The desalination plant is certified by the State of California to produce 1.5 million gallons per day. The plant has used this fresh water for years for its own use to not have to tap into local water supplies. 048-L084-1

Diablo Canyon uses about one-third of the State licensed total of 1.5 million gallons, so there is ample capacity to serve local residents.

As you know, the State is in a dire, emergency drought. This environmental benefit provided by the emission free atomic plant is widely welcomed by the community. The San Luis Obispo Board of Supervisors voted unanimously (and enthusiastically) to approve this initiative by PG&E's Diablo Canyon power plant.

I hope Governor Brown and the California Legislature take notice of this additional contribution of 048-L084-2

the Diablo Canyon plant to California's biggest environmental problem - this climate change driven drought (New York Times reported many climate scientists now see the drought as not cyclical, but part of the global climate change underway due to excess atmospheric CO2 - 8/21/15)

With this contribution by Diablo Canyon many hope the Governor to see the obvious suggestion this move by the plant represents. We have the largest State in the United States (39 million citizens operating a $2 trillion economy) in a dire environmental emergency with water running dangerously low. More atom powered plants along the California coast could provide emission free power to replace all the State's fossil fuel usage, and provide millions of gallons of fresh water from the Pacific at the same time.

048-L084-2 cont'd

The Governor, President Obama and the key atomic regulatory agency, NRC, should all work jointly to meet this climate change crisis boldly to initiate construction of more fission powered plants in California. The safety of this proven power source has 30 years of accident free operation at Diablo Canyon, and a US Navy operating accident free for nearly 60 years whereby up to 100,000 crew have now served in atom powered subs and aircraft carriers with a perfect safety record.

How long must this power source go with its perfect record to be deemed completely safe and appropriate for widespread use? Waste is mentioned by some as the problem. But compare atomic waste disposal with disposal of the waste of the only alternative energy fuel usable for base load power - fossil fuel.

Waste disposal of burning fossil fuel is certifiably killing humans all over the world due to ingestion and inhalation of small carbon combustion combustion particles thrown carelessly into our air where it enters the lungs of our children and adults. (reference: American Lung Association, American Heart Association, World Health Organization).

There is absolutely no comparison of treatment of waste of these two power sources. One has killed and is killing masses of people in the millions. The other has a record of neither injuring nor killing a single human being.

The conclusion is beyond obvious - America should save lives and switch power sources to the truly safe source. The NRC plays a big role and deserves major credit for the amazing record of safety of atomic power in the USA.

Finally, it is widely known among atomic scientists new types of reactors are nearly ready for commercial use (from China, Korea, India, Canada, Europe and the US). These new, even safer reactors will be able to use "waste" from existing atomic plants as fuel for the new designs . Free fuel, ready and waiting for use.

The superiority in benefits to the environment and health of atom power is beyond question. Diablo Canyon should be re-licensed in 2024, and again at the next opportunity and more such plants should be immediately encouraged by government and built all over the United States.

The NRC is in a unique position to facilitate and help that to happen for the good of the country, and for the good of planet earth.

notions that maybe came out of the Cold War. Their assessment is going to be very different than what, perhaps, my generation had in the 1970s, and it's going to be very refreshing because it will do everything that is necessary to turn the whole global warming situation around. It's an amazing technology, and we should all learn more about it. The more you know, the more that you will appreciate that it is the solution to our problems today. Thank you.

MR. HAGAR: Okay, our next speaker will be Dr. Alexander Cannara, is that right?

MR. GLOEGE: Hi, my name is William Gloege. I founded Californians for Green Nuclear Power. I'm very proud that I did that. I really am very proud I founded that group. We have four PhDs. We have an engineer that helped build the plant. We have laypeople that are professionals. Let me say, first of all, we have no animosity towards people that are here.

048-T001-41

I think all the people talking against nuclear power have good faith and a good heart, and they think they're doing the right thing. They're thinking they're helping in the best way. But let me say a little more. I started this because of my grandchildren. I've got two grandchildren. One is 8, and one is 10, and they're really cute little kids. The boy, 8, is a

soccer player. The girl's into gymnastics. They're looking forward to a long life and a happy life on the planet. I look at global warming and it scares the heck out of me. That's the monster we should all be after. 048-T001-41 cont'd They're the reason that I started my group. I'm very happy that we've been doing so well. Let's talk a little bit about the doubt industry.

There's a doubt industry out there. There's a fear industry out there. You all know about what that industry did with smoking. They told us that it was a hoax, that smoking was okay. It had nothing to do with cancer. For 50 years, they got away with that, and millions of people died. We're in that kind of a crisis right now. We're in a life or death crisis on earth. Trust me, global warming is the big one. When you hear these people spreading doubt and putting fear into your heart -- and that was very good fearmonger speech we heard a little earlier, congratulations.

They're doing the same thing with global warming. It's a hoax. It's a hoax. They always get some scientists to come and talk to you about the thing is not true. You've got 97 on one side, and two on the other. Everybody says it's a controversy. It's not a controversy. What nuclear power is doing for us, benefitting us, giving us clean air, not putting up

carbon dioxide. That's what we need to look at. It's working in France. It's working all over the United States because of the NRC's good judgment and being a watchdog. I would like to put you guys in charge of the fossil fuel industry next, please.

048-T001-41 cont'd

Can you take it on? Look at the US Navy, 60 years of successful operation, 100,000 crew have gone through those ships, those aircraft carriers, those submarines, not one injury, not one death. They've been very successful. Thank you, Admiral Rickover. We need you now, Admiral Rickover. Please come back. Thank you very much.

MR. HAGAR: All right, the speaker after Dr. Cannara will be Marni Magda. Marni, are you here? Great.

DR. CANNARA: Hi, I'm not going to -- my name's Alex Cannara, from San Francisco area. I'm not going to say what I was going to say because I've been listening to what other people have been saying here. If you really are concerned, as Bill was talking about, about our descendants, then you'll realize why we send our kids to school, why people go to college, become professionals, become scientists, doctors, is because they realize the importance of facts. We've heard a lot of things here from groups of people that are,

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RULES AND DIRECTIVES BRANCH USNRC

General Comment

Dear NRC,

I am the former nuclear project engineer, working for Bechtel Corporation, of the Trojan NPP. Diablo Canyon is essentially a duplicate of Trojan except that Trojan used a cooling tower instead of once through cooling as is installed at Diablo Canyon.

SUNSI Review Complete
Template = ADM-013

1) There is no reason why a cooling tower cannot be used at Diablo Canyon. Of course it will cost money and affect the Heat Rate of the unit. It will reduce the pumping cost of the circulating water system since only 20% of the water needs to be pumped to plant elevation 85 ft above mean sea level. The cooling tower pumping head will be in the order of 35 ft.

049-L060-1

A recirculation system is of course an environmental benefit. It avoids killing microorganisms as the water is heated inside the steam condenser tubes and reduces the huge flow of hot water 24/7 into the biologically sensitive area near the outfall discharge. In addition the intake structure's inflow is reduced from 100% to 20%. This five fold reduction in approach velocity will significantly reduce entrapment of small fish. The reduced flow will also reduce operating costs of the traveling screens.

2) The most serious environmental impact could occur during a significant seismic event. The earthquake faults discovered, are near, as well as in very close proximity, of the plant. The original design of Diablo Canyon was based on a seismic response spectra specifically modeled on the known fault at the time and historic events including results from oil explorations. The structures as well as the pipe and electric and instrument cable tray supports are all based on the original response spectra. That means the support locations, spacing, snubbers, and spring supports are carefully calculated to avoid resonance. 049-L060-2

Excessive and different motions caused by the forcing function of an other than design earthquake could disable the supports of Class I systems - unless a complete recalculation of all class I piping and cable tray supports are done.

Needless to say, the environmental effects of Class I systems during an earthquake would be a disaster

3) In addition the magnitude of the more recently discovered earthquake faults in all likelihood will exceed the original design. This does not only apply to the structures and supporting power and control systems. Of great concern are the internal components of the reactor vessel, the tube support system and driers in the four steam generators provided by Westinghouse, the NSSS supplier.

4) The spent fuel pool is a critical component - both during operation and during refueling. A larger than design earthquake and with a different forcing function could affect water levels, as well as fuel transfer tube during refueling.

5) As was learned after the Three Mile Island accident, the amount of hydrogen release inside the containment significantly exceeded the anticipated amount. Has Diablo Canyon updated it's hydrogen suppression system since then? 049-L060-3

In my opinion all of the above is only a fraction of the concerns that could affect plant safety during an earthquake with a magnitude larger than design. A radioactive release would be an environmental disaster. Therefore NEPA would require that the above raised issues be considered in an EIS.

PUBLIC SUBMISSION

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Docket: NRC-2009-0552
Notice of Receipt and Availability of Application for Renewal of Diablo Canyon Nuclear Power Plant License

64

Comment On: NRC-2009-0552-0026
Diablo Canyon Power Plant, Units 1 and 2; Notice of Intent to Prepare an Environmental Impact Statement

Document: NRC-2009-0552-DRAFT-0057
Comment on FR Doc # 2015-15921

7/1/2015
80 FR 37664

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2015 SEP -1 PM 5:20
RULES AND DIRECTIVES BRANCH USNRC

Submitter Information

Name: Dion Good

General Comment

Re-licensing the Diablo Canyon nuclear power plant is a dangerous and irresponsible act. Nuclear power has proven itself to be too dangerous for human beings to use safely in any capacity, and the waste produced will remain dangerously toxic to any kind of life long after our civilization, and perhaps our species, has gone from this Earth. There is enough clean, renewable energy available on this planet for all our needs. Please do not re-license Diablo Canyon nuclear power plant now or at any time in the future; rather, decommission it. America's, and the rest of the world's, future lay with clean renewables, not dangerously radioactive nuclear power. 050-L065-1

SUNSI Review Complete
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Notice of Receipt and Availability of Application for Renewal of Diablo Canyon Nuclear Power Plant License

Comment On: NRC-2009-0552-0026
Diablo Canyon Power Plant, Units 1 and 2; Notice of Intent to Prepare an Environmental Impact Statement

Document: NRC-2009-0552-DRAFT-0073
Comment on FR Doc # 2015-15921

Submitter Information

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7/1/2015
80 FR 37664
79

Name: Kirk Gothier
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General Comment

NEPA Section 1502.14(d) requires that: "resulting environmental effects from taking no action would be compared with the effects of permitting the proposed activity or an alternative activity to go forward."

Consequently, the EIS must include full disclosure of all significant environmental impacts resulting from NRC denial of extending the license to continue operation of Diablo Canyon Power Plant, including, but not limited to the: 1) increase in Greenhouse Gas Emissions, from projected fossil fuel power plant production of electricity to replace Diablo Canyon, 2) increase in ocean acidification, 3) disruption to the existing power distribution system, 4) increase in energy poverty levels, and 5) increase in public health impacts resulting from the increased GGE and energy poverty, (because California does not have a clear set of integrated energy policies, as recommended in the attached comments, submitted to the California Energy Commission on 7/20/15).

1) 051-L082-1
2) 051-L082-2
3&4) 051-L082-3
5) 051-L082-4

Attachments

SUNSI Review Comp
Template = ADM – 013
E-RIDS= ADM -03
Add= M. Wentzel (MSW2)

Integrated Energy Policy Report Update 2015

7/20/2015

051-L082-5

To: California Energy Commission (CEC)
From: Kirk Gothier, Senior Planning Advisor (kirkgothier@gmail.com)

Subject: 7/24/15 CEC Workshop Comment (Docket 15-IEPR-11, TN# 205160)

Commissioners,

Your scheduled Workshop, on the "State of the Science to Deeply Reduce Greenhouse Gas Emissions (GGE) on California's Energy System," will yield valuable insight into how to reduce GGE and meet California's energy system goals.

Unfortunately, the format and contents of previously prepared CEC Integrated Energy Policy Reports (IEPR) did not provide Commissioners with:

1. A concise and manageable description of California's Existing Energy System,

2. An engaging vision of California's Planned Energy System, and

3. A complete set of integrated energy system policies, with a clear path towards reducing GGE and delivering clean air and water, sustainable communities, and economic prosperity.

Consequently, I would urge your Commission to focus the Workshop input on updating the 2015 IEPR to include all of the above.

Having spent the past 4 decades in both the public and private sectors, helping build communities and small businesses, I couldn't resist preparing the attached recommended 2015 IEPR format, for your consideration. I hope it helps!

Kirk

P.S. It has also been my pleasure to connect with Millennials in the San Francisco Bay Area, who are disrupting our world in hugely inclusive and affirming ways. Please build on their insightful research and data in preparing the 2015 IEPR Update, (http://thebreakthrough.org/index.php/issues/energy/renewables-and-nuclear-at-a-glance), listen to what they are saying about modernizing our energy system, and engage in the discussion they recently initiated with the release of this document: http://www.ecomodernism.org/manifesto/

Attachment A: Draft 2015 IEPR Update Format
Attachment B: Resume

ATTACHMENT A: DRAFT 2015 IEPR UPDATE FORMAT

051-L082-5
cont'd

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Appendices *(list links to all support materials)*

ATTACHMENT B: RESUME

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(707) 786-9040 • KIRKGOTHIER@GMAIL.COM

051-L082-5
cont'd

KIRK GOTHIER

Experience

Prior to retirement from public service in March of 2007, I held numerous increasingly responsible positions within the Humboldt County Community Development Services Department. During this rewarding career, I developed life-long relationships with elected officials, agency staff, and industry leaders.

I also created and built North Coast Concepts, a wholesale gift business, managing every aspect of this business for 20 years including: product development, marketing and sales. Our most popular product was Adopt a Baby Redwood.

I currently invest in equities, mentor local agency staff, serve as President of the Ferndale Museum, and write poetry for the North Coast Journal. Following are some examples of my relevant experience.

County of Humboldt-Planner: Directed the delivery of local planning services in Humboldt County in a variety of positions, including Assistant Planning Director and LAFCo Executive Officer.

In 1994 I was promoted to the position of Assistant Planning Director. In this position I worked directly with the County Board of Supervisors, Local Agency Formation Commission, City and District Managers, City Council and District Board Members, Legal Counsels for all local agencies, and Department Heads. I also managed a staff of 21 in delivering local planning services.

North Coast Concept-Business Owner: Built a business as a creative outlet for the development and marketing of wholesale gift products. As a wholesale manufacturer and distributor for 20 years, I was responsible for all aspects of managing and building a small business: product development, marketing, sales, and management of contract labor. Our most popular product was "Adopt a Baby Redwood," and we typically sold 10-20,000 redwood seedlings a year, primarily through gift stores and mail order catalogues.

College of the Redwoods-College Instructor: I taught a 3-unit class titled "The Planning Permit Process" for 3 semesters.

And we need to stop this needless slaughter of Californians. So again, we need to renew the license of this plant. Thank you very much.

(Applause)

MR. HAGAR: Okay, let me ask again, is Rochelle Becker here? Oh, you -- you told me that, thank you. Tom Campbell? Paula Ash? Nancy Graves?

And following Nancy will be David -- no, David Crosby's not here again, is he? Yes, he was here earlier. And the Diane Koletzke.

Okay. You're up next.

MS. GRAVES: I thought I'd get to sit down.

MR. HAGAR: And then Sherry -- Sherry Lewis, you'll be next.

MS. GRAVES: Good evening. I'm Nancy Graves. I live about seven miles downwind of Diablo Canyon. I'm a Board Member and the Interim Board Chair for ECOSLO, the Environmental Center of San Luis Obispo.

ECOSLO has been cherishing and protecting this corner of the earth for over 40 years. Over the last three years the ECOSLO has also been responsible for documenting and cleaning up Fukushima marine debris.

I read a quote recently by Albert Einstein. He said splitting the atom changed everything but the 052-T002-11

mind of man. It may be time to change our minds about the ethicacy of nuclear power generation.

052-T002-11 cont'd

ECOSLO believes there are better ways to secure and sustain our energy future. By the time this expensive DEIS for license renewal is done, new advances in energy technology will make generating nuclear power even less economical, less flexible and certainly less sustainable.

Advances in energy technology are happening every day. Just this year the extractable problem of storing the earth's -- the sun's energy has been solved. And just as a side note, storing the sun's energy is safer and less costly then storing nuclear waste.

052-T002-12

Those who claim nuclear power as clean energy can only claim the energy generated is cleaner then burning fossil fuels. But even that is a questionable claim when the mining and manufacture of a non-renewable source like uranium is included in the equation.

Therefore, any DEIS must include a comprehensive analysis of actual environmental costs from cradle to grave. It must compare renewable and non-renewable energy cost benefits on a level playing field.

As you probably know, Monday, the EPA published their clean power plan. I'll read just one small quote from that report. 052-T002-13

Recent trends evidenced in renewable energy development such as rapidly growing investment and rapidly decreasing costs are not as clearly evidenced in nuclear generation. This important finding must be factored into the DEIS for license renewal.

Thank you.

(Applause)

MR. HAGAR: Okay. Thank you. Our next speaker will be Sherry Lewis and her colleague. And what we've done here is combine the time limit for two speakers for this presentation.

MS. LEWIS: My name is Sherry Lewis. I belong to San Luis Obispo Mothers for Peace. And for several years -- can you hear me? Jeeze. Now you can.

Okay. Sherry Lewis, Mothers for Peace of San Luis Obispo. And for several years Sawada Showning, Reverend Sawada, Brother Sawada, who belongs to a Buddhist order that walks and prays against nuclear energy and nuclear weapons.

And how -- do you remember how long you have been coming here to walk for no nuclear?

Docket ID NRC-2009-0552
Diablo Canyon Power Plant License Renewal Environmental Scoping Meeting
August 5, 2015, Courtyard San Luis Obispo

Submitted by - Bob Greene Ph.D., Board Member of Thorium Energy Alliance of Silicon Valley

Lest there be any confusion, let me be clear that I am wholeheartedly in favor of NRC's extending the operating license for the Diablo Canyon Power Plant. 053-L088-1

This submission has four parts: 1.) Macro view of the Environmental Issues of Nuclear Power, 2.) Some of my thoughts concerning comments made by others at the public hearing (afternoon session), 3.) The notes that I used for my comments at the public hearing. These notes are largely similar to my verbal comments but there are differences. And 4.) My submission to the California Energy Commission on their workshop/hearing on reducing greenhouse gases.

For the record, my Ph.D. is in Atmospheric Physics.

Part 1 – The environmental picture

Almost all who participated in the Environmental Scoping Meeting focused their microscopes on individual issues of interest to them. They hoped to sway the NRC in their investigation, one way or the other, with respect to the relicensing of the Diablo Canyon Power Plants. Naturally, this is a valid approach. Many came with the interest that somehow their individual objection or the sum of several objections might sway the NRC from relicensing. Some of their input was weak, misleading, irrelevant, or factually questionable. I have addressed a few of these comments in Part 2 (below). But mostly, I am relying on the NRC to distinguish between fact and emotion and to perform a scientifically based evaluation.

But to me there is an element missing in this approach, i.e., a broad holistic view of the issue. This is the area where my comments will focus. This approach should look at all the benefits, but I will not delve into the economic and social benefits

The Benefits of the Diablo Canyon Power Plant 053-L088-2
Diablo Canyon provides inexpensive, dependable carbon-free base-load electricity to roughly 3 million Californians. This equates to a savings of 6 to 7 million tons per year of carbon dioxide emissions over fossil fuel sources. Not relicensing Diablo Canyon probably implies that California will increase its carbon footprint in a time when both

President Obama and Pope Francis have underscored the need to decrease it to tame climate change. 053-L088-2 cont'd

In addition, Diablo Canyon has entered into a five-year agreement to provide San Luis Obispo County with its excess fresh water from its desalination plant to help combat effects and challenges of California's long drought. This means about 825,000 gallons a day will be made available to the County. If climate change heralds a projected long drought, this capability may be vital to the well being of the County.

An impending disaster

A major issue is being systematically ignored. It is ocean acidification. 053-L088-3

Since the beginning of the industrial age, we have been pumping massive amounts of carbon dioxide into the atmosphere, currently about 10 Gtonnes/yr. About one quarter of that is dissolved in the oceans in a given year. But this means of our total emissions of 1500 Gtonnes about two-third remains in the atmosphere (1000 Gtonnes). Approximately, 500 Gtonnes has been dissolved in the oceans. The natural sedimentation/sequestration process of the oceans is about 0.3 Gtonnes/yr but only if the pH>8. Relying only on this natural process it will take centuries to return the atmosphere and oceans to their pre-industrial state assuming that we cease all CO2 emissions.

The problem is that CO2 when combined with H2O produces carbonic acid. Before the industrial age ocean pH was about 8.2. Now it is about 8.1. We are making the oceans more acidic. And when the pH reaches 8.0 or less, the oceans will lose their abilities to provide any self-regulation.

What does this acid do? It removes available calcium from the water. This in turn impedes the growth of shells and skeletons in marine creatures. The oyster fishermen in the Pacific Northwest are already dealing with this issue. To make their beds less acidic they do the equivalent of adding 'Tums'. But as the problem grows, we will see smaller fish and decreases in yields. This problem reaches right down to phytoplankton, the lowest level of our food chain. We are placing at least 15% of the world's protein source in danger of extinction. This problem will also affect all marine mammals. And we are currently doing nothing about it.

There are things that can be done. But they all entail massive amounts of energy. Wind and solar energy are inappropriate since they are energy sparse and not carbon free (due to their backup gas-fired plants). We need zero-carbon power sources. We need as much nuclear as we can get, as fast as we can get it, especially Gen 4 Molten Salt Reactors that 053-L088-4

can burn down existing radioactive 'waste' as fuel. We cannot wait. We need resources in place the moment we collectively wake up and decide to address the problem. 053-L088-4 cont'd

Climate change impact

Mankind has yet to wake up to the energy requirements to meet climate change challenges. I will only name a couple more without explanation: 1.) The need for desalination. I believe we will need to address it in a much broader way, especially as wild fires spread drought effects and 2.) The energy needed to address sea rise either through construction of seawalls or relocation of society to higher ground.

If one looks at all the global energy projections, one fact stands out. Despite large investments in solar and wind and conservation, the increase in energy demand will be met mostly by fossil fuel sources. In other words, instead of moving toward a zero-carbon dioxide world, we will be emitting more carbon dioxide at mid-century than we are today. The oceans cannot wait. If we do not take significant steps before 2030, we are in danger of permanently poisoning our oceans. Business as usual will not do the job.

Part 2 – Responses to comments made by other speakers at the public hearing

A. - Some of the speakers at the hearing were operating under a misconception about the incidents at Fukushima Daiichi. They stated their belief that the earthquake (9.0 magnitude) was the direct cause of the problems. They did not realize that the reactors shut down successfully after the earthquake. 053-L088-5

The real issue was the tsunami that inundated power equipment for reactor cooling. The operating company (TEPCO) sited the reactors at only 4 m above sea level with a 6 m seawall. The inundation level was 14 m above sea level. TEPCO originally removed 25 m of earth vertically before laying the foundation. This was despite historic 'Sendai monuments' in the area, which essentially were inscribed with "Do not build below this point." A TEPCO sister plant a short distance down the coast did not receive substantial damage.

Meanwhile, there were no problems at Onagawa Nuclear Power Plant which was twice as close as the Fukushima Daiichi plant to the earthquake epicenter. Onagawa experienced a higher tsunami wave and an earthquake shock of greater magnitude, indeed the most severe earthquake experienced by any nuclear power plant. It also went on to provide shelter for 200-300 residents who were displaced from their homes. Onagawa holds the record for the fastest built nuclear power plant. But in fairness it must be pointed out that

Onagawa (commissioned 1984) was designed 10 to 15 years later than Fukushima Daiichi. 053-L088-5 cont'd

Diablo Canyon is sited on an 85-foot bluff. It was designed and constructed after the Onogawa plant. It has ample gravity-fed water storage above the site for a full cool down procedure regardless if power is active. 053-L088-6

Considerations for the NRC – If Diablo Canyon was constructed to standards at least as good as Onogawa, then there is little reason to assume it would not withstand a 9.0 quake. But if there are additional concerns, then the NRC can ask to do what California has done for every other public structure in the state, i.e., an earthquake retrofit.

If the NRC deems that 85-ft above sea level is not high enough to protect against tsunami, then specify a height for a seawall to be added that also takes into account any envisioned sea level rise due to climate change over the length of the relicensing period and a follow-on period.

In other words, additional earthquake and tsunami safety is addressable, and does not seem to merit a refusal to extend Diablo Canyon's operation license.

B. – Some of the speakers express concerns about the physical security of Diablo Canyon. They fear terrorist attacks, drone attacks and attacks from the ocean. I cannot tell if their objective is to increase the number of drills to intercept these types of attacks or to shut Diablo Canyon down because it is indefensible. 053-L088-7

Diablo Canyon is not the only nuclear power plant sited on the ocean. My recommendation to the NRC is that Diablo Canyon should be held to the same standards for physical safety as other US-based nuclear power plants. I am certain that the management of Diablo Canyon would be happy to comply.

C. – I may have missed it this time, but over time there has been criticism of Diablo's once-through cooling using ocean water (2.5 billion gallons per day). The criticisms seem to be two: 1.) That larvae of marine creatures are sucked into the system and that they are killed at alarming rates endangering marine life in the area. Even though I do not have the numbers in front of me. My recollection is that the kill rate is on the order of 1-2 larvae per gallon, a low amount for ocean water. And 2.) The water temperature in the outlet area is increased by 20-deg F at the outlet and this leads to poor commercial fishing in the area. 053-L088-8

These concerns are of questionable value. There have been articles in the local newspaper quoting fisherman as stating the yields have been very good. But perhaps more importantly, one of the early speakers in the afternoon hearing session was a retired marine biologist (I did not catch his name.). He stated that in his position he helped accumulate data for over 40 years on this very issue. He stated that his finding was that Diablo Canyon had no appreciable impact on the marine populations in the area. 053-L088-8 cont'd

I urge the NRC to investigate this lead, and to do your own math.

Secondly, even if the worst-case scenario is true, it is a local effect. It has to be weighed against the broad set of economic and other benefits provided by Diablo Canyon. In that light, this issue would not justify denying Diablo Canyon relicensing. My secondary conclusion is that there appears to be no need to construct cooling towers. The once-through cooling has worked successfully for nearly 30 years.

D. – Critics have questioned the use of dry casks for high-level radioactive waste storage. This issue should be an easy one. Regardless of whether critics oppose this approach, the question is simply "Does Diablo Canyon Power Plant comply with existing NRC regulations with respect to handling and storage of high-level radioactive material in dry casks? If the answer is "No", they should be cited through the usual steps. If the answer is "Yes", then so point out and pat them on the back. 053-L088-9

I suspect that the underlying issue here is that some folks don't like nuclear waste storage anywhere, including in their vicinity. But this decision is currently not Diablo Canyon's responsibility. They currently have no choice but to store the casks on site. They are not allowed to transport the casks anywhere. The prospect of arranging a long-term storage site has been made a political issue. It is fairly ironic since, there are a lot fewer of these casks than people imagine. If you started standing all the casks at US nuclear power plants up on the end line of a football field, would they even reach the 20-yard line at the other end of the field?

E. – I read a position paper from a anti-nuclear group in which they made what to me were some very odd claims. To me, their logic was very convoluted. After some thought, I think I now understand from where they are coming. I include comments here in case this logic showed up at the evening hearing session. 053-L088-10

Their claims were several. A.) Nuclear power is outmoded. B.) That being base-power and not load-following is a disadvantage. C.) The existence of nuclear on the grid reduces the flexibility of the grid and impedes improvements to the grid.

I believe that their views are based on a vision of what our grid and power generation should look like, not what it currently is. In their view, power generation is more distributed and closer to points of usage. Then, the grid can be much more distributed as well, and therefore less susceptible to major disruptions either by man or nature. A key point in their view is that there is ample and efficient electrical storage available locally. I believe in their model all energy sources run at their current maximum efficiency, with any excess being dispatched to storage.

053-L088-10 cont'd

To me there are some major flaws in these arguments.

1.) This is unlike our existing electrical power infrastructure. I have never heard a good explanation as to how we would transition to this model. Any replacement strategy would entail massive costs.

2.) Nuclear power is outmoded? I find this to be fantasy. Nuclear power currently provides about 19% of US electricity. If it is outmoded, why are over 70 nuclear plants under construction around the world. Granted we have not yet moved to newer reactor designs, but this is understandable given that we suppressed nuclear power R&D for 5 decades.

3.) That being base-power and not load-following is a disadvantage? I think a couple of concepts are getting mixed up here. In their view, I think they believe that solar is load following because most of the energy is produced during the day coinciding with peak demand. That is not load following. If the demand goes up, solar power only increases if you add more sources, or if you decrease the excess amount you were eurtailing. If it all of a sudden gets very cloudy, then the load must be followed by drawing on your storage and/or adding additional sources, which in today's world means gas-fired plants. The source never followed the load. There is a similar story with wind power, but it is double-bladed (excuse the pun). Wind is unreliable if there is either too little or too much wind.

Today, PG&E uses the Helms Pumped Storage Plant. This is typically 'charged' at night with excess power from Diablo Canyon. It can be brought on line in 8 minutes. You could not reliably use this type of plant using solar and wind sources. Because of inefficiencies in pumping water uphill, the power is generated when demand is high and PG&E can charge its large customers a higher rate. Utilities are likely to use this logic in the future even if the storage is battery. They will not be doing it for any altruistic reason like general power availability, unless they are forced to.

This is an example where base-power shows a clear benefit. 053-L088-10 cont'd

4.) The existence of nuclear on the grid reduces the flexibility of the grid and impedes improvements to the grid? Again this envisions a different sort of grid. I am very skeptical that the government, utilities or society will embrace such a huge replacement cost.

Conclusion 053-L088-11

In my opinion, none of the above concerns either singly or collectively justify refusing the relicensing of Diablo Canyon Power Plant(s).

Part 3 - My notes for my comments at the NRC public hearing 053-L088-12

Diablo Canyon has an excellent, established 30-year safety record. This is real experience, not hypothetical scenarios. If you want a certainty, I guarantee you that if we do not get serious about greenhouse gas emissions the lives of our children and grandchildren will be significantly impacted.

Because of its effects on climate change, we need to cut CO2 generation as much as possible and as soon as possible. Renewable sources increase CO2 generation through their backup gas-fired plants.

The rest of the world recognizes the need for more nuclear. Approximately 70 new plants are under construction worldwide. In June, the China National Nuclear Power Corporation floated an IPO on the Shanghai Exchange hoping to raise US$2B. Instead they raised US$273B.

We need to diminish CO2 generation ASAP and combat the new challenges of climate change. Two examples

a.) Ocean acidification – If we do not take significant steps by 2030, we are in danger of poisoning our oceans permanently.

b.) Desalination – California might require broad desalination just for its cities, to say nothing if we also must desalinate for agriculture.

These two issues alone require immense amounts of energy.

We are kidding ourselves about climate change. It is happening faster and at a greater intensity. We need to react sooner. We are seriously underestimating the quantity of energy needed. Solar and wind cannot satisfy this need because they are intermittent and energy-density sparse.

We need as much nuclear and as fast as we can get it, especially Gen4 Molten Salt Reactors that are walk-away safe and can consume existing nuclear 'waste' as fuel.

053-L088-12 cont'd

If the NRC really wants to provide a public service, it will extend Diablo Canyon's operating limits to reflect efficiencies due to newer turbine technology. This could power an additional 70,000 homes, and reduce cooling and waste requirements.

Please renew the Diablo Canyon Power Plant operating license for the maximum extension.

Added note for this submission – The implication of China's large investment in nuclear development is that, unless the US becomes seriously active, the entire industry will be ceded to the Chinese. When we eventually wake up, as is inevitable, we will be buying all this sophisticated technology from them. But an additionally unpleasant implication is that we will not train and educate tomorrow's needed scientists, engineers and technicians. This seems a sure path to the US becoming a second rank intellectual and innovation power.

Part 4 - My submission to the California Energy Commission on their workshop/hearing on reducing greenhouse gases

053-L088-13

Docket No. 15-IEPR-11
Workshop on the State of the Science on Scenarios to Deeply Reduce Greenhouse Gas Emissions from California's Energy System 7/24/15 and 7/27/15

Comments submitted by
Robert Greene, Ph.D.
Board Member, Thorium Energy of Silicon Valley

This submission is in addition to my verbal comments at the 7/24 workshop session. For the record, my Ph.D. is in Atmospheric Physics.

In my opinion there are some fundamental flaws in the belief that California can achieve a "real" 50% renewable portfolio. We can achieve one in "name" but the practical aspects are different, especially without significant storage options, which might be available only much later in the future.

Solar and wind are intermittent power sources. They produce an effective capacity of 20% to 40% of their nameplate capacity. And there are times when there is no sun and

no wind. To compensate for this issue, utilities build continuously-running, gas-fired power plants. Conceivably, these must provide up to 100% of the required power when alternative sources are not available. More practically, they probably have to plan on providing 2/3rds of that.

This means that your renewables portfolio is burning fossil fuels almost all the time and at some times it is close to being the only source of power. The renewable portfolio as currently defined contributes large amounts of CO2 to the atmosphere, which was opposite of its intent.

053-L088-13 cont'd

Additionally, with a gas infrastructure we are emitting large quantities of methane through leakage and incomplete combustion. Methane is a worse greenhouse gas than CO2 by a factor of about 20 on a per molecule basis. This means that we are still contributing heavily to global warming.

One simple workaround would be to add an excess of alternative energy nameplate capacity. But that would increase your energy costs by 2.5 to 5 times. Perhaps, this would make more sense if you have a real energy storage option. (Even though the new Tesla battery technology looks promising, the Commission should not kid itself that this is right around the corner as a viable utility-scale solution. Even when it is, the adoption and installation rates will be much longer than desired, as is typical for all new technology introductions.) It is simple to say that during peak times you can control the output of the alternative energy sources so as to not flood the grid. This is conceivable for wind. You can feather the blades. But you may have much greater maintenance costs if this is being done everyday. For solar, you can shut off the inverter at the solar plant. Then your panels, being non-reflective, become black body radiators, i.e. heaters. You would then be contributing to local warming directly.

This is just one set of issues as we address climate change. Here are others.

Scope – While the mission of the Commission is to find solutions for California's needs, we need to bear in mind that climate change is a global problem. Californians can also suffer from the CO2 problems in the rest of the country and the world. It is convenient to think that if we fix California, we are all set. We are not. So we should also be thinking in creating exportable technology to address climate change. Therefore, I believe there should be an economic development effort as part of your considerations, i.e., environmentally-sound export technology and products.

Time Frame and Intensity – Virtually all models have fallen short of reality in predicting the effects of climate change, such as polar cap and glacial melting. There is a

very understandable reason for this. Scientists are naturally conservative. They believe they do more harm by overestimating than by underestimating. But with climate change, I believe we will be better served by some overestimating. By underestimating, we take the risk of not taking the right steps while they can still be effective. In this game, if we are late, we are really screwed.

053-L088-13 cont'd

Suggested efforts talk about having things under control by 2050 or even 2100. According to Elizabeth Kolbert's *The Sixth Extinction*, the Great Barrier Reef is already 50% dead as well 80% of the coral in the Caribbean. A prime culprit is carbon dioxide. Ocean acidification is progressing much faster than anyone predicted. It impedes the ability of species at the base of the marine food chain to produce shells and skeletons. We are altering the chemistry of the oceans, the source of nearly 20% of the world's food supply and 50% of it oxygen. I believe all remediation dates must be moved in to at least 2030.

Quantity – Most efforts aim to replace combustion electrical energy production. Though desirable, it doesn't go far enough. We need to think in terms of massive amounts of additional energy to counter the effects of climate change. A few examples: a.) we must convert to an electric-vehicle world; b.) we need a broad program of desalination; c.) we need carbon-neutral industrial feedstocks, plus fuels for unique applications, such as aircraft, agriculture, mining, etc.; and d) we need clean power for massive materials-processing for ocean remediation to correct acidification.

Just taking desalination as an example, the Carlsbad Desalination plant will produce 50M gallons of fresh water a day, providing 7% of San Diego's need and using 40 MW. To service all the cities in California, you would need 140 such plants. That is approximately the power produced by three (3) Diablo Canyon Power Plants for this application alone. You can multiply this by much more, if we need to produce desalinated water for California's agriculture. These numbers pale in comparison to the energy needed to address ocean acidification.

Approach – Alternative energy sources cannot provide the quantities of energy required. See *A Cubic Mile of Oil* by SRI's Crane, Kinderman and Malhotra page 79 and chapter 9 for details. Most alternative energy sources are too expensive, demand too many resources and threaten too much of the environment, per kWHr actually delivered. I asked the author if this implied that we will have a primarily fossil fueled in 2050. He replied that it does.

Only nuclear has the energy density to address these needs. Nuclear also has a better safety record and lower environmental and health impact than alternative energy sources. Using Diablo Canyon as an example, it is also cheaper.

053-L088-13 cont'd

Recommendations

1.) Revise the goal of our environmental efforts to "Zero CO2 emissions".
2.) Revise California's Renewable Portfolio Standard to include nuclear power. This will make it much easier to meet aggressive CO2 emission goals. By using more nuclear, it will be much easier for utilities to flatten out the "Duck Curve"
3.) Actively support the relicensing of Diablo Canyon Power Station.
4.) Press for legislation changes to allow Diablo Canyon to install the latest turbine technology for its existing units, which will increase efficiency, decrease nuclear waste, decrease cooling requirements, and provide power for an additional 70,000 homes. (The issue here is that Diablo Canyon is restricted by state law from exceeding its current operating limit.)
5.) Recommend additional nuclear plants in the state and fix the San Onofre Power Plant (if it is not too late) just as Ohio did with its Davis-Besse Plant.
6.) Recommend the investigation of a Molten Salt Reactor industry in California. Molten Salt Reactors are walk-away safe and can burn down existing nuclear 'waste' as fuel. This is a tremendous opportunity for California. It is potentially an industry as large as the aircraft industry. It can provide exportable products and a large number of high-paying high-tech and manufacturing jobs. (These sorts of activities are already taking place in China. They have over a 1000 people working on a government supported project using technology developed at Oak Ridge National Laboratories. In June, the China National Nuclear Power Corporation sought US$2B in an IPO on the Shanghai exchange. They raised US$273B. If we do not enter this market, I guarantee we will be buying their products here, all built with Chinese technicians, not Californian.)

Below are the notes that I used to make my verbal statement at the 7/24 workshop hearing. My verbal comments differed based on input from the session.

Renewables **July 24, 2015**

a. Since renewable energy sources are dependent on climate and sunlight conditions, they produce variable amounts of energy below their maximum capacity ratings.

b. Since renewable energy sources produce variable power, they must be backed up by dedicated continuous-running gas-fired power plants to make up the difference.

c. Since the effective power capacity delivered by renewable sources runs from 20% to 40% of the maximum power capacity, to make up the difference you either have to have 2.5 to 5 times the number of power sources as the original or gas-fired power plants to handle the shortfall of 60% to 80%, and perhaps higher when the alternative source is not available

d. Because the power generated by renewables is variable, their backup gas-fired power plants usually run at less than peak efficiency, generating relatively greater amounts of CO2 than when running at peak efficiency.

053-L088-13 cont'd

e. Because renewable energy sources require backup gas-fired power plants that generate CO2, they cannot be considered truly carbon-free.

f. Because utility companies can be swamped by multiple renewable energy power generators during peak performance periods, they pay those power producers to provide less or zero power during those periods.

g. Because renewable energy sources are dependent on climate and sunlight conditions, they are relatively energy-sparse compared to nuclear or fossil fuels.

h. Because renewable energy sources are energy-sparse, they require much larger areas than nuclear or fossil fuel plants to generate the same amount of energy.

i. Because renewable energy sources require much larger collection areas, they require significant investment in transmission capabilities and roads.

j. Today, we do not have many and good mechanisms for storing excess electrical power that could be used on-demand during periods of low power production.

k. Because renewable power production is relatively energy-sparse and geographical broad, initial investment is comparatively high and requires taxpayer support.

l. Because renewable power production is energy-sparse it is relatively expensive to the consumer.

m. Because renewable power production is relatively energy-sparse and expensive, it cannot keep up with fossil fuel expansion to meet user demand.

n. Because renewable energy sources are relatively energy-sparse, geographically broad and expensive, they are difficult to ramp up fast enough to prevent degradation or collapse of climate factors upon which humans rely and enjoy.

053-L088-13 cont'd

o. Because renewable energy sources are relatively energy-sparse, geographically broad and expensive, they cannot be deployed fast enough to respond to abrupt natural and manmade disasters.

p. Renewables at present and projected development rates cannot meet the massive amounts of energy required to reverse ocean acidification and address other climate change induced issues.

q. Only nuclear overcomes all these difficulties.

indicted by the United States Department of Justice for corrupting a federal investigation. In the words of that famous California seismologist, Ronald Reagan, trust, but verify. The NRC staff has shown itself enthusiastically trusting of PG&E. It's time that you start to verify.

MR. HAGAR: Your time's up.

MR. GEESMAN: Thank you.

MR. HAGAR: All right, the speaker after Dr. Greene will be Klaus Schumann.

DR. GREENE: I'm Bob Greene. I'm a board member of Thorium Energy of Silicon Valley, and also a friend of Diablo Canyon. My PhD is in atmospheric physics. Diablo Canyon has an established, excellent, 30-year safety record. This is real experience, not hypothetical scenarios. If you want to talk about hypothetical scenarios, I can guarantee you if we don't get serious about greenhouse gasses, it'll kill all your children and grandchildren. We need to cut back our CO2 generation as much as possible. Renewable sources increase CO2 generation through backup, gas-fired plants. 053-T001-35

The rest of the world recognizes the need for more nuclear. There's approximately 70 plants under construction worldwide. In June, the China

National Nuclear Power Corporation floated an IPO on the Shanghai Exchange hoping to raise $2 billion. Instead, they raised $273 billion. If we're going to participate in the future, which is nuclear, we have to get going. We need to diminish CO2 generation ASAP and combat the new challenges of climate change. I'll point to ocean acidification. If we do not take significant steps by 2030, we are in danger of poisoning our oceans permanently. Another example is desalination. California will need massive amounts. Just for these two issues alone require immense amounts of energy. We are kidding ourselves about climate change. It's happening faster. We need to react sooner.

053-T001-35 cont'd

We are seriously underestimating the quantity of energy needed. Solar and wind can't satisfy this need because its energy density is sparse. We need as much nuclear power as fast as we can get it, and especially generation for molten salt reactors, which can consume existing nuclear waste. If the NRC really wants to provide a public service, it will extend Diablo Canyon operating limits to reflect efficiencies due to newer turbine technology.

That would also reduce the cooling requirements. Please renew the Diablo Canyon license,

and one more final comment. The reactors in Japan did not fail at Fukushima. It was poor planning for tsunamis. The reactors actually shut down. 053-T001-35 cont'd

MR. HAGAR: All right, folks, let's get back with the program here. After Klaus Schumann will be Keay Davidson.

MR. SCHUMANN: Thank you, NRC, for coming again and giving an opportunity to speak. First, I would like to recommend to anybody to go to the Mothers of Peace website and look at their suggestions what actually should be in the EIS. There are a great many of excellent suggestions which actually would meet the requirements of a scoping meeting, rather than a PR or offering reasons why you're for or against nuclear power.

I would recommend that. In particular, I would ask the NRC also, itself, go on the website and have a look of some of the suggestions Mothers of Peace gives specifically for the scoping process. One thing I would particularly point to is the section on leaks from dry cask cracking. You might find some very interesting information there. In addition, from all that I've heard so far in this meeting here, there are obviously a great many uncertainties and questions about the replica nuclear power plant.

nuclear energy produces more clean air energy than any other source and it is the only one that can produce large amounts of electricity 24 hours a day, 7 days a week.

And then just to conclude, the EVC as an organization, we stand behind PG&E and the work that Diablo Canyon does and the economic benefit that it brings to this county. Thank you.

(Applause)

MR. HAGAR: The speaker after Eric Greening will be Terri Strickland. Terri, are you here?

(No audible response)

MR. HAGAR: Okay.

MR. GREENING: Thank you. I am Eric Greening, and you're interested in new information that has come up since this process started. On May 30th, 054-T001-69 2015 published in the Journal of Geophysical Research an article by Mark. R Legg and three other co-authors entitled, "High Resolution Mapping of Two Large-Scale Transpressional Fault Zones in the California Continental Border Lands: Santa Cruz-Catalina Ridge and Ferrelo Faults." We're talking about faults that had thought not to be capable of large earthquakes now appearing to be capable of large earth quakes. They are

well offshore in Southern California.

So far most of the emphasis on tsunami dangers has been looking northward at the Cascadia Subduction Zone and the Triple Junction. There's been probably unwarranted self-reassurance that, well, that's far away and the waves would be traveling parallel to the coast, etcetera, etcetera. Well, maybe so; maybe not. We know now that a major tsunami from the south could come. We know that such a tsunami could affect the road out. And in that context I would like some real world scoping of what our so-called evacuation plan is all about.

054-T001-69 cont'd

We know we can't get everybody out: non-drivers, housebound, etcetera, and even people in cars in traffic out of here in even 12 hours, not to mention whenever the radiation might arrive. So there are going to be places that are supposed to shelter-in-place, people who are supposed to shelter-in-place. I don't know where the homeless go.

But here is the question, here is the real world question: In the wake of Fukushima our county has done table top exercises for a day or two assuming everything is fine after that and everybody goes home. What does shelter-in-place mean in the context of an emergency that is still in the uncontrolled emission

phase? Shelter-in-place until when? Until what happens? Who is going to do what to make the environment safe for the people who've sheltered-in-place while radioactive water or no water comes out of their faucet and they run out of their groceries and their baby runs -- well, anyway.

054-T001-69 cont'd

Let's look at some real world scenarios. Let's look at the elders. Even if somebody comes for them and somebody is supposed to if they're on a list, what if she won't leave her cats? She has a good reason not to. Look at what happened to the pets in Fukushima. Her cat may be her emotional center. These are real world situations. We haven't even begin to rehearse them. The bus drivers who are expected to make return trips back into harm's way. We could go on and on. And I will write.

(Laughter)

MR. HAGAR: Thank you.

(Applause)

MR. HAGAR: Okay. Our next speaker will be Terri Strickland.

MS. STRICKLAND: That's me.

MR. HAGAR: That's you. Okay. Sorry. Got out of sequence. Barbara Scott will be next. Barbara?

checked out. Equipment is checked, repaired if necessary, worked on. And this is safety -- the safety equipment, anything like that. So they've been doing a good job keeping the plant up.

I've worked out there off and on for 31 years and I do -- well, I will make this short, but I do want to say to the NRC that myself and my members appreciate the hard work that you people in regulating and keeping the nuclear power industry safe. Thanks.

(Applause)

MR. HAGAR: Okay. The speaker after Henrietta will be Amber Johnson. Amber, are you here?

(No audible response)

MR. HAGAR: Then Andrea Sestran. Andrea?

(No audible response)

MR. HAGAR: Okay.

MS. GROOT: Yes, my name is Henrietta Groot. I'm associated with the Mothers for Peace, also the Alliance for Nuclear Responsibility. I give credit to these organizations of concerned citizens.

I started out today asking a question, if you may recall, asking who asked for this meeting? And I don't think I got a satisfactory answer. The NRC apparently put this show on without a request from PG&E because apparently PG&E is not ready with all the 055-T001-83

problems that they still have to answer. So the NRC meanwhile picked up the ball anyway.

055-T001-83 cont'd

And that brings me to this question of the danger of regulatory capture.

(Applause)

MS. GROOT: David Sirota is a senior writer of the International Business Times, and he talks about that danger of regulatory capture. And the definition is when a government agency is effectively captured by and subservient to the industry that the agency is supposed to be regulating. And I think I ask you is this is what is going on here? If PG&E didn't ask for this, why did the NRC do this? We learned a lot of interesting things today, never mind, but it should not have happened today.

(Applause)

MS. SEASTRAND: Which one do I use?

MR. HAGAR: Speaker after Andrea will be Sherry Danno. Sherry, are you here?

(No audible response)

MR. HAGAR: Then Bruce Campbell. Bruce Campbell, are you here?

MR. CAMPBELL: I am.

MR. HAGAR: Okay. This one.

MS. SEASTRAND: This one? All right.

right to force weaker cultures such as Native Americans and Mongolians to accept highly radioactive waste on their homelands and condemn generations of their people to a terrible life of living in irradiation environments. We ask you to deny the request to re-authorize this license. And I remind you that the distinction between the past, present and future is only a stubbornly persistent illusion by Albert Einstein.

(Applause)

MR. HAGAR: Thank you. Speaker after Barbara Harmon will be Liz Curren. Liz, are you here?

(No audible response)

MR. HAGAR: Okay. Good.

MS. HARMON: Greetings. My name is Barbara Harmon. I'm a member of the Arroyo Grande City Council. It is important for me to emphasize that I am not speaking on behalf of the council or the City of Arroyo Grande. I'm speaking as a resident of San Luis Obispo County and one who supports the continued licensing of Diablo Canyon Power Plant. 056-T001-66

I support licensing renewal because of the numerous comprehensive and ongoing safety measures, environmental benefits and economic benefits. These benefits include 24/7 electricity production, a clean reliable cost-effective energy resource, zero

emissions which reduces greenhouse gas emissions by 6 to 7 million tons per year, environmental stewardship of 12,000 acres, vital charitable contributions and event sponsorship for our community, contributions to school education programs. 056-T001-66 cont'd

Our county general fund receives approximately $6.7 million. There are four unified school districts that receive a combined total of approximately $10.5 million, our community college, 1.1 million, our roads, 295,000, and our harbor district 380,000 all due to yearly tax revenue allocations, not to mention the very important head of household jobs provided.

Lastly, I encourage everyone who doubts these benefits to schedule a tour of the plant. PG&E is a welcome part of our community. PG&E does what is asked of them and they do it well. Please renew the licensing, and thank you very much for this consideration.

(Applause)

MR. HAGAR: The speaker after Liz will be Kaila Anderson. Kaila, are you here?

MS. ANDERSON: Yes.

MS. CURREN: Hello, I am Liz Curren from Los Osos and I am speaking for the future generations.

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Submitter Information

Name: Minea Herwitz

General Comment

I haven't seen serious plans by the NRC to relocate the 1,100+ metric tons of nuclear waste at Diablo Canyon, nor all the tons present at San Onofre power plant. Unless this is adequately taken care of and removed from the hazard-prone coastline, I do not think the plant deserved to be re-licensed. 057-L042-1

What about the 40% or thereabouts surplus of energy in California? Why take the risk of a meltdown or nuclear accident if we don't even need the excess energy? 057-L042-2

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speaker after Ace Hoffman will be Sharon Hoffman.

MR. HOFFMAN: Thank you. We came up from Carlsbad, drove up this morning. So I want to tell you a little bit about what's going on with that reactor. 059-T001-90

A couple of years before it shut down it had an emergency scram because a cable that had gone underneath a gigantic refrigerator-sized breakout box finally wore through after 30-35 years and it shut the reactor down. These reactors are getting old. And the reason that we don't replace them with new Gen IV and nuclear reactors is: (A) new reactors are way too expensive. And the most important reason is it's illegal in California to build a new reactor. But they keep putting new assemblies into the old reactors. And they keep doing this until they break. So what's going to happen when yours breaks up here? Well, what's going to happen is you're going to get a bill for all the profit that PG&E would have made until the end of the re-licensing period. That's what we're going to have to pay down in San Diego, $1,674 each meter. That's the estimate. Over $10 billion. And that's for a reactor that they broke by their own negligence.

And since I know we don't have a lot of time, I wrote a book about eight years ago and I have a bunch of copies of it. They're free. I'll hand them out.

You can also get it online. You don't need to embarrass yourself by asking for a copy if you're wearing a green shirt.

059-T001-90 cont'd

(Laughter)

MR. HOFFMAN: You can still read it. That goes everything that you're going through now.

And I have one last request of the green people. Those golf balls. We're going to have 150 canisters, these huge things the size of a school bus holding those golf balls. I wonder if you guys would be willing to take them from us, because we live in an area where there's tens of millions of people that are going to be impacted.

PARTICIPANT: (off microphone)

MR. HOFFMAN: No, 150.

PARTICIPANT: I'll take 150.

MR. HOFFMAN: Hundred and fifty? Okay. You guys will take them?

PARTICIPANT: We'll take them.

MR. HOFFMAN: All right. Good. I'm going to bring that back. I really wanted to get that answer. Thank you very much. I can't even go on, I'm so happy. We have a solution to our waste problem. Do you realize how many activists are trying to solve that problem, and they can't because there's no place to put

the waste. There's nobody that really wants it. And you're not going to end up taking it. You know you aren't.

059-T001-90 cont'd

PARTICIPANT: We'll take it.

MR. HOFFMAN: Thank you very much.

(Applause)

MR. HAGAR: Sharon? And Sharon will be our last speaker.

MS. HOFFMAN: My name is Sharon Hoffman and since I'm the last speaker in this part of the meeting, I'll try to be pretty brief.

I feel like we're not looking at the actual problem. The actual problem is that accidents do happen. Accidents can happen. And I don't know about the rest of you, but I've had radiation intentionally bombarded at me and I have seen my skin from it, and that was a very small controlled amount of radiation. So let us acknowledge that if there is an accident, it would be a disaster.

And then let's step back and think about the fact that this is a plant built and run and regulated by human beings, and we all have accidents. I venture to say that every person in this room has auto insurance, since it's required by the State of California and most other states, and we don't have auto insurance because

MR. HOFFMAN: Probabilistic risk assessments don't work for human behavior. They don't work when the workers at the plant refuse to walk around and do fire safety inspections like they did at San Onofre. 059-T002-23

They also don't work when the utility in order to pass a probabilistic risk assessment impact statement of some sort will balance making something more risky in one area by making it, they think, less risky in another area.

For example, they didn't work for San Onofre, because when the plant failed, we had been told we were going to make a billion -- we were going to save a billion dollars. And that didn't happen.

Instead the plant disappeared. And how is that going to be in your statement? But, more specifically, German Wings, MH370, 9/11, that's four airplanes.

A Warthog pilot stole a Warthog and flew it into a mountain after flying all over Utah and Nevada. In San Diego, a man stole a tank.

And the only reason that he was stopped from wherever he wanted to go, and I mean anywhere, was he went on top of a barrier and a very brave cop climbed on top of the tank and opened the door and tried to het

him to stop. And when the guy started to move the tank again, he shot him.

059-T002-23 cont'd

In 1970s I believe it was a hijacker stole -- hijacked an airplane and overflew Los Alamos. Now how are you going to do a PRA or anything that's going to prevent those sorts of events? They're going to happen.

Now, the dry casks with their half inch think stainless steel and their concrete over packs, they're not going to withstand a full impact of a loaded jumbo jet. They're not going to withstand an A-10 Warthog that's been stolen and is firing 70 depleted uranium bullets per second at the thing and then dropping 500 pound bombs.

059-T002-24

There's just no way you can protect against these sorts of things. So I think it's high time that you admit that you -- every time I've talked to the NRC about these problems I get one answer, TSA.

They're going to stop every single hijacking that's going to happen in the future. It wouldn't have stopped German Wings. It wouldn't have stopped MH370. There was an Egyptian air pilot about 15 years ago that is believed to have crashed a fully loaded jumbo jet into the St. Lawrence seaway.

You're not going to be able to do any of

these things. You're not going to be able to prevent against a single one of these. So, why are we arguing about something that is so easily replaceable? 059-T002-24 cont'd

San Onofre had a billion dollars in funds that they could have been spending on renewable energy that they just holding back. And they could have been spending it during that year and a half when the plant had already failed before they decided that they were not going to restart it. 059-T002-25

Which we all knew from -- within six weeks of when it failed. Because we knew it was fluid elastic instability that had broken it. And they had no way to protect against that.

None of this is covered in any of these environmental impact statements. So, how about you just give it up. And let us go a different route. Thank you.

(Applause)

MR. HAGAR: The speaker after Sharon will be Daryl Gale.

MS. HOFFMAN: Hello, my name is Sharon Hoffman. First of all, I want to echo something that a number of people have said this evening. We should not be talking about license renewal. We should be talking about immediate shut down.

the waste. There's nobody that really wants it. And you're not going to end up taking it. You know you aren't.

PARTICIPANT: We'll take it.

MR. HOFFMAN: Thank you very much.

(Applause)

MR. HAGAR: Sharon? And Sharon will be our last speaker.

MS. HOFFMAN: My name is Sharon Hoffman and since I'm the last speaker in this part of the meeting, I'll try to be pretty brief.

I feel like we're not looking at the actual problem. The actual problem is that accidents do happen. Accidents can happen. And I don't know about the rest of you, but I've had radiation intentionally bombarded at me and I have seen my skin from it, and that was a very small controlled amount of radiation. So let us acknowledge that if there is an accident, it would be a disaster. 060-T001-91

And then let's step back and think about the fact that this is a plant built and run and regulated by human beings, and we all have accidents. I venture to say that every person in this room has auto insurance, since it's required by the State of California and most other states, and we don't have auto insurance because

we think that something is going to go wrong. We have auto insurance in case there's an accident, because accidents happen to everybody.

060-T001-91 cont'd

So do you really want to gamble -- the NRC, who's actually going to make this decision, to you really want to gamble with the lives of all of the people in this area, future generations and all of the places that that radioactivity could spread, which is the whole globe. We all know that we all have residue from the bomb tests in the '50s in our bodies, everybody who's old enough. I think everybody in this room probably is. This is not something that goes away. This is not something you can say, well, we haven't had a problem here for however long and assume that there will not be a problem in the future.

So I urge the NRC to really look at the question of if you were licensing this plant, would you do it, and find that the answer is no. Thank you.

(Applause)

MR. HAGAR: I was mistaken. We have one more speaker.

(Laughter)

MR. HAGAR: So, Gary?

MR. KIRKLAND: Thank you. My name is Gary Kirkland, and what I wanted -- a couple things that I

these things. You're not going to be able to prevent against a single one of these. So, why are we arguing about something that is so easily replaceable?

San Onofre had a billion dollars in funds that they could have been spending on renewable energy that they just holding back. And they could have been spending it during that year and a half when the plant had already failed before they decided that they were not going to restart it.

Which we all knew from -- within six weeks of when it failed. Because we knew it was fluid elastic instability that had broken it. And they had no way to protect against that.

None of this is covered in any of these environmental impact statements. So, how about you just give it up. And let us go a different route. Thank you.

(Applause)

MR. HAGAR: The speaker after Sharon will be Daryl Gale.

MS. HOFFMAN: Hello, my name is Sharon Hoffman. First of all, I want to echo something that a number of people have said this evening. We should not be talking about license renewal. We should be talking about immediate shut down.

060-T002-26

And we have no way to predict when a problem might occur. And every day we are gambling with the lives of all the people in California and beyond. 060-T002-26 cont'd

The second point I wanted to address is, in these slides, there was a list of all the different impacts that you're going to look at in this license renewal. And I was a little shocked.

I've been coming to NRC hearings for decades. And I have heard the NRC repeatedly say the only thing that we are responsible for is safety.

And now we're talking about economic impacts and all types of other criteria that have nothing to do with safety. But if we're going to talk about those, then let's talk about the cost of renewable energy.

Warren Buffet, who does not strike me as the guy who is in this for good environmental reasons, he's in it for the money. He admits that freely. Just bought the cheapest electrical power in the nation. And it's solar.

I'm sure the people who are making it are making a profit. And I'm sure Warren Buffet is going to make a profit. And it's still going to be way cheaper then anybody else's electricity.

We have time apparently, if we're talking

about license renewal ten years from now. Let's build those solar plants instead.

060-T002-26 cont'd

When we drove up here today, we passed fields and fields baking in the sun. And hills and hills that would be good places for wind turbines. Let's put them out there.

Let's shut down Diablo Canyon and all the rest of the nuclear power plants before something really bad happens. Thank you.

(Applause)

MR. HAGAR: Following Daryl Gale will be Kathy Oliver. Kathy, are you here?

MS. GALE: Good evening NRC. Thank you very much for the ability to speak and for all of our concerns and issues to be aired.

I came up here from Los Angeles where I live. I came up on Amtrak California, which has proprietary cleaner fuel burning then Amtrak USA. So I try to lower my carbon footprint as much as possible.

I also live in a solar apartment. A lot of the speakers this afternoon were talking how solar isn't that useful or is not, you know, the technology isn't good enough.

I mean, there's 110 solar panels on my apartment building. And during the day we get to have

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Email: elaineholder@att.net

General Comment

The possibility of terrorism is a site specific issue at Diablo Canyon and it must be addressed in the environmental impact statement. Private and commercial airplanes fly over the plant because it is not in a no-fly zone. It should be because an airplane or a drone could be used for terrorism purposes. Since Diablo Canyon is on the ocean, it is also vulnerable to an attack from a boat. The Coast Guard or other policing authority would be too slow to prevent such an attack which could be carried out fairly quickly. 061-L054-1

Emergency response is also a site-specific issue because Diablo Canyon is in an area of small towns with a highway system designed for such an area, but it also attracts a very large number of visitors because it is a major tourist area. It would be impossible to evacuate or shelter all of the tourists that gather here frequently -- especially in the summer. Evacuation by zones as the current plan depends on, will not work because people here know this and they are likely to want to get out "before the rush starts" 061-L054-2

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Notice of Receipt and Availability of Application for Renewal of Diablo Canyon Nuclear Power Plant License

Comment On: NRC-2009-0552-0026
Diablo Canyon Power Plant, Units 1 and 2; Notice of Intent to Prepare an Environmental Impact Statement

Document: NRC-2009-0552-DRAFT-0060
Comment on FR Doc # 2015-15921

7/1/2015
80 FR 37664
(67)

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2015 SEP -1 PM 5:20
RULES AND DIRECTIVES BRANCH USNRC

Submitter Information

Name: Emilie Inman

General Comment

Relicensing the diablo canyon plant is not only an incredibly harmful proposition it also seems fairly oblivious to the multitude of high risk scenarios this relicensing would permit to continue. I am firmly against it. Not only is this power plant on the shore, its coolin pipes killing and estimated 2.5 billions fish babies per year, and any nuclear disaster threatening to spread its toxic waste into the pacific and across the globe, it also rests on 13 active fault lines. The location alone threatens an incredibly widespread area of our beloved planet. This does not include the issue of toxic waste and it's disposal, creating opportunities for toxins to enter not only the soil and ground water but in turn our food. In addition to these high risk and incredibly detrimental opportunities this plant provides, CA has a 40% energy surplus without nuclear energy. WE DO NOT NEED THIS ENERGY OR ITS POLLUTING RISKS. 062-L067-1

To care for our planet and ourselves it is imperative that Diablo canyon nuclear power plant NOT be relicensed.

SUNSI Review Complete
Template = ADM – 013
E-RIDS= ADM-03
Add= M. Weitzel (MJW2)

My name is Joe Ivora. I am a retired Civil Engineer, a passionate Environmentalist, and retired from Diablo Canyon. I want Diablo Canyon to be relicensed because:

1) it runs so clean, it emits no CO_2 no nitric oxide, no ozone or other gas-regulated pollutons; 063-L032-1

2) it does not produce any ash to pollute the land or water. All the high-level waste is collected, and safely controlled. The so-called waste is about 95% unspent fuel that could be reprocessed and reused. This is not a technical problem - only a political problem. The waste has no effect on the environment since it is contained in steel and concrete containers. Waste has a very small footprint at Diablo Canyon. I would invite you to take a public tour and see for yourselves.

Diablo Canyon does not emit any radiation to the general public. No one has died from the radiation from a commercial nuclear power plant anywhere in the world, but millions die from the combustion of coal, oil and natural gas to produce electricity at fossil fuel plants.

Diablo Canyon produces about 10% of California's low-cost, carbon-free, very reliable electricity for nearly 3 million Californians without the approximately 6½ million tons of greenhouse gases that would be emitted annually by a fossil fuel plant.

Diablo Canyon runs 24/7 to meet the energy needs of California no matter if we are in a drought season, a rainy season, or if it is night, or if there is no wind, and at the same time meet the state and federal pollution EPA requirements. Fossil fuel plants cannot meet the future EPA pollution requirements with the current technology. Nuclear power provides 63% of the clean electricity in the United States.

Solar and wind have a very limited capacity to meet the energy needs of the future and therefore, must include Diablo Canyon which has a very high capacity factor of about 90%. Nuclear power has to be a part of any future clean energy mix, so <u>our</u> children and <u>their</u> children will have <u>abundant</u>, <u>reliable</u> and <u>clean</u> energy.

Thank you.

(360 words)

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Comment On: NRC-2009-0552-0026
Diablo Canyon Power Plant, Units 1 and 2; Notice of Intent to Prepare an Environmental Impact Statement

Document: NRC-2009-0552-DRAFT-0092
Comment on FR Doc # 2015-15921

98

Submitter Information

7/1/2015
80FR37664

Name: Joseph Ivora
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Orcutt, CA, 93455
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RECEIVED
2015 SEP -1 PM 5:31
RULES AND DIRECTIVES BRANCH USNRC

General Comment

I am a retired Civil Engineer, a passionate Environmentalist, and retired from Diablo Canyon Power Plant. I want Diablo Canyon to be relicensed because:

063-L095-1

1) it runs so clean, it emits no CO no nitric oxide, no ozone or other gas-related pollutons;

2) it does not produce any ash to pollute the land or water. All the high-level waste is collected, and safely controlled. The so-called waste is about 95% unspent fuel that could be reprocessed and reused. This is not a technical problem, only a political problem. The waste has no effect on the environment since it is contained in steel and concrete containers. Waste has a very small footprint at Diablo Canyon. I would invite you to take a public tour and see for yourselves.

Diablo Canyon does not emit any radiation to the general public. No one has died from the radiation from a commercial nuclear power plant anywhere in the world, but millions die from the combustion of coal, oil and natural gas to produce electricity at fossil fuel plants.

Diablo Canyon produces about 10% of California's low-cost, carbon-free, very reliable electricity for nearly 3 million Californians without the approximately 6 1/2 million tons of greenhouse gases that would be emitted annually by a fossil fuel plant.

Source Reviewer Complete Template = ADM-013
E-RIDS = ADM-03
Add = M. Wentzel (mtw2)

Diablo Canyon runs 24/7 to meet the energy needs of California no matter if we are in a drought season, a rainy season, or if it is night, or if there is no wind, and at the same time meet the state and federal pollution EPA requirements. Fossil fuel plants cannot meet the future EPA pollution requirements with the current technology. Nuclear power provides 63% of the clean electricity in the United States.

063-L095-1 cont'd

Solar and wind have a very limited capacity to meet the energy needs of the future and therefore, must include Diablo Canyon which has a very high capacity factor of above 90%. California has a philosophy of more renewables and energy efficiency. All those things are great, but we know that big, base load power plants are what provide stability for the system. Renewables are intermittent and unreliable, and without having a real strong backbone of nuclear or fossil fuel, the reliability of the grid is jeopardized. However, fossil fuel is dirty. Nuclear is the only clean option. Nuclear power has to be a part of any future clean energy mix, so our children and their children will have abundant, reliable and clean energy.

Diablo Canyon also provides clean water using desalination for the local community.

Thank you.

MR. HAGAR: The speaker after Joe Ivora will be Simone Malboeuf. Simone, you're next.

MR. IVORA: My name is Joe Ivora. I'm a retired civil engineer, a passionate environmentalist that retired from Diablo Canyon. I want Diablo to be relicensed because it is so clean. It emits no CO_2, no nitric oxide, no ozone or any other pollutants. It does not produce any ash to pollute the land or water. All the high-level waste is collected and safely controlled. The so-called waste is about 95 percent unspent fuel that can be reprocessed and re-used. This is not a technical problem. 063-T001-64

It is only a political problem. The waste has no effect on the environment since it is contained in steel and concrete containers. The waste has a very small footprint at Diablo Canyon, and I would invite you to take a public tour and see for yourselves. Diablo Canyon does not emit any radiation to the general public, and no one has ever died from radiation from a commercial nuclear power plant anywhere in the world. Millions die from combustion of coal, oil, and natural gas to produce electricity at the fossil fuel plants.

Diablo Canyon produces about 10 percent of California's low-cost, carbon-free, very reliable electricity for nearly three million Californians,

without the approximately six and a half million tons of greenhouse gasses that would be emitted annually by a fossil fuel plant. Diablo Canyon runs 24/7 to meet the energy needs of California, no matter if we are in a drought season, a rainy season, or if it is night, or if there's no wind. At the same time, it meets all the air quality requirements, all the EPA requirements. Fossil fuel plants cannot meet the future EPA requirements with the current technology. Nuclear power provides about 63.3 clean energy in the US.

063-T001-64 cont'd

Solar and wind have a very limited capacity to meet the energy needs of the future and, therefore, Diablo Canyon must be included because it has a very high capacity factor, around 90 percent. Diablo Canyon has to be part of the future energy mix so our children and their children can have an abundant, reliable, and clean energy. Thank you very much.

MR. HAGAR: The speaker after Simone will be Barbara Harmon. Let me say something about the time. We've got about 30 more minutes in the scheduled meeting time. We've got more than 30 minutes' worth of speakers. NRC staff has decided to extend the meeting closing time for probably another 30 minutes, so I think with that, we'll have enough time to get through all the speakers.

AUG 5, NRC CITIZEN COMMENT ON ENVIRONMENTAL BENEFITS OF DIABLO CANYON

BRIEF COMMENT BY MARY IVORA, COASTAL RESIDENT

THANK YOU DIABLO CANYON EMPLOYEES FOR GIVING ME CLEAN, FRESH AIR FOR THE LAST 30 YEARS. 064-L038-1

THANK YOU FOR 100% SAFETY FOR 30 YEARS.

I LIVE NEARBY AND I WANT THIS PLANT RE LICENSED TO KEEP MY ENVIRONMENT CLEAN AND PROVIDING EMISSION-FREE ELECTRICAL POWER FOR ME AND 3 MILLION COASTAL RESIDENTS.

THANK YOU SO MUCH!

MARY IVORA,
ORCUTT, CA

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Comment On: NRC-2009-0552-0026
Diablo Canyon Power Plant, Units 1 and 2; Notice of Intent to Prepare an Environmental Impact Statement

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Comment on FR Doc # 2015-15921

7/1/2015
80 FR 37664
(63)

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2015 SEP -1 PM 5:20
RULES AND DIRECTIVES BRANCH USNRC

Submitter Information

Name: Jeff Jacoby

General Comment

We MUST decommission the plant immediately.
Fukushima has demonstrated that there is no safe way to operate a plant on a faultand that disasters CAN happen!

065-L048-1

It is unacceptably dangerous and extremely unsafe to allow a nuclear plant such as Diablo Canyon to continue to operate along fault lines in California!
Even without an earthquake the plant is harming people and the environment by generating waste that can't be properly disposed of, killing fish by returning hot water to the ocean, and regularly exposing neighbors to low-levels of radiation exposure.

We must not continue to increase our risks of disaster by allowing a nuclear plant to exist on a fault line at the ocean!
SHUT DOWN DIABLO CANYON NOW!

SUNSI Review Complete
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Add= M. Weetzel (MJW2)

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Document: NRC-2009-0552-DRAFT-0040
Comment on FR Doc # 2015-15921

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2015 SEP -1 PM 5:17
RULES AND DIRECTIVES BRANCH USNRC

Submitter Information

Name: Cori Jane

General Comment

I'm a voice of just concern: I ABSOLUTELY oppose the re-licensing of the Diablo Canyon Power Plant. From where I am standing, on well-informed ground, I can know that our planet's continuing with human life is dwindling in reality. We have absolutely fucked all over this planet and there is little we can do to change that immediately. One thing we really can do is NOT support things like nuclear power plants at this day and in this age. We have available to us epic proportions of healthful and sustainable power-producing methods and practices and there is VERY little reason to not employ the myriad options available at this time. Wind, solar, hydro, magnetic, etc. We are powerful and technologies have increased in reliability and diversity. Let us invest in a future in these sustainable and intelligent ways, not a signed death sentence by way of supporting even more nuclear power plants. (Especially one nestled right along California's coast where thirteen different and active fault lines are stretched.) I do NOT support the re-licensing of the Diablo Canyon Power Plant. Not one cell of my body, nor my imagination feels otherwise. 066-L049-1

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Template = ADM – 013
E-RIDS= ADM-03
Add= M. Wentzel (MJW2)

the plant to continue to be there for the decommissioning process, and we look forward to the transition to renewable energy, to Solartopia, which is happening right now. That's where the jobs are. That's where the economy is. That's where the future of this planet is. Thank you very much.

MR. HAGAR: Okay, our next speaker, after Molly Johnson, David Crosby. Come on up here, Dave.

MS. JOHNSON: Hi, my name is Molly Johnson. I am a fourth generation San Luis Obispo County resident. I am very concerned about Diablo Canyon. My subject today is embrittlement. This is directly from the NRC. Reactor pressure vessels which contain the nuclear fuel in nuclear power plants are made of thick steel plates that are welded together. 067-T001-8

Neutrons from the fuel in the reactor irradiate the vessel as the reactor is operated. This can embrittle the steel or make it less tough and less capable of withstanding flaws which may be present. Pressurized water reactors, such as Diablo Canyon, are more susceptible to embrittlement than boiling water reactors. NRC regulations at 10 CFR 50.61 provide fracture toughness requirements for protection against pressurized thermal shock, or PTS, events at pressurized water reactors. A PTS can occur when water

considerably cooler than the water normally used in operation of a nuclear reactor is injected into the reactor pressure vessel. Severe cracking of the metal RPV can follow which, in turn, can cause a serious nuclear power accident. 067-T001-8 cont'd

A 2014 report called a Radiation Embrittlement of Reactor Pressure Vessels in Nuclear Power Plants states the following: ARPV material toughness properties are known to degrade with age because of irradiation damage. While this degradation mechanism was factored into the initial design and considered in the selection of materials of RPV, a failure of the RPV by rupture or brittle fracture is beyond the design basis of the plant.

Therefore, every effort must be made to protect the RPV from brittle fracture by reducing the level of embrittlement or, failing this, by considering more drastic measures, such as RPV thermal annealing or early plant retirement. Thus far, the industry has not recreated any method by which it can directly measure the neutron bombardment to the wall of the nuclear reactor, other than to sample the coupons of metal wells that are put into each vessel when it is manufactured. These capsule coupons are designed to be removed periodically so that each one may be subjected to

destructive testing, in order to directly measure the vessel's level of embrittlement. My question to the NRC staff, how has PG&E kept in compliance with the NRC Regulation 10 CFR 50.61, which includes criteria that limit the amount of RPV embrittlement that the NRC will permit?

067-T001-8 cont'd

Does Diablo have these capsule coupons, and when was the last time that one was removed and examined, and what were the results? In a letter from the NRC to Energy Nuclear Operations in April of 2013, the NRC stated that Diablo Canyon is in the list of the top five most embrittled pressure reactors. Considering this information, how can we be assured that the plant will continue to operate safely if the license is renewed, or even tomorrow? What size of earthquake today would it take to fracture those embrittled RPVs? Thank you.

MR. HAGAR: Let me remind you, too. I have this in mind -- I noticed Molly had a typewritten sheet. If you have your comments in writing, I'd invite you to just hand those comments to the NRC staff. That'll get them on the record, as well, so please consider that. The speaker after David Crosby will be Rochelle Becker, so Rochelle, would you come up here, please?

MR. CROSBY: This is a very partisan thing. I know all of you have opinions about what's really

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Diablo Canyon Power Plant, Units 1 and 2; Notice of Intent to Prepare an Environmental Impact Statement

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Comment on FR Doc # 2015-15921

51

Submitter Information

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7/1/2015
80FR 37664

RECEIVED
2015 SEP -1 PM 5:17
RULES AND DIRECTIVES BRANCH USNRC

General Comment

The Diablo Canyon Power Plant is on and near 13 active fault lines, and its cooling pipes take 675,000 gallons per day from the ocean and return it 20 degrees warmer, killing an estimated 2.5 billion fish babies per year. We should be investing in renewable energy sources, not relicensing 40 year-old nuclear plants.

068-L051-1

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Template = ADM – 013
E-RIDS= ADM-03
Add= M. Wentzel (MJW2)

Continue to have all the power we need and then some. Save money and eliminate the threat of harm to humans and other living things.

007-T002-40 cont'd

We must do this now. It is the right and only thing left to do. Although I am not a spokesperson for Mothers for Peace, I thank them for the resolved courage, their exhausting research and relentless dedication to this cause. They rock the cradle.

(Applause)

MR. HAGAR: and the speaker after Anthony will be Kathleen Stevens. Is Kathleen here? Then we'll go to Gina Mori.

MR. KALVANS: Can everyone hear me okay? Give me a thumbs up if you can hear me okay. Okay. Good. Sorry, I do this a lot. So, I want to make sure everyone can hear me.

My name is Anthony Kalvans. I am a past, present and current Director of San Miguel Community Services District in northern San Luis Obispo County. Tonight though, I am speaking on my own time and for my own voice. I am not representing my district.

I am speaking in favor of license renewal for Diablo Canyon power plant as I'm highly concerned about the socioeconomic impacts on San Luis Obispo County under the assessed alternatives license renewal.

069-T002-41

069-T002-42

The NRC report admits they did not do a detailed assessment of the socioeconomic impact if the renewal was not approved, let alone the fact that the assessment did not look at where in the two counties the workforce for Diablo Canyon resides.

This concerns me as to potential impact of social resources of a community could be significant if renewal is not approved. Let alone, if we were to shut down the plant right now.

That is why I am also concerned about how smooth a workforce transition would be if the renewal is not approved. As I fear that alternative industry pay ranges may not be comparable to what is provided for the workforce at Diablo Canyon.

As well that our fledgling specialized industrial economy may not be able to absorb an additional 1,000 workers on top of the college graduates would be competing for the same jobs.

In conclusion, I support the proposed action of license renewal. And also, just for -- I've seen a lot of people talk about Fukushima, I'm actually Japanese/American.

My family lives in the Ibaraki Prefecture. So if you know where Ibaraki is, it's right next to Fukushima. And even my family said, we must do what is

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(25)

August 22, 2015

Chief Rules, Announcements and
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Washington, D.C. 20555-0001

RECEIVED
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RULES AND DIRECTIVES BRANCH USNRC

To Whom it may concern,

I am writing as a citizen residing in Los Osos, California ten miles from the Diablo Nuclear Plant. I have attended two NRC scoping public hearings in San Luis Obispo at the Marriott Hotel put on by the NRC. I have spent time researching the information put out by various organizations.

I am appealing to you and very concerned regarding the safety of the plant, the surrounding communities and the natural environment - ie air, ocean life, water resources and drought conditions.

There are 4 serious threats to the plant:

1) Earthquake damage - a similar scenario to Fukishima with a possible tsunami triggered. As you must know California is earthquake country and Diablo sits on a web of faults. California is long overdue for the big one,

070-L025-1

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Template = ADM - 013
E-RIDS= ADM-03
Add= M. Wentzell (mxw12)

according to seismic experts. Earthquakes as yet cannot be predicted. There is no accurate prediction that an aging nuclear plant can withstand a seismic event of great magnitude. 070-L025-1 cont'd

2. The waste accumulated at the plant is highly dangerous and poisonous to the environment with a longevity beyond our comprehension. No energy that leaves radiation that remains deadly for thousands of years can be considered green or clean. This waste while contained in casks is still subject to the process of embrittlement over time and therefore not considered reliable in terms of environmental safety. Renewal of the license will mean more and more accumulated waste with no solution for its disposal. We do not need more waste. 070-L025-2

3. Due to the present drought conditions in California the plant cannot be assured complete protection from the possibility of fire damage as a threat. Conditions are worse than fire fighters have ever experienced before and fire season has not even started. 070-L025-3

4. Nuclear terrorism is a threat especially with the rise of drone technology. Drones could be used in a variety of ways from reconnaissance for air or land attack or 070-L025-4

070-L025-4 cont'd

to an actual attack.

In addition to threats to the plant is the environmental threat to the ocean due to the process of once-through-cooling used at Diablo. We do not know the long term effects on marine life as a result of the 20 degrees warmer water returned each day. There needs to be research into the impact of this process on the ocean environment. 070-L025-5

These threats and others such as cancer rates in the area are an unacceptable situation. 070-L025-6

What makes more sense is to begin the de-commissioning of Diablo, keeping present employees employed in this process and at the same time building sustainable resources of energy which are safer for the environment and economically more feasible. Nuclear plants are too expensive and dangerous to maintain. P.G. and E employees could transition into these new jobs which would create a Win-Win for everyone. 070-L025-7

Please consider my comments and halt the relicensing of Diablo.

Sincerely,
Anne Kellogg

we think that something is going to go wrong. We have auto insurance in case there's an accident, because accidents happen to everybody.

So do you really want to gamble -- the NRC, who's actually going to make this decision, to you really want to gamble with the lives of all of the people in this area, future generations and all of the places that that radioactivity could spread, which is the whole globe. We all know that we all have residue from the bomb tests in the '50s in our bodies, everybody who's old enough. I think everybody in this room probably is. This is not something that goes away. This is not something you can say, well, we haven't had a problem here for however long and assume that there will not be a problem in the future.

So I urge the NRC to really look at the question of if you were licensing this plant, would you do it, and find that the answer is no. Thank you.

(Applause)

MR. HAGAR: I was mistaken. We have one more speaker.

(Laughter)

MR. HAGAR: So, Gary?

MR. KIRKLAND: Thank you. My name is Gary Kirkland, and what I wanted -- a couple things that I

071-T001-92

hadn't planned to say, but I want to say now is I'm one of those people who believe in civil discourse. We had a Board of Supervisors presentation a few weeks ago about civil discourse, and some of the things I heard today were examples of non-civil discourse, in my opinion.

071-T001-92 cont'd

One of the things is false reasoning. And false reasoning, you say, well, you just think about it. Well, that's an insult. And one lady here; I think she left, she said weaker cultures. Well, I'm a Choctaw and that's an insult to my culture to call it a weak culture. And so, I don't believe in ad hominems and I also don't believe people should say "we" unless they have a mouse in their pocket, because they're not speaking for me. They're only speaking for themselves. And so I hope the NRC, when they read these things, will discount any false reasoning and name calling or any insulting of other people with their positions.

Now my position, now I'm talking about whenever somebody makes a decision in life, how they should make the decision is based on a cost-benefit ratio. And what you say is the possible benefits of this action, whatever it is, are they going to outweigh the benefit, the cost or are the costs likely to outweigh the benefits? Well, if you look at Diablo Canyon; and

071-T001-92 cont'd

I hope the NRC does this, if you look at all the benefits we've had for the last 30 years, of all the electricity that's been produced and all the lives that have been improved and economies benefitted, the benefits in my opinion far outweigh the costs. And therefore this decision should be easy to make, that we go forward. Sure, there are costs. Every activity in your life has a cost-benefit.

Another thing, we're talking about the radiation. Somebody mentioned a few minutes ago about helium-3 or whatever it was coming up from the mantle. Well, the reason the interior of the earth is hot is because it's radioactive. And so if you're trying to get away from radioactivity, you can't be in this universe. This whole universe is radioactive. Right here in this room is radioactive right now. You're not going to get away from radioactivity no matter where you go in this universe. Maybe you know some other universe that is. So you've got to live with it. And it's a benefit when you can use it in such a way that provides a benefit rather than just going to waste as the center of the earth is just staying hot. And outer space is highly radioactive and anywhere you go is radioactive. There's background radiation here. Thank you very much.

ECON
ALLIANCE

204 E. Enos Street, Santa Maria, CA 93454

August 31, 2015

To: United States Regulatory Commission (NRC)

From: Mike Kirkwood, Board President
Economic Alliance of Northern Santa Barbara County

RE: Docket ID NRC-2009-0552
(PG&E Diablo Canyon License Renewal/Environmental Impact Statement)

The Economic Alliance of Northern Santa Barbara County is a nonprofit organization focused on the industries and activities driving northern Santa Barbara County economic vitality and quality of life.

The industries driving economic prosperity in northern Santa Barbara County include agriculture, wine and tourism, oil and gas, manufacturing and small business. All of these depend upon a reliable, affordable source of electricity, as do our residents.

It is imperative that the Environmental Impact Statement for the PG&E Diablo Canyon license renewal include the following:

- Inclusion of the fact that there zero carbon (Greenhouse Gas) emissions generated by PG&E's Diablo Canyon power generation, helping California to meet its Greenhouse Gas reduction goals under the Global Warming Solutions Act – AB 32 072-L090-1
- Inclusion of the environmental impacts and Greenhous Gas (GHG) impacts of generating 20% of PG&E power through conventional means, if Diablo Canyon were not producing 20% of the company power – estimated impacts of conventional means being 6-7 million tons/year of carbon emissions 072-L090-2
- Mention of the $1B added to the California economy by Diablo Canyon 072-L090-3
- Mention of Diablo Canyon's safety record, with its safety recognition from the Institute of Nuclear Power Operations (INPO) 072-L090-4
- Mention that nuclear energy produces large amounts of clean energy 24/7 and is the only energy source to do so 072-L090-5
- Mention of the 1992 PG&E Diablo Canyon Land Stewardship Program (DCLS) recognition by the President's Council of Environmental Quality as a national example of corporate land stewardship 072-L090-6
- Mention of PG&E's 1995 prestigious "Corporate Conservation Award" from the Ecological Society of America

analysis must address the destructive effects of the whole marine food chain and the health of the ocean as an economic and environmental cost. The EIR must address effective mitigations. We have 40 years of new marine science to draw from. Evidence is clear that removing huge amounts of larvae, small-food fish and plankton could collapse the whole marine life cycle.

The world's ocean health is under extreme stress already from toxic plumes, plastic, climate change, and the EIR for license renewal of the Diablo Canyon Nuclear Power Plant must provide a comprehensive study of these added stressors and clear plan for avoiding system collapse within a 500-mile radius of the plant.

MR. HAGAR: Following Diane will be Paula Ash.

MS. KOLETZKE: My name is Diane Koletzke, and I have been asked by Bonnie Raitt, musician and member of Musicians United for Safe Energy, to bring you this statement, and I am a resident of Paso Robles. Honorable Commissioners, good afternoon, my name is Bonnie Raitt. Thank you for letting us submit this testimony today.

As I'm sure you're aware, your responsibility for regulating these two reactors 073-T001-21

affects us all. I am deeply concerned about the safety and viability of reactors in light of past and recent seismic studies pointing to the dangers of the plant being in such close proximity to several significant earthquake faults. 073-T001-21 cont'd

As Californians, we are all very worried about the devastation the radiation from Diablo could bring in the event of an earthquake or terrorist attack. We are counting on you to protect us and appreciate your considering the points we feel compelled to make today. Now that renewable energy is much cheaper than nuclear, we wonder why the plant is operating at all. We know that the 2,200 megawatts Diablo produces will be quickly replaced with solar and wind power, and that those renewable sources will make far more jobs than there are at Diablo. Shutting it down means that jobs for solar installers, wind power technicians and the like will multiply to fill the gap. In the meantime, we have to ask why is Dr. Michael Peck not being listened to, and why is he no longer working at Diablo Canyon? 073-T001-22

Dr. Peck was your own top inspector at the site. He has warned that Diablo can't withstand the shocks that could easily be delivered by the dozen fault lines in the area. Those fault lines had not been discovered before construction began in 1968. The 073-T001-23

Hosgri was found by Shell Oil while Diablo was being built. The rest we learned about after. The newly found Shoreline fault crosses within less than 1,000 yards of the reactor's core.

073-T001-23 cont'd

How can we believe that Diablo is strong enough to withstand earthquakes coming from these fault lines if they were not accounted for in the original blueprints in that construction more than 40 years ago? We know that Diablo is just 45 miles from the San Andreas fault. The quake that destroyed Fukushima was twice that distance from the reactors there. Given our short time here, we want to urge you to finally and truly act as independent regulators. We ask you to put the health and safety of the public first, ahead of the short-term needs of PG&E, ahead of the agenda of the nuclear power industry. For the safety of California, we ask you to shut Diablo now, Bonnie Raitt.

073-T001-24

MR. HAGAR: After Sherry Lewis will be Joey Ricano. Is that right, Joey?

MS. ASH: Hi, I'm Paula Ash, and I'm here on behalf of Jackson Browne, a musician, activist and board member of Musicians United for Safe Energy. Every day Diablo Canyon takes in 2.5 billion gallons of sea water and discharges that sea water back into the ocean 20 degrees hotter. So much for nuclear power as

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August 11, 2015

U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Dear NRC Commissioner,

I am writing to encourage you to move ahead with licensing the Diablo Canyon PP for three important reasons:

1) The Diablo Canyon PP has continued to safely produce clean and reliable energy for 30 years. Tax revenues generated over the years from the power plant have helped build and support SLO County's economic and operational infrastructure. If the power plant were to be shut down, that infrastructure would crumble and place a tremendous financial burden on the county and its citizens.

074-L016-1

2) I began my career working for Jacques Cousteau and have worked in the nonprofit sector for 40 years. It has been my experience that companies with large employee bases such as PG&E play an essential role in helping community nonprofits to achieve their mission by providing both financial and employee volunteer support. If the licensing application were denied, the economic repercussions on the nonprofits in San Luis Obispo County and the state would be devastating. Such an action would have tremendous consequences for the county's social services programs and for the nonprofit organizations that strive to improve the quality of life that we enjoy on the Central Coast.

In addition, PG&E has demonstrated a strong and steadfast commitment to the environment. One example is on Earth Day when they make significant contributions to the California State Parks and send hundreds of employee volunteers throughout the state to help on numerous conservation and beautification projects.

In regards to their involvement with Nature Corps, every year PG&E recruits scores of employee volunteers to support our conservation efforts. With their financial and employee support we have:

- Restored 3 miles of coastal dunes that serves as the nesting habitat of the threatened Snowy Plover.
- Rebuilt a plant nursery in Morro Bay State Park that is essential to revegetation projects throughout the state park.
- Sponsored our Science in Action program that made it possible for over 700 elementary school students to take part in a number of service learning projects to restore the dunes.
- Mobilized groups of volunteers to help reestablish a key meadow in Sequoia National Park. Meadows represent only 2% of the Sierra Nevada landmass but they support 75% of the wildlife. This was the first restoration project of its kind and would not have been possible without PG&E's support.
- From 2001 to 2007 PG&E employees helped plant 20,000 trees throughout Sequoia and Kings Canyon National Parks. Three thousand of those trees were planted in memory of the victims of September 11. As a result of their support, the project received a **Congressional "Take Pride" award**.

3) Lastly, I feel strongly that the expanded use of nuclear power could tip the scale away from global reliance on oil. This in turn would dry up revenue streams that support defiant nations such as Iran, who engages in state sponsored terrorism and supports insidious terrorist organizations such as ISIS.

Based on the findings of the Safety Evaluation Report, I encourage the NRC to move forward with the relicensing of the Diablo Power Plants, both units 1 and 2. Thank you for taking the time to review my comments.

Sincerely,

Mark Landon
Executive Director

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65

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Submitter Information

7/1/2015
80 FR 37664

Name: Sandra Lee
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San Luis Obispo, CA, 93405
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General Comment

SONSI Review Complete
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DIABLO CANYON IS NOT A SOLUTION TO REDUCING ATMOSPHERIC CARBON
Diablo Canyon will prevent California from succeeding in its goal to achieve carbon-free energy of 33% by 2020. 075-L062-1

DIABLO CANYON IS NOT NEEDED TO FILL CALIFORNIA'S ENERGY DEMANDS 075-L062-2

The California Independent System Operator oversees energy distribution throughout California by managing the grid. CAISO has expressed concern that there may be times when there is so much variable wind, solar and other renewable energy being scheduled onto its system that the other generators, such as nuclear, who will have to adjust to accommodate it, will not have the flexibility needed to do so.

SEISMIC DANGERS 075-L062-3

Diablo Canyon is built adjacent to 13 known earthquake faults, and it may actually be built directly over the Shoreline Fault. No one - not PG&E, not the US Geological Survey, not the Independent Peer Review Panel - no one actually knows how far east the Shoreline Fault extends. For PG&E to claim that it does is both dangerous and fatuous.

TERRORISM

075-L062-4

Almost 15 years have come and gone since the events of September 2001, and America's civilian nuclear facilities remain unprotected against a terrorist attack of that scale. Instead, our civilian reactors prepare only against a much smaller-scale attack, known as the "design basis threat," while the NRC fails to provide supplementary protection against a realistic 9/11-type attack at Diablo Canyon.

PLUTONIUM

075-L062-5

Plutonium is the most toxic substance in the world. It is only produced through a nuclear reaction. Its half-life is 24,000 years. Plutonium can be transported in the atmosphere usually when it is attached to particles in the air. It can be deposited on land or water by settling or by rain. Plutonium can stick to particles in soil, sediment, and water.

DRY CASK STORAGE

075-L062-6

The dry casks selected for use at Diablo Canyon are just 5/8 inch thick stainless steel. Lower quality canisters are being used, choosing profits over our safety. NRC documents provide data that indicate thin storage containers can fail 16 years after a crack initiates.

ONCE-THROUGH COOLING SACRIFICES MARINE LIFE

075-L062-7

PG&E, for many years, provided state water authorities with skewed data on Diablo Canyon. The data showed that the plant's intake of billions of gallons of water a day did very little harm to surrounding marine life. PG&E's conclusions were based on the unscientific formula that the amount of sea life drawn into the system at the intake port could be accurately measured by the amount of small fish and other organisms at the outflow of the cooling system.

CLIMATE DISRUPTION AND NUCLEAR ENERGY

075-L062-8

The new normal in climate science is that there is no longer any "normal."

The new normal regarding climate disruption is that, for the planet, today is better than tomorrow

Pacific Ocean and to slow our passage to a safe and sustainable energy future. Shut down Diablo Canyon today, Jackson Browne.

MR. HAGAR: I got a little bit out of sync here. This is Sherry, and now Joey Ricano.

MS. LEWIS: Is this the one? It's this one? My name is Sherry Lewis. I'm with Mothers for Peace. I want to read portions of a new contention regarding adequacy of severe accident mitigation alternative analysis prevented by David Jackson in contention to the NRC -- well, probably wasn't the NRC, but I'm getting mixed up. Anyway, PG&E's severe accident mitigation analysis is inadequate to satisfy the National Environmental Policy Act implementing regulations because PG&E's evaluation of potential mitigation measures is not based on a sufficiently rigorous or up-to-date analysis of seismic risks.

076-T001-28

As a result, PG&E's evaluation of the comparative costs and benefits of measures to prevent or mitigate the effects of a severe earthquake does not sufficiently credit the cost effectiveness of mitigation measures. PG&E's seismic hazard analysis is insufficiently rigorous and relies on outdated or unjustified methods and assumptions. Given the inadequacies of PG&E's seismic hazard analysis, which

was presented in March of 2015, to merely cite its results in a revised SAMA analysis would not be sufficient to ensure the adequacy of the analysis to evaluate potential mitigation.

076-T001-28 cont'd

PG&E must cure the significant defects in the underlying data and analysis. The core requirement of NEPA is that for any federal action with a significant adverse effect on the human environment, federal agencies must prepare an environmental impact statement, which includes a detailed statement regarding several things I'll read, too. No. 4, the relationship between local, short-term uses of man's environment and the maintenance and enhancement of long-term productivity, which would be pretty well smashed by any accident, and the fifth one, any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

That means that to have a nuclear power station here and there's a problem, there would be irretrievable problems with it. I'm not good at speaking like this. What I want to say, too -- there are a couple of things. The Tohoku earthquake that was the problem for Fukushima had several segments. The geologists felt that if a segment goes off, there will

be so much problem. They never thought that all the segments might well rupture at once, which they did. That is -- is it getting towards time? 076-T001-28 cont'd

MR. HAGAR: Time is up.

SHERRY LEWIS: That is the problem. I also want to mention --

PARTICIPANT: Time.

MR. HAGAR: Hold on, folks.

MS. LEWIS: I'm going to stand here until you be quiet.

MR. HAGAR: Everybody, hold it down, please. If you have --

MS. LEWIS: I have one sentence.

MR. HAGAR: Okay, then go ahead.

MS. LEWIS: Clean air energy supported by you folks, what's the air like in Fukushima? Would you like to be there now? 076-T001-29

MR. HAGAR: Okay, thank you. Joey? Joey Ricano? Okay, then Elizabeth Broose, and following Elizabeth will be John Geesman.

MS. BROOSE: Is this the live one, or this one?

MR. HAGAR: This is the one.

MS. BROOSE: This one's better? Because I also want to read, so I need to be able to --

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7/1/2015
80 FR 37664

85

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RULES AND DIRECTIVES BRANCH USNRC

Submitter Information

Name: LMH Anonymous

General Comment

In addition to attached files, the NRC ought to consider the NO RENEWAL alternative completely; so that the public will get a full understanding of what will be required to decommission
Diablo Canyon Nuclear Power Plant. What will need to be done and how long will it take and what are the environmental implications?
Knowing that might make it clearer that it's advisable not to renew the license, but to start the closing/clean-up
processes sooner rather than later. 077-L075-1

There should also be a much fuller exploration in the EIS of what other analyses, policies and options 077-L075-2
are available to the public to secure our energy future. There are abundant resources for cutting edge thinking and doing. As an example, there's the Rocky Mountain Institute- RMI.org focus on electricity generally
and also their report on energy opportunities without San Onofre NPP

http://www.rmi.org/rmi_report_reinventing_fire_in_southern_california

and how smaller can be better

http://blog.rmi.org/blog_2014_10_20_micropowers_quiet_takeover

Other factors to consider are included in the attached .pdf See attached file(s)

SUNSI Review Complete Template = ADM-013 E-RIDS = ADM-03 Add = M. Wentzel (MSW2)

After repeated messages from this site that you can't find my uploaded files, I include this link which expresses those views (related to NRC 8/5/2015 meeting in San Luis Obispo) which I endorse

077-L075-3

http://mothersforpeace.org/blog/topics-to-address-at-august-5-2015-nrc-meeting-in-slo

they are not adequately trained either in tactics or in the use of firearms to combat a terrorist attack. Now you just imagine what happens when the guards run away from highly motivated terrorists.

They know that the terrorists do not care about high radiation areas. They know that they are suicidal. And they will run.

Security guards are the lowest compensated employees on a number of nuclear power plants. Even when compared to janitors who are often not only paid more, but have better benefits. This has led to high turnover and seriously low morale at most of the plants POGO investigated.

The NRC should not be managing nuclear power plants. They are not up for the job. The bottom line is we need truly professional guards defending the plants on the order of the Army or Marines.

And like some French nuclear power plants, we need antiaircraft batteries to defend attacks from the air. But the best solution is to shut Diablo down.

(Applause)

MR. HAGAR: The speaker after Ellen will be Duane Waddell. Duane, are you here? Okay.

MS. LODGE: Hi, my name is Ellen Lodge. I live in Los Osos. I'm a private citizen. And has been

078-T002-31

mentioned several times that Diablo sits or is built adjacent to 13 known earthquake faults. And may actually be built directly on the shoreline fault. 078-T002-31 cont'd

No one, not PG&E, not the NRC, not any U.S. Geological survey, independent peer review panel, no one, actually knows how far east the shoreline fault extends. And for PG&E to claim that it does is both dangerous and misleading.

No one knows -- I'm sorry. The shoreline fault may very well extend directly under the nuclear power plant. When PG&E was studying the fault, their underwater seismic detector was not operating. Their data was extrapolated, not measured. This is frightening.

No one knows when the next major earthquake will happen. I have friends in Canada and Australia, and they say basically that having a reactor here is nothing short of insanity.

The map length of the fault's rupture is not the length of the fault. It merely tells us what has happened in the past, not what will happen in the future.

It is predictive, but no one has a crystal ball. Many of the largest and most lethal earthquakes did not occur on known faults. The Loma Prieta earthquake in '89, the 1994 Northridge, 2010 Darfield,

2012 Sumatra.

078-T002-31 cont'd

PG&E totally disregards this information. And unjustifiably relies on scaling relationships to estimate magnitudes of the fault. This is again, extrapolated data, not facts.

078-T002-32

I'd like to speak on a more personal note, which is not an imagination. And it's not illusionary. I lived through a very real earthquake in 1994. I lived in Van Nuys.

I was a couple of miles from the epicenter, as did many millions of people in LA. My husband who was a trainer for the emergency management for California State under Homeland Security, was very well prepared for emergencies.

We had water. We had food. We had a gas detector in our garage. We were able to help our neighbors. But, had it not been for him pulling me off the bed at 4:00 in morning, his quick reaction, I would have been crushed.

So this really happened, okay. And it can happen. And nobody knows when it's going to happen again. It took us years to recover. And we were fairly well prepared.

You know, rebuilding around our house. Fixing cracks. We were very lucky. Some people it

078-T002-32 cont'd

took much longer. And some people have never recovered as you know, like 32 students died in Northridge.

And this is without any radioactive poison in our environment. This was just the earthquake. We don't need this. We live in California and we have a history of earthquakes.

Having an unstable nuclear reactor in a populated area where there's a history of earthquakes is unsafe and life threatening. We cannot control nature.

But, we can control what happens with Diablo. And we can eliminate a disaster. Thank you.

(Applause)

MR. HAGAR: Amy Anderson will be the next speaker.

MR. WADDELL: When we consider whether this license should be renewed, it's not about PG&E profits, it's not about us, it's not about you. It's about them and their peers.

These are my grandchildren, Oden Skywalker Grafton, age eight. Shelby Viola Grafton, five. Do we have the right to impose obvious and unknown consequences on them and the many generations that follow for a relatively small amount of power produced for us?

again, David Georgie? Okay, then we'll skip David. Fred Frank? Okay. Fred, you'll be up next.

MS. LOVERING: Thank you for the NRC for having this opportunity. My name is Jessica Lovering, and I'm from the Breakthrough Institute. In case you haven't heard of us, we're a think tank that was founded by environmentalists in 2007. We're focused on clean energy and climate change. A nice thing about us is that we're entirely funded by philanthropy, which allows us to maintain our independence and do research that we think is important to combat climate change and protecting biodiversity.

That's what brought us here today. My colleague, Mary, and I drove down from Berkeley because we feel it's extremely important to keep existing nuclear power plants open, especially in California. That's something you don't hear from a lot of environmentally focused organizations. The electricity output from Diablo Canyon exceeds all of California's solar output by about 30 percent, and all of California's wind output by about 25 percent. 079-T001-62

Before San Onofre closed, California's nuclear power plants produced more clean electricity than all of the state's wind, solar, and biomass combined. If we could replace Diablo Canyon entirely

with renewables, we would have to cover an area the size of San Jose with solar panels, or an area the size of Los Angeles and San Francisco combined with wind turbines. That is a huge impact on birds and other wildlife. Besides that, unfortunately, in the real world, when a nuclear power plant closes, it doesn't get replaced with renewables. It gets replaced with dirty fossil fuels. When San Onofre closed in 2012, it was replaced by natural gas, which increased California's power sector carbon emissions by 25 percent just in one year.

079-T001-62 cont'd

Even in renewables-focused Germany, their phase out of nuclear power has led to a boom in coal production. Their carbon emissions have been going up, even though they're building tons of solar and wind, it's just not enough. Even in Japan, where no one died from radiation at the Fukushima accident, tens of thousands of people have died since from local air pollution because their burning of coal and natural gas just shot up 50 percent when they shut down their nuclear power plants, and that's a much more -- I've been to Fukushima.

I've seen the effect of that accident. But the impact from their increased fossil fuels burning is much more significant to public health and the

environment. The reason we care about this, and I'm sure you all understand, it's been mentioned, is that these increased carbon emissions and other air pollution, like particulates, sulfates, heavy metals from burning coal and gas, have a huge impact on the natural environment. While I understand the concern about the impact on aquatic life from Diablo Canyon's cooling system, which is a legitimate concern, but the impacts from not having Diablo Canyon would be so much greater. That's really the choice that we're facing today, and I think people need to keep that in mind.

079-T001-62 cont'd

If Diablo Canyon was to close, even though it could safely operate for another 50 years, producing clean and reliable energy, it would most likely be replaced with fossil fuels, like fracked natural gas, which do have a much larger impact on the climate. So I encourage the Commission and the community to really focus on that decision, which is what we're making today.

MR. HAGAR: The speaker after Fred will be Bill Denneen. Is Bill here? He's gone. Then it'll be Joe Ivora. Joe, you're next.

MR. FRANK: My name is Fred Frank. I'm speaking for four generations of the Franks who have lived in the county for a long time. I also was a -- I'm

will be Mark Landon. Is Mark here? I don't see Mark. Then it will be Lauren Sutton.

MS. SUTTON: I already spoke.

MR. HAGAR: Say again?

MS. SUTTON: I already spoke unless there's something to say again.

MR. HAGAR: Oh, your card must be in here twice then. Then Julie Rendor. Is Julie here? Chris Harrison? Mark Skinner? Mark, you're next.

MS. LOVERING: Thank you. Thanks for the chance to speak here. Can everyone hear me? So, I'm Jessica Lovering. I'm from the Breakthrough Institute.

And if you don't know, that's an environmental organization. We're focused on climate change and energy. And just to make it really clear, we're entirely philanthropy funded. So no industry or corporate funding. It keeps us very independent in our research.

So, I wanted to encourage the Commission and the community more broadly to consider these choices as they really are. So, if you're concerned about the environment, marine life, public health, I feel like you should be much more concerned about what would happen if Diablo Canyon were to close. 079-T002-47

And if you think that the choice that we're doing here today is simply to keep Diablo Canyon open or to close Diablo Canyon, you're mistaken. The real choice is between having 18 terawatt hours of pollution free electricity every year from Diablo Canyon. 079-T002-47 cont'd

Or, getting that electricity at much higher prices from a much dirtier source. In California it's most likely going to come from fracked natural gas.

Several people mentioned the life cycle impacts of nuclear being not so good. And I encourage the Commission to actually look at life cycle effects. Because what you'll find is actually that nuclear is one of the cleanest sources when you look at the full life cycle. 079-T002-48

Even cleaner then solar power. The truth is that solar and wind have huge mining impacts. They don't come from, you know, the sky. They're mostly made in China. And the production has a very toxic chemical footprint.

So, look at -- go ahead and look at the full life cycle impacts. The current electricity output from Diablo Canyon exceeds California's entire solar output by about 25 percent more. 079-T002-49

And it exceeds California's entire wind output by about 30 percent. Just from this one small

nuclear plant taking up very little area. 079-T002-49 cont'd

And Diablo Canyon would not be replaced by renewables if it were shut down. It would be replaced by fossil fuels. Most notably as I said, natural gas. And which would increase California's carbon emissions by 350 million tons over what would have been the lifetime of the plant. 079-T002-50

And when San Onofre closed in 2012, it was replaced by natural gas. It increased California's power sector carbon emissions by 25 percent in one year.

It's not just California. We've seen this Germany. We've seen it in several countries and States who have shut down their nuclear power plants. We've seen it in Japan.

So, as an example, a lot of people mentioned Fukushima. I went to Japan this year. I visited Fukushima. Ate a lot of seafood. But I also talked with a local women's group that was organized around their concerns. 079-T002-51

And I went and I wanted to talk to them about their concerns as an environmentalist. I said are you worried about radiation? Do you worry about the food? And they said no. We're not worried about radiation. It's really easy to detect if you have a Geiger counter.

We can, you know, measure our soil. We can

079-T002-51 cont'd

measure the air. We have our food checked. What they were concerned about was the increased air pollution from all the coal that had been burning to replace the fossil fuels.

They were worried about their children getting asthma. About their grandparents. And so that was of much concern. I think that should be an equal concern of the people living here about what would happen when, hopefully not, if Diablo Canyon closes.

(Applause)

MR. HAGAR: Okay. Mark? Bruce Campbell? James Brown?

UNKNOWN: He's outside.

MR. HAGAR: Okay. Carl Dudley? All right.

MR. SKINNER: Please deny the reli -- please deny the relicensing of Diablo Canyon. I have no confidence in PG&E's seismic study. PG&E has conducted a campaign of lies and evasion about the earthquake risks associated with the plant.

PG&E's own seismic consultants had serious misgivings before the AB1632 Central Coast California Seismic Imaging Project was issued. PG&E did not evaluate the worst case possibility for damage to structures such as switch yards, which would have a

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Document: NRC-2009-0552-DRAFT-0020
Comment on FR Doc # 2015-15921

7/1/2015 (3)
80 FR 37664

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RULES AND DIRECTIVES BRANCH USNRC

Submitter Information

Name: Nathan Macher

General Comment

I am writing to support the continued operation of Diablo Canyon Power Plant Units 1 & 2. The Diablo Canyon Power Plant provides many benefits to the local community, including revenue, jobs, and clean energy. The plant not only protects children (and adults) from breathing in harmful sulfur dioxide and other particulates that come from the combustion of fossil fuels, but the plant can also help with the drought by desalinating water.

080-L003-1

Removing the plant from operation would be a loss for the environment and public health. After the San Ofre plant shut down in 2012, California's carbon emissions rose by 35%, according to NuclearMatters. In the context of climate change closing clean energy plants is going in the wrong direction. Disregarding climate change, closing clean energy plants is a public health disaster as it forces those in the surrounding community to breathe in more air pollution.

Keep Diablo Canyon Power Plant Units 1 & 2 open.

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Submitter Information

7/1/2015
80 FR 37664
9

Name: terry madonna
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3710 Broad st
San Luis Obispo, CA, 93401
Email: terrymadonna403@yahoo.com

General Comment

Good afternoon

I'm Terry Madonna, a 40 year resident of San Luis Obispo County and the current Business Agent of the Plumbers/pipefitters local 403. Our members and I are in favor of the relicensing of Diablo Canyon Nuclear Power Plant. Diablo Canyon for 30 years has been a major source of clean energy for the state of California. During this time the plant has operated without incidence. PG&E is continuously upgrading the plants safety and security measures. I have worked at the plant off and on for 30 years and seen first hand PG&E's cooperation With the NRC abiding by the regulations and training their employees to ensure that the plant operates safely. On behalf of the Plumber/fitters local 403 I urge the NRC to relicense Diablo Canyon Nuclear Power Plant.

081-L009-1

SUNSI Review Complete
Template = ADM – 013
E-RIDS= ADM-03
Add= M. Wentzel (mjw2)

EMP or some other kind of cause for a grid failure that we would do well to not re-license them. And I hope you will think of doing that.

I wish I had brought my notes, but I didn't have time to prepare them. Thank you.

(Applause)

MR. HAGAR: Okay. Thank you. Speaker after Terry Madonna is Brent Christianson. Brent, are you here?

(No audible response)

MR. HAGAR: I don't see Brent, so Heinrich -- can't quite -- Groot? Is that right?

MR. GROOT: Henrietta.

MR. HAGAR: Okay. Oh, Henrietta? Pardon me. Henrietta, you're next.

MR. MADONNA: Hello. I'm Terry Madonna. I'm with the Plumbers and Pipefitters Local 403 in San Luis Obispo, and I think I'll keep my comments directed at the NRC.

And, Diablo Canyon, the obvious -- Diablo Canyon Nuclear Power Plant produces emissions when it produces electricity. Diablo Canyon has run 30 years plus without incident. PG&E continuously updates its safety, its security, its equipment. I mean, this has been going on from the start. Every outage things are

081-T001-82

checked out. Equipment is checked, repaired if necessary, worked on. And this is safety -- the safety equipment, anything like that. So they've been doing a good job keeping the plant up. 081-T001-82 cont'd

I've worked out there off and on for 31 years and I do -- well, I will make this short, but I do want to say to the NRC that myself and my members appreciate the hard work that you people in regulating and keeping the nuclear power industry safe. Thanks.

(Applause)

MR. HAGAR: Okay. The speaker after Henrietta will be Amber Johnson. Amber, are you here?

(No audible response)

MR. HAGAR: Then Andrea Sestran. Andrea?

(No audible response)

MR. HAGAR: Okay.

MS. GROOT: Yes, my name is Henrietta Groot. I'm associated with the Mothers for Peace, also the Alliance for Nuclear Responsibility. I give credit to these organizations of concerned citizens.

I started out today asking a question, if you may recall, asking who asked for this meeting? And I don't think I got a satisfactory answer. The NRC apparently put this show on without a request from PG&E because apparently PG&E is not ready with all the 055-T001-83

change of climate are with you. We want very much to recognize global warming is a terrible issue. Rising tides, tsunamis, the types of horrible storms that we're about to face, the challenges in our future are huge.

What I'm here to ask, with my research -- Diablo is 8 percent of California's energy. If we turned off our lights from midnight on, California could save that now. It would be hard on our utilities because they wouldn't get the money that they need. 151-T001-44

As the NRC goes after this environmental look again at Diablo, it must take into account -- which we didn't do in San Onofre -- any new -- the environmental impact report said there was no problem with San Onofre anywhere. 151-T001-45

We must look at the Cascadia fault. We must look at the San Andreas fault as we understand it today, not in the >60s. We have to understand rising tides because the area on the ocean is going to move to going underwater.

Right now there's storage fuel in Florida that is not transportable, and that is projected to have the whole state going underwater. Believe me, I understand global warming as a huge issue. What we have is a nuclear industry that has not looked at the back end of waste, and we must have storage and transportation, and it must be standardized. 151-T001-46

We can't have every energy company in the country changing how their canisters -- their casks, their transport system. I ask the Nuclear Regulatory Commission to make it be standardized to work with any bill in the country, so that there is a dry transfer storage system right now built at Diablo, right now built in San Onofre, so that we have a way to get the dry casks out of there. Because interim storage for 100 years or 304 years, which is now allowed by the Nuclear Regulatory Commission, will not work in California.

151-T001-46 cont'd

I don't care what you think about nuclear in the rest of the country, but California is in the fire zone of earthquake. We cannot leave our fuel here for 100 years in canisters that right now, I can tell you, Holtec already let us know, on July 23rd, that their canisters that are here at Diablo are inferior. I'm sorry, I'm cut off now, but you need to look into that. They are only Alloy 304 instead of 316L, which we have at San Onofre, which still won't last for 30 years. Thank you.

MR. HAGAR: After Anthony Armini, the speaker will be Ellie Replei. Ellie, are you here? Okay.

DR. ARMINI: Hello, my name is Anthony Armini. I am a nuclear physicist, and I'm with

MS. MALBOEUF: "The distinction between the past, present and future is only a stubbornly persistent illusion" - Albert Einstein. Like Houdini, the American corporate industrial nuclear juggernaut continues to weave its illusions throughout the public psyche in order to keep its fingers deep in the rate payers' and tax payers' pots of gold. If nuclear power plants such as Diablo were safety, nuclear power industry would not need the protection of the Price-Anderson Act. This sellout of public trust continues to drastically limit legal liability. The nuclear power industry, including PG&E, would not have survived without this sellout. If you think nuclear power is so safe, then why are you not willing to accept product liability lawsuits?

082-T001-65

Some of the many illusions created by PG&E's inventive propaganda programs are: (1) That the nuclear power industry should continue to receive public subsidies that renewable energy power sources of wind, solar and wave companies are denied. Subsidies give nuclear power control over the competitive power industry leaving customers no choice in this so-called free market society.

(2) Illusion. If an emergency evacuation situation does occur, the citizens of San Luis Obispo

County will -- this is a illusion, that the citizens will proceed along the evacuation route in an orderly fashion and arrive safely on the other side without being irradiated by nuclear fallout where they will happily ever after.

082-T001-65 cont'd

Another illusion, that anyone living beyond the designated 10-mile evacuation zone will not be affected at all by radiation release or core meltdown.

Another illusion, that the NRC is capable of honestly performing both its assignments without prejudice, promoting nuclear power industry while simultaneously regulating safety issues for the public's protection.

Another illusion, that low-level radiation exposure does not pose a threat to anyone and is in fact healthy for them as long as they don't eat too many bananas or exceed the current definition of daily or yearly safe limits of radiation exposure.

Another illusion, that the producers of manmade radioactivity waste have no more obligation to clean up the toxic waste dump of decommissioned nuclear power plants or to solve the problems of stockpiling millions of tons of radioactive waste around the globe.

Another illusion, that it is morally all

right to force weaker cultures such as Native Americans and Mongolians to accept highly radioactive waste on their homelands and condemn generations of their people to a terrible life of living in irradiation environments. We ask you to deny the request to re-authorize this license. And I remind you that the distinction between the past, present and future is only a stubbornly persistent illusion by Albert Einstein.

082-T001-65 cont'd

(Applause)

MR. HAGAR: Thank you. Speaker after Barbara Harmon will be Liz Curren. Liz, are you here?

(No audible response)

MR. HAGAR: Okay. Good.

MS. HARMON: Greetings. My name is Barbara Harmon. I'm a member of the Arroyo Grande City Council. It is important for me to emphasize that I am not speaking on behalf of the council or the City of Arroyo Grande. I'm speaking as a resident of San Luis Obispo County and one who supports the continued licensing of Diablo Canyon Power Plant.

I support licensing renewal because of the numerous comprehensive and ongoing safety measures, environmental benefits and economic benefits. These benefits include 24/7 electricity production, a clean reliable cost-effective energy resource, zero

issue is certainly site specific environmental concern. Allow Fukushima to be our warning.

(Applause)

MR. HAGAR: Simone? And following Simone will be Elizabeth Broose. Are you still here? Elizabeth Broose? Okay, yes, there you are.

MS. MALBOEUF: The distinction between the past, present and future is only a stubbornly persistent illusion, by Albert Einstein. In the 1950s Congress passed the Atomic Energy Act which launched the development of commercial nuclear power. 082-T002-19

Along with an aggressive propaganda campaign, the notion that nuclear power is safe, clean and economical was put forward. The corporate American industrial nuclear juggernaut was born.

New documentation, right here, by former nuclear control technician and PG&E whistle blower, Bob Ryan, I this have his book, My Humble Diary, a True Betrayal of Public Trust, reveals that PG&E's record as the owner and operator of the world's first privately funded nuclear plant at Humboldt was a disaster waiting to happen.

Like Michael Peck, Bob was fired for trying to uphold industry safety standards. Over 500 pages of riveting documentation that everyone will want to read.

A copy -- excuse me, a couple of juicy quotes from his book.

082-T002-19 cont'd

One, "it is difficult to understand why PG&E selected Eureka for the Humboldt reactor because it was known for frequent earthquakes. An active fault discovered directly under the reactor in 1976 forced it's shut down too."

"PG&E's concern for employee and public safety is described as nothing more then lip service. Just enough to give the illusion of safety."

"PG&E's PR rubbish all meant to create an undeserved reputation for putting safety first in the nuclear workplace."

Three, "in 1963, two renowned doctors, John Gofman and Arthur Tamplin from Livermore Lab were tasked with researching the effects of radiation on man. They reported the radiation expected from developing atomic energy programs is a far more serious hazard to humans then the experts thought possible.

Twenty times more hazardous. The threats to all future generations for genetic damage and death has been even more seriously underestimated."

Four, "the entire nuclear industry has developed a set of totally false illusions of safety and economy. What is more, the false illusion of a safe

amount of radiation has pervaded at the highest circles.

082-T002-19 cont'd

All hoping to develop the industry with exposures well below that limit. A limit we now know is anything, let's say."

Since Humboldt's closure, PG&E has had many chances to prove to us that we can trust them with our lives. But they insist on rewriting the rules for their own purposes.

And according to Mr. Ryan often showed blatant disregard for the safety of the workers and exposing them unnecessarily to radiation. Given all this risks and cost, nuclear power is not cheap, nor clean, nor safe.

As public servants, the U.S. taxpayers, we ask NRC to start doing the other half of its job. Which is tell the truth about seismic threats at PG&E's nuclear power plant in San Luis Obispo and the health issues that are being created by this plant.

Don't grant another license. Shut it down now before it's too late. Remember the distinction between the past, present and future is only a stubborn, persistent illusion, Albert Einstein.

(Applause)

MR. HAGAR: Thank you. Okay, the speaker after Elizabeth Broose will be Michele Flam. Are you

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Comment On: NRC-2009-0552-0026
Diablo Canyon Power Plant, Units 1 and 2; Notice of Intent to Prepare an Environmental Impact Statement

Document: NRC-2009-0552-DRAFT-0023
Comment on FR Doc # 2015-15921

Submitter Information

7/1/2015
80FR37664

Name: michael manetas

6

General Comment

I strongly urge that Diablo Canyon not be given a license extension. and because of safety concerns, be shut down now.

083-L006-1

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SUNSI Review Complete
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E-RIDS= ADM -03
Add= M. Wentzel (MJW2)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
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RECEIVED
2015 SEP 10 PM 2:53
RULES AND DIRECTIVES BRANCH USNRC

AUG 3 1 2015

U.S. Nuclear Regulatory Commission
Attn: Cindy Bladey
Office of Administration, Mail Stop: OWFN–12 H08
Washington, DC 20555–0001

Subject: Notice of Intent to Prepare an Environmental Impact Statement for the Proposed Operating License Renewal for Diablo Canyon Power Plant Units 1 and 2, San Luis Obispo County, California

Dear Ms. Bladey:

The U.S. Environmental Protection Agency has reviewed the July 1, 2015 Notice of Intent to prepare an Environmental Impact Statement for the proposed operating license renewal for Diablo Canyon Power Plant Units 1 and 2, located in San Luis Obispo County, California. Our comments are provided pursuant to the National Environmental Policy Act, Council on Environmental Quality Regulations (40 CFR Parts 1500-1508) and § 309 of the Clean Air Act.

To assist in the scoping process for this project, we have identified several issues for your attention in the preparation of the EIS. These issues include: power plant cooling water, seismicity and spent nuclear fuel storage.

We appreciate the opportunity to review this project and are available to discuss our comments. Please send one hard copy of the Draft EIS and one CD ROM copy to the address above (mail code: ENF-4-2). If you have any questions, please contact me at (415) 972-3238, or contact Scott Sysum, the lead reviewer for this project. Scott can be reached at (415) 972-3742 or sysum.scott@epa.gov.

Sincerely,

Ann McPherson

Ann McPherson
Environmental Review Section

7/1/2015
80 FR 37664
28

Enclosures: EPA's Detailed Comments

SUNSI Review Complete
Template = ADM – 013
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Add= M. Wentzel (MSW2)

US EPA DETAILED COMMENTS ON THE NOTICE OF INTENT TO PREPARE AN ENVIRONMENTAL IMPACT STATEMENT FOR THE PROPOSED OPERATING LICENSE RENEWAL FOR DIABLO CANYON POWER PLANT UNITS 1 AND 2, SAN LUIS OBISPO COUNTY, CALIFORNIA, AUGUST 31, 2015

Power Plant Cooling Water

084-L028-1

The State Water Resources Control Board adopted a policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling in 2010. The policy establishes technology-based standards to implement federal Clean Water Act Section 316(b) and reduce the harmful effects associated with cooling water intake structures on marine and estuarine life. The SWRCB's Once-Through Cooling (OTC) Water policy calls for the elimination of OTC for the Diablo Canyon Power Plant by 2024 and 2025 for Units 1 and 2, respectively, when their current licenses expire. According to a report[1] prepared by Bechtel for Pacific Gas and Electric and the SWRCB's Nuclear Review Committee, construction costs for closed-cycle systems could range as high as $6 billion to $12 billion and may require extensive excavation at the Diablo Canyon site. Additionally, a Diablo Canyon Independent Safety Committee's Evaluation of the Bechtel report[2] concluded that the various closed-cycle cooling options would involve very extensive modifications to the plant that have the potential to affect the operability of safety-related systems. Furthermore, a license amendment would probably be required.

Recommendation:
Discuss, in the Draft Environmental Impact Statement, the SWRCB's OTC policy, applicability, projected costs for compliance, and potential environmental impacts associated with the implementation of this policy.

Seismic Multi-fault Ruptures

084-L028-2

Past models have generally assumed that earthquakes are either confined to separate faults, or that long faults like the San Andreas can be divided into different segments that only rupture separately. Many recent earthquakes, however, have struck beyond previously inferred fault-rupture boundaries.[3] For example, the three most recent, largest earthquakes[4] in California extended past such boundaries, jumping from one fault to another, as multi-fault ruptures. In addition, the 2011 magnitude 9.0 Tohoku, Japan earthquake also violated previously defined fault-segment boundaries, resulting in a much larger fault-rupture area and greater magnitude than expected, which contributed to the deadly tsunami and Fukushima nuclear disaster.

It has become increasingly evident that we are not dealing with a few well-separated faults, but with a vast, interconnected fault system. In fact, it has become more difficult to identify where some faults end and others begin, implying many more opportunities for multi-fault ruptures.

[1] Independent Third-Party Final Technologies Assessment for the Alternative Cooling Technologies or Modifications to the Existing Once-Through Cooling System for Diablo Canyon Power Plant (Draft) Report No. 25762-000-30R-G01G-00010; Bechtel Power Corporation Issued September 20, 2013,
[2] Diablo Canyon Independent Safety Committee's Evaluation of Safety Issues for "Independent Third Party Final Technologies Assessment for the Alternative Cooling Technologies or Modifications to the Existing Once-Through Cooling System for the Diablo Canyon Power Plant," September 2013, http://www.dcisc.org/draft-once-through-cooling-2013.php.
[3] UCERF3: A New Earthquake Forecast for California's Complex Fault System. USGS Fact Sheet 2015-3009
[4] 1992 magnitude 7.3 Landers earthquake, the 1999 magnitude 7.2 Hector Mine earthquake, and the 2010 magnitude 7.2 El Mayor–Cucapah earthquake.

At Diablo Canyon, the affected environment includes numerous earthquake faults. Recent history suggests that a multi-fault rupture is a reasonably foreseeable event. Any impacts that would result either from the facility being subjected to a multi-fault rupture, or from any actions that would need to be taken to protect the facility from damage during such a rupture, are reasonably foreseeable and should be disclosed in the DEIS as potential indirect impacts.

084-L028-2 cont'd

Recommendations:
Discuss, in the DEIS, whether or not the potential for a multi-fault rupture has been evaluated. If not, discuss the potential for multi-fault ruptures on the San Andreas, Hosgri and Shoreline faults.

Discuss, in the DEIS, the potential for tsunami impacts, both during the operating time frame as well as post-operation, when spent fuel may be stored in spent fuel pools and/or dry cask storage. Describe and review the tsunami design basis for the DCPP.

Spent Fuel Pools

084-L028-3

The 2013 Integrated Energy Policy Report,[5] produced by the California Energy Commission, stated that there were reports from Diablo Canyon personnel that the spent fuel pool has had a persistent minor leak for many years. PG&E concluded that, based on evaluation of industry experience on spent fuel pool leakage, the amount of leakage being experienced was acceptable, as there is a negligible adverse effect on the concrete and reinforcing steel. The 2013 IEPR recommended that PG&E evaluate the potential long-term impacts and projected costs of spent fuel storage in pools versus dry cask storage, and the potential degradation of fuels and package integrity during long-term wet and dry storage and transportation offsite, and submit the findings to the CEC and California Public Utilities Commission. The CEC also recommended that the CPUC require expedited transfer of spent fuel assemblies from wet pools to dry cask storage.

Spent fuel pools at most operating reactors are storing the spent fuel at much higher densities than originally designed. Spent fuel pool cooling water has to be actively managed and could be compromised through loss of power or intentional acts of sabotage. Dry cask storage is a passive system of cooling and separates the spent fuel into multiple casks, which are less susceptible to intentional damage.

Recommendations:
Include, in the DEIS, a summary and evaluation of PG&E's findings regarding the potential long-term impacts and projected costs of spent fuel storage in pools versus dry cask storage. Incorporate PG&E's findings by reference or include them in an appendix to the DEIS,

Discuss, in the DEIS, the feasibility and environmental impacts of expediting the transfer of spent fuel assemblies from wet pools to dry cask storage.

Climate Change

084-L028-4

The EPA believes the Council on Environmental Quality's December 2014 revised draft guidance for Federal agencies' consideration of GHG emissions and climate change impacts in NEPA outlines a

[5] California Energy Commission. 2013. 2013 Integrated Energy Policy Report. Publication Number: CEC-100-2013-001-CMF.

084-L028-4 cont'd

reasonable approach, and we recommend that the Nuclear Regulatory Commission use that draft guidance to help outline the framework for its analysis of these issues. The DEIS should contain an estimate of the GHG emissions associated with the proposal and its alternatives. Example tools for estimating and quantifying GHG emissions can be found on CEQ's NEPA.gov website.[6] In most cases quantification of GHG emissions involves a relatively straightforward calculation

The DEIS should provide a summary discussion of climate change and ongoing and reasonably foreseeable climate change impacts relevant to the project, based on U.S. Global Change Research Program[7] assessments, to assist with identification of potential project impacts that may be exacerbated by climate change and to inform consideration of measures to adapt to climate change impacts

Recommendation:

Consider, in the DEIS, how climate change could potentially influence the continued operation of the DCPP. Evaluate the potential impacts of sea level rise or other anticipated climate change related impacts.

[6] https://ceq.doe.gov/current_developments/GHG_accounting_methods_7Jan2015.html

[7] http://www.globalchange.gov/

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Diablo Canyon Power Plant, Units 1 and 2; Notice of Intent to Prepare an Environmental Impact Statement

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Add = Jim Kennedy (jmk2)

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Submitter Information

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90

General Comment

Thank you for hearing the voices of the public. There truly are some very bright minds in northern California and I believe that the world is benefiting greatly by the ideas generated here.

I have reviewed the license renewal proposal for the Diablo Canyon Nuclear power plant and I must say that while the studies are very extensive, they omit large amounts of information that would act as a good insight into the necessity and risk of this plant.

085-L091-1

I was in Fukushima this past January and was told by many people that the beaches on that coast are "only for looking now"
What was once a very active beach community is now contaminated. In the economic impact assessment of Diablo Canyon, there is a large amount of land taken into consideration in the unfortunate event of a leak or meltdown, but nowhere did I see any assessment of the economic or environmental impacts on the ocean. If California were to loose it's beach culture, there would be billions of dollars lost, not to mention one of the best prides of this state.
Fukushima Daiichi today is still releasing waste water into the ocean.

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We must learn from Fukushima. That is why I traveled there and have been researching the intricacies of this disaster. I have found many similarities between TEPCO and PG&E in regards to operation safety standards and disregards for outside requests to improve safety.

085-L091-2

I searched through the entire License renewal and the sources that were used to put that document together and to my dismay, found that none of the sources refereced were published after 2011.

! That seems incredible ! 085-L091-3

There have been so many developments, realizations, and publications written about powerplants, safety, and the economic impact written after the meltdown at Fukushima in 2011.

THE NEW PLANT! 085-L091-4

If PG&E wants to stay relevant in a rapidly changing society, they must realize that their biggest service to offer is not electricity itself, but the infrastructure. When they focus on that, they will succeed greatly as a company.
There are currently so many amazing technologies being developed in the sustainable energy industry that it would be advantageous for PG&E to stop the renewal attempt on these old reactors that are clearly in safety question and repurpose that land to a multi-source power plant.

Some ideas for a repurposing of the power plant land are:

Solar Fields
Ocean Geothermal Power
Tidal generators

The onsite desalination system could be put to use making drinking water for the surrounding communities instead of of 675,000 gallons a day it creates to run through the plant and feed back into the ocean.

This power plant is old and if added up since it's opening, it is one of the most widely opposed nuclear power plants. I urge the NRC to recognize the massive communities that are against this and that if there is an accident at the plant, every single member of the NRC will be to blame for relicensing this plant. There are currently lawsuits against Japanese government regulators and TEPCO power officials that put the blame of the meltdown onto them ignoring requests like this to shut the plant down. 085-L091-5

I hope we can all learn from Fukushima.
Thankyou for not issuing a new license for the plant.

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(92)

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RULES AND DIRECTIVES BRANCH USNRC

Submitter Information

Name: Oliver Mellan
Organization: Radiation Filters Legal Team

General Comment

Here are some questions about the plant that a group of lawyers formed when looking over the license renewal application.

1 - What is the ocean water intake and usage allotment for the state?

085-L087-1

2 - Does PG&E pay to use the ocean water?

3 - How much would a new cooling system to cool down the exhaust water cost?

4 - How much less water would the plant use if it had a new cooling system?

5 - How much money would it take to produce the amount of power that Diablo Canyon produces by building a solar farm on site?

6 - Are there an solar panels at the plant now?

7 - What is the backup power generator plan?

8 - Does Michael Peck still work at the NRC? What is his email address?

9 - How many NRC jobs would be lost if the plant closed?

SUNSI Review Complete
Template = ADM-013
E-RIDS = ADM-03
Add = Mr. Wenzinger (MJS2)

085-L087-1 cont'd

10 - what are the NRC's losses in profits if the plant closes?

11 - How much would the NRC make monetarily if the plant's license was renewed?

12 - How much does an operating license cost?

13 - Who pays for the license?

14 - Who pays for the cooling towers?

15 - Who is in charge of the NRC?

16 - What are the salaries of the NRC staff?

17 - What is the cost of the Fukushima clean up right now?

18 - Has anyone from the NRC gone to Fukushima?

19 - How many hours can the gravity fed cooling pools at Diablo keep the reactors cool if the pumps that pump 675,000 gallons a day fail?

20 - Are there open air spent fuel pools on site?

21 - How are those evaporation levels being measured?

22 - Where does the plutonium or uranium for the plant come from?

23 - Does that source become a subject of investigation of the environmental impacts?

24 - Are the plant's current operations violating the Water Quality Act?

25 - Why does the governor Brown want to keep the plant open?

26 - how much is the NRC's budget?

27 - How much spent fuel is being stored on site at Diablo Canyon?

28 - What procedures might the NRC be overlooking in this investigation?

We look forward to hearing the answers to these questions.
Thank you so much

Radiation Filters Legal Team

radioactive than the material that went in. My mind can hardly grasp that, but I've researched that and I wanted to put it out.

The other issue is the evacuation issue, among many others. Last Friday my husband and I drove home from Los Angeles on Friday afternoon. The road -- the traffic was in soup all the way to Santa Barbara from people just trying to escape Los Angeles for the weekend. My mind also can't grasp what it would be like for the people in San Luis Obispo to hit the roads in the case of an emergency.

So obviously I am urging the NRC not to allow relicensing of this aged worn out plant.

(Applause)

MR. HAGAR: Next speaker will be Jill Zamek. Jill, are you here?

MS. MELLOW: My name is Marianne Mellow. I've lived in SLO county for over 60 years and I welcome all of the folks that came to support us.

Earthquake faults lie under, around and near the Diablo Canyon Nuclear Power Plant. Had that fact been revealed before construction of the nuclear plant began, the plant would never have been allowed to be licensed or built. 086-T001-75

It is reported that PG&E and the NRC have

determined that the Diablo plant can withstand any likelihood of an earthquake that could appear on this fault. The facts are and the truth is neither the NRC or PG&E can predict or determine with any certainty how great any earthquake those faults will generate, only that they will occur. 086-T001-75 cont'd

Others have relied on assurances from experts and believed their nuclear plants were safe. Their debris is now washing ashore on American beaches. Previous lives have been lost and their land rendered uninhabitable for generations to come. So might ours. There is still no facility in which to store deadly spent fuel that the Diablo Canyon Nuclear Power Plant produces, so it is stored on site. This is a further risk to our residents. That plant would never have been built or licensed had a nuclear dump been allowed to be on it.

San Luis Obispo County has an evacuation plan which is to be used when there is an accident at the Diablo plant. The evacuation plan is unworkable. We all know that it will not be possible to have a timely evacuation of those in peril from nuclear radiation. We will be told to shelter-in-place which will provide virtually no protection from nuclear radiation fallout, as you all know. Our citizens will pay the ultimate

price to ensure profits for PG&E.

You know the truth. It would be an irresponsible disregard of public safety to extend the Diablo Canyon Nuclear Power Plant and operating license for another 20 years. We deserve more. Thank you. 086-T001-75 cont'd

(Applause)

MR. HAGAR: The next speaker will be Gary Corsiglia. Gary, are you here?

(No audible response)

MS. ZAMEK: Hi, I'm Jill Zamek with San Luis Obispo Mothers for Peace and I live in Arroyo Grande. The topic I'd like the NRC to look at is human performance deficiencies.

There are an unacceptable number of human performance deficiencies at the Diablo Canyon facility, particularly involving identification and resolution of problems. There were 29 violations documented by the NRC in 2014, and overwhelmingly the root cause of these violations pointed to human performance deficiencies. These violations involved fire protection, inoperable emergency diesel generators, occupational radiation safety, poor maintenance planning on safety-related equipment, failure to follow procedures, problems with design control and multiple

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Diablo Canyon Power Plant, Units 1 and 2; Notice of Intent to Prepare an Environmental Impact Statement

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8

Submitter Information

7/1/2015
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RECEIVED
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General Comment

I am in favor of the continued operation of DCPP. The plant has an excellent safety record, and the station is always striving to improve safety and performance. In addition, there have been many upgrades to the emergency plan to better protect the public if an accident were to occur.

087-L008-1

SUNSI Review Complete
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E-RIDS= ADM-03
Add= M. Wentzel (MSR2)

second. Debbie? Then Greg McMillan. Terry Madonna.

MS. MERZOYAN: Hello, my name is Natalia Merzoyan and I've lived in this county for 48 years and in California my entire life. And one of my ancestors came here with Father Serra in 1769 and we've lived here continuously since then.

I'm not affiliated with any alternative energy company. I don't have anything that's financially motivating me like some people who are employees or past employees of PG&E. As you probably all know, PG&E bonuses their employees with stock in their company. So it's not completely speaking from their heart without any ulterior motives that this sea of green has appeared.

And I just would like to say I agree that the Fukushima meltdown was not entirely seismically-related, that there was failure in the grid which also could happen here for reasons besides an earthquake such as the solar flare from an EMP that occurred in 1868 and a couple of other ones here in California -- I mean, in the United States, and that would wipe out the grid. And nothing has been done to insulate the grid. So I certainly hope that this facility is not re-licensed just for that reason until something is done about insulating the grid against an

088-T001-81

EMP or some other kind of cause for a grid failure that we would do well to not re-license them. And I hope you will think of doing that.

088-T001-81 cont'd

I wish I had brought my notes, but I didn't have time to prepare them. Thank you.

(Applause)

MR. HAGAR: Okay. Thank you. Speaker after Terry Madonna is Brent Christianson. Brent, are you here?

(No audible response)

MR. HAGAR: I don't see Brent, so Heinrich -- can't quite -- Groot? Is that right?

MR. GROOT: Henrietta.

MR. HAGAR: Okay. Oh, Henrietta? Pardon me. Henrietta, you're next.

MR. MADONNA: Hello. I'm Terry Madonna. I'm with the Plumbers and Pipefitters Local 403 in San Luis Obispo, and I think I'll keep my comments directed at the NRC.

And, Diablo Canyon, the obvious -- Diablo Canyon Nuclear Power Plant produces emissions when it produces electricity. Diablo Canyon has run 30 years plus without incident. PG&E continuously updates its safety, its security, its equipment. I mean, this has been going on from the start. Every outage things are

for.

It's lived its long life. We've already had to put, I've forgotten, $600 thousand into replacing some of the parts already. It's going to do nothing but drain us of finances.

And as far as jobs go, give our employees at Diablo a safe place to work. Thank you.

(Applause)

MR. HAGAR: And now, after Vita Kathi DiPeri.

MS. MILLER: Hi, I'm Vita Miller.

MR. HAGAR: Vita, pardon me.

MS. MILLER: Okay. Well, a lot of what I wanted to say has been said. But, I will mention that I was at an NRC hearing back in -- some of the Mothers for Peace here can remind me, maybe it was '80/'81. 089-T002-60

And I do remember we were given great reassurances by the NRC at that time of the safety of the nuclear power industry. Many of us were skeptical.

We were particularly skeptical because of the revolving door policy of the NRC many who come from the nuclear energy. And I don't know if that's true of any of you, so I don't know. I haven't looked that up.

But, my main concern, and I also marked at Diablo, was not arrested. My children, my husband and 089-T002-61

I well all marched. We marched alongside doctors in this community. At that time there were doctors marching.

089-T002-61 cont'd

Because of the fear of low level radiation, Dr. John Gofman told us about that. And as I recall, and some of the Mothers can refresh my memory. I believe he came here and spoke.

If I'm remembering right, I was at that meeting. And he certainly was noted, I believe a nuclear scientist.

But, my main concern in addition to that was the storage of nuclear waste. We were given reassurances at that time that there would be long term safe storage of nuclear waste.

089-T002-62

We didn't have to worry about it. There would be repositories. Or we'd send it out in space. Or whatever. And here we are. We're stuck with it.

I live seven air miles from this nuclear power plant. Somebody suggested we don't live in the area. Are you kidding me? Most of us who have been involved in this issue for years and years and years, we do live in this area.

There's a report here that I copied off the internet about cracks that are either happening or will happen in the casks. They're unreliable. And yet, the

NRC is claiming that the fuels must be reloaded into new canisters every 100 years. 089-T002-62 cont'd

Are you kidding me? Do you honestly believe those casks are going to last 100 years? Of course not.

Now, anyone who's involved in science, metallurgy, metallurgical sciences would be able to tell you that's just not possible. That's not going to happen. Particularly when you're storing high level radioactive waste. That's nonsense.

You know, another concern now of course is the damage it's doing to the marine life with the once through cooling system. And the fact that that has destroyed a lot of the marine life. And that reports have been buried by PG&E about the actual destruction of marine life around the outflow of the nuclear reactor. 089-T002-63

So, that's just another comment I want to make is the credibility of PG&E. They have no credibility in this community. I'm sorry. What they did in San Bruno, -- what they did in San Bruno, they lied. 089-T002-64

They lied and they were in collusion with the PUC to hide their culpability. Do you think I'm going to believe PG&E?

Dear NRC Chairman Stephen Burns, Governor Jerry Brown, Senator Barbara Boxer, Senator Dianne Feinstein, House Minority Leader, Nancy Pelosi, Speaker of the California Assembly, Toni G. Atkins, and California Senate Majority Leader, Bill Monning,

We are pleased to present you with this petition affirming this statement:

"As the Commission members are aware, their mission is to ensure adequate protection of public health and safety of the nation's nuclear power plants. Nuclear power plants, especially old nukes, such as the Diablo Canyon Nuclear Power Plant, do not belong near densely populated regions, in areas where earthquakes are a dangerous geological reality. "

091-L041-1

Attached is a list of individuals who have added their names to this petition, as well as additional comments written by the petition signers themselves.

Sincerely,
Joseph Mirabile

091-L041-1
cont'd

Charles Schoellenbach
San Francisco, CA 94117
Aug 5, 2015

Michael Pegues
San Francisco, CA 94110
Aug 2, 2015

Barbara Rouseff
Fair Oaks, CA 95628
Aug 1, 2015

Rosemary Wilvert
San Luis Obispo, CA 93405
Aug 1, 2015

James Murr
Santa Maria, CA 93455-1522
Jul 31, 2015

kim carpenter
hemet, CA 92544
Jul 30, 2015

Stephan Cheek
Sacramento, CA 95829
Jul 30, 2015

Burdening future generations with deadly waste is immoral.

David Georgi
Shell Beach, CA 93449
Jul 30, 2015

sam walsh
NIPOMO, CA 93444
Jul 30, 2015

Devona powell
Magnolia, AR 71753
Jul 30, 2015

John Mills
St. Petersburg, FL 33710
Jul 29, 2015

There is no good reason this plant is needed, and several reasons it is not. One being it is on an Active Fault!!!

Lee Marinus
Erie, PA 16506
Jul 29, 2015

091-L041-1
cont'd

Annamay Beekman
Cayucos, CA 93430
Jul 29, 2015

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14 earthquake faults! What else needs to be said?

Tracy Neil
Los Osos, CA 93442
Jul 29, 2015

Julie Silva
Santa Maria, CA 93458-1033
Jul 29, 2015

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anne smith
w danville, vermont, VT 05873
Jul 29, 2015

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carolyn youra
Tavares, FL 32778
Jul 29, 2015

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margo martinez
Valley Center, CA 92082
Jul 29, 2015

Karen Perez
Salinas, CA 93901
Jul 29, 2015

Mark Jordan
Windsor Locks, CT 06096
Jul 29, 2015

No Risk is worth A Repeat disaster as Fukishima! This is a Disaster waiting to happen.

Kat Payton
Grover Beach, CA 93483
Jul 29, 2015

Shut 'em all down! Make these dinosaurs extinct before they do us.

091-L041-1
cont'd

Dion
Arroyo Grande, CA 93420
Jul 29, 2015

Linda MacBay
Goose Creek, SC 29445
Jul 29, 2015

Joe Boysen
Shell Beach, CA 93449
Jul 29, 2015

Too old and too close to faults.

Ken Sexton
Salem, OR 97301
Jul 29, 2015

Maryann Avila
Grover Beach, CA 93433
Jul 29, 2015

Fran Henriksen
Arroyo Grande, CA 93420
Jul 29, 2015

Greg Koby
Orcutt, CA 93455
Jul 29, 2015

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verona rebow
arroyo grande, CA 93420
Jul 29, 2015

Virginia Elliott
East Burke, VT 05832
Jul 29, 2015

Diablo Canyon, near a fault, now housing dangerous waste in open ponds, was poorly designed and badly built. My neighbor, came home many times shaking his head at errors made by workmen. He was a pipe fitter there.

Lee Greenawalt
Merced, CA 95340-1621
Jul 29, 2015

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cont'd

Mia P. Elias
Anaheim, CA 92801
Jul 29, 2015

Brad
HENDERSON, TN 38340
Jul 28, 2015

Dr. Mha Atma S. Khalsa
Los Angeles, CA 90035-3314
Jul 28, 2015

Terre Dunivant
San Luis Obispo, CA 93401
Jul 28, 2015

Zachariah Moreno
Los Angeles, CA 90020
Jul 28, 2015

Gale McNeeley
Santa Maria, CA 93454
Jul 28, 2015

Stefano Drei
Oceano, CA 93445
Jul 28, 2015

Roger Herried
San Francisco, CA 94103
Jul 28, 2015

christina
guadalupe, CA 93434
Jul 28, 2015

Mark Winchester Sr.
Covington, LA 70433
Jul 28, 2015

Joyce Perreira
san Miguel, CA 93451
Jul 28, 2015

Deborah Efron
Bellevue, WA 98004
Jul 27, 2015

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cont'd

Susy Friedman
Pt Richmond, CA 94801
Jul 27, 2015

Mark Gruberg
Pt Richmond, CA 94801
Jul 27, 2015

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dvaid Godinez
oakland, CA 94602
Jul 27, 2015

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amber macgregor
West Jordan, UT 84088
Jul 27, 2015

Nuclear should not be near oceans either.

Lawrence Jensen
Oakland, CA 94602
Jul 27, 2015

Marcy Israel
San Francisco, CA 94114
Jul 27, 2015

Alicia veium
San Luis Obispo, CA 93401
Jul 27, 2015

Dr. G. William Walster, Ph. D.
Sunnyvale, CA 94089-1623
Jul 27, 2015

Bernadette Foti
Paso Robles, CA 93446
Jul 26, 2015

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alena vlancy
Morro Bay, CA 93443
Jul 26, 2015

Linda Vaughan
Santa cruz, CA 95062
Jul 26, 2015

Phyllis & Bill Davies
San Luis Obispo, CA 93401

Jul 26, 2015

Joan Mirabile
San Francisco, CA 94122
Jul 26, 2015

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cont'd

Edward Miggins
Morro Bay, CA 93442
Jul 26, 2015

Valentin Mirabile
New York, NY 10009
Jul 26, 2015

Dieter Meyerhoff
San Francisco, CA 94127
Jul 26, 2015

Please protect our oceans and communities of the central coast of California and beyond by closing diablo canyon nuclear power plant now. thank you.

Julia Stein
San Luis Obispo, CA 93401
Jul 26, 2015

David Welts
SAN DIEGO, CA 92103
Jul 26, 2015

Thomas Stevenson
Cayucos, CA 93430
Jul 26, 2015

Karen Stewart
San Jose, CA 95120
Jul 26, 2015

Ivanna Stanfield
Tehachapi, CA 93561
Jul 26, 2015

William Hainsworth
Anaheim, CA 92801
Jul 26, 2015

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norman ogilvie
carlsbad, CA 92010
Jul 26, 2015

that's a no-brainer

091-L041-1
cont'd

carole machette
citrus heights, CA 95621
Jul 26, 2015

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lilibeth nava
lompoc, CA 93436
Jul 26, 2015

Jessica Gleason
Berkeley, CA 94704
Jul 26, 2015

Brandon Thomas Samiere
San Francisco, CA 94124
Jul 26, 2015

Brian Hill
Palo Alto, CA 94306
Jul 26, 2015

Phyllis Rosenfeld
LOS OSOS, CA 93402-3021
Jul 26, 2015

Edi Sosa
Tuxpan, Veracruz, Mexico
Jul 26, 2015

Donna Kube
Morro Bay, CA 93442
Jul 26, 2015

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robert
Arroyo Grande, CA 93420
Jul 25, 2015

Barbara Jacoby
Brook Park, OH 44142
Jul 25, 2015

Sharon F
Pismo Beach, CA 93420
Jul 25, 2015

Robert Scott
Arroyo Grande, CA 93420

Jul 25, 2015

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cont'd

paula schultz
San Luis Obispo, CA 93401
Jul 25, 2015

Julie Smith
Los Osos, CA 93402
Jul 25, 2015

Loretta Dipboye
San Francisco, CA 94122
Jul 25, 2015

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jeanne aikman
Los Gatos, CA 95030
Jul 25, 2015

I live around the corner from Diablo!!!!!!

Gladys Porter
San Luis Obispo, CA 93405
Jul 25, 2015

Karina Cardin
Atascadero, CA 93422-1866
Jul 25, 2015

Please, shut this nuclear facility down. I would rather go without any energy at all then to have it be in this form that endangers our lives.

Heidi Grant
Grover Beach, CA 93433
Jul 25, 2015

Gary reed
San Simeon, CA 93452
Jul 25, 2015

Timothy Lucier
San Francisco, CA 94123
Jul 25, 2015

Jennifer Mirabile
Los Angeles, CA 90027
Jul 25, 2015

I live 4 miles from the plant. It is time for it to be shut down, believe me.

091-L041-1
cont'd

Billy Foppiano
San Luis Obispo, CA 93405
Jul 25, 2015

Billy Foppiano
San Luis Obispo, CA 93405
Jul 25, 2015

Jenn
paso robles, CA 93446
Jul 25, 2015

Bob Leppo
Santa Maria, CA 93454
Jul 25, 2015

Annette Ross
Cleveland, United Kingdom
Jul 25, 2015

Sean Collins
San Luis Obispo, CA 93405
Jul 25, 2015

Keith Gordon
Arroyo Grande, CA 93420
Jul 24, 2015

Carol Osorio
Mill Valley, CA 94941
Jul 24, 2015

Nell Wade
Arroyo Grande, CA 93420
Jul 24, 2015

Pat Lodge
San Luis Obispo, CA 93405
Jul 24, 2015

Eugene Blanck
Cambria, CA 93428
Jul 24, 2015

Janice Lucier
Pismo Beach, CA 93433

Jul 24, 2015

This plant has had many "problems" since its inception.....Not the least of which is the building of the plant with blueprints that were "backwards"...REALLY. Many of the workers in the early years were either high or drunk....REALLY.....

Diana Daughters
Atascadero, CA 93423
Jul 24, 2015

091-L041-1
cont'd

Donald E. Hedrick
San Luis Obispo, CA 93406
Jul 24, 2015

The possibility of losing friends and loved ones, of having to abandon my home and property always lurks in the back of my consciousness. Close Diablo Cyn PP - it was built on lies!

Nancy Bast
Morro Bay, CA 93442
Jul 24, 2015

Randy Evensen
CAMBRIA, CA 93428
Jul 24, 2015

In addition, there's the Cascadia fault line. How long do we have before the earthquake, tsunami, tidal wave?

Sylvia Alcon
Avila Beach, CA 93424
Jul 24, 2015

Helen Barge
San Miguel, CA 93451
Jul 24, 2015

William W. Donovan
San Luis Obispo, CA 93401
Jul 24, 2015

The closure is well overdue. Time to end this

Karen Wachsmuth
Morro Bay, CA 93442
Jul 24, 2015

Susan McIntosh
Atascadero, CA 93422
Jul 24, 2015

I live in SLO county & this place is a fukushima waiting to happen.

091-L041-1
cont'd

Tom Dorsey
Santa Margarita, CA 93453
Jul 24, 2015

Leane Nordquist
Atascadero, CA 93422
Jul 24, 2015

Bill Denneen
Nipomo, CA 93444
Jul 24, 2015

Earl Frounfelter
Santa Maria, CA 93454-6644
Jul 24, 2015

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casey pera
templeton, CA 93465
Jul 24, 2015

Sandra Moyer
Atascadero, CA 93422
Jul 24, 2015

Skyler Pienack
Oceano, CA 93445
Jul 24, 2015

Judith Bertonneau
Morro Bay, CA 93442
Jul 24, 2015

Jack Mahrt
Morro Bay, CA 93442
Jul 24, 2015

Christina Forsythe
Buellton, CA 93427
Jul 24, 2015

Daniel St. Sauveur
San Luis Obispo, CA 93401
Jul 24, 2015

Dean Shrock, Ph.D.
Yachats, OR 97498

Jul 24, 2015

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kathy
san luis obispo, CA 93405
Jul 24, 2015

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cont'd

Richard Beveridge
Lompoc, CA 93436
Jul 24, 2015

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cynthia lewis
Templeton, CA 93465
Jul 24, 2015

Jaine Rice
templeton, CA 93465
Jul 24, 2015

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betty winholtz
Morro Bay, CA 93442
Jul 24, 2015

This is an excellent petition which I will not only sign, but post on my FB page called Stop the Diablo Canyon Seismic Testing. I will also be appearing at the NRC meeting in San Luis Obispo as Nukes Templar, a religious priesthood who will watch over the nuclear waste down through the ages.

Joseph J. Racano
Los Osos, CA 93402
Jul 24, 2015

Nancy J Whelan
Santa Maria, CA 93454-7647
Jul 24, 2015

Shannon
Vandenberg Village, CA 93436
Jul 24, 2015

Raymond Porter
Paso Robles, CA 93446
Jul 24, 2015

PG&E is willing to gamble with our health. I'm not. The plant has already been here long enough.

Hedy Carra
san luis obispo, CA 93405
Jul 24, 2015

Sharine Borslien
Atascadero, CA 93422
Jul 24, 2015

091-L041-1
cont'd

My family and I live approximately 10 miles away from this power plant. Our area is a well-know geologically active region with new faults being discovered as recently as 2008. The Diablo Canyon Nuclear Power Plant is a potential disaster waiting to happen.

Jonathan Fernsler
Grover Beach, CA 93433
Jul 24, 2015

Thomas Gould
Cambria, CA 93428
Jul 24, 2015

Valerie
San Luis Obispo, CA 93403
Jul 24, 2015

Laura Grace
Cayucos, CA 93430
Jul 24, 2015

I live only 5 miles from this horrid Nuke plant that was not constructed properly to begin with. Yes, please shut it down!

Ellen Boykin
los osos, CA 93402
Jul 24, 2015

William Elder
Buellton, CA 93427
Jul 24, 2015

Amie Alter
Los Osos, CA 93402
Jul 24, 2015

Ann Dobroth
Grover Beach, CA 93483
Jul 24, 2015

Maria Jensen
Santa Maria, CA 93455
Jul 24, 2015

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cont'd

Arthur Dickerson
San Luis Obispo, CA 93405
Jul 24, 2015

charles varni
oceano, CA 93445
Jul 24, 2015

Diana Robertson
Pismo Beach, CA 93449
Jul 24, 2015

Nancy Morgan
Los Alamos, CA 93440
Jul 24, 2015

CHRISTOPHER P SCOTT
Santa Maria, CA 93458
Jul 24, 2015

Judith (Judy) Ransom
Atascadero, CA 93422
Jul 24, 2015

Jasmine de la Mora
lompoc, CA 93436
Jul 24, 2015

Pat Richards
Atascadero, CA 93422-7840
Jul 24, 2015

E Genasci
SN Luis Obisp, CA 93401
Jul 24, 2015

we formerly lived 7 miles downwind from the Diablo plant. Now we are 25 miles downwind, but still being offered potassium iodide pills in preparation!! This gets our attention and resolve to shut this baby down.

Fred Walker
Nipomo, CA 93444-9234
Jul 24, 2015

Melvin Zimmerman
Morro Bay, CA 93442-2141
Jul 24, 2015

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cont'd

Evelyn Greenwald
San Luis Obispo, CA 93401
Jul 24, 2015

wendy eisler
Solvang, CA 93463
Jul 24, 2015

Shannon Scott
Los Olivos, CA 93441
Jul 24, 2015

Charles Rabaut
Grover Beach, CA 93433
Jul 24, 2015

Della Romero
Los Osos, CA 93402
Jul 24, 2015

Bob Peterson
San Luis Obispo, CA 93401
Jul 24, 2015

FT Mendoza
San Luis Obispo, CA 93406
Jul 24, 2015

H. C. Stewart
Lompoc, CA 93436
Jul 24, 2015

Louise Zimmer
Paso Robles, CA 93446
Jul 24, 2015

Charlotte Mountain
SN Luis Obisp, CA 93401
Jul 24, 2015

Paul D Ramos
Santa Ynez, CA 93460
Jul 24, 2015

Absolutely.

Joseph Dowdy
Lompoc, CA 93436

Jul 24, 2015

Linda Larkin
Tempe, AZ 85284
Jul 23, 2015

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cont'd

Maggie Macro
Redlands, CA 92374
Jul 23, 2015

W Duane Waddell
Cayucos, CA 93430
Jul 23, 2015

Roberta Hill
Austin, TX 78703
Jul 23, 2015

Janice Kissel
San Luis Obispo, CA 93401
Jul 23, 2015

Donna Cheek
Atascadero, CA 93422
Jul 23, 2015

Marylia Kelley
Livermore, CA 94551
Jul 23, 2015

Nuclear Waste will NEVER be safe!

Steve Crimmel
Cambria, CA 93428
Jul 23, 2015

Anthony Mitre
Las Vegas, NV 89135
Jul 23, 2015

Maureen Roy
Topanga, CA 90290
Jul 23, 2015

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joyce suslovic
Dewitt, NY 13214
Jul 23, 2015

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cont'd

Roberta Prada
New York City, NY 10016
Jul 23, 2015

Barbara Joye
Atlanta, GA 30307-1415
Jul 23, 2015

Dieter Reger
NÃ¼rnberg, Germany
Jul 23, 2015

Lyndon Lininger
Hot Springs, AR 71914
Jul 23, 2015

We cannot afford to keep these old reactors function. We MUST as a nation work to get rid of the, not only potential but inevitable, danger of nuclear disaster.

JUlia Hernandez
Concord, CA 94518
Jul 23, 2015

Jeff pienack
Oceano, CA 93445
Jul 23, 2015

Barbara Laxon
Miramar, FL 33025
Jul 23, 2015

jason jackson
Rogue River, OR 97537
Jul 23, 2015

Jean Blackwood
Columbia, MO 65203
Jul 23, 2015

No extensions for nuclear power.

wendi
mukwonago, WI 53149
Jul 23, 2015

nuclear power is no answer

091-L041-1
cont'd

Linda Chimenti
Paso Robles, CA 93446
Jul 23, 2015

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prime principle: do no harm.

Lewis E Patrie, M. D.
Asheville, NC 28805
Jul 23, 2015

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chandra garsson
Oakland, CA 94606
Jul 23, 2015

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michele
Morrisville, PA 19067
Jul 23, 2015

Schuyler Gould
Barre, VT 05641
Jul 23, 2015

Laila Sunde
Odda, Norway
Jul 23, 2015

Martine Cuisenaire
Heer, Belgium
Jul 23, 2015

Ray and Barbara Stevens
Greenbelt, MD 20770-7727
Jul 23, 2015

Michele
San Luis Obispo, CA 93405
Jul 23, 2015

Patricia Hval
Westerly, RI 02891
Jul 23, 2015

Donna Cuthbert
Pottstown, PA 19465
Jul 23, 2015

JUANI MUÑOZ
whasington, EspaÃ±a
Jul 23, 2015

CLOSE IT NOW

091-L041-1
cont'd

Sheila Parks
Watertown, MA 02472
Jul 23, 2015

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vasiliki paschalidi
patmow, Î¶Î»Î¬Î±
Jul 23, 2015

Darlene St. Martin
Mount Vernon, WA 98273
Jul 23, 2015

Gina Mori
Arroyo Grande, CA 93420
Jul 22, 2015

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anne Hamilton
Asheville, NC 28804
Jul 22, 2015

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radiation is very bad for human health, ask me! Rocketdyne 1959

Kathy Lerner
Petaluma, CA 94952
Jul 22, 2015

Grace MacKenzie
Cedar Ridge, CA 95924
Jul 22, 2015

Russell Lowes
Tucson, AZ 85716
Jul 22, 2015

Richard Jefferies
Thurmont, MD 21788
Jul 22, 2015

The NRC would not allow a new plant to be built on this site. How could they extend the license for an old one?

Fred Frank
Atascadero, CA 93422
Jul 22, 2015

Jeff Bague
San Luis Obispo, CA 93401
Jul 22, 2015

091-L041-1
cont'd

Shut it down before Mother Nature does with a similar fate that Fukushima experienced. Let me know if you want to join me on my film, MELTDOWN.

Jill Murphy Long
Portland, OR 97201
Jul 22, 2015

Dangerous dirty expensive. No Diablo.

LINDA SEELEY
San Luis Obispo, CA 93405
Jul 22, 2015

Let our community plan wisely for decommissioning Diablo Canyon PP in the years ileading up to 2024. Thank you.

Brad Snook
Arroyo Grande, CA 93420
Jul 22, 2015

Mandy Davis
Sarasota, FL 34236
Jul 22, 2015

Nuclear = CANCER CAUSING RADIATION..

Tom Conroy
Naples, FL 34106
Jul 22, 2015

Sandy Silver
Santa Cruz, CA 95062
Jul 22, 2015

Ted Williams
Ralls, TX 79357
Jul 22, 2015

Jef Harvey
Palmer, AK 99645
Jul 22, 2015

Bob Jordan
St. Louis, MO 63112

Jul 22, 2015

Harvey Z Schaktman
shelburne Falls, MA 01370
Jul 22, 2015

091-L041-1
cont'd

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manuela wolter
san.jose, IA 50309
Jul 22, 2015

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susanna minacheili
thessaloniki, Greece
Jul 22, 2015

JENIFER MASSEY
San Clemente, CA 92672
Jul 22, 2015

Mitchell Maricque
Menominee, MI 49858
Jul 22, 2015

Mary S. Reed
Duanesburg, NY 12056
Jul 22, 2015

Paul George
Los Altos, CA 94024
Jul 22, 2015

Barbara Antonoplos
Atlanta, GA 30315
Jul 22, 2015

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jim canady
oregon house, CA 95962
Jul 22, 2015

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holger hadrich
Germany
Jul 22, 2015

In California, millions of Public Stakeholders in reactor communities are definitely threatened, by unsafe nuclear reactors operating in high risk scenarios. NRC Commissioners are reminded again of your mandate & mission to ensure adequate protections of public health and safety. Your role is NOT to protect profit margins of Licensees, utilities, and nuclear industry!.

patricia borchmann
escondido, CA 92026
Jul 22, 2015

091-L041-1
cont'd

Among the most embrittled reactors in the U.S. - Shut Down before Melt Down!

Michael J Keegan
Monroe, MI 48161
Jul 22, 2015

Nobody but shareholders are for nukes!

Judy Kulp
Cape May, NJ 08204
Jul 22, 2015

Suzan Michele Powers
San Jose, CA 95124
Jul 22, 2015

Miriam Landman
Sebastopol, CA 95472
Jul 22, 2015

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monica leavitt
San Francisco, CA 94109
Jul 22, 2015

Ritsuko Higashi
Rego Park, NY 11374
Jul 22, 2015

Lee Blackburn
Pataskala, OH 43062
Jul 22, 2015

Michael Mariotte
Takoma Park, MD 20912
Jul 22, 2015

We have no need for an old, outdated and dangerous nuclear plant on our CA Coastline! Let's make California the leader in truly sustainable, renewable energy!

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cont'd

Molly Johnson
San Miguel, CA 93451
Jul 22, 2015

Jonathan Buickerood
Sebastopol, CA 95472
Jul 22, 2015

Don Eichelberger
San Francisco, CA 94117
Jul 21, 2015

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paul frey
Redwood Valley, CA 95470
Jul 21, 2015

Nancy Couperus
Los Altos Hills, CA 94022
Jul 21, 2015

Ernest Goitein
Atherton, CA 94027
Jul 21, 2015

Nancy Norwood
San Luis Obispo, CA 93405
Jul 21, 2015

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gail koffman
fairfax, CA 94978
Jul 21, 2015

Joseph Mirabile
San Francisco, CA 94122
Jul 20, 2015

The cooling system sucks in 2.1 billion gallons of sea water and marine life every day to cool the reactors. It sends this water back to the ocean 20 degrees hotter.

PG&E concealed data and minimized the effects of this heating and killing cycle until 2000 when it finally released data showing extensive deterioration of the already threatened black and red abalone population in waters around the reactor. The data also revealed catastrophic deterioration to biologically important marine communities.

So, you, the NRC, you're not a corporation dedicated to profit making. The profit benefit ratio of cooling systems is not in your mission.

Regardless of the cost, I believe it's your duty to require modern cooling towers to be in place before you consider relicensing Diablo Canyon. Thank you.

(Applause)

MR. HAGAR: After Joseph the speaker will be Ellen Lodge. Ellen are you here?

MS. LODGE: Yes.

MR. HAGAR: Okay.

MR. MIRABILE: Well, besides earthquakes, a major concern of mine is the protection of the nuclear

091-T002-30

plant. And will the plant's guards be able to stand up against well trained, well armed and suicidal attackers?

091-T002-30 cont'd

The guards themselves at Diablo Canyon would have to be well trained also. And as highly motivated to defend the plant.

The Project on Government Oversight, POGO, investigated 13 nuclear power plants and found that of the 13, only three plants had guards who were confident they could defeat a terrorist attack.

Almost all the guards interviewed told the Project on Government Oversight that their numbers of guards are reduced significantly after passing an NRC mock terrorist attack.

Since 9/11 utilities have been ordered to increase the size of their guard force. But many have relied heavily on requiring the existing guards to put in extraordinary overtime. The NRC endangers us all when it looks the other way while allowing utilities to get away with this.

Many of the guards do not believe they are equipped with adequate firearms and other weaponry. Many are concerned they would simply be outgunned in a terrorist attack.

The current guards and new recruits believe

they are not adequately trained either in tactics or in the use of firearms to combat a terrorist attack. Now you just imagine what happens when the guards run away from highly motivated terrorists.

091-T002-30 cont'd

They know that the terrorists do not care about high radiation areas. They know that they are suicidal. And they will run.

Security guards are the lowest compensated employees on a number of nuclear power plants. Even when compared to janitors who are often not only paid more, but have better benefits. This has led to high turnover and seriously low morale at most of the plants POGO investigated.

The NRC should not be managing nuclear power plants. They are not up for the job. The bottom line is we need truly professional guards defending the plants on the order of the Army or Marines.

And like some French nuclear power plants, we need antiaircraft batteries to defend attacks from the air. But the best solution is to shut Diablo down.

(Applause)

MR. HAGAR: The speaker after Ellen will be Duane Waddell. Duane, are you here? Okay.

MS. LODGE: Hi, my name is Ellen Lodge. I live in Los Osos. I'm a private citizen. And has been

RULES AND DIRECTIVES

Formal Complaint Regarding Diablo Canyon Nuclear Power Plant

To: NRC and PG&E

Cc: DCISC, MFP, Alliance for Nuclear Responsibility, Governor Jerry Brown, President Obama, Honorable Barbara Boxer, Katcho Achadjian, Senator Bill Monning, Dr. Michael Peck, Kate Kytle, Justin Stanley, Laura Sutton, Nancy Johnson, Fred with Chumash Tribe, SLO Surfrider, Representative Lois Capps, Senator Diane Feinstein, US EPA, Senator Mike Thompson, Supreme Court of the United States, Jun and Sawada Buddhist Monks, Friends of the Earth DC, Nuclear Information and Resource Service, Our Children's Trust, Western Environmental Law Center, PUC, SLO County Supervisors, Honorable Kamala Harris, Ted Turner, Oprah, Das Williams, World Business Academy, California Coastal Commission, Bonnie Raitt, Jackson Brown, David Crosby, Lara Turner Seydel, Neil Young, Coastal Aquarium in Avila, Victor McCree, Eco Watch, Care 2, National Wildlife Federation, Sierra Club, Senator Blakeslee.

August 20, 2015

I have attended numerous NRC, DCISC, MFP meetings, marches, vigils, canvassed, signed dozens of petitions, shared my knowledge with others in person and on social media, written letters all the way up to the President of the United States and anything else I can do to get DCNPP SHUT DOWN. 092-L027-1

This will be my last letter before the 8-31-15 NRC Deadline. My next step will be **formal legal action**. The citizens and the environment are not being protected as required by law. The eco-system of the Bay is damaged daily, as the "once through cooling system" kills millions of marine life, heating the sea water over 20 degrees. DCNPP is currently the largest marine predator of the west coast. The abalones have been wiped out. 092-L027-2

A recent Health study shows the increased cancers, thyroid conditions, birth complications and so on, directly linked to DCNPP and the radioactive isotopes that they release into the atmosphere. Our community has been getting sicker every year since DCNPP opened. After the 1989 closure of Laguna Seca Power Plant, there was a significant decrease in local death and disease. This same scenario is also true for other decommissioned plants around the world. 092-L027-3

At the 8-5-15 NRC re-licensing hearing, I heard more double tack and evasive answers from the NRC than ever. Simple questions, such as how many nuclear power plants have been denied re-licensing, became a five minute double talk session. Many of us who knew the simple answer, were answering ZERO, as Michael Wentzel danced around the question and gave vague deceptive answers. This is the same thing that occurred at the 6-24-15 NRC meeting, when I asked about the collusion case. On record the panel member minimized the situation and did not address the question truthfully. As with PG&E, transparency is the biggest challenge with the NRC. Luckily all of this is on record. 092-L027-4

We pay a decommissioning fee and competition fee monthly, for de-commissioning after the 40 yr license term expires. This fund already has $2.3 Billion and we are ready for these funds to be put to good use, by closing DCNPP immediately. The construction cost was estimated at $320 million, yet ended up being a whopping $5.8 billion. The seismic studies have cost the ratepayers an additional $64 million. Enough is enough!!! 092-L027-5

Considering The Bodega Bay plant was rejected, due to Earthquake faults and the 1976 Moratorium on Nuke Plants. It is clear that DCNPP is putting all of California and even North America as a whole, at unnecessary risk. We have nowhere to put the waste that takes hundreds of thousands of years to breakdown. How dare us leave our future generations, with this toxic deadly problem. Currently there is nowhere for the waste to go, so it is piling up on site. 19 out of 34 casks were improperly loaded; once again putting citizens at great risk. DCNPP is the last remaining nuke plant in California and no nuke plants have been built here in over 35 years. It is time for Ca to be Nuke free. We do not want a California Fukushima. DCNPP must be shut down before it is too late.

The latest shut down of another US Reactor, Vermont Yankee, punctuates the reality of the challenges of safely mothballing radioactive fuel for decades. Waste may be safely stored on site up to 60 years, yet the waste lasts hundreds of thousands of years. The calculation is simple. This is totally unacceptable. 092-L027-6

Tepco (owner of Fukushima plant)-had been warned years earlier about the dangers of an earthquake and tsunami hitting the plant. No one did anything about it. The simple fact is that nuclear power generation- has risks and costs, which dramatically outweigh any benefit. Chernobyl's human error, Three Mile islands cutting corners and Fukushima's corporate negligence should be enough to prove that nuclear power is UNSAFE. There is a reason that no private insurance company will cover nuke plants. There is just too much risk. How many warnings will it take? How many lives must be lost? How much damage will we continue to do to the environment? How many more citizens will become sick and die? It is time for accountability.

092-L027-7

It was proven that PG&E doctored fault maps at the Bodega site back in 1961. Thankfully the cover-up was exposed by the Sierra club and the project was scrapped. Even though the Hosgri Fault was discovered and charted back in the 1960's, PG&E claims it had no knowledge until late 1972 and finally publicized it in 1973. The same seismic experts form Bodega pointed out major flaws in PG&E's own study of DCNPP. Thank goodness the Point Arena site, as well as the Davenport Complex were scrapped after public opposition. The 1989 Loma Prieta EQ would have devastated the area, with the epicenter being only miles away from the planned reactor site. The Humboldt Bay reactor was labeled the dirtiest reactor in the US and after EQ faults were discovered, it too was closed. The spent fuel at all of these sites still poses great risk. During the 1985 Rancho Seco incident the staff was unable to carry out prescribed emergency procedures, including communicating with outside emergency officials.

The Shika Nuke plant in Japan will be the next to be de-commissioned due to EQ faults. Interestingly enough, at the 8-5-15 NRC meeting in SLO, I acquired various literature provided by the NRC. The assessment doc set, including views and recommendations as well as the Reactor oversight Process doc set are outdated. They are dated 2008 and 2006, both pre Fukushima.

I do not understand, with all of the precedent setting emergencies and failures, how anyone is allowed to put the public at such risk. This is criminal and negligent.

The corruption, collusion and fraud continue at DCNPP and with the NRC. Congressional hearings during President Reagan's presidency indicated that federal licensing rules were broken, yet nothing was ever done about it.

Japan continues to attempt to cover up the extremely dangerous conditions following the Fukushima disaster. I continually hear "Lessons from Fukushima" at the various DCNPP meetings I attend. As long as DCNPP remains open, it proves we did not learn a thing from any of the past nuclear catastrophes.

Currently Renewables are the second largest source of electricity in the WORLD. The .9 % increase in Nuclear energy, clearly illustrates that the world realizes it is not worth it. It is too costly, dangerous and damaging, to our already fragile environment. Nuclear plants leave a large carbon footprint and it is not clean energy, especially when you consider the mining process, enrichment process, etc. Since 1990, global solar power has been increasing by 44.6% a year and wind at 27.1%. This is our future, not NUKES!!!!!

The President of the United States recognizes that Nuclear power is not part of our "GREEN" future. He eliminated incentives for the nuclear industry, in his recently revised Climate Act. There will be no bailouts. There will not be any emissions offsets. According to the EPA's, RE (Renewable Energy), BSER (Best Systems of Emissions Reduction); nuclear energy is too costly and should not be included.

Even the Pope calls nuclear power a **modern tower of Babel**. He said, "Human beings should not break the natural laws set by God."

Californians never wanted the plant to be built in the first place, evident by the 10,000 protestors and 1,900 arrests. This was more arrests than any other nuke plant in history. The plans were reversed during construction and mistakes continue to occur without any penalty or fine. Prospectively, a landlord is fined for not having smoke detectors in rentals, yet DCNPP can continue to put all of our lives in danger and they have yet to be punished for any of their errors. It is clear that something very suspicious is going on.

21 youths have already filed a lawsuit against the federal government, regarding Climate change and how it violates their rights to life, liberty, property and failed protection of essential public trust resources. If DCNPP is not shut down very soon, they will also be hit with a similar suit. The suit will cover not only the dangerous conditions, but also the burden of the radioactive spent fuel, which the youth will be left to deal with for endless generations. We only get one planet, there is no plan B and our generation must do something about this now. 092-L027-7 cont'd

A similar suite was filed in Washington State, by five young petitioners re Climate Change. Within two weeks the children were able to meet with Governor Inslee and an agreement was made. Our children do not want, nor deserve the burden of toxic radioactive Nuclear Waste. Our children DO want their constitutional rights to life, liberty, property and protection of public trust resources. Toxic, deadly, improperly stored, nuclear waste does not meet the requirements to allow for these unalienable Constitutional rights. Expect the Youth to stand up and demand to be relieved of this burden. We will start with the youth here in SLO and continue down the list, wherever there is a plant producing waste and or storing spent fuel.

The 8-21-15 EIS re Yucca Mountain is another example of how the NRC is not complying with their own 2008 requirements, imposed on the Energy Department. Just like the NRC allows DCNPP to "adjust" safety measures to fit within findings; putting all of North America at risk for a Nuclear DISASTER. 092-L027-8

As the past weeks mine accident has shown; toxic waste can cause catastrophic damage. In the event of a radioactive waste accident, it won't be contained in a tributary; it will float around wherever the wind takes it. There will be no way to clean it up. DCNPP needs to be shut down and also needs to immediately stop producing radioactive waste. The silver lining in the mine disaster is said to be; "more aggressive state and federal efforts to deal with the legacy of mine pollution." DCNPP produces pollution of THE deadliest kind. 092-L027-9

Terrorism is a huge concern as it was confirmed by the US government after 9-11, that nuke plants were targeted for terrorism. Muhammad Youssef Abdulazeez, responsible for the recent TN shooting that killed 3 marines and a sailor was employed at the Perry Nuke Plant in Cleveland. Ten days after being hired, he failed a background check and was fired. 092-L027-10

The supposed emergency evacuation plans for DCNPP are far from adequate. Hwy 101 is the only escape and it is already gridlocked in non emergency situations. I work in Avila beach within a few miles of the rectors and we will all be trapped. In the six years that I have worked near the plant, I have never heard a single siren test. We wouldn't even know if we needed to evacuate. I have sent written notice, made phone calls and e-mailed re my concerns about the sirens. Apparently it is MY problem to deal with. 092-L027-11

We need honesty and transparency, no more falsifications, no more rubber stamping. 092-L027-12

I want it on record that PG&E as well as the NRC are both liable for all injury, death and destruction caused by the deadly nuke plant. We cannot afford to be PG&E's latest mistake. Rate payers were killed and many homes destroyed in the San Bruno explosion, which was a direct result of PG&E's negligence. The recent mass killing of endangered Chinook salmon in Butte Creek by PG&E, also shows their disregard for the environment and all living things.

The next step will be massive protests and endless lawsuits filed by individuals and groups alike.

I have included my speech from the 8-5-15 NRC meeting in SLO and a copy of my son's poem. He read his poem at the 8-5-15 NRC hearing. His poem sums it all up to a T.

Thank you for the opportunity to be part of this process. Please confirm receipt of this correspondence after reviewing.

Signed,
Gina Mori
Gina Mori

Diablo, Fukushima or Chernobyl

092-L027-13

Is it really worth the risk so the elite to get Armani suits and drive a Maserati?

Converting lush terrain to desolate waste lands

For a sequence of numbers on a computer

Risking the future that surpasses 7 generations

in the quest for green rectangles symbolizing debt

Creating a society hopelessly inept to see past their current state of being

Hijacking sacred grounds belonging to the natives

They turn around and fill your head with propagandized filth

We know the truth about Nikola Tesla and the future he could have manifested

Without the need for the yellow cake, spent fuel, or radioactive waste

The potential to have an immense population displaced

all for the love of money is utterly a disgrace

Take me back to the era of innovation devoid of greed

Resurrect the Wardenclyffe tower lets distribute the power with complete efficiency

let's do this in honor of the lost souls from Chernobyl and Okuma Fukushima

The pain and suffering handed down to the people

to expose the ones reaping the benefits hiding in their lavish mansions

lest us not forget earthquake faults located under un measurable amounts of toxic contaminants

Organizations claiming its green while transporting environmental pollutions

Constantly suppressing countless solutions

How many have to be affected before we accept the fact that nukes are merely a complication with the power to slay the global civilization

By Justin Stanley

8-5-15 NRC Re-licensing meeting

My name is Gina Mori. I live in Arroyo Grande and I have worked in the Avila Beach area for over 6 years.

I am here because I am gravely concerned about my health and safety, as well as the health and safety of SLO County, along with the entire state of Ca and even the North American Continent, in a worst case scenario.

092-L027-14

I have spent time with Fukushima survivors and my best friend lived through Chernobyl. We must decommission Diablo, before it is too late. We can't afford to be PG&E's latest mistake.

From the original DCNPP plans being backwards, to the San Bruno deaths and destruction in 2010, or the recent mass killing of endangered salmon. The 14.5 million dollar San Bruno judgment for negligence sited violations in; record keeping, classification and maintenance.

The lack of Accountability & Transparency is the most concerning aspect to date.

Local coverage is lacking and even biased- SF news covers DCNPP, but not our local media. Locals are in such denial that when I mentioned that I needed to get my free iodide supply, most local's had no clue about it at all. Where I on the other hand, am terrified by the prospect of a nuclear meltdown.

A few more imminent dangers include, but are not limited to:

Cooling towers that continue to damage the eco-system of the Bay daily. DCNPP has been designated the largest marine predator of the West Coast.

Improper storage of Toxic Waste, including June 2015 Safety Test Failure, re 19 of 34 dry casks improperly loaded. This toxic waste will be around for hundreds of thousands of years and is stored on 13 EQ faults.

Inadequate EQ and Tsunami hazard evaluations. DCNPP would NEVER have been built, using the most current safety data. Most of my family still lives in Napa, where scientist still do not know which fault line the August 2014 quake occurred on. Scientist have discovered new fault lines in Napa and state that, entire neighborhoods would never have been built under current building requirements, with the knowledge of the newly discovered faults. Napa suffered catastrophic damages to many retrofitted buildings. Thank goodness the quake hit while everyone was sleeping. Otherwise the death and injury toll would have been much higher. SF's 1989 Loma Prieta is another glaring example of how dangerous Ca quakes can be. With roads,

buildings and bridge collapses, fires, death and major injuries. Mother Nature's wrath cannot be predicted.

092-L027-14 cont'd

At the last NRC meeting, I was reassured that the cooling pools are safe, even in an EQ. I do not believe that for a minute, knowing that during the Napa quake, my father's swimming pool created a tidal wave of water, rushing towards his back exit. He had to run to the front door, as over half of the pool water emptied, creating a wall of water. Imagine this scenario, with added fuel rods and HIGHLY radioactive waste.

This is all very reminiscent of the original proposed nuclear plant site in Bodega Bay, which was rejected because of EQ faults. It is clear that under current standards and with the latest knowledge, DCNPP also would never have been built. Due to the inherent risks, it needs to be de-commissioned.

Inadequate evacuation plans insure gridlock on Hwy 101, our only escape.

The overall health of locals is at risk. I personally know dozens of people dealing with cancers, Thyroid conditions and so on. Recent studies show the increased risks involved.

Collusion of the NRC

Continued alteration of safety measures to "Fit" requirements

In closing, if more of the public knew the truth, there would be an uprising. It is time for PG&E to TELL the truth and expect the public to react accordingly.

We depend on agencies such as the NRC to protect us, yet it seems to be more about the money and protecting only a few at the expense of the rest of us.

DCNPP is not in alignment with the new Federal Climate Act, signed only days ago, by the President.

DCNPP is also not in alignment with California's goal of 33% renewables by 2020. It would be unsafe to ramp down nuclear power, as wind and solar become our main power sources.

No more rubber stamping by the NRC. The NRC must shut down DCNPP. Ca does not need it and SLO doesn't' want it.

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Comment On: NRC-2009-0552-0026
Diablo Canyon Power Plant, Units 1 and 2; Notice of Intent to Prepare an Environmental Impact Statement

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59

Submitter Information

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7/1/2015
80 FR 37664

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2015 SEP -1 PM 5:19
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General Comment

I have mailed my "comments" via certified mail. I included many facts and concerns. I will use this opportunity to reiterate the dangers and damage linked to DCNPP.

092-L059-1

Destruction of the eco-system of the bay, increased cancers, increased infant mortality, increased thyroid conditions, 13 earthquake faults, tsunami zone, toxic radio active waste improperly stored, terrorist target, damage to the overall environment, inadequate evacuation plans, outdated, too costly, not in alignment with renewable energy goals, waste lasting hundreds of thousands of years with no long term plan, the list goes on and on.

DCNPP should never have been built and it must go before PG&E causes anymore death and destruction, at the expense of ratepayers.

The NRC must protect us as obligated by law. Save us from a California Fukushima.

California does not need this dirty dangerous energy source and SLO doesn't want it.

People's lives must matter more than corporate greed.

DO your job and shut it down.

SUNSI Review Complete
Template = ADM – 013
E-RIDS= ADM-03
Add= M. Wentzel (MJW2)

realistic. We are humans. We have brains. Let's use them. Thank you.

(Applause)

MR. HAGAR: Okay. And following Gina will be Nancy Shaw. Is Nancy here?

MS. MORI: My name is Gina Mori. I live in Arroyo Grande and I've worked in the Avila Beach area for over six years.

I'm here because I'm gravely concerned about my health and safety as well as the health safety of SLO County, along with the entire State of California. And even the North American continent in a worst case scenario. 092-T002-43

I have spent time with Fukushima survivors. And my best friend lived through Chernobyl. We must decommission Diablo before it's too late.

We can't afford to be PG&E's latest mistake. From the original Diablo plans being backwards to the San Bruno death and destruction in 2010, to the recent mass killing of endangered salmon.

The $14.5 million San Bruno judgement of negligence cited violations in record keeping, classifications and maintenance. The lack of accountability and transparency is the most concerning aspect to date.

Local coverage is lacking and even biased. San Francisco News covers Diablo, but not our local media. Locals are in such denial that when I mentioned that I need to get my free iodine supply, most locals had no clue about it at all. Why on -- where on the other hand, I'm terrified by the prospect of a nuclear meltdown. 092-T002-43 cont'd

A few more imminent dangers include but are not limited to cooling towers that continue to damage the eco system of the bay daily. Diablo has been designated as the largest marine predator of the west coast.

Improper storage of toxic waste, including the June 2015 safety test failure regarding 19 of 34 dry casks improperly loaded. This toxic waste will be around for hundreds of thousands of years. And is stored on 13 earthquake faults.

Inadequate earthquake and tsunami hazard evaluations. Diablo would never had been built using the most current safety data. Most of my family still lives in Napa where scientists still do not know which fault line the August 2014 quake occurred on.

Scientists have discovered new faults in Napa. And they state that entire neighborhoods would never have been built under current building

requirements with the knowledge of the newly discovered faults.

092-T002-43 cont'd

Napa suffered catastrophic damages to many retrofitted buildings. Thank goodness the quake hit while everyone was sleeping. Otherwise, the death and injury toll would have been much higher.

San Francisco's 1989 Loma Prieta is another glaring example of how dangerous California quakes can be, with roads, buildings, bridges collapsing, fires, death and major injury. Mother nature's wrath cannot be predicted.

At the last NRC meeting I attended, I was reassured that the cooling pools are safe even in an earthquake. I do not believe that for a minute knowing that during the Napa quake my father's swimming pool created a tidal wave of water rushing towards his back exit.

He had to run to the front door as over half the pool water emptied, creating a wall of water. Imagine this scenario with added fuel rods and highly radioactive waste.

This is a very -- this is all very reminiscent of the original proposed nuclear plant site in Bodega Bay, which was rejected because of earthquake faults. It is clear that under current standards and

with the latest knowledge Diablo would never have been built.

092-T002-43 cont'd

Due to the inherent risks, it needs to be decommissioned. And adequate evacuation plans ensured gridlock on Highway 101, which is our only escape. The overall health of locals is at risk.

I personally know dozens of people dealing with cancers, thyroid conditions and so on. Recent studies show the increased risks involved.

Collusion of the NRC is a concern. I'm almost done. Continued alteration of safety measures to fit requirements.

In closing, if more of the public knew the truth, there would be an uprising. It is time for PG&E to tell the truth and expect the public to react accordingly.

We depend on agencies such as the NRC to protect us. Yet, it seems to be more about money and protecting only a few at the expense of the rest of us.

Diablo is not in alignment with the new Federal Climate Act signed only days ago by the President. It's also not in alignment with the California goal of 33 percent renewable energy by 2020. It would be unsafe to ramp down nuclear power and wind and solar become our main power source.

No more rubber stamping by the NRC. The NRC must shut down Diablo. California does not need it and SLO doesn't want it.

092-T002-43 cont'd

(Applause)

MR. HAGAR: Okay, following Nancy will be Laura Sutton.

MS. SHAW: I am Nancy -- is this working? Okay. Nancy Shaw. I'm from the north county. I'm a registered nurse since 1985 and a mother of two teenage daughters that I'm very concerned about living here.

I've added a few thoughts on here. Critical thinking also includes looking at history and other nuclear disasters. I mean, we have to look at the -- you're missing the forest for the trees.

I'm tired of hearing from professional people, professional scientists who are comparing nuclear atmospheric carbon problems, air pollution to old fossil fuel methods. I mean, we have newer renewable methods that we can be using.

So, why are they comparing those two. I think that's disingenuous. And for people who are that intelligent, which I know you are, to be doing that is really makes me angry actually.

You don't need to be a financial analyst to know that a huge amount of money is needed to keep a

MR. HAGAR: Randy Morton is next, and then Kathleen Schwartz.

MS. SCHWARTZ: I'll pass. Everybody's said everything I was going to say much better than I could say it.

MR. HAGAR: Then Larry Murray will be after that.

MR. MORTON: My name is Randy Morton. As you can see by my almost light green shirt, I'm a member of the Friends of Diablo Canyon. More importantly, in 1972 and 1973, I was a junior engineer for Westinghouse at, can you imagine, Diablo Canyon. In those days, it was Diablo, not Diablo. But anyway, I was there for well over a year. I enjoyed it very much. 093-T001-60

I participated in the golf program that PG&E had and the various contractors had. I hear all of this discussion about this document, that document, and so forth, and so on. I have no documents. I haven't read up on Diablo Canyon or Diablo Canyon. I can tell you that from a practical standpoint, it certainly is valuable to us. I had the pleasure or displeasure of working in a number of fossil fuel plants in the PG&E system and a couple of them in San Francisco and Morro Bay and Moss Landing and so forth.

Some of those are non-operational thanks to

Diablo Canyon, and maybe San Onofre, to a lesser extent. Anyway, my feeling is I would urge the -- I had a stroke in January, so -- I would urge the NRC to renew the license for Diablo Canyon. Just one last comment. I'd like to say that my musical playlist has shortened considerably. 093-T001-60 cont'd

MR. HAGAR: The speaker after Larry Murray will be Jessica Lovering.

MR. MURRAY: Good afternoon, everybody. My name's Larry Murray. I'm president of Local 403 Pipefitters in San Luis Obispo, California. I'm here representing 300 local, non-celebrity members of the Pipefitters Local 403 in San Luis Obispo. As you all know, President Obama, yesterday, proposed big changes in venting of carbon into the atmosphere. 094-T001-61

California is, without a doubt, right now, the best state in the Union for taking care of the environment and carbon output. Whether we're for or against nuclear power, we should all be proud of our state for what we're doing for the atmosphere because we're trying. With my experience, in a standard power plant that's 750 megawatts, which is about a third of one of the units of Diablo Canyon, they have a natural gas feed line anywhere from 10 inches in diameter up to 24 inches.

Consider that. That's a lot of gas going into that plant. Outside of California, most states burn coal. Look at the changes in our weather and that of the world, for that matter. Nuclear power is used to generate power of a rating of 2,200 megawatts produces zero carbon dioxide -- zero. Carbon dioxide reacts with the ocean and generates acid. It mixes in. So when you hear people talking about the acidification, that's what it means. The same size conventional plant as Diablo Canyon, the amount of carbon is huge. Coal and natural gas are responsible for 98 percent of electrical generation CO2. Nuclear in Diablo Canyon generates zero carbon to these figures.

094-T001-61 cont'd

If you lived in this county back before the >90s, which I did, you'll remember how bad the air quality was. That's when Morro Bay Power Plant was running. On a hot day, if you looked out over the ocean, it was just like Los Angeles. It had a grimy, brown look to it. I worked at Diablo Canyon for 38 years and can attest to its sound condition and excellent operation. I strongly urge the NRC to give Diablo Canyon a relicensing, so that we can protect our environment. Thank you very much.

MR. HAGAR: The speaker after Jessica will be David Georgie. David, are you here? Let me say

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Submitter Information

Name: Allen Myers

General Comment

To Whom It May Concern,

My name is Allen Myers, I am a film maker and producer out of San Francisco. I help run an artist collective here called Merchants of Reality, and am the founder and director of The Earth Day Film Festival. I am extremely concerned about the possibility of renewing the Diablo Canyon Nuclear power plants license to continue operation. It has become clear to me that the risk far out ways the benefit. The power plant, as I'm sure you are aware, sits on an active fault line. If an earth quake where to happen or tsunami, as we saw in Japan, we could face a nuclear disaster that would destroy our coastline, kill people, wreck local economies, couple that with the fact the we have enough energy with out nuclear power to meet California's energy demands, more then %40 surplus with out it! Why risk it, I ask? Please let us create healthy energy, put our talent and resources to renewable energy such as solar and wind. Nuclear is far too risky, please don't renew this license. 095-L044-1

SUNSI Review Complete
Template = ADM – 013
E-RIDS= ADM-03
Add= M. Wentzel (MSW2)

Statement of Graham Nash
Nuclear Regulatory Scoping Meeting for
Diablo Canyon
Aug 5, 2015

My friends Jackson Browne, Bonnie Raitt, James Taylor, Don Henely,Linda Ronstadt, the late John Denver, David Crosby, Stephen Stills and I started to oppose nuclear power by supporting proposition 15, the Nuclear SafeGuards Initiative in 1976. There were 6 plants under construction then and there were two in operation, Humbolt and San Onofre #1.

096-L034-1

Both of them..... now gone, shut down...."for safety reasons".

Of the six I mentioned completed, 4 have been shut down for "Financial and safety reasons", only the two at Diablo Canyon remain and, as everyone knows, they were both built in active, dangerous seismic zones. We have participated, many times in raising funds, disseminating information and supporting local grass roots and national organizations to help empower people to act and will continue to do so in the future.

My friends and I sincerely believe that the Diablo Canyon nuclear power plant is an accident waiting to happen. Please, if just for the sake of all our children and grand-children, we must try our best to see to it that dreadful, expensive accidents like Three Mile Island, Chernobyl and Fukushima never happen here.

In hope,

Graham Nash

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Docket: NRC-2009-0552
Notice of Receipt and Availability of Application for Renewal of Diablo Canyon Nuclear Power Plant License

Comment On: NRC-2009-0552-0026
Diablo Canyon Power Plant, Units 1 and 2; Notice of Intent to Prepare an Environmental Impact Statement

Document: NRC-2009-0552-DRAFT-0065
Comment on FR Doc # 2015-15921

7/1/2015 (72)
80 FR 37664

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RULES AND DIRECTIVES BRANCH USNRC

Submitter Information

Name: Gene Nelson

General Comment

I Gene Nelson, Ph.D. serve as the Government Liaison for Californians for Green Nuclear Power http://www.CGNP.org. Attached find a relevant file in support of the renewal of the license application for Diablo Canyon Plant, Units 1 and 2.
The Docket Number is NRC-2009-0552.

097-L063-1

Attachments

Gene_Nelson_PhD_Comments_Summary_of_CGNP_Filings_in_Docket_15-IEPR-12 05 11 15

SUNSI Review Complete
Template = ADM – 013
E-RIDS= ADM-03
Add= M. Wentzel (MSW2)

http://docketpublic.energy.ca.gov/PublicDocuments/15-IEPR-12/
TN204588_20150511T153044_Gene_Nelson_PhD_Comments_Summary_of_CGNP_Filings_in_Docket_15IE.pdf Archived 05 11 15 by Gene A. Nelson, Ph.D.

DOCKETED

Docket Number:	15-IEPR-12
Project Title:	Nuclear Power Plants
TN #:	204588
Document Title:	Gene Nelson, Ph.D. Comments: Summary of Californians for Green Nuclear Power Filings in Support of DCPP
Description:	N/A
Filer:	System
Organization:	Gene Nelson, Ph.D.
Submitter Role:	Public
Submission Date:	5/11/2015 3:30:45 PM
Docketed Date:	5/11/2015

Comment Received From: Gene Nelson, Ph.D.
Submitted On: 5/11/2015
Docket Number: 15-IEPR-12

Summary of CGNP Filings in Docket 15-IEPR-12 in Support of DCPP

For the convenience of the California Energy Commission, a tabular summary of all of the 231 pages of comments to date made by Californians for Green Nuclear Power (CGNP) http://www.CGNP.org in response to CEC Docket 15-IEPR-12 is found in the first five pages. A spreadsheet follows with live links to each of the comments. Both the table and spreadsheet are sorted by the order in which the docket entries were made.

Additional submitted attachment is included below.

15-IEPR-12 Docket Log Summary for submissions by Gene Nelson, Ph.D. and Californians for Green Nuclear Power (CGNP) as of 11 May 2015

TN 203964, Docketed 26 March 2015: 2 page summary of CGNP advocacy for Diablo Canyon Power Plant (DCPP) once-through-cooling (OTC) alternative compliance by utilizing the SWRCB "Appendix A" amendments

TN 204274, Docketed 21 April 2015: 2 page summary including executive summary advocating for alternative compliance and the table of contents of the 45-page CGNP packet submitted to the SWRCB on 03 February 2015. (There were technical difficulties with submission of large attachments to the CEC website that day.)

TN204275, Docketed 21 April 2015: The complete 45-page CGNP packet submitted to the SWRCB on 03 February 2015. The key finding was that forcing DCPP's owners to retrofit DCPP with salt-water-cooled cooling towers to comply with federal Clean Water Act(CWA) 316(B) legislation would cause unacceptable safety risks to DCPP and provide scant benefits regarding sea life impingement relative to the multi-billion dollar costs of the dangerous retrofit. In recognition of the emissions-free environmental benefits of generating extremely large amounts of electrical power, the CWA 316(B) legislation provides options to waiver nuclear power plants, particularly in light of the safety risks cited and the benefits being wholly out of proportion to the retrofit costs.

TN204278, Docketed 21 April 2015: 66 pages, including summary. The Energy Institute at Haas at the University of California at Berkeley studied the effects of the premature forced closure of San Onofre Nuclear Generation Station (SONGS) in February, 2012. They concluded that there were significant power line transmission constraints that prevented ratepayers in the area previously served by SONGS from receiving the most economical power available. As a result, regional gas-fired generators were utilized, increasing air pollution and emissions. Quoting from the abstract, ... We find that in the months following the closure, almost all of the lost generation from SONGS was met by natural gas plants inside California at an average cost of $66,000 per hour.....The transmission constraints also made it potentially more profitable for certain plants to exercise market power, *and we find evidence that one company, in particular, may have acted non-competitively* (emphasis added).. ..

and from the conclusion:

Conclusion: *We find that the SONGS closure increased the private cost of electricity generation in California by about $369 million*, (emphasis added) and the social cost of emissions from generation by about $331 million, during the first twelve months. Of this, $39 million reflects transmission constraints and other physical limitations of the grid that necessitated that a high fraction of lost generation be met by plants located in the Southern part of the state. These

constraints also increased the scope for market power, and we find evidence that one company, in particular, may have acted non-competitively.....

These data support the estimate that ratepayers will pay about $3.3 billion more for electric power over the projected life of SONGS had a license extension been granted, as noted in Docket submission TN 204275.

TN 204314, Docketed 23 April 2015. 5 pages, including summary. The article, "The Ten Biggest Power Plants In America -- Not What You Think" by James Conca, Ph.D. 20 April 2015, blog at Dr. Conca's Forbes.com website. This article highlighted the ten biggest power plants in the United States as measured by total electric power generated annually. In 2014, nuclear power plants occupied the top four positions and seven of the top ten. Measured by 2011 power production, DCPP would be just below number 13 in the rankings. DCPP's large generation capability implies that it is important in maintaining grid stability (the match between supply and demand.) In a subsequent Docket Entries TN 204522 and TN 204530, additional detail is provided. **These three docket entries establish that DCPP is the largest generator of electric power in California . Therefore the loss of DCPP would seriously harm California grid stability.**

TN 204381, Docketed 27 April 2015, 10 pages. Some samples of the media coverage of the groundbreaking CGNP citizen advocacy for the continued safe operation of DCPP are included. CGNP depends only on contributions of its members to defray necessary expenses. CGNP does not obtain intervenor funds from the California PUC, nor does it receive funding from any corporate body.

TN 204426, Docketed 29 April 2015, 4 pages, including summary. Media coverage of Governor Brown's Executive Order B-30-15 establishing aggressive new targets for emissions reductions on 29 April 2015. The only practical, cost-effective means to accomplish these important goals will be to remove the legal impediments to building additional California nuclear power generation capacity. This nuclear power generation could power millions of electric vehicles and provide much-needed energy for the construction of additional desalination facilities to supply water to drought-parched California.

TN 204427, Docketed 29 April 2015, 6 pages, including summary. A critique of wind generation of power with a focus on failures in California from the ***UK Daily Mail***, 18 March 2012. A key question asked about the low capacity factor (CF) of wind generation is, " Why, they ask, should the debt-laden country be giving wind energy companies a 30 per cent tax credit, costing taxpayers nearly $3 billion a year, when wind accounts for only 2.3 per cent of America's electricity." While nuclear power and wind generation are both emissions-free, nuclear power is far more cost effective, reliable, and safe.

TN 204429, Docketed 29 April 2015, 4 pages, including summary. Media account of the Nuclear Regulatory Commission (NRC) and a panel of independent seismologists reaffirming DCPP's seismic safety during a highly-technical four-hour-long teleconference from NRC headquarters. This NRC reaffirmation of DCPP seismic safety stands in stark contrast to the alarmist claims being raised by PUC-funded intervenors such as the Alliance for Nuclear Responsibility, The Utility Reform Network, and the Friends of the Earth, among others.

TN 204430, Docketed 29 April 2015, 1 page. Color front cover of the 24 September 2014 issue of ***Science Magazine*** (Courtesy Alex Cannara, Ph.D.) showing the unprecedented declines in the California water table since 2002, as measured by NASA's GRACE mission. These declines are caused by the epic California drought, which has been exacerbated by global warming. Nuclear power could run California desalination stations to compensate for this loss without adding emissions.

TN 204516 Docketed 06 May 2015, 237 pages. Transcript for the 27 April 2015 Nuclear Joint Lead Commissioner Workshop held in Sacramento, California. Dr. Gene Nelson's comments appear on pages 200-203, Mr. Bill Gloege's comments on pages 203-207, Joseph Ivora's on pages 206-207, and Dr. Alex Cannara, who supports CGNP, has comments on pages 213-218.

TN 204522 Docketed 07 May 2015, 7 pages, including summary. DCPP is important to California power grid stability - Rebuttal to the California ISO submission TN 204323 - Part 1 of 2. A 2004 Western Area Power Administration (WAPA) "Path 15" press release is annotated to show the power transmission lines connecting DCPP to PG&E's Helm Pumped Storage Unit. DCPP is the largest California power generation facility and Helms is one of the top ten facilities. During the night hours, emissions-free power from DCPP may be employed to "charge up" Helms pumped storage. Then, during the day, Helms may generate the approximate emissions-free power of an additional DCPP reactor (typically accompanied by DCPP's twin reactors) to power the California grid. Emissions to generate California's electric power would be dramatically increased if DCPP were forced to shut down.

TN 204530, Docketed 07 May 2015, 5 pages, including summary. DCPP is important to California power grid stability - Rebuttal to the California ISO submission TN 204323 - Part 2 of 2. The table, " 2013 Total System Power in Gigawatt Hours" from the California Energy Almanac (CEA) is re-organized to highlight power generation by emissions-free generation sources in contrast to the sources that emit emissions that exacerbate global warming and diminish air quality. Note the significant contribution to in-state emissions-free power generation from nuclear power. In 2013, 100% of the nuclear power generated in California came from DCPP. On the other hand, the contributions of dirty out-of-state coal power generation was approximately equal to the annual power generation of SONGS in recent years. The out-of-state air pollution from burning coal drifts into California. This statistic rebuts the interruption of my

CEC citizen testimony during the 27 April 2015 CEC hearing in Sacramento by apparent natural gas advocate and CEC Chair Robert B. Weisenmiller, Ph.D. The second spreadsheet highlights the "Top 10" California power generation facilities, extracted from a CEA tabulation. DCPP is number 1. Helms Pumped Storage is in the "Top 10." The third spreadsheet details the low capacity factor (CF) of natural-gas-powered Moss Landing in comparison with DCPP. **DCPP's CF is almost three times that of Moss Landing**. These spreadsheets underscore the serious dimensions that a loss of DCPP power would cause.

TN 204551, Docketed 08 May 2015, 3 pages. A 20 April 2015 article from ***PG&E Currents*** that summarizes a recent meeting between executives at Japan's Chubu Electric Power Company and DCPP executives. This article underscores the dimensions of the positive DCPP nuclear safety culture which the executives of the third-largest power company in Japan wish to emulate.

TN 204560, Docketed 11 May 2015, 5 pages, including summary. Details, including the complete text of Governor Brown's Executive Order B-30-15. The political barriers to the expansion of the use of nuclear power will need to be taken down in order to comply with Governor Brown's 29 April 2015 executive order. As a consequence of their low capacity factors, solar and wind power are not cost-effective. Burning more natural gas or coal just increases global warming, contrary to the intent of this executive order.

TN 204561, Docketed 11 May 2015, 1 page by CGNP member Joe Ivora. Power-intensive desalination stations, such as the one under construction in Carlsbad, CA should be powered by emissions-free nuclear power plants.

TN 204562, Docketed 11 May 2015, 48 pages with summary. Relevant chapters of the California Central Coast Seismic Imaging Project (CCCSIP) are merged into a single document. This paragraph is a rebuttal to the overblown concern highlighted by Attorney John Geesman in his 08 May 2015 Docket entry TN 204546 at page 3 of 46: The CCCSIP information has been carefully reviewed by the NRC and their panel of seismologists. Dr. Hamilton's views are anomalous among most geologists that have studied the seismic potential of features underlying or near DCPP. It is likely that Dr. Hamilton receives 'things of value" from DCPP opponents, as do several other Ph.D.s recruited by the opposition. The CEC should also be reminded of the bias that Attorney John Geesman received intervenor compensation as high as $545.00/hour , as noted in TN 204275. Per the PUC Intervenor Rate table updated 29 October 2014, Rochelle Becker received as much as $125.00 per hour

At page 46 of 49:

CCCSIP studies have also addressed the testimony of Dr. Douglas Hamilton concerning a previously recognized fault mapped under the DCPP turbine building and the Unit 1 containment (Diablo Cove fault), and a proposed fault named the San Luis Range/Inferred Offshore Fault (SLR/IOF). Through review of previously collected information about the Diablo Cove fault from the original siting and preconstruction activities supplemented with recently collected geologic map data and high-resolution 3D seismic –reflection data collected as part of the CCCSIP indicate that the Diablo Cove fault does not represent a seismic hazard (e.g. vibratory ground motion or surface faulting) to the DCPP. Analysis of high-resolution 2D and 3D seismic-reflection data, seismicity and potential field data does not support the SLR/IOF as proposed by Dr. Hamilton. ("Hamilton" appears 13 times in the docketed document.)

TN 204564 Docketed 11 May 2015,2 pages by CGNP member and founder William Gloege. This docket entry summarizes the need for DCPP to meet pressing needs in California.

TN 204565 Docketed 11 May 2015,1 page by CGNP member Anthony Armini, Ph.D. California's likely economic harms caused by a potential DCPP shutdown are highlighted by noting recent economic losses in the German economy as they turned from nuclear to solar, wind, and fossil fuel power.

TN 204566 Docketed 11 May 2015,2 pages with summary. The complementary role of PG&E's Helms Pumped Storage facility to DCPP is summarized in this one-page ***PG&E currents*** article. Both DCPP and Helms (when powered by DCPP) are zero- emissions power generators.

TN 204570 Docketed 11 May 2015,1 page by CGNP member Anthony Armini, Ph.D Dr. Armini makes the case that it would be far less expensive to repair the steam generator problem at San Onofre Nuclear Generating Station (SONGS) instead of permanently decommissioning the plant.

TN 204581 Docketed 11 May 2015,5 pages with summary. Dr. James Conca provides additional documentation regarding the high reliability of nuclear power in an article published on his Forbes.com blog today.

TN 204583 Docketed 11 May 2015,6 pages with summary. In response to some extremely vocal critics of dry cask storage who are neither metallurgists nor nuclear engineers, a National Public Radio (NPR) article from 2012 is included as rebuttal with some included listener comments regarding nuclear waste politics.

Total page count: 231 pages.

Docket Log

Docket: 15-IEPR-12
Project Title: Nuclear Power Plants
Generated On: 5/8/2015 10:41:29 PM

TN	Docketed Date	Document Title	Exhibit #	To	From
203964	3/26/2015	Gene Nelson, Ph.D. Comments: The Californians for Green Nuclear Power (CGNP) Advocates for Adoption of the SWRCB "Appendix A" amendments for DCPP Air Quality, Efficiency, Compliance, Reliability, Transmission System Engineering, Greenhouse Gases 2 page(s)		CEC/Docket Unit	Gene Nelson, Ph.D.
204274	4/21/2015	Gene Nelson, Ph.D. Comments: Californians for Green Nuclear Power Board-Approved Submission Air Quality, Biological Resources, Efficiency, Executive Summary, Facility Design, Compliance, Geology/Paleontology, Reliability, Transmission Line Safety and Nuisance, Greenhouse Gases, _IEPR 2015-04-27 Workshop , _IEPR Presentation, _IEPR Public Comments 2 page(s)		CEC/ Docket Unit	Gene Nelson, Ph.D.
204275	4/21/2015	Californians for Green Nuclear Power (CGNP) February 3, 2015 Board-Approved Packet		CEC/Docket Unit	Gene Nelson, Ph.D.

TN	Docketed Date	Document Title	Exhibit #	To	From
		45 page(s)			
204278	4/21/2015	Energy Institute at Haas - The Value of Transmission in Electricity Markets: Evidence from a Nuclear Power Plan Closure 66 page(s)		CEC/Docket Unit	Gene Nelson, Ph.D
204314	4/23/2015	Gene Nelson, Ph.D. Comments: DCPP's High Capacity Factor Makes the Plant a Critical Factor in Grid Stability Air Quality, Efficiency, Land Use, Reliability, Transmission System Engineering, Greenhouse Gases, _IEPR 2015-04-27 Workshop , _IEPR Public Comments 5 page(s)		CEC/Docket Unit	Gene Nelson, Ph.D.
204381	4/27/2015	Gene Nelson, Ph.D. Comments: Sample of Media Coverage Regarding Californians for Green Nuclear Power (CGNP) Air Quality, Geology/Paleontology, Reliability, Transmission System Engineering, Greenhouse Gases, _IEPR 2015-04-27 Workshop , _IEPR Agenda , _IEPR Public Comments 10 page(s)		CEC/Docket Unit	Gene Nelson, Ph.D.
204426	4/29/2015	Gene Nelson, Ph.D. Comments: California Governor Brown Announces Ambitious New Emissions Targets			Gene Nelson, Ph.D.

TN	Docketed Date	Document Title	Exhibit #	To	From
		Biological Resources, Noise and Vibration, Visual Resources, Greenhouse Gases, _IEPR 2015-04-27 Workshop , _IEPR Public Comments 4 page(s)			
204427	4/29/2015	Gene Nelson, Ph.D. Comments: Wind Energy is not the path to Emissions-Free Power - Nuclear is Air Quality, Biological Resources, Land Use, Noise and Vibration, Visual Resources, Greenhouse Gases, _IEPR 2015-04-27 Workshop , _IEPR Public Comments 6 page(s)			Gene Nelson, Ph.D
204429	4/29/2015	Gene Nelson, Ph.D. Comments: The NRC Reaffirms DCPP's Seismic Safety 28 April 2015 Air Quality, Biological Resources, Facility Design, Geology/Paleontology, Reliability, Transmission System Engineering, Greenhouse Gases, _IEPR 2015-04-27 Workshop , IEPR Public Comments 4 page(s)		CEC/Docket Unit	Gene Nelson, Ph.D.
204430	4/29/2015	Science the Drought You Can't See 1 page(s)		CEC/ Raquel Kravitz	Gene A. Nelson, Ph.D

TN	Docketed Date	Document Title	Exhibit #	To	From
204522	5/7/2015	Gene Nelson, Ph.D. Comments: DCPP is important for Grid Stability Part 1 - Rebuttal to California ISO Facility Design, Reliability, Transmission System Engineering, _IEPR 2015-04-27 Workshop , _IEPR Presentation 7 page(s)		CEC/Docket Unit	Gene Nelson, Ph.D.
204530	5/7/2015	Gene Nelson, Ph.D. Comments: DCPP is important for Grid Stability Part 2 - Rebuttal to California ISO Air Quality, Efficiency, Facility Design, Reliability, Socioeconomics, Transmission Line Safety and Nuisance, Transmission System Engineering, Greenhouse Gases, _IEPR 2015-04-27 Workshop , _IEPR Presentation, IEPR Public Comments 5 page(s)		CEC/ Docket Unit	Gene Nelson, Ph.D.
204551	5/8/2015	Gene Nelson, Ph.D. Comments: Japan's Chubu Electric Power Company - Looks to Diablo Canyon for Best Practices in Assessing Risk, Seismic Safety Air Quality, Efficiency, Facility Design, Geology/Paleontology, Reliability, Transmission System Engineering, Greenhouse Gases, _IEPR 2015-04-27 Workshop 3 page(s)		CEC/Docket Unit	Gene Nelson, Ph.D.

TN	Docketed Date	Document Title	Exhibit #	To	From
204560	5/11/2015	Gene Nelson, Ph.D. Comments: Governor Brown Establishes Most Ambitious Greenhouse Gas Reduction Target in North America Air Quality, Public Health, Reliability, Socioeconomics, Greenhouse Gases, _IEPR 2015-04-27 Workshop 5 page(s)		CEC/Docket Unit	Gene Nelson, Ph.D.
204561	5/11/2015	Joseph S. Ivora Comments: California future water 1 page(s)		CEC/Docket Unit	Joseph S. Ivora
204562	5/8/2015	Gene Nelson, Ph.D. Comments: DCPP's Seismic Risk is bounded by the Predicted Energy Released by Hosgri Fault Facility Design, Geology/Paleontology, _IEPR 2015-04-27 Workshop , _IEPR Public Comments 48 page(s)		CEC/Docket Unit	Gene Nelson, Ph.D.
204564	5/11/2015	William P. Gloege Comments: Need for Diablo Canyon and Role of Nuclear Power in California _IEPR 2015-04-27 Workshop 2 page(s)		CEC/Docket Unit	William P. Gloege
204565	5/10/2015	Anthony Armini Comments: Be careful not to wreck California's economy		CEC/Docket Unit	Anthony Armini

TN	Docketed Date	Document Title	Exhibit #	To	From
		_IEPR 2015-04-27 Workshop 1 page(s)			
204566	5/11/2015	Gene Nelson, Ph.D. Comments: Helms Pumped Storage Operates in Conjunction with DCPP to Provide Emissions-Free Power Air Quality, Efficiency, Facility Design, Reliability, Transmission System Engineering, Greenhouse Gases, _IEPR 2015-04-27 Workshop , _IEPR Public Comments 2 page(s)		CEC/Docket Unit	Gene Nelson, Ph.D.
204570	5/11/2015	Anthony Armini PhD Comments: Fixing San Onofre is cheaper than closing it _IEPR 2015-04-27 Workshop 1 page(s)		CEC/Docket Unit	Anthony Armini PhD
204581	5/11/2015	Gene Nelson, Ph.D. Comments: James Conca Ph.D. 11 May 2015 Article about Nuclear's High Capacity Factor Air Quality, Efficiency, Reliability, Transmission System Engineering, Greenhouse Gases, _IEPR 2015-04-27 Workshop , IEPR Public Comments 5 page(s)		CEC/ Docket Unit	Gene Nelson, Ph.D.

TN	Docketed Date	Document Title	Exhibit #	To	From
204583	5/11/2015	Gene Nelson, Ph.D. Comments: NPR Reported on the safety of dry cask storage 13 June 2012 Facility Design, Public Health, Reliability, Waste Management, _IEPR 2015-04-27 Workshop , _IEPR Public Comments 6 page(s)		CEC/Docket Unit	Gene Nelson, Ph.D.

TN	Docketed Date	Document Title	Exhibit #	To	From
TN	**Pages**				
203964	2				
204274	2				
204275	45				
204278	66				
204314	5				
204381	10				
204426	4				
204427	6				
204429	4				
204430	1				
204522	7				
204530	5				
204551	3				
204560	5				
204561	1				
204562	48				
204564	2				
204565	1				
204566	2				
204570	1				
204581	5				
204583	6				
Total Pages	**231**				

PUBLIC SUBMISSION

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Docket: NRC-2009-0552
Notice of Receipt and Availability of Application for Renewal of Diablo Canyon Nuclear Power Plant License

(84)

Comment On: NRC-2009-0552-0026
Diablo Canyon Power Plant, Units 1 and 2; Notice of Intent to Prepare an Environmental Impact Statement

9/1/2015
80 FR 37644

Document: NRC-2009-0552-DRAFT-0078
Comment on FR Doc # 2015-15921

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2015 SEP -1 PM 5:28
RULES AND DIRECTIVES BRANCH USNRC

Submitter Information

Name: Gene Nelson

General Comment

I Gene Nelson, Ph.D. serve as the Government Liaison for Californians for Green Nuclear Power http://www.CGNP.org.
Attached find a relevant file in support of the renewal of the license application for Diablo Canyon Plant, Units 1 and 2.
The Docket Number is NRC-2009-0552.

The Federal EPA recognized the environmental value of emissions-free and carbon-free nuclear power when the federal 316(B) legislation was drafted. Specific exemptions to the 316(B) rules apply when the safety of a nuclear facility could be compromised by the EPA rules. See the attached file.

http://www.gpo.gov/fdsys/search/home.action
EPA-HQ-OW-2008-0667
http://www.gpo.gov/fdsys/pkg/FR-2014-08-15/pdf/2014-12164.pdf

Federal Register File: EPA NPDES Final Regulations 08 15 14.pdf

This PDF document is secured so it may not be annotated.

Please search the PDF document for the phrase "Naval Nuclear Propulsion Program."

The bottom page 24 of 141 and the top of page 25 states in summary that safety requirements supersede 316(B) requirements.

097-L064-1

The "Nuclear Units" section begins on the bottom of page 74 of 141 and continues through the top of page 75 also underscores this principle.

See also page 137 of 141, (f) Nuclear facilities, for another reaffirmation of this principle.

097-L064-1 cont'd

Attachments

EPA NPDES 316(B) Final Regulations 08 15 14

The commenter provided the entire text of the EPA's final rule from the *Federal Register* (79 FR 48300). As a matter of brevity, only the relevant pages of rule text are retained here. The entire text of the rule can be found at http://www.gpo.gov/fdsys/pkg/FR-2014-08-15/pdf/2014-12164.pdf.

structure. Biological monitoring must be completed at a minimum frequency of monthly.

The owner or operator of an existing facility must meet the impingement mortality requirements as soon as practicable after issuance of a final permit establishing the entrainment requirements under § 125.94(d).

Today's final rule also allows the Director, based on review of site-specific data, to conclude that a de minimis rate of impingement exists and therefore no additional controls are warranted to meet the BTA impingement mortality standard. In addition, today's final rule allows the Director flexibility in determining appropriate site-specific controls that may be less stringent than those found at § 125.94(c)(1) to (7) for existing units at existing facilities operating with a capacity utilization of less than 8 percent averaged over a 24-month block contiguous period. This provision can be found at § 125.94(c)(12). EPA notes that these provisions for impingement mortality would not apply to entrainment because, as discussed in the next section, the requirements for entrainment are established by the Director on a site-specific basis.

B. BTA Standard for Entrainment for Existing Units at Existing Facilities

The final rule establishes the national BTA standard for entrainment at existing units at existing facilities at § 125.94(d) (hereafter, entrainment standards). For such units, the rule does not prescribe a single nationally applicable entrainment performance standard but instead requires that the Director must establish the BTA entrainment requirement for a facility on a site-specific basis. The requirements must reflect the Director's determination of the maximum reduction in entrainment warranted after consideration of all factors relevant to the BTA determination at the site and must include consideration of the specific factors spelled out in § 125.98(f)(2). Facilities that withdraw greater than 125 mgd AIF must develop and submit an Entrainment Characterization Study (§ 122.21(r)(9)), as well as provide other information required at § 122.21(r)(7) and (10), (11), (12) and (13) that must include specified data pertinent to consideration of several of the factors identified in § 125.98(f).

C. BTA Standards for Impingement Mortality and Entrainment for New Units at Existing Facilities

The owner or operator of a new unit at an existing facility must achieve one of two compliance alternatives under the national BTA standards for impingement mortality and entrainment for new units at existing facilities at § 125.94(e) (hereafter, new unit standards).[40] Under the new unit standards, the owner or operator of a facility must reduce AIF at the new unit, at a minimum, to a level commensurate with that which can be attained by the use of a closed-cycle recirculating system as defined at § 125.92(c)(1). The owner or operator of a facility with a cooling water intake structure that supplies cooling water exclusively for operation of a wet or dry cooling tower(s) and that meets the definition of closed-cycle recirculating system at § 125.92(c)(1) meets this new unit standard. Under the alternative new unit standard, the owner or operator of a facility must demonstrate to the Director that it has installed, and will operate and maintain, technological or other control measures that reduce the level of adverse environmental impact from any cooling water intake structure used to supply cooling water to the new unit to a comparable level to that which would be achieved through flow reductions commensurate with the use of a closed-cycle recirculating system. Under this alternative, the owner or operator of a facility must demonstrate entrainment mortality reductions that are equivalent to 90 percent or greater of the reduction that could be achieved through compliance with the first alternative entrainment standard for new units.

The new unit entrainment standards do not apply to certain water withdrawals including (1) cooling water used by manufacturing facilities for contact cooling purposes; (2) portions of those water withdrawals for auxiliary cooling uses totaling less than 2 mgd; (3) any volume of cooling water withdrawals used exclusively for make-up water at existing closed-cycle recirculating systems;[41] and (4) any quantity of emergency back-up water flows. Furthermore, as is the case for existing units, obtaining cooling water from a public water system, using reclaimed water from wastewater treatment plants, or desalination plants, or using recycled process wastewater effluent as cooling water does not constitute use of a cooling water intake structure. The new unit requirements apply only to the volume of cooling water used by the new unit, or to the cooling water intake structures used by the new unit. The new unit requirements do not apply to the rest of the existing facility.

In addition, the Director may establish alternative entrainment requirements for new units when compliance with the new unit entrainment standards would result in compliance costs wholly out of proportion to the costs EPA considered in establishing the requirements at issue or will result in significant adverse impacts on local air quality, significant adverse impacts on local water resources other than impingement or entrainment, adverse impacts on threatened and endangered species, or significant adverse impacts on local energy markets. Any Director-specified alternative must achieve a level of performance as close as practicable to the requirements of § 125.94(e)(1) or (2).

D. Other Provisions

The final rule contains a number of other provisions related to the BTA impingement and entrainment reduction requirements. For example, the rule also provides that the Director may establish more stringent requirements as BTA if the Director determines that the facility owner or operator's compliance with the requirements otherwise established under the final rule would not meet the requirements of applicable State and Tribal law, including water quality standards. 40 CFR 125.94(i). Today's rule also requires the owner or operator of a facility subject to this subpart to submit and retain permit application and supporting information as specified in § 125.95; monitor for compliance as specified in § 125.96; and report information and data and keep records as specified in § 125.97. Director requirements are specified in § 125.98.

The rule further provides that, in the case of a nuclear facility or a facility constructing or conducting maintenance on nuclear powered vessels of the Armed Services, if the owner or operator of the facility demonstrates to the Director, upon the Director's consultation with the Nuclear Regulatory Commission, the Department of Energy or the Naval Nuclear Propulsion Program, that compliance with this subpart would result in a conflict with a safety requirement established by these entities, the

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[40] EPA expects that all new units will comply with these requirements through the installation of a closed-cycle cooling system, which is one of the most effective technologies for reducing impingement and impingement mortality. Therefore, the IM requirements for new units are already addressed by the new unit requirements by virtue of the first compliance alternative of the IM performance standard.

[41] For facilities with a combination of closed-cycle recirculating systems and other cooling water systems, the entrainment mortality standard does not apply to that portion of cooling water withdrawn as make-up water for the closed-cycle recirculating system.

Director must establish BTA requirements that would not result in a conflict with the Commission's, the Department's or the Naval Nuclear Propulsion Program's safety requirement.

V. Summary of Data Updates and Revisions to the Proposed Rule

This description of revisions to the proposed rule is organized in three sections: Data updates, regulatory approach and compliance, and new units. EPA published two NODAs (Notice of Data Availability) (77 FR 34315, June 11, 2012 and 77 FR 34927, June 12, 2012) based on some comments received on the proposed rule and additional analyses. EPA also took public comment on the information in these notices.

A. Data Updates

On the basis of comments received, additional information made available, and further analyses, EPA revised a number of assumptions used in its assessments for the final rule. These included revisions to the engineering costs of options considered in development of the final rule, the information collection costs, the economic analyses, and the benefits analyses. The revised analyses, along with an explanation of how they affected decision making for this final rule, are discussed below.

1. Impingement Data and Performance Standard

Since publishing the proposal, EPA received a substantial number of comments stating the amount of data to develop the proposed impingement mortality performance standard was too limited. EPA received more than 80 additional documents containing impingement and entrainment data. EPA reviewed these materials and found that many documents did not provide useful data. For example, in some cases, a document did not provide useful information because the only data available were the facility name and raw sampling data for a number of different species of fish or shellfish, or both. In other cases, the documents focused on source water characterization data alone. However, after review, EPA identified more than 40 distinct sets of additional impingement sampling and performance data.

EPA also reevaluated and revised the criteria it used for including impingement mortality study data in the impingement mortality performance standard calculations. In calculating the impingement mortality performance standard of § 125.94(c)(7), EPA applied these revised criteria for acceptable data to both the new data and the earlier data used for proposal. EPA's approach for the final rule is similar to that of the proposal. In order to include data in EPA's calculation, for the proposal, EPA applied the following four criteria. First, the data must be specific to the technology under consideration. Second, impingement mortality must have been reported as an absolute number or a percentage of impinged fish that were killed. Third, the data must reflect that the installed technology was operated under conditions that are representative of actual conditions at a facility, and fourth, the reported values must be actual measurements. EPA based the proposed performance standard on the performance of modified traveling screens with a fish return system using a limited definition of the control technology.

In its reevaluation and based on comments, EPA decided to revise some of the criteria and add two new ones. In some cases, the effect of these changes is to relax the criteria and in others, to impose more restrictive criteria. First, all impingement data must be for non-fragile species (including shellfish). Second, the data must be representative of annual mortality data for purposes of deriving an annual performance standard. EPA notes that in contrast to the proposed rule, the permit application does not require submission of the proposed list of "species of concern." EPA found that the term "species of concern" was similar to terms used in the context of T&E (threatened and endangered) species, and may further cause confusion over existing Services or State requirements for such species. Further, despite EPA's efforts to distinguish between species of concern and RIS (representative indicator species) in the NODA (77 FR 34325, June 11, 2012), EPA found that many commenters were still confused by the language. Instead, EPA is adopting the term "fragile species" and using the term exactly as it is used with the impingement mortality data and criteria used in calculating the impingement mortality performance standard of the rule. EPA included a definition for "fragile species" at § 125.92(m), as a species of fish or shellfish that has an impingement survival rate of less than 30 percent. EPA took this approach to ensure that a facility's performance in reducing impingement mortality as demonstrated by collecting biological data would reflect only the effects of its improvements to the CWIS technology, and not be confounded by effects of data collection that are not caused by impingement.

EPA also relaxed the holding time criteria as a result of reevaluating the range of acceptable impingement mortality holding times, which at proposal was limited to 24 to 48 hours. After evaluating the data, EPA concluded that a range of holding times of 18 to 96 hours was acceptable for inclusion in the development of a performance standard because commenters had provided documentation showing that the actual time period typically had little effect on IM rates. At proposal, EPA counted all fish that died at any time during the holding period. For the final rule being promulgated today, EPA excludes those that were dead at time zero because such counts measured immediate deaths and not those organisms that were mortally harmed as a result of impingement. These counts also might reflect already injured, nearly dead, or already dead fish ("naturally moribund") that were impinged by the screen. As a consequence of relaxing the holding times and other requirements, EPA based the performance standard on a larger set of data, with broader geographic representation. (For more information, see DCN 12–6703.) The rationale for these revisions to the data acceptance criteria are described in further detail in the TDD, Chapter 11. Using the revised criteria, EPA reviewed the data in each of the impingement mortality studies for potential inclusion in EPA's evaluation of an impingement mortality performance standard. These changes resulted in an increase in the number of facility data sets acceptable for determining the impingement mortality performance standard, from four data sets at three facilities at proposal to 26 data sets at 17 facilities today. As a result, the 12-month average impingement mortality performance standard of all life stages of fish and shellfish was revised from no more than 12 percent to no more than 24 percent mortality, including latent mortality, for each non-fragile species that is collected or retained in a sieve with maximum opening dimension of 0.56 inches and kept for a holding period of 18 to 96 hours. The revised performance standard and data evaluation criteria are discussed in detail in Section VI and Chapter 11 of the TDD.

EPA also reevaluated its approach to compliance monitoring for the impingement mortality performance standard. In particular, EPA considered the costs and burden of frequent biological monitoring for those technologies that, according to EPA's record, perform equal to or better than

fish populations. The Director may require data collection to demonstrate support for a de minimis level of impingement. In addition, EPA does not expect that a de minimis exemption would apply to facilities with no technology present other than trash racks, a technology that nearly all facilities employ. In making a determination that no additional controls are warranted, the Director may wish to consider factors such as whether the waters are subject to a TMDL for an aquatic life use, the waters are not attaining a designated use, and there would be more than minor detrimental effects on threatened or endangered species or critical habitat. The Director will still establish proper operation and maintenance conditions in the permit whenever making a de minimis finding that no additional controls are warranted. EPA notes that the de minimis provision for impingement does not necessarily mean a facility has a de minimis level of entrainment. The life stages affected by impingement are different than those affected by entrainment, and low counts of impingeable life stages do not always mean the counts of entrained organism are similarly low. Since the entrainment requirements are already determined by the Director for each site, EPA concluded that specific regulatory language for de minimis entrainment was unnecessary.

5. Low Capacity Utilization Units

The Director may consider less stringent controls for intakes dedicated to low capacity utilization rate (CUR) power generating units. If an existing facility has a cooling water intake structure used exclusively for one or more existing electric generating units, each with an annual average capacity utilization rating of less than 8 percent averaged over a 24-month block contiguous period, the owner or operator may request that the Director establish BTA standards for impingement mortality for that cooling water intake structure which are less stringent than § 125.94(c)(1) to (c)(7). When determining the permit's IM requirements associated with the low CUR unit, the Director may consider, after conferring with any appropriate state co-regulators (such as public utility commissioners) and with regional transmission organizations, independent system operators or other planning authorities, the significance of the unit's operation to the overall reliability of electric power in the area.

In addition, in determining the IM requirements associated with a low CUR unit, the Director should consider any seasonal factors for affected species that might justify seasonal limits on the unit's operation, for example any increased impacts resulting from the unit's operation during spawning runs. Also, when considering the presence and potential effects to threatened and endangered species, the Director should consider whether the life stages present at the location are at risk of being impinged or entrained at the low CUR unit's cooling water intake.

In the event that the Director determines less stringent controls for intakes dedicated to low capacity utilization power generating units are appropriate, they should consider, at a minimum, the following in establishing controls:

Strategies for minimizing water withdrawal during stand by periods of operation, startup/shutdown, and on-line periods of operation;

The effectiveness of installing variable speed pump drives to reduce water withdrawals during all periods of operation, particularly during stand-by periods of operation; and

The effectiveness of installing alternative equipment (e.g. behavioral deterrents) to minimize impingement mortality.

The owner or operator would demonstrate whether they have an intake only serving one or more low capacity utilization power generating units in permit application requirements at § 122.21(r)(3) and (8). Under § 122.21(r)(6), the owner or operator would indicate a request that the Director establish alternative BTA standards that are less stringent than § 125.94(c)(1) through (7). EPA recognizes the contribution of peaking units in serving peak electricity demands, and maintaining a reliable electricity grid. However, if peaking units are in standby mode for long periods relative to periods when they are generating electricity, the result is a capacity utilization of the cooling water intake that is greater than the capacity utilization of the generator. Significant periods of standby could contribute to a greater impact on aquatic life. While the 8 percent capacity utilization is an industry standard that distinguishes those units making the greatest contribution to a smoothly functioning electricity grid, a Director may still determine that the impacts to aquatic life are significant enough to deny a request that BTA at that intake should be less stringent than § 125.94(c)(1) to (c)(7). EPA anticipates the Director will have the information necessary to determine BTA in such circumstances based on the permit application requirements, including but not limited to an identification of the number of days the cooling water system is in operation, flow on those days, and seasonal changes in the operation of the system under § 122.21(r)(5) and the biological information under § 122.21(r)(4).

As discussed previously, the Director will determine the BTA for entrainment for low CUR units on a site-specific basis. EPA expects that many of the same factors discussed above—including the significance of the unit's operation to the overall reliability of electric power in the area, the diversity of fuels available for the unit, and the impact of the costs of any potential entrainment requirements on the unit's cooling water intake structure on overall reliability of electric power in the area—will be relevant in making site-specific BTA entrainment determinations for low CUR units. The Director may consider the factors at § 125.98(f)(3) when making these determinations for low CUR units, which includes grid reliability, among other factors.

6. Monitoring

The Director will review any impingement mortality and entrainment monitoring reports submitted by the facility to ensure ongoing compliance. EPA is shifting toward an electronic discharge monitoring report system, and many of the impingement mortality and entrainment standards can be incorporated into the discharge monitoring report itself, rather than requiring a separate report. Except for facilities choosing alternatives § 125.94(c)(7), detailed biological data collection would only be included as part of the facility's permit application submission and not for compliance purposes. The Director has the discretion to request additional information, including inspection of the facility, at § 125.95(d) (*i.e.*, permit application and supporting information requirements) and § 125.96(c) (*i.e.*, additional monitoring requirements).

7. Nuclear Units

The rule includes a provision that permits the owner of a nuclear facility to demonstrate to the Director that compliance with the rule would result in a conflict with safety requirements for their facility. See § 125.94(f). EPA anticipates that this provision would be implemented as follows. Initially, the Director will draft a permit and will share the draft permit with the owner or operator of the nuclear facility. Upon reviewing the draft permit, the owner or operator will determine whether in their view a conflict with a safety requirement established by the Nuclear

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Regulatory Commission, the Department of Energy or the Naval Nuclear Propulsion Program exists. If a conflict exists, the owner or operator should communicate the conflict to the NRC, Department or Program and the Director. In all cases, whether a conflict exists or not, the Director should notify the NRC, Department or Program and the owner or operator of the facility that he or she wishes to informally confer regarding the permit. Such interactions should be scheduled, conducted and documented. Where a conflict is identified, the Director would make a site-specific BTA determination.

F. What are example permit conditions and compliance monitoring for impingement mortality?

As previously discussed, the owner or operator must comply with BTA standards as soon as practicable on a schedule of requirements established by the Director. EPA did not specify dates by which the BTA standards for impingement mortality must be met because the specific method of compliance with the BTA standards for impingement mortality is tied to the determination of BTA requirements for entrainment. Further discussion of this alignment of compliance deadlines is provided in Section A. Today's final rule provides for several methods of compliance with the BTA for impingement mortality. This section discusses each of the methods for compliance, how they follow from the permit application requirements at § 122.21(r), and any minimum monitoring and reporting requirements associated with each method.

1. Closed-Cycle Recirculating System

In this method of compliance, an existing facility must operate a closed-cycle recirculating system as defined at § 125.92(c). The facility would indicate the choice to use this compliance method under § 122.21(r)(6) in its permit application. As specified in § 122.21(r)(1), the facility would need to submit § 122.21(r)(9) through (13), if it exceeds 125 mgd AIF and these requirements are not waived by the Director. The information still required at § 122.21(r)(2) to (8) is considerably less burdensome. The monitoring must be representative of normal operating conditions, and must include measuring cooling water withdrawals, make-up water, and blowdown flows. The facility must monitor actual intake flows at a minimum frequency of daily, or may monitor the representative cycles of concentration at a minimum frequency of daily. These monitoring data would be used by the Director to determine that make-up and blowdown flows have been minimized. The owner or operator would submit these data with their existing DMR or equivalent state report. Facilities complying using closed-cycle cooling are not subject to biological compliance monitoring unless otherwise specified by the Director (see § 125.96(c)).

2. 0.5 Feet per Second Through-Screen Design Velocity

In this method of compliance, the facility must operate a cooling water intake structure that has a maximum design through-screen intake velocity of 0.5 feet per second. The facility must submit information under § 122.21(r) to the Director that demonstrates that the maximum design intake velocity as water passes through the structural components of a screen measured perpendicular to the screen mesh could not exceed 0.5 feet per second. The maximum velocity must be achieved under all conditions, including during minimum ambient source water surface elevations (based on BPJ using hydrological data) and during periods of maximum head loss across the screens or other devices during normal operation of the intake structure.

EPA notes a cylindrical wedgewire screen, in general, is designed for 0.5 feet per second. In Phase II, EPA pre-approved wedgewire screens under specific operational conditions. Today's final rule simplifies the demonstration requirements for a facility employing cylindrical wedgewire screens to that of demonstrating the maximum design through-screen velocity is 0.5 feet per second. As another example, a facility may have pumping and piping constrictions that physically limit the design intake velocity to less than 0.5 feet per second. The Director may choose to establish permit conditions that address the physical limitations of the intake, such as requiring a pump be removed from service, or that only one of two (redundant) pumps may operate at any time. Facilities choosing to comply under this section do not have monitoring requirements under this section.

3. 0.5 Feet per Second Through-Screen Actual Velocity

This method of compliance is similar to the design velocity alternative discussed above, except that the intake's maximum design velocity can exceed 0.5 fps, as long as the intake is operated such that the actual, measured velocity does not. As an example, a facility may have originally been constructed with a maximum design intake of 1.0 feet per second, but now, because it has retired generating capacity but not pumps, may only withdraw cooling water such that the actual intake velocity at the intake never exceeds 0.5 feet per second. This would constitute compliance with the impingement mortality standard. The maximum velocity must be achieved under all conditions, including during minimum ambient source water surface elevations (based on BPJ using hydrological data) and during periods of maximum head loss across the screens or other devices during normal operation of the intake structure.

Monitoring the velocity at the screen face or immediately adjacent to the screen face must be conducted at a minimum frequency of daily. Monitoring of the approach velocity does not meet this requirement. However, in lieu of velocity monitoring at the screen face, the owner or operator may calculate the through-screen velocity using intake water flow, water depth, and the screen open area. EPA is requiring this point of measurement to ensure that fish are actually able to swim away (not into an embayment from which they cannot escape) from the location within the intake structure at which they are most susceptible to being impinged.

Under today's final rule, the Director may authorize the facility to exceed the low velocity compliance alternative for brief periods for the purpose of maintaining the cooling water intake system, such as backwashing the screen face. In this compliance option, facilities are not subject to biological compliance monitoring unless otherwise specified by the Director (see § 125.96(c)).

4. Existing Offshore Velocity Cap

In this method of compliance, facilities will submit information under § 122.21(r) that they operate an offshore velocity cap that meets the definition at § 125.92(v) and that was installed prior to the effective date of this rule. The definition of offshore velocity cap includes the requirement that the velocity cap be located a minimum of 800 feet offshore. The velocity cap must include devices to exclude marine animals, such as bar screens. The velocity cap must be designed to change the direction of water withdraw from vertical to horizontal, thereby creating velocity patterns that can be sensed and trigger an avoidance response by fish and other aquatic organisms. Intake flow must be monitored at a minimum frequency of daily. This information will confirm the intended velocity patterns are created. In this compliance option, facilities are not subject to biological compliance monitoring

requirements established by the Director pursuant to § 125.98(b)(7).

(5) For cooling water flows excluded by paragraph (e)(3) of this section, the Director may establish additional BTA standards for impingement mortality and entrainment on a site-specific basis.

(f) *Nuclear facilities.* If the owner or operator of a nuclear facility demonstrates to the Director, upon the Director's consultation with the Nuclear Regulatory Commission, the Department of Energy, or the Naval Nuclear Propulsion Program, that compliance with this subpart would result in a conflict with a safety requirement established by the Commission, the Department, or the Program, the Director must make a site-specific determination of best technology available for minimizing adverse environmental impact that would not result in a conflict with the Commission's, the Department's, or the Program's safety requirement.

(g) *Additional measures to protect Federally-listed threatened and endangered species and designated critical habitat.* The Director may establish in the permit additional control measures, monitoring requirements, and reporting requirements that are designed to minimize incidental take, reduce or remove more than minor detrimental effects to Federally-listed species and designated critical habitat, or avoid jeopardizing Federally-listed species or destroying or adversely modifying designated critical habitat (e.g., prey base). Such control measures, monitoring requirements, and reporting requirements may include measures or requirements identified by an appropriate Field Office of the U.S. Fish and Wildlife Service and/or Regional Office of the National Marine Fisheries Service during the 60 day review period pursuant to § 125.98(h) or the public notice and comment period pursuant to 40 CFR 124.10. Where established in the permit by the Director, the owner or operator must implement any such requirements.

(h) *Interim BTA requirements.* An owner or operator of a facility may be subject to interim BTA requirements established by the Director in the permit on a site-specific basis.

(i) *More stringent standards.* The Director must establish more stringent requirements as best technology available for minimizing adverse environmental impact if the Director determines that compliance with the applicable requirements of this section would not meet the requirements of applicable State or Tribal law, including compliance with applicable water quality standards (including designated uses, criteria, and antidegradation requirements).

(j) The owner or operator of a facility subject to this subpart must:

(1) Submit and retain permit application and supporting information as specified in § 125.95;

(2) Conduct compliance monitoring as specified in § 125.96; and

(3) Report information and data and keep records as specified in § 125.97.

§ 125.95 Permit application and supporting information requirements.

(a) *Permit application submittal timeframe for existing facilities.* (1) The owner or operator of a facility subject to this subpart whose currently effective permit expires after July 14, 2018, must [illegible] Director the information [illegible] he applicable provisions of [illegible]1(r) when applying for a subsequent permit (consistent with the owner or operator's duty to reapply pursuant to 40 CFR 122.21(d)).

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(2) The owner or operator of a facility subject to this subpart whose currently effective permit expires prior to or on July 14, 2018, may request the Director to establish an alternate schedule for the submission of the information required in 40 CFR 122.21(r) when applying for a subsequent permit (consistent with the owner or operator's duty to reapply pursuant to 40 CFR 122.21(d)). If the owner or operator of the facility demonstrates that it could not develop the required information by the applicable date for submission, the Director must establish an alternate schedule for submission of the required information.

(3) The Director may waive some or all of the information requirements of 40 CFR 122.21(r) if the intake is located in a manmade lake or reservoir and the fisheries are stocked and managed by a State or Federal natural resources agency or the equivalent. If the manmade lake or reservoir contains Federally-listed threatened and endangered species, or is designated critical habitat, such a waiver shall not be granted.

(b) *Permit application submittal timeframe for new units.* For the owner or operator of any new unit at an existing facility subject to this subpart:

(1) You must submit the information required in 40 CFR 122.21(r) for the new unit to the Director no later than 180 days before the planned commencement of cooling water withdrawals for the operation of the new unit. If you have already submitted the required information in your previous permit application, you may choose to submit an update to the required information.

(2) The owner or operator is encouraged to submit their permit applications well in advance of the 180 day requirement to avoid delay.

(c) *Permit applications.* After the initial submission of the 40 CFR 122.21(r) permit application studies after October 14, 2014, the owner or operator of a facility may, in subsequent permit applications, request to reduce the information required, if conditions at the facility and in the waterbody remain substantially unchanged since the previous application so long as the relevant previously submitted information remains representative of current source water, intake structure, cooling water system, and operating conditions. Any habitat designated as critical or species listed as threatened or endangered after issuance of the current permit whose range of habitat or designated critical habit includes waters where a facility intake is located constitutes potential for a substantial change that must be addressed by the owner/operator in subsequent permit applications, unless the facility received an exemption pursuant to 16 U.S.C. 1536(o) or a permit pursuant to 16 U.S.C. 1539(a) or there is no reasonable expectation of take. The owner or operator of a facility must submit its request for reduced cooling water intake structure and waterbody application information to the Director at least two years and six months prior to the expiration of its NPDES permit. The owner or operator's request must identify each element in this subsection that it determines has not substantially changed since the previous permit application and the basis for the determination. The Director has the discretion to accept or reject any part of the request.

(d) The Director has the discretion to request additional information to supplement the permit application, including a request to inspect a facility.

(e) *Permit application records.* The owner or operator of a facility must keep records of all submissions that are part of its permit application until the subsequent permit is issued to document compliance with the requirements of this section. If the Director approves a request for reduced permit application studies under § 125.95(a) or (c) or § 125.98(g), the owner or operator of a facility must keep records of all submissions that are part of the previous permit application until the subsequent permit is issued.

(f) In addition, in developing its permit application, the owner or operator of an existing facility or new unit at an existing facility must, based on readily available information at the

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Notice of Receipt and Availability of Application for Renewal of Diablo Canyon Nuclear Power Plant License

Comment On: NRC-2009-0552-0026
Diablo Canyon Power Plant, Units 1 and 2; Notice of Intent to Prepare an Environmental Impact Statement

Document: NRC-2009-0552-DRAFT-0063
Comment on FR Doc # 2015-15921

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Submitter Information

70

Name: Gene Nelson

General Comment

I Gene Nelson, Ph.D. serve as the Government Liaison for Californians for Green Nuclear Power http://www.CGNP.org. Attached find a relevant file in support of the renewal of the license application for Diablo Canyon Plant, Units 1 and 2.
The Docket Number is NRC-2009-0552.

Attachments

How Nuclear Retirements Might Undermine Clean Air Progress 08 19 15

The commenter submitted a report entitled When Nuclear Ends: How Nuclear Retirements Might Undermine Clean Power Plan Progress. The report is available at the following website:
http://www.thirdway.org/report/when-nuclear-ends-how-nuclear-retirements-might-undermine-clean-power-plan-progress

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General Comment

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Attachments

SLO Tribune Acknowledges CGNP Advocacy for DCPP 08 05 15

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The above-the-fold headline for this front-page article in the Thursday, August 6, 2015 print edition of the San Luis Obispo Tribune was "Diablo hearings focus on environment."

Musician David Crosby among speakers at Diablo Canyon hearing

By David Sneed

http://www.sanluisobispo.com/2015/08/05/3750796_diablo-canyon-nuclear-power-nrc.html

dsneed@thetribunenews.com August 5, 2015 Updated 5 hours ago (7:00 PM PDT)

Diablo Canyon nuclear power plant

JOE JOHNSTON — jjohnston@thetribunenews.com

The text of this article has been redacted.

GAN Comment at Midnight 08 06 15

Thank you, David including in your reporting the pro-DCPP advocacy of Californians for Green Nuclear Power http://www.CGNP.org . We are an environmentally-conscious citizen group that appreciates the abundant, reasonably-priced emissions-free power from DCPP. Our group includes many technical professionals. As a NRC meeting speaker and the lead CGNP spokesman, I noted a spirited dialogue between plant advocates and opponents. I believe that this "give and take" has been lacking in many previous NRC meetings with plant opponents making most of the comments. 097-L071-1 cont'd

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Name: Gene Nelson

General Comment

I Gene Nelson, Ph.D. serve as the Government Liaison for Californians for Green Nuclear Power http://www.CGNP.org. Attached find a relevant file in support of the renewal of the license application for Diablo Canyon Plant, Units 1 and 2.
The Docket Number is NRC-2009-0552.

Attachments

Diablo desal water could flow to taps 08 26 15
097-L072-1

SUNSI Review Complete
Template = ADM – 013
E-RIDS= ADM -03
Add= M. Wentzel (MSW2)

Plan to pipe Diablo Canyon's desalinated water to South County moves forward

097-L072-1
cont'd

This article was the above-the-fold headline article on August 26, 2015 with the headline, "**Diablo desal water could flow to taps**." Archived 08 29 15 by Gene A. Nelson, Ph.D.

By David Sneed dsneed@thetribunenews.com August 25, 2015

http://www.sanluisobispo.com/2015/08/25/3777708_desalinated-water-diablo-canyon.html

The text of this article has been redacted.

Comment 3 of 3:

097-L072-1 cont'd

Lynette Tornatzky ·

UCLA

A good El Niño this year will NOT solve the water problem in Los Osos.

"Public response to the pipeline project was mixed." Yup. Most of the naysayers were the very same people who fought the Los Osos sewer tooth and nail, giving us a sewer project $29 million more than the last one, delaying significant water conservation by 8+ years. I would not put any stock in what they say—especially since they are the ones saying the water plan we do have does not adequately address drought!!

This drought may go on for years, take a year off and then come back. We are past the point on thinking we can conserve our way out of this. We have one water source, that's it. People with private wells are still planting lawns on their property here in LO with nothing to stop them.

Aug 25, 2015 8:14pm

Mike Morgan ·

Julian High

Hopefully the present CSD will work hard on getting water to Los Osos, rather than standing in the way of any sorely needed infrastructure as did the infamous LOCSD of the past who took control of Los Osos; just as the insane took control of the ayslum of Doctor Feather, and Mr.Tarr in Sothern France as referenced from a tale by Edgar Allen Poe.

It is imperative that Los Osos get a pipe line to Naciamento water. Its absolutely a no brainer. This piped in water could be used in conjunction with the Los Osos water basin giving the basin much needed relief.

This is vision...thinking five minutes ahead; without vision you perish.

http://www.sanluisobispo.com/2015/08/29/3782828/how-we-can-permanently-fix-slo.html

097-L072-1
cont'd

How we can permanently fix SLO County's water problems

August 29, 2015 Updated 14 hours ago Emphasis for option 1 added by Gene A. Nelson, Ph.D.

The text of this article has been redacted.

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Notice of Receipt and Availability of Application for Renewal of Diablo Canyon Nuclear Power Plant License

Comment On: NRC-2009-0552-0026
Diablo Canyon Power Plant, Units 1 and 2; Notice of Intent to Prepare an Environmental Impact Statement

7/1/2015
80 FR 37664

83

Document: NRC-2009-0552-DRAFT-0077
Comment on FR Doc # 2015-15921

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RULES AND DIRECTIVES BRANCH USNRC

Submitter Information

Name: Gene Nelson

General Comment

I Gene Nelson, Ph.D. serve as the Government Liaison for Californians for Green Nuclear Power http://www.CGNP.org.
Attached find a relevant file in support of the renewal of the license application for Diablo Canyon Plant, Units 1 and 2.
The Docket Number is NRC-2009-0552.
This just-published article by nuclear scientist James Conca, Ph.D. underscores the myriad damages to the biosphere being caused by anthropogenic climate change. Most of the adverse changes are closely connected with the burning of fossil fuels, including so-called "clean" natural gas. Instead, the U.S. should be aggressively expanding the use of nuclear power, with appropriate weight being given to the emissions-free and carbon-free nature of nuclear power.

097-L074-1

Attachments

Climate Change Heating Oceans and Rivers - Conca 08 31 15

SUNSI Review Complete
Template = ADM – 013
E-RIDS= ADM-03
Add= [illegible]

http://www.forbes.com/sites/jamesconca/2015/08/31/climate-change-has-got-the-earth-in-hot-water/print/
Archived 08 31 15 by Gene Nelson, Ph.D.

Forbes http://onforb.es/1fQNHln

097-L074-1
cont'd

James Conca Contributor

I write about nuclear, energy and the environment

Opinions expressed by Forbes Contributors are their own.

ENERGY 8/31/2015 @ 6:00AM | 2,973 views

Climate Change Has Got The Earth In Hot Water

Comment Now

The text of this article has been redacted.

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Comment On: NRC-2009-0552-0026
Diablo Canyon Power Plant, Units 1 and 2; Notice of Intent to Prepare an Environmental Impact Statement

Document: NRC-2009-0552-DRAFT-0071
Comment on FR Doc # 2015-15921

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77

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Submitter Information

Name: Gene Nelson

General Comment

I Gene Nelson, Ph.D. serve as the Government Liaison for Californians for Green Nuclear Power http://www.CGNP.org.
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The Docket Number is NRC-2009-0552.

Attachments

SLO County hopes to tap Diablo's desal water 08 02 15

SUNSI Review Complete
Template = ADM – 013
E-RIDS= ADM-03
Add= M. Wentzel (MSW2)

Santa Maria Times.com

097-L080-1

SLO County hopes to tap Diablo's desal water

072815Diablo and Desal01.jpg

Daniel Dreifuss, Staff

The text of this article has been redacted.

Tom Jones, Pacific Gas and Electric Co.'s director of government relations, explains how Diablo Canyon Power Plant's desalination plant works. San Luis Obispo County and PG&E are working together to explore the possibility of utilizing excess water from the plant as a supplemental source for the county.

August 02, 2015 12:00 am • By April Charlton

This article was featured as the lead above-the-fold headline article in the 02 August 2015 print edition of the *Santa Maria Times* with the headline, " SLO County eyeing Diablo's desal water."

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78

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Diablo Canyon Power Plant, Units 1 and 2; Notice of Intent to Prepare an Environmental Impact Statement

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Submitter Information

Name: Gene Nelson

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I Gene Nelson, Ph.D. serve as the Government Liaison for Californians for Green Nuclear Power http://www.CGNP.org.
Attached find a relevant file in support of the renewal of the license application for Diablo Canyon Plant, Units 1 and 2.
The Docket Number is NRC-2009-0552.

Attachments

Desal could be on tap for south SLO County 08 26 15

SUNSI Review Complete
Template = ADM – 013
E-RIDS= ADM-03
Add= Tim Wentzel (TJW5W2)

Santa Maria Times.com

097-L081-1

Desal could be on tap for south SLO County

072815Diablo and Desal02.jpg

Daniel Dreifuss, Staff

San Luis Obispo County and Pacific Gas and Electric Co. are exploring the possibility of using water produced by the nuclear power plant's desalination facility as a supplemental water source for the county.

August 26, 2015 12:00 am • By April Charlton

http://santamariatimes.com/news/local/desal-could-be-on-tap-for-south-slo-county/article_9c0297bc-f54f-5e7e-82ea-76156bce0f5e.html

The text of this article has been redacted.

PARTICIPANT: Shut --

DR. NELSON: Stop.

MR. HAGAR: Let's let each speaker speak without interruption, okay?

DR. NELSON: Did you stop the timer?

PARTICIPANT: I did.

DR. NELSON: Thank you. My comments focus on the clean air in western San Luis Obispo County, specifically the lack of ozone pollution highlighted by the US EPA and the California EPA. Instead, these agencies highlight the ozone pollution in the L.A. air basin and the San Joaquin Valley from burning fossil fuels. This ozone pollution exacts a toll on the health of the very old and the very young. The California EPA has developed a tool, the Cal Enviroscreen 2.0, that highlights the social justice impacts of burning fossil fuels and making ozone. Here's Los Angeles, minority communities being harmed. This information will be all submitted electronically to the NRC. When SONGS was shut down in early 2012, fossil fuel generation increased dramatically, increasing the ozone burden dirty coal-fired power imperils. Imports also increased for the respiratory health of Californians in the red zones that I've shown you. Diablo Canyon's license should be renewed. Thank you. 097-T001-18

this country, which is renewable energy.

And when you look at relicensing anything like this, you need to look at the economic and ecological impacts of the transition from an old decrepit nuclear power plant like Diablo into the world of solar panels, wind power and all the stuff that actually does work and will create an environment in the future where our children and grandchildren can survive.

Thank you very much for your time. Shut them down.

(Applause)

MR. HAGAR: Okay. Dr. Nelson and then Rochelle Becker.

MS. BECKER: I'm waiving my time.

MR. HAGAR: Okay. I understand Rochelle Becker is skipping her time. Tom Campbell will be next then. Is Tom Campbell here?

DR. NELSON: Good evening. My name is Dr. Gene Nelson. I served on the Cal Poly Engineering Faculty. And currently serve in the Cuesta College Physical Sciences Faculty.

Critical thinking is really, really important. And I strongly endorse any efforts to encourage critical thinking. And I understand in fact

097-T002-10

that the NRC places great emphasis on critical thinking as opposed to appeals to emotion.

097-T002-10 cont'd

Human imagination can dream up all kinds of scary things. But we have to look at hard facts and hard reality. And clearly, the Diablo plant has worked very, very well.

We had earlier today a large group of folks wearing similar green shirts. And this was representative of the strong community support for the plant. The plant produces clean, reliable, low cost nuclear power.

And my comments are going to focus on one of the elements of the cleanliness of that power. Specifically, the lack of ozone pollution.

Here we have a nationwide map that will be submitted to the NRC from the US EPA. You'll note that San Luis Obispo County, particularly the western portion has no ozone pollution.

Ozone comes from burning fossil fuel. And fossil fuel is what's being burned in abundance in this state. It's impairing the health of the very old and the very young. Those are the most vulnerable in our populations.

And we have to look at the ozone problem. Again, ozone combustion. And what happened after San

Onofre was shut down? Which omitted nothing to produce ozone. Well, ozone's gone up in southern California. That's bad news.

097-T002-10 cont'd

So, what do we have here? We have ozone pollution. Here's a better view of ozone pollution in California. The orange zones. That's the San Joaquin Valley. That's the LA air basin.

And again, we have a combination of fixed sources, including fossil fuel power plants. And we have, obviously, lots of vehicles.

And the California EPA has developed a tool called the Cal Enviro Screen 2.0. I recommend it highly. That's Cal Enviro Screen 2.0. You can Google it.

And it highlights the social justice impacts of all of this ozone pollution. Because the red zones here, and this is for Los Angeles area, the red zones here for the San Joaquin Valley, those are places where people are least prepared to mitigate the harms of ozone because of either being minorities or being impoverished.

They don't have the way -- oh, let's just pick up and go out to the coast. No, they can't do that. This is where they live. This unfortunately is also where they die.

And we need to stop this needless slaughter of Californians. So again, we need to renew the license of this plant. Thank you very much. 097-T002-10 cont'd

(Applause)

MR. HAGAR: Okay, let me ask again, is Rochelle Becker here? Oh, you -- you told me that, thank you. Tom Campbell? Paula Ash? Nancy Graves?

And following Nancy will be David -- no, David Crosby's not here again, is he? Yes, he was here earlier. And the Diane Koletzke.

Okay. You're up next.

MS. GRAVES: I thought I'd get to sit down.

MR. HAGAR: And then Sherry -- Sherry Lewis, you'll be next.

MS. GRAVES: Good evening. I'm Nancy Graves. I live about seven miles downwind of Diablo Canyon. I'm a Board Member and the Interim Board Chair for ECOSLO, the Environmental Center of San Luis Obispo.

ECOSLO has been cherishing and protecting this corner of the earth for over 40 years. Over the last three years the ECOSLO has also been responsible for documenting and cleaning up Fukushima marine debris.

I read a quote recently by Albert Einstein. He said splitting the atom changed everything but the

On behalf of French Hospital Medical Center, we appreciate the presence of PG&E in our community and we are grateful for its ongoing support of local non-profits. PG&E continues to be a good community partner and a strong community asset. We, therefore, support the license renewal and ongoing operations of PG&E.

098-L033-1

Debby Nicklas
Vice President, Philanthropy
French Hospital Medical Center

My name is Greg Odom. I am a citizen of northern Santa Barbara County, a father of two beautiful 099-T002-69 daughters and a recent Cal Poly graduate with a degree in economics and environmental science.

I was sitting on my couch unemployed on March 11, 2011 watching TV when I saw the disaster at Fukushima unfold. Knowing we have two similar reactors just over the hill, I decided to enroll in Allan Hancock College.

I got my degree in business. Transferred to Cal Poly and got my degree in economics. The reason I chose economics is because I believe that the world is predominantly ran by business interests and everything is labeled on a cost benefit basis.

One of the things that I wanted to look at in my senior project, which I have right here, is the social welfare analysis on the cost benefit analysis of nuclear powered electrical production at Diablo Canyon.

And my scientific findings found that the nuclear power electrical production is inefficient at best. Reckless and dangerous at worst.

And if I am using data from the Unified California Earthquake Rupture Forecast form 2007 and compared it to the same Unified California Earthquake Rupture Forecast released in 2014, my data analysis

shows an increased risk of 31 percent higher risk today then there was from the NRC's one in 23,810 odds that were given on an earthquake strong enough to cause core reactor damage.

099-T002-69 cont'd

If we were to extrapolate that percentage increase over the extended life of a plant until 2045, by 2045 that risk would be somewhere in one in 200. And I'm just wondering how low does that risk have to get before the NRC wakes up and actually does their job and protects the public.

Thank you.

(Applause)

MR. HAGAR: Okay. Hold on Margaret. Margaret is the last speaker I have a card for.

So as she's speaking, you decide -- the rest of you decide if there's anything more you want to say. You'll have an opportunity when she's finished.

MS. CARMAN: Hello. Is this okay? Hi, I'm Dr. Margaret Carman. And I'm a chiropractor in San Luis Obispo. I've practiced here for 23 years.

And first I want to say, thank you Ms. DiPeri. Thank you. And I want to try to appeal to these people on a different realm then just criminal charges.

I had yet another patient I found out

forward with more nuclear energy until we figure out a way to deal with the waste.

That's a big part of our collective denial. We keep building more plants and creating more waste. And I don't know if it's up to the Federal agencies or State policy. But we've got to deal with the waste before we make more waste.

Thank you.

(Applause)

MR. HAGAR: And the next speaker will be Joseph Mirabile. Is that right, Joseph?

MS. OLIVER: Oh, it's this right here. Thank you. Good evening. I'm Kathy Oliver. I'm a citizen and a rate payer.

And as a citizen and a rate payer from this county, I believe that the health of the smallest organism contributes to that of all of us. However, my sole provider of electricity, Pacific Gas & Electric Corporation, believes in making a profit, as is appropriate for a corporation. 100-T002-29

Protection of the marine life at the base of the food chain has not been reviewed as profitable by PG&E. PG&E's Diablo Canyon facility sucks in and kills more then a billion fish in the early life stages during its daily cycle.

The cooling system sucks in 2.1 billion gallons of sea water and marine life every day to cool the reactors. It sends this water back to the ocean 20 degrees hotter. 100-T002-29 cont'd

PG&E concealed data and minimized the effects of this heating and killing cycle until 2000 when it finally released data showing extensive deterioration of the already threatened black and red abalone population in waters around the reactor. The data also revealed catastrophic deterioration to biologically important marine communities.

So, you, the NRC, you're not a corporation dedicated to profit making. The profit benefit ratio of cooling systems is not in your mission.

Regardless of the cost, I believe it's your duty to require modern cooling towers to be in place before you consider relicensing Diablo Canyon. Thank you.

(Applause)

MR. HAGAR: After Joseph the speaker will be Ellen Lodge. Ellen are you here?

MS. LODGE: Yes.

MR. HAGAR: Okay.

MR. MIRABILE: Well, besides earthquakes, a major concern of mine is the protection of the nuclear

efficiency would achieve the same outcome with a much lower environmental and consumer friendly impact."

Make a note, Breakthrough Institute. Your 2009 GEIS insisted that "to serve as a source of commercial power photovoltaic systems and concentrating solar power systems would need to work in conjunction with energy storage systems such as batteries."

We hereby challenge that out of date generic conclusion. And note that the EIS should acknowledge the April 2015 introduction by Tesla of affordable residential and industrial battery storage systems.

The implications of this technology has widespread acceptance. And its projected growth to become a $19 billion industry by 2017.

If the EIS does not incorporate such an analysis, we will know that the NRC has again chosen to remain strategically out of date so as to exclude viable alternatives to license renewal. Thank you.

(Applause)

MR. HAGAR: Maybe I just skipped your card.

MS. OWEN: Should I just go?

MR. HAGAR: Yes, go ahead.

MS. OWEN: Thank you. Good evening and 101-T002-59

welcome NRC to our beautiful area. First I wanted to remind you of your mission statement, which is to protect public health and safety. You got that. 101-T002-59 cont'd

Promote common defense and security. You got that. And protect the environment. So, I'm glad you're here and that hopefully we can come to some agreements.

One, I understand that we've spent six years now going over this whole relicensing dance. We've had so many different meetings that I'm just -- I'm concerned that we're wasting a lot of time.

I think what we are looking at is we need to amp down Diablo. It's an old, deteriorating plant that is not going to be made safe without throwing thousands -- millions and millions of dollars at it I'm sorry, I'm nervous.

And at the same time, right -- I took the tour with the Coastal Commission. There's nothing solar at that site. And why is that? We have technology that should be installed and it could be co-generating.

PG&E is irresponsible as far as I'm concerned with doing nothing to actually add in and reduce the amount of nuclear waste they produce out there every day.

So, I'm asking -- my concerns are that this is a dangerous world. The worry of a terrorist event or a major accident of some kind or a major earthquake event, we're in trouble. 101-T002-59 cont'd

There's -- you can say uh-oh, and oops. But, that does not -- is irresponsible in the fact that we can start closing this plant down. Give it the then years it takes.

And in the meanwhile we have the wind generators that are up in Salinas. If you haven't seen them, they're amazing and they are creating one megawatt of power each. They've got two of them now.

How many would it take to put on our coastline here? I think the Coastal Commission would much rather see wind energy and solar energy and wave generation then to continue trying to play this game. It's just a big waste of everybody's time.

And every month that goes by, every year that goes by, we're getting no closer to an answer. All we're doing is postponing whether we're going to let one study or another trump.

And who's going to make those decisions in the end? You've heard from this public. We have -- you've heard so many different reasons. And I just beg that you really consider that this plant is done

for.

101-T002-59 cont'd

It's lived its long life. We've already had to put, I've forgotten, $600 thousand into replacing some of the parts already. It's going to do nothing but drain us of finances.

And as far as jobs go, give our employees at Diablo a safe place to work. Thank you.

(Applause)

MR. HAGAR: And now, after Vita Kathi DiPeri.

MS. MILLER: Hi, I'm Vita Miller.

MR. HAGAR: Vita, pardon me.

MS. MILLER: Okay. Well, a lot of what I wanted to say has been said. But, I will mention that I was at an NRC hearing back in -- some of the Mothers for Peace here can remind me, maybe it was '80/'81.

And I do remember we were given great reassurances by the NRC at that time of the safety of the nuclear power industry. Many of us were skeptical.

We were particularly skeptical because of the revolving door policy of the NRC many who come from the nuclear energy. And I don't know if that's true of any of you, so I don't know. I haven't looked that up.

But, my main concern, and I also marked at Diablo, was not arrested. My children, my husband and

MR. OWEN: Hello, my name is Rick Owen, and I am another out-of-towner, hopefully not a fearmonger. I'm from Pacifica, California. I came down here today. I want to thank the NRC for taking comments from the public. My comment is really to reiterate how important it is for the NRC to make sure that should this license not be renewed that they fully appreciate and take into the account the real impact, not the theoretical impact, the real impact of the generation that will be required, from fossil fuel sources, to take up the slack of this amazing technological wonder that is Diablo Canyon Generation Plant. 102-T001-39

That is the main item that I have to say for the NRC, and I'll make my presentation very short. That is what I really -- as a citizen of California, I will hold the NRC accountable to do exactly that. If you do, then there is no doubt about the relicensing of this facility. That should take into the account, for sure, the ocean acidification that is for sure will take place should this generation capability be taken offline.

That's my main comment to make. The other thing that I'd like to say just for the audience here is that there is a new generation, politically, of young people that are re-assessing nuclear power. They do it with fresh eyes, and they do it without any preconceived 102-T001-40

notions that maybe came out of the Cold War. Their assessment is going to be very different than what, perhaps, my generation had in the 1970s, and it's going to be very refreshing because it will do everything that is necessary to turn the whole global warming situation around. It's an amazing technology, and we should all learn more about it. The more you know, the more that you will appreciate that it is the solution to our problems today. Thank you. 102-T001-40 cont'd

MR. HAGAR: Okay, our next speaker will be Dr. Alexander Cannara, is that right?

MR. GLOEGE: Hi, my name is William Gloege. I founded Californians for Green Nuclear Power. I'm very proud that I did that. I really am very proud I founded that group. We have four PhDs. We have an engineer that helped build the plant. We have laypeople that are professionals. Let me say, first of all, we have no animosity towards people that are here.

I think all the people talking against nuclear power have good faith and a good heart, and they think they're doing the right thing. They're thinking they're helping in the best way. But let me say a little more. I started this because of my grandchildren. I've got two grandchildren. One is 8, and one is 10, and they're really cute little kids. The boy, 8, is a

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58

Comment On: NRC-2009-0552-0026
Diablo Canyon Power Plant, Units 1 and 2; Notice of Intent to Prepare an Environmental Impact Statement

Document: NRC-2009-0552-DRAFT-0051 7/1/2015
Comment on FR Doc # 2015-15921 80FR37664

RECEIVED 2015 SEP -1 PM 5:19 RULES AND DIRECTIVES BRANCH USNRC

Submitter Information

Name: Mark Parson

General Comment

I can't believe after Fukushima that you would even consider it
decommission nuclear power plants in California at least have one clean state do not give the permit to Diablo Canyon
That would be insane

103-L058-1

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Comment On: NRC-2009-0552-0026
Diablo Canyon Power Plant, Units 1 and 2; Notice of Intent to Prepare an Environmental Impact Statement

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Comment on FR Doc # 2015-15921

69

Submitter Information

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80FR 37664

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General Comment

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Diablo Canyon Power Plant, Units 1 and 2; Notice of Intent to Prepare an Environmental Impact Statement

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Comment on FR Doc # 2015-15921

66

Submitter Information

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7/1/2015
80FR 37664

RECEIVED
2015 SEP -1 PM 5:20
RULES AND DIRECTIVES BRANCH USNRC

EPDS = ADM-03
Add = mw, wenzinger (MSW2)

General Comment

Diablo Canyon sits on the confluence of 13 earthquake faults, is a dire threat to millions of lives and gets more dangerous with every tick of the doomsday clock. Re-licensing Diablo Canyon would also serve as an excuse to extend the life of a power plant that really represents only death. Death to people, plankton, and all organisms who dwell within the 2.5 billion gallons of seawater sucked into the once through cooling intake on a daily basis.

105-L066-1

This intake itself is so destructive to our ocean it is about to be shut down forever for lack of meeting best available technology standards. Diablo is attempting a sleight of hand called 'enshrinement' to keep their obsolete, 1950's technology intake in operation by playing the desal-drought card and dealing it from the bottom of the deck.

Plant owner PG&E is currently undergoing a broad investigation which will drastically change the company.

105-L066-2

A company who couldn't be trusted with seismic testing, couldn't be trusted by Erin Brockovich and the poor people of Hinckley, couldn't be trusted with the lives of the more than a half-dozen people they incinerated in San Bruno, and they can't be trusted to provide electricity or safe drinking water for your family.

SUNSI Review Complete
Template = ADM-013

Much to the contrary, these people belong in prison for the crime of creating 500 lbs of nuclear waste every day- a crime which they are committing against people who won't even be born for another 250 thousand years. 105-L066-2 cont'd

"Where were you when Diablo Blew?"

Joey Racano
1487 Nipomo ave
Los Osos, Calif 93402

Bonnie Raitt

August 5, 2015

Honorable Commissioners:

Good afternoon, my name is Bonnie Raitt.

Thank you for letting us submit this testimony today. As I'm sure you're aware, your responsibility for regulating these two reactors affects us all.

Having lived within a few hours drive of Diablo Canyon since its beginning, I have been deeply concerned about the safety and viability of the reactors in light of past and now recent seismic studies pointing to the dangers of the plant being in such close proximity to several significant earthquake faults.

As Californians, we are all worried about the devastation the radiation from Diablo could bring in the event of an earthquake or terrorist attack.

We are counting on you to protect us and appreciate you considering the points we feel compelled to make here today.

Now that renewable energy is so much cheaper than nuclear, we wonder why the plant is operating at all.

106-L039-1

Renewables can easily supplant all the energy Diablo produces. They will also create far more jobs than are currently sustained at the plant.

We're concerned about the good people still working at Diablo, but we know many of them could stay on to decommission the reactors once their time comes to an end.

P.O. Box 626, Los Angeles, California 90078

Bonnie Raitt

The owners of Fukushima repeatedly assured the public that its American-made reactors would withstand an earthquake and a tsunami.

106-L039-2

Neither was true.

Why would we believe the same assurances about Diablo?

We are told that because Diablo is on a high bluff, it won't be affected by a tsunami.

But the intake pipes are at sea level. Please explain to us how they are protected.

We have also seen at Fukushima that the owner, Tokyo Electric Power, has not been held financially responsible for the damage it's done to the health and property of people in the area.

106-L039-3

In fact, thanks to government bailouts, Tepco has turned Fukushima into a profit center.

Because of the Price-Anderson Act, that would likely be the case at Diablo Canyon as well.

If there's a major catastrophe at Diablo, PG&E has very limited liability.

And if put in charge of the clean-up, even after a terrible accident like Fukushima, the company could continue to make money. Tepco certainly has.

In that context, why would we ever believe PG&E can be trusted to keep those reactors safe?

P.O. Box 626, Los Angeles, California 90078

Bonnie Raitt

We also know that the 2200 megawatts Diablo produces will be quickly replaced with solar and wind power, and that those renewable sources will create far more jobs than there are now at Diablo.

106-L039-4

Shutting it down will mean that jobs for solar installers, wind power technicians and the like will multiply to fill the gap.

In the meantime, we have to ask you: Why is Dr. Michael Peck not being listened to?

And why is he no longer working at Diablo Canyon?

106-L039-5

Dr. Peck was your own top inspector at the site. As we all know, he has warned that Diablo can't withstand the shocks that could be easily delivered by the dozen fault lines in the area.

Those fault lines had not been discovered before construction began in 1968.

The Hosgri was found by Shell Oil while Diablo was being built.

The rest we learned about later.

106-L039-6

The newly found Shoreline Fault crosses within less than a thousand yards of the reactor cores.

How can we believe that Diablo is strong enough to withstand earthquakes coming from these fault lines if they were not accounted for in the original blueprints and final construction more than 40 years ago?

We know that Diablo is just 45 miles from the San Andreas fault. The quake that destroyed Fukushima was twice that distance from the reactors there.

P.O. Box 626, Los Angeles, California 90078

Bonnie Raitt

There's no time today to discuss the NRC's cozy relationship with the industry it's supposed to regulate. That would take hours. 106-L039-7

So given our limited time here, we want to urge you to finally act as truly independent regulators. We ask you to put the health and safety of the public first....ahead of the short-term needs of PG&E, ahead of the agenda of the nuclear power industry.

It's worth noting again:

Dr. Michael Peck is clearly the expert who knows most about Diablo's ability to withstand an earthquake. 106-L039-8

He does not believe it can.

Why was he removed from his position here? And why isn't he being listened to?

For the safety of California, we ask you to shut Diablo now. 106-L039-9

Thank you for this opportunity to speak strongly and from my heart.

END

P.O. Box 626, Los Angeles, California 90078

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Docket: NRC-2009-0552
Notice of Receipt and Availability of Application for Renewal of Diablo Canyon Nuclear Power Plant License

Comment On: NRC-2009-0552-0026
Diablo Canyon Power Plant, Units 1 and 2; Notice of Intent to Prepare an Environmental Impact Statement

Document: NRC-2009-0552-DRAFT-0037
Comment on FR Doc # 2015-15921

7/1/2015 (44)
80 FR 37664

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2015 SEP -1 PM 5:16
RULES AND DIRECTIVES BRANCH USNRC

Submitter Information

Name: Ethan Ramirez

General Comment

Do not reactivate the Diablo Canyon Power Plant and put Californians and the ocean in grave danger. The have been many large earthquakes in 2015 and it will only get worse now that we have badly depleted the water table. Insanely, Diablo Canyon Power Plant was built on a fault. There is no clean up plan if there is a meltdown, the area and wherever the water goes will just be radioactive for thousands of years. It would be the direct karmic fault of the people who decided to turn it back on, knowing that worse case scenario would cause a horrific earth shattering disaster. Do the right thing, find non-dangerous, green forms of energy and do not reactivate Diablo Canyon Power Plant! 107-L043-1

SUNSI Review Complete
Template = ADM – 013
E-RIDS= ADM-03
Add= M. Wentzel (MJW2)

MS. REPLEI: Good afternoon, everyone. Can you hear me okay?

PARTICIPANT: Yes.

MS. REPLEI: Okay. My name is Ellie Replei. Thank you for allowing me to speak. I am a retired, 23-year veteran, as a tour guide of Diablo Canyon. What I'm speaking about is from up close and personal experience. First of all, I want to just say something really quick about the warm water exiting into Diablo Canyon. There's a 40-acre cove there the water exits into, and it does not impact the entire water system there. In fact, warm water is more buoyant than cold water, and it rises to the surface. So by the time you get one-half mile off shore, it's barely detectable. I just wanted to interject that. I'm going to talk about the fishing along our coastal waters here. I'm going to read a quote from the Tribune that was published November 6, 2014, which wasn't even a year ago. The study of data from the Department of Fish and Wildlife revealed in 2014, Morro Bay had the largest catch in a 20-year history, since 1993. In addition to that, I have, myself, gone to Morro Bay, talked to the commercial fishermen, I even talked to Butch, who's the president of the local fishermen's association.

108-T001-48

I've talked to sport fishing businesses,

and I've talked to a few recreational fishermen and fisherwomen. They all state that the fishing along our coastal waters is fantastic. It's great. In fact, the lady at the commercial fishing operation said that daily, they get their quota of indigenous rockfish and lingcod. 108-T001-48 cont'd

For those who are not aware, there is a one-mile off shore exclusion zone from Diablo Canyon which protects the many species of fish in Diablo Cove and beyond to that one-mile radius. These fish species include many that find their way into Diablo Canyon with the warm water storm which we experienced not too long ago with the last rainfall. To give other people opportunity to speak, I thank you for allowing me to speak, but I want you to know again that I speak to you from up close and personal experience.

MR. HAGAR: The speaker after Wesley Weisenberger will be Lynn Walter.

DR. WEISENBERGER: Can you hear me?

PARTICIPANT: Pick it up.

DR. WEISENBERGER. I'm Wes Weisenberger. I actually have a PhD in nuclear physics. I relate the industry to the power, but not exactly the power industry. Can you see what these are? They're golf balls. Each golf ball is the size of the --

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Docket: NRC-2009-0552
Notice of Receipt and Availability of Application for Renewal of Diablo Canyon Nuclear Power Plant License

Comment On: NRC-2009-0552-0026
Diablo Canyon Power Plant, Units 1 and 2; Notice of Intent to Prepare an Environmental Impact Statement

Document: NRC-2009-0552-DRAFT-0050
Comment on FR Doc # 2015-15921

57

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2015 SEP -1 PM 5:19
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Submitter Information

7/1/2015
80 FR 37664

Name: Thomas Rippner
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E-RIDS = NRO-014-013
Add = Mr. Wardzala (MS5W)

General Comment

DIABLO CANYON IS NOT NEEDED TO FILL CALIFORNIA'S ENERGY DEMANDS

The California Independent System Operator oversees energy distribution throughout California by managing the grid. CAISO has expressed concern that there may be times when there is so much variable wind, solar and other renewable energy being scheduled onto its system that the other generators, such as nuclear, who will have to adjust to accommodate it, will not have the flexibility needed to do so.

109-L057-1

Nuclear power plants cannot safely turn their power off and on. Every time a reactor is powered down, it causes stress on the parts. In order to have a flexible, resilient energy grid, the power sources must be responsive. Nuclear energy is not flexible. Diablo Canyon will provide about 8.5% of the energy to the grid, whether we need it or not. Therefore, it stymies the growth of rooftop solar and wind, which are very responsive and flexible.

We urge you to deny the relicensing of Diablo Canyon. We do not need the energy in the 21st Century; it leaves a toxic waste behind for hundreds of thousands of years; and we must be forward thinking into a responsive, flexible and resilient energy future.

SUNSI Review Complete
Template = NRO-014-013

U.S. Women in Nuclear®
Diablo Canyon Chapter

Diablo Canyon Power Plant
P.O. Box 56
Avila Beach, CA 93424

Email: DCPPwinboard2@pge.com

Aug. 31, 2015

RE: Docket ID NRC-2009-0552-0026, Diablo Canyon Power Plant, Units 1 and 2

Ms. Cindy Bladey
Office of Administration
Mail Stop: OWFN-12 H08
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Dear Ms. Bladey,

This letter is written on behalf of the more than 150 members of the Diablo Canyon Chapter of U.S. Women in Nuclear. We are Radiation Protection Specialists, Operators, Engineers, and Instructors. We are Inspectors, Auditors and Quality Control experts. We are nuclear professionals. We hold ourselves and those we work with to a higher standard because we know that just a few miles down the road are our children, spouses, and friends. 110-092-1

Our facility, and the more than 1,500 employees that work here, are responsible for injecting more than $1.1 billion each year into the state of California. We provide $25 million in tax dollars to our local community. We volunteer more than 30,000 hours to a range of local organizations serving youth, education, veterans, seniors, fine arts and environmental interests. We are partnering with the county to create a flow of water from our desalination plant to support our local fire fighters. We have one of the best safety records in the industry. We proudly travel to Diablo Canyon each day where we earn fair paychecks, build camaraderie and work to provide safe, clean and reliable energy, and an invaluable resource to our country: energy independence.

We are mothers, daughters, sisters, friends, wives and neighbors. We are the Diablo Canyon Chapter of U.S. Women in Nuclear, 150 strong, and we support the continued operation of the Diablo Canyon Power Plant.

Board of Directors, Diablo Canyon Chapter of U.S. Women in Nuclear,

Sarah Risley
Heather Tarango
Shilo Terek
Meagan Wilson
Kristin Zaitz

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Notice of Receipt and Availability of Application for Renewal of Diablo Canyon Nuclear Power Plant License

Comment On: NRC-2009-0552-0026
Diablo Canyon Power Plant, Units 1 and 2; Notice of Intent to Prepare an Environmental Impact Statement

Document: NRC-2009-0552-DRAFT-0034
Comment on FR Doc # 2015-15921

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80 FR 37464

(19)

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2015 AUG 20 PM 2:15
RULES AND DIRECTIVES BRANCH USNRC

Submitter Information

Name: Del Ritchie

General Comment

I am a 30 year employee of PG&E and believe that nuclear power and Diablo Canyon Power Power are needed in the state of California. PG&E continually strives to be the best nuclear power plant. Safety is of utmost concern and the people at DCPP are dedicated to the safe operation of the plant.

111-L019-1

SUNSI Review Complete
Template = ADM – 013
E-RIDS= ADM-03
Add= M. Wentzel (MJW2)

SAN LUIS OBISPO CHAMBER COMMERCE

895 Monterey Street
San Luis Obispo, CA
93401-3278
Ermina Karim, President/CEO

August 12, 2015

Ms. Cindy Bladey, Chief
Rules, Announcements, and Directives Branch
Office of Administration
Mail Stop: OWFN-12 H08
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Re: Environmental review and process of review for Diablo Canyon Power Plant license renewal applications

Dear Nuclear Regulatory Commissioners,

As the largest business organization in San Luis Obispo County, the San Luis Obispo Chamber of Commerce respectfully submits the following comments regarding the Nuclear Regulatory Commission's development of an environmental impact statement (EIS) and the process of continuation of review of the license renewal applications for Diablo Canyon Power Plant (DCPP).

Representing over 1,440 members that employ over 34,000 employees throughout San Luis Obispo County, we have long been supportive of conducting studies to more fully understand the potential seismic and environmental impacts related to DCPP. As a vital economic engine – infusing over $1 billion into the California economy - it is critical to our collective communities that PG&E continues to operate the plant in a safe and secure manner, that good environmental stewardship continues and that impact studies by both PG&E and independent experts are regularly conducted to add to our knowledge of DCPP's operational standards, disaster preparedness and safety record. 112-L017-1

PG&E is the largest private employer in our county, directly employing approximately 2,000 workers. The more than $25 million in property taxes paid by PG&E last year helped support municipalities, schools, and public services. 112-L017-2 Further understanding the environmental risk potential due to seismic events, flooding and other unexpected natural occurrences near DCPP would broaden our ability to understand the capacity and potential impacts to the safety of our residents and businesses. These are necessary components to seeing the continuation of the operation of this important resource and contributor to our region. 112-L017-3

Thank you for the opportunity to comment.

Sincerely,

Charlene Rosales

Charlene Rosales
Director of Governmental Affairs

T 805.781.2670
F 805.543.1255
E slochamber@slochamber.org

slochamber.org
visitslo.com
slo-buiness.com

August 17, 2013

To: Nuclear Regulatory Commission
Attn: Chief of Rules, Announcements & Directives
From: Barbara & Robert Rosenthal
324 Woodland Drive, Los Osos, CA

Please do not grant a second license renewal to the Diablo Canyon Power Plant. 113-L022-1

Evacuation
We have lived in Los Osos since 1981. When the plant first went on line there were concerns about evacuation problems. The county population has nearly doubled already and by the time of the renewal it may have tripled. Our transportation infrastructure has little improved. On the coast where we are so close to the plant evacuation will be impossible. 113-L022-2

Health
It should be the commission's responsibility to address concerns over high cancer rates. This should not fall on the citizens. 113-L022-3

Storage
This is still an unresolved issue. To go blindly forward is not logical. If we are to count on future solutions, let's count on solutions to replace nuclear energy. 113-L022-4

Weather

There is no doubt of climate change. It is unknown how this will impact the Central Coast. Without that information we cannot predict into the dates of the renewal lisence. Our ocean temperatures are well above normal this year, by several degrees. Couple this with the heated water from the plants and marine life will be seriously impacted, with a ripple effect through the environment and economy. 113-L022-5

Earthquake

While our situation is different than the Japanese, the failure to acknowledge the strength and unpredictability of nature is not? We do know that the plants are on a seismicly unstable area — unpredictable to 100% safety! And that is what I am asking for — 100% predictable safety since there is no way out. 113-L022-6

Sincerely,

Barbara Rosenthal and
Robert "Rosey" Rosenthal

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2015 JUL 17 PM 2:47

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J. A. Savage
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Trinidad, CA 95570
707 232 4053
mobile 510 593-7149
jasavagehonest@gmail.com

July 8, 2015

Re: NRC-2009-0552 Diablo Canyon license extension

7/1/2015
80 FR 37664

Cindy Bladey
Office of Administration
Mail Stop OWFN-12 H08
Nuclear Regulatory Comission
Washington DC 20555-0001

1

114-L001-1

I oppose allowing a 20-year license extension to the two units.

It's not just that the potential for earthquakes has been downplayed, and the NRC's former engineer Michael Peck's conclusions that the facility be shut down immediately were ignored. It's also that the NRC and owner PG&E are betting that the brittle old plant won't break. I understand that the commission does its due diligence on license extensions, but it's also quite clear that the commission almost always grants those extensions, despite reasonable concerns and doubt.

Don't continue that rubber stamp with Diablo Canyon.

Cordially,

J.A. Savage

SUNSI Review Complete
Template = ADM – 013
E-RIDS= ADM-03
Add= M. Wentzel (MJW2)

7/1/2015
80 FR 37664

104

RULES AND DIRECTIVES
BRANCH
USNRC

Comments to NRC Scoping meeting Aug. 5th 2015
San Luis Obispo, CA

2015 NOV -2 AM 9: 51

Diablo Canyon Nuclear Power Plant Re-licensing

By Klaus Schumann, 26 Hillcrest Drive, Paso Robles, CA 93446

RECEIVED

Date: Aug. 5th 2015

Below is a web-site link to SLO Mothers for Peace suggestions what to include in the EIS for re-licensing the Diablo Canyon Nuclear Power Plant. Hereby, I make their suggestions my own and ask to put them into the record.

115-L101-1

SLO Mothers for Peace web-site:
http://mothersforpeace.org/blog/topics-to-address-at-august-5-2015-nrc-meeting-in-slo.

I especially refer to:

I. LEAKS FROM DRY CASK CRACKING [see below]

. Additionally, in light of the many uncertainties in the seismic, once through cooling, component aging due to embrittlement, terrorism issues, I would urge you to put

115-L101-2

II. Special emphasis on the "no-action" and "environmentally superior" alternatives.

III. Furthermore, I like to put into the record my own comments from Dec. 4th 2013 under **Comment on the Waste Confidence Draft Generic Environmental Impact Statement and Proposed Rule**
Docket ID # NRC-2012-0246.

115-L101-3

LEAKS FROM DRY CASK CRACKING

The dry storage canisters at Diablo Canyon are just 5/8" thick stainless steel. In other countries, such as Germany, 14" to 20" thick ductile cast iron canisters/casks are used, such as the CASTOR V/19. The U.S. nuclear industry could have chosen the thick CASTOR sealed ductile cast iron casks. Instead, they use lower quality canisters, choosing profits over our safety. NRC documents provide data that indicate thin storage containers can fail 16 years after a crack initiates.

115-L101-4

The NRC claims fuel must be reloaded into new canisters every 100 years, unless there is a permanent repository. However, they have no technical basis to state these canisters will last 100 years, but they do have data that indicates a much sooner potential failure rate.

None of the current U.S. thin steel storage canisters are adequately designed for over 20 year storage and may start failing in as little as 17 to 20 years with through-wall cracks. Vendor

SUNSI Review Complete
Template = ADM – 013
E-RIDS= ADM-03
Add= m. Wentzel (MS W2)

claims of longer storage times are not supported by data. There is no aging management designed into these thin canisters. They cannot even be inspected for cracks or repaired.

Numerous factors can trigger stress corrosion cracks in these thin canisters. Salt moist air is one that the NRC has studied more extensively than the others. The nuclear waste containers used in the U.S. were not designed to last for more than 20 to 40 years. And there is no current technology to inspect or repair these canisters for cracks and no current method to replace these canisters.

The nuclear industry has not been routinely inspecting installed dry storage canisters and has yet to develop a method to inspect them for cracks. However, a 2014 inspection found **sea salt crystals on a Diablo Canyon canister that had only been loaded for two years**. Only two Diablo canisters were inspected, ranging from just 2 to 3.5 years in service. The canister loaded for only two years had sea salts and a low enough temperature range to trigger the corrosive environment needed for stress corrosion cracking initiation — much sooner than the NRC expected.

115-L101-4 cont'd

Nuclear waste storage near the coast could fail and release radiation due to the corrosive nature of salt air with metal. Pitting corrosion in a salt fog environment is troubling. If a canister became sufficiently corroded, it would have to be replaced and the fuel assemblies moved. Further, the canister and fuel rods are pressurized, so the canister would leak radiation.

It is both illogical and immoral that the NRC would allow MORE highly radioactive spent fuel to be created every day when they know there is nowhere to store it safely, and there is a likelihood that the canisters will crack, exposing the environment to lethal radiation. You need to shut the plant down now.

Sincerely

Klaus Schumann

and one more final comment. The reactors in Japan did not fail at Fukushima. It was poor planning for tsunamis. The reactors actually shut down.

MR. HAGAR: All right, folks, let's get back with the program here. After Klaus Schumann will be Keay Davidson.

MR. SCHUMANN: Thank you, NRC, for coming again and giving an opportunity to speak. First, I would like to recommend to anybody to go to the Mothers of Peace website and look at their suggestions what actually should be in the EIS. There are a great many of excellent suggestions which actually would meet the requirements of a scoping meeting, rather than a PR or offering reasons why you're for or against nuclear power.

I would recommend that. In particular, I would ask the NRC also, itself, go on the website and have a look of some of the suggestions Mothers of Peace gives specifically for the scoping process. One thing I would particularly point to is the section on leaks from dry cask cracking. You might find some very interesting information there. In addition, from all that I've heard so far in this meeting here, there are obviously a great many uncertainties and questions about the replica nuclear power plant. 115-T001-36

Some go around to the seismic issue, others run through cooling issue, cooling agents doing emblazonment, terrorist issue have not been met yet, but I understand it has to be addressed in the EIS, as well. I think looking at all of this, in particular looking also the recently discovered cracks or beginning cracks in the dry cask which started two and a half years after the dry cask was put onto the surfaces, the independent spent fuel storage installation. I would urge very much to NRC to look at the writing on the wall, and in particular, pay a lot of attention to the so-called non-action or no-action alternative, as well as also the environmental -- the superior alternative, which I think you're required to look into the EIS because this plant will shut down sometime in the possibly near future. No action alternative means no relicensing. What happens after that? That is something you really want to look at very carefully and should be included in your environmental impact review. Thank you very much.

115-T001-36 cont'd

115-T001-37

MR. HAGAR: Following Keay will be Rick Owen.

MR. DAVIDSON: I'm Keay Davidson. I'm one of those out-of-town fearmongers that was attacked earlier by someone in the audience, and I'm proud to be

I was going to talk about terrorism, but I thought it needed a little lightening in this room, and so I made up this story. If we were in a film and the film was about a nuclear power plant being put on earthquake faults, we'd walk out of the movie and we'd say that is so unbelievable. Who would ever dream of doing something like that? Well, indeed it is the truth. So that film will end. It will be put somewhere in an archive and I think the Nuclear Regulatory Commission needs to put Diablo Canyon in an archive. Thank you. 116-T001-71

(Applause)

MR. HAGAR: Okay. The next speaker will be Marianne Mellow. Marianne Mellow, are you here?

MS. MELLOW: I'm here.

MR. HAGAR: Okay.

MS. WELBERT: I am Rosemary Welbert from San Luis Obispo. Polly Cooper had to leave and she donated her time to me.

I want to speak about two issues among the many that have me terribly concerned. The first one, as people have mentioned, is the waste issue. The word "waste" is really a misnomer. It sounds like something that's weak and half worn out. But the waste that comes out of this power plant is a million times more

Well, thank you. I do thank the NRC for having this meeting. I am for civil discourse and I am excited any time there is a meeting to express my opinion, and I applaud both sides to be here expressing that opinion. And only in America. I love it.

As a former congresswoman and a former assemblywoman for this area, I do want to express myself and say to the NRC that I strongly support PG&E and Diablo Canyon. It was an interesting time working with the different professionals at the Diablo facility. And I just want to say that for 30 years Diablo Canyon has continued to safely produce clean and reliable energy without greenhouse gases, avoiding 6 to 7 million tons per year of greenhouse gases that would be emitted by other conventional generation resources. 117-T001-84

And I might add we're starting to say -- from what I'm reading, we do not have the ability as yet with wind and solar, the renewables, at this point in time and we need our energy for California and for America if we are going to be an economic power in the free world. In my opinion nuclear power should be officially recognized as a green energy, a renewable energy, and it should be placed in the renewable portfolio.

So bottom line, I'm for California needing

nuclear power. I'm for America. I understand it needs nuclear power to be an economic leader in the free world. Thank you. 117-T001-84 cont'd

(Applause)

MR. HAGAR: Speaker after Bruce Campbell will be Manilla Horowitz. Manilla Horowitz, are you here?

(No audible response)

MR. HAGAR: Then Ace Hoffman, you'll be next.

MR. CAMPBELL: I'm Bruce Campbell from Los Angeles. Hmm, lots of microphones.

MR. HAGAR: The one on the right.

MR. CAMPBELL: So I want to point out a couple of documents. This one's entitled, from the L.A. Times, "Helium Finding Adds New Wrinkle to Newport-Inglewood Fault," and they found helium-3, which they didn't expect to find from the Newport-Inglewood fault. As you may know, there's two obvious major coastal faults in California. One is the Newport-Inglewood fault and one is the Hosgri-San Simeon-San Gregorio fault. So anyway, they found helium-3 which indicates that it goes as deep as the earth's mantle.

So, and part of this -- a quote from this

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Comment On: NRC-2009-0552-0026
Diablo Canyon Power Plant, Units 1 and 2; Notice of Intent to Prepare an Environmental Impact Statement

Document: NRC-2009-0552-DRAFT-0049
Comment on FR Doc # 2015-15921

56

E-RFDS = AD4-23
Add = Jim Wendzel (Consultant)

Submitter Information

7/1/2015
80 FR 37664

Name: Linda Seeley
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Email: lindaseeley@gmail.com

RECEIVED
2015 SEP -1 AM 5:19
RULES AND DIRECTIVES BRANCH USNRC

General Comment

1. It would be very irresponsible of the NRC to approve an EIS that does not take in to account the thousands of tons of radioactive waste that are being stored onsite at the Diablo Canyon plant. The casks in use are 5/8" thick stainless steel, and they are subject to corrosion, especially in the marine environment. Though the casks are safer than the spent fuel pools for storage of radioactive waste, they are sited on or near at least a dozen earthquake faults. By comparison, the spent fuel casks that survived the earthquake and tsunami at Fukushima were over 9" thick stainless steel. With nowhere to store nuclear waste, no plan to build a permanent repository, and the likelihood of having to store the waste onsite for the next 600 years, it is unethical to make more of it. The facility should be shut down immediately, and it certainly should not be given a license to operate for another 20 years beyond the license expiration. 118-L056-1

2. With the advances in renewable energy, battery storage, and energy conservation that are emerging almost daily, there is absolutely no need for electricity from Diablo Canyon. Nuclear energy is a 20th Century technology that has no place in the flexible, responsive grid that we need to meet California's energy needs. Local microgrids are being built. Solar roads are becoming a reality. Roofing and window materials that double as solar collectors are here. Wind power, wave power, micro-hydro power - all of these are here and are of the future. Nuclear power is very carbon-intensive to build; the mining is toxic to the ecosystem; milling and processing are dirty and dangerous; every plant is over-budget. Dirty, dangerous, and expensive. That's what nuclear 118-L056-2

Source Register Template = AD4-023

power is. We must move on for the sake of all of the future generations - out of the dark ages and into a future that is responsible to Earth, to the plants, animals, air, water, and humans - so that life itself can continue. 118-L056-2 cont'd

3. The Independent Peer Review Panel has complained that PG&E ignored its findings and attempts to communicate about seismic conditions at Diablo Canyon. The NRC cannot allow this situation to continue and must order PG&E to confer openly and in good faith with the IPRP. 118-L056-3

No more rubber stamping by the NRC. The NRC must shut down Diablo. California does not need it and SLO doesn't want it.

(Applause)

MR. HAGAR: Okay, following Nancy will be Laura Sutton.

MS. SHAW: I am Nancy -- is this working? Okay. Nancy Shaw. I'm from the north county. I'm a registered nurse since 1985 and a mother of two teenage daughters that I'm very concerned about living here. 119-T002-44

I've added a few thoughts on here. Critical thinking also includes looking at history and other nuclear disasters. I mean, we have to look at the -- you're missing the forest for the trees.

I'm tired of hearing from professional people, professional scientists who are comparing nuclear atmospheric carbon problems, air pollution to old fossil fuel methods. I mean, we have newer renewable methods that we can be using.

So, why are they comparing those two. I think that's disingenuous. And for people who are that intelligent, which I know you are, to be doing that is really makes me angry actually.

You don't need to be a financial analyst to know that a huge amount of money is needed to keep a

nuclear plant going. And that that money instead could be going towards the implementation of safer, less expensive and renewable systems.

119-T002-44 cont'd

You don't need to be a geologist to do yet more studies to know that Diablo Canyon is in a very precarious position over numerous earthquake faults. This is common sense.

I really don't get it. This is so simple to me. You don't need to be an energy expert to know that the very small percentage of energy, what is it, eight to 15 percent I believe from nuclear energy, is not worth it.

It's far outweighed by the risk of damage to people. And could easily be substituted with healthier, earth friendly energy systems.

And you don't need to be a scientist or a physician to know that this nuclear plant being in an extremely dangerous location can cause untold and devastation damage to people, wildlife, plant life of California forever. Forever in our lifetimes and our children's and their children's, it's ruining our beautiful central coast.

All you need to do is use common sense. And save yourselves a lot of time and money. And just close down this dangerous plant.

My father's birthday is tomorrow. He's going to be 93. And I remember him giving me advice when I was going through a bad breakup as a young woman. Don't kick a dead horse. 119-T002-44 cont'd

And I feel like this is a dying horse. And my grandparents all lived to be in their 80s and 90s. Late 90s, all of them.

I don't think that's going to happen in my family and for many of us because of things like this. Not the only thing, but anyway. Thank you.

MR. HAGAR: Okay. Thanks.

(Applause)

MR. HAGAR: And the speaker to follow Laura will be Justin Stanley.

MS. SUTTON: Hi -- oh, it's the other one. This one, okay. My name is Laura Sutton. And I was at Diablo Canyon in 1981 amongst I believe it was 1,700 people that were arrested to intervene with the opening of that plant or the continuation of the plant.

I feel very strongly. I felt very strongly about it then. And I feel very strongly even more so about it now. I feel like the intervening years has been an unspeakable stroke of luck that nothing has happened of significance at Diablo Canyon.

However, things of significance, of great

As you probably know, Monday, the EPA published their clean power plan. I'll read just one small quote from that report.

Recent trends evidenced in renewable energy development such as rapidly growing investment and rapidly decreasing costs are not as clearly evidenced in nuclear generation. This important finding must be factored into the DEIS for license renewal.

Thank you.

(Applause)

MR. HAGAR: Okay. Thank you. Our next speaker will be Sherry Lewis and her colleague. And what we've done here is combine the time limit for two speakers for this presentation.

MS. LEWIS: My name is Sherry Lewis. I belong to San Luis Obispo Mothers for Peace. And for several years -- can you hear me? Jeeze. Now you can. 120-T002-14

Okay. Sherry Lewis, Mothers for Peace of San Luis Obispo. And for several years Sawada Showning, Reverend Sawada, Brother Sawada, who belongs to a Buddhist order that walks and prays against nuclear energy and nuclear weapons.

And how -- do you remember how long you have been coming here to walk for no nuclear?

120-T002-14 cont'd

MR. SAWADA: After the Fukushima.

MS. LEWIS: Come over here.

MR. SAWADA: I just -- I have been involved in the peace movement especially abolishment of the nuclear weapon. Shut down nuclear power plant.

After the Fukushima, I focused in shut down Diablo. So that's why twice in a year I walked from Santa Barbara to Diablo with Buddhist prayer.

MS. LEWIS: Now he does this over about six days, seven days. He walks over 20 miles a day starting in Santa Barbara.

He does this in March around the Fukushima anniversary. And in August around the Hiroshima and Nagasaki anniversaries. Tomorrow is August 6, the 70th anniversary of the bombing of Hiroshima. And August 9 is the 70th anniversary of the bombing of Nagasaki.

So we -- Mothers for Peace is putting on an event tomorrow night from 7:00 to 9:00 at the Unitarian Universalist Fellowship Hall in San Luis Obispo, where Sawadasan will be there. And we are showing a movie, Message from Hiroshima.

And then there will be a talk by Harvey Wasserman. And also by Reverend Rod Richards of the Unitarian Church about Hiroshima.

One of the things he does when he walks, he

chants and he prays. And so for his allotted time, he's going to be doing that now.

120-T002-14 cont'd

And that is to -- well, save us all. Thank you. So, go ahead.

MR. SAWADA: Especially my message a very simple. We cannot, humanity or any beings cannot live man made nuclear waste, radiation. People say it is a green, a clean, no. Radiation is a most dangerous poison.

Even if every nuclear power plant making every day nuclear waste. And no one knows those waste to storage. To no idea. So, most safety mean stop to nuclear power plant.

Also, between nuclear bombs and power plant, so the rate is same reaction. One is my memory it's a small sentence reminds me, nuclear war going on in the reactor in the power plant. We have to realize that.

So, I like to do a prayer for nuclear free future for the next generation. Or next any beings have to be safe. So, I'll ask you people here we could stop to the license of the power plant.

So I like to share with you Buddhist prayer. Each step I took this prayer with me.

(Doing Buddhist prayer.)

believe.

I know it is legally required to be in the scope for the NRC, the environmental scoping, and that it's actually looking at the possible alternatives to nuclear energy. 121-T001-56

The only thing that I want to say in public today -- the rest will be in my comments -- is that the NRC environmental scope must incorporate the findings of its fellow federal agency, the United States Geological Survey's most recent report published in 2014 and 2015, the Uniform California Earthquake Rupture Forecast, Version 3. I would just like to quote for that today. This is from Page 2 and Page 3 of the summary put out by the USGS. Many recent earthquakes have plowed past previously inferred fault rupture boundaries. 121-T001-57

This also has to do with what John Geesman from the Alliance for Nuclear Responsibility was saying. Back to the quote. That is past models have generally assumed that earthquakes are either confined to separate faults, or that long faults, like the San Andreas, can be divided into different segments that only rupture separately. However, all three of the most recent, largest earthquakes in California ruptured right past such boundaries, jumping from one fault to another as multi-fault ruptures. These were the 1992

magnitude 7.3 Landers, the 1999 magnitude 7.2 Hector Mine, and the 2010 magnitude 7.2 El Mayor Cucapah earthquakes.

121-T001-57 cont'd

The 2011 magnitude 9.0 Tohoku, Japan earthquake also violated previously defined fault segment boundaries, resulting in a much larger fault rupture area and magnitude than expected, and contributing to the deadly tsunami and Fukushima nuclear disaster. We are not dealing with a few well-separated faults, but with a vast interconnected fault system. In fact, it has become difficult to identify where some faults end and others begin, implying many more opportunities for multi-fault ruptures, and we all know that Diablo Canyon is located in a nest of faults.

121-T001-58

I believe it's 99.9 percent certain that Diablo Canyon Power Plant never would have been permitted if the science at that time had known about the fault system in place. I would also like to point out, for people that are so gung ho about nuclear energy, that France, itself, recently has put new laws on the books mandating more solar and more renewable energy. Thank you.

MR. HAGAR: Let me just take a minute and check with the people on the phone, see if they have any

comments. Operator, does anyone on the phone have any comments they want the NRC to consider?

OPERATOR: No, sir, I'm not showing anybody queueing up.

MR. HAGAR: All right, thank you. After Jeff, the speaker will be Randy Morton. Randy, are you here? Okay, you're next.

MR. SHIVEY: I'm very excited here. I get to speak before all you concerned and excited citizens. I am a proud member of the out-of-town fearmongering group. I salute all of us because we're all actually -- none of us are out of town here. Nuclear is a local issue for all of us. We're all part of the deal. If we live in California, even if we don't live in California, if you live in Fukushima, wherever you might live.

I know many of us here are outraged that a renewal of this license would even be considered. Using the nuclear fission process so that we can electrify our homes to keep our water hot is an insane use of technology. It was, of course, first perpetrated by my parents' generation, which came up with this solution to kill a lot of people real quick, and then decided with Eisenhower to go into the peaceful use, but that's all kind of a strange lie that's now come

122-T001-59

home to roost.

I've been in the solar business since 1975 and have seen it grow into a significant industry. With all the renewables that we have, solar electric, wind, biomass, mini hydro, it's too much to really go over. There's absolutely no reason to even entertain using nuclear-generated electricity. We need to follow Germany's policy of shutting down all nukes, after they got through Fukushima -- or after they heard about Fukushima -- and as soon as possible, and move quickly on all these fronts. Remember that on any one day, enough solar energy falls upon the face of the planet to fuel the whole planet for one year. That's how much energy's out there. That's how many photons are floating out there. That's with current technology.

122-T001-59 cont'd

That's just with current technology. Why not use some of this potential? We need to shut down all nukes as soon as possible, being dismantling all weapons of mass destruction, as well, all nuclear weapons of mass destruction, as well. I'm not holding my breath, but that's, I think, what we need to do. I think we all have good intention, even those of us who disagree on how this is done, but I think we do need to examine it. Hopefully the NRC, in its worldly wisdom, will decide to do the right thing. Thank you.

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September 1, 2015

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Subject: Notice of Intent to Reinitiate the Environmental Scoping Process for the Review of the Diablo Canyon Power Plant, Units 1 and 2, License Renewal Application, Docket Nos. 50-275 and 50-323; NRC-2009-0552.

Dear Mr. Wentzel:

The California Department of Fish and Wildlife (Department) has reviewed the Notice of Intent to Reinitiate the Environmental Scoping Process for the Review of the Diablo Canyon Power Plant (DCPP), Units 1 and 2, License Renewal Application (Project). The Department understands that the U.S. Nuclear Regulatory Commission (NRC) is reviewing an application submitted by Pacific Gas & Electric Company (PG&E) for the renewal of the operating licenses for DCPP, Units 1 and 2 on November 23, 2009. The NRC is restarting the scoping process for creating a Supplemental Environmental Impact Statement (SEIS) pursuant to the National Environmental Protection Act (NEPA) prior to holding hearings for the issuance of a new license. If approved, the NRC's issuance of renewed licenses would authorize PG&E to operate DCPP, Units 1 and 2 for an additional 20 years beyond the current licensing periods, which expire on November 2, 2024 and August 26, 2025 respectively.

As a trustee for the State's fish and wildlife resources under Fish and Game Code section 1802, the Department has jurisdiction over the conservation, protection, and management of fish, wildlife, and habitat necessary for biologically sustainable populations of those species. In this capacity, the Department administers the California Endangered Species Act, the Native Plant Protection Act, and other provisions of the California Fish and Game Code that afford protection to the State's fish and wildlife trust resources. Furthermore, the Department is recognized as a "Trustee Agency" under the California Environmental Quality Act (CEQA) with regard to the fish and wildlife of the state, to designated rare or endangered native plants, and to game

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refuges, ecological reserves, and other areas administered by the department (CEQA guidelines §15386). As a Trustee Agency for fish and wildlife resources, the Department is responsible for providing biological expertise with respect to potentially significant impacts arising from project activities and means to mitigate or avoid such impacts. The Department is also responsible for marine biodiversity protection under the Marine Life Protection Act (MLPA) in coastal marine waters of California.

Biological Significance

The Point Buchon area offshore of DCPP possesses a large diversity and abundance of fish, invertebrate and seabirds with habitats ranging from intertidal to deep rocky reef. Six marine protected areas (MPAs) are within the source water of DCPP. The area is also home to commercial and sport fishing communities and non-consumptive users that utilize the resources year round. In addition, the land surrounding the DCPP is rich in biological diversity and endemic wildlife.

Pursuant to our jurisdiction, the Department has the following comments and recommendations regarding the Project.

California Endangered Species Act (CESA) 123-L029-1

CESA provides for the protection of rare, threatened, candidate, and endangered plants and animals, and prohibits the taking of such species without authorization (Fish and Game Code Section 2050). The Department maintains a list of rare, threatened, and endangered plants and animals that can be found on the Department's web site: http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/TEAnimals.pdf. The Department recommends including a full analysis of CESA listed species that may be in the Project area and potential impacts in the SEIS. Adverse impacts from the Project leading to take of CESA listed species would require take authorization from the Department according to Fish and Game Code §2081.

Fully Protected Species 123-L029-2

The Department has jurisdiction over fully protected species pursuant to Fish and Game Code Sections 3511, 4700, 5050, and 5515. Fully protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and certain relocation situations. Therefore "take" of any fully protected animal species is prohibited and must be avoided by the Project. The Department recommends listing the fully protected species and discussing the potential impacts in the SEIS. The Department maintains a list of fully protected species that can be found on the Department's web site: http://www.dfg.ca.gov/wildlife/nongame/t_e_spp/fully_pro.html

Lake or Stream Alteration Agreement (LSAA)

123-L029-3

The Department has regulatory authority with regard to activities occurring in streams and/or lakes that could adversely affect any fish or wildlife resource, pursuant to Fish and Game Code sections 1600 *et seq*. If a Project could substantially divert or obstruct the natural flow of any river, stream or lake; substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake; or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake, notification of Lake or Streambed Alteration to the Department is required. The entire Project site has multiple drainage features as well as the Diablo Creek which flows approximately though the center of the Project site. We recommend that Project proponents consult with the Department before commencing activities that could impact these features and submit a Lake or Stream Alteration Notification to comply with Fish and Game Code sections 1600 *et. seq*. The Department recommends that the SEIS inform Project proponents of this responsibility. It is important to note that the Department is required to comply with CEQA in the issuance of an LSAA. Therefore, for efficiency in environmental compliance, we recommend that any stream disturbance(s) be described, and mitigation for the disturbance(s) be developed as part of the environmental review process. This would likely reduce the need for the Department to require additional extensive environmental review to issue an LSAA.

Water Pollution

123-L029-4

Pursuant to Fish and Game Code Section 5650, it is unlawful to deposit in, permit to pass into, or place where it can pass into the "Waters of the State" any substance or material deleterious to fish, plant life, or bird life, including non-native species. The Department recommends that the SEIS fully address potential pollutants to "Waters of the State" in the environmental analysis for the Project. The Regional Water Quality Control Board also has jurisdiction regarding discharge and pollution to "Waters of the State" including storm water runoff into surface waters.

Marine Life Protection Act and Marine Protected Areas

123-L029-5

The State of California, through the MLPA, designated Marine Protected Areas (MPAs) in the vicinity of the Project which are regulated through Fish and Game Code Section, 2850-2863 and Title 14, Section 632, CCR. MPAs in the source water for cooling the DCPP include: the Cambria State Marine Conservation Area (SMCA), White Rock SMCA, Point Buchon SMCA, Morro Bay State Marine Recreationally Managed Area (SMRMA), the Morro Bay State Marine Reserve (SMR), and the Point Buchon SMR. In a SMR, the take of all living marine resources is prohibited, except under a permit or specific authorization for research, restoration or monitoring purposes. In a SMCA, the commercial and recreational take of living marine resources is restricted with take of only certain species allowed. In a SMRMA, it is unlawful to perform any activity that, as determined by the designating entity or managing agency, would compromise the recreational values for which the area may be designated. Recreational opportunities

may be protected, enhanced, or restricted, while preserving basic resource values of the area. Additional information regarding MPAs and the MLPA can be found on the Department's website (http://www.dfg.ca.gov/marine/mpa/). The Department recommends including discussion of the MLPA and MPAs in the SEIS, including any potential impacts to the MPAs from the relicensing of DCPP. 123-L029-5 cont'd

Additional Recommendations

The Department recommends that the SEIS include a full analysis of environmental impacts on the following topics:

Entrainment and Impingement – 123-L029-6

- The Department remains concerned about entrainment and impingement impacts from the once through cooling process at DCPP. The Department recommends analyzing continued entrainment and impingement impacts over the life of the DCPP and potential alternatives. The analysis should include the entire source water for the DCPP.

Thermal Effluent Discharge – 123-L029-7

- The SEIS should fully analyze the impacts to marine resources by the once-through cooling water discharged from the DCPP thermal effluent discharge.

Sensitive Habitats and Essential Fish Habitat – 123-L029-8

- The SEIS should analyze sensitive habitats such as, but not limited to, marine rocky substrate, kelp beds, and known breeding or feeding areas used by state or federally protected species as well as areas designated Essential Fish Habitat (EFH) in the vicinity and source water of the Project.

Protected Marine Resources – 123-L029-9

- The SEIS should analyze DCPP activities that may disrupt protected marine resources such as sea turtles, marine mammals, marine fish, and native shellfish or benthic invertebrates protected under federal or state law.

Recreational and Commercial Fishing – 123-L029-10

- The Department recommends that the SEIS analyze the interaction between recreational and commercial fishing and the operation of the DCPP in the future should relicensing occur.

Climate Change and Emerging Ocean Issues –

- The SEIS should include an analysis of climate change in relation to both marine and terrestrial resources and how DCPP may influence the impacts of climate change. The Department is concerned about sea level rise impacts at DCPP and recommends the SEIS include an analysis of sea level rise impacts under multiple climate change scenarios. In particular, the Department is interested in what plans are in place for sea level rise through the life of the plant and on site storage. 123-L029-11

- In addition, the Department recommends that the SEIS include analysis of emerging ocean issues such as the increased occurrence of salps. Salps have been occurring in the intake cove in recent years in large numbers necessitating a pilot project that uses bubble curtains in the attempt to keep the salps from clogging the cooling water intake. Monitoring of potential impacts from the use of the bubble curtains, the efficacy of the bubble curtains, and other potential solutions are still being explored. 123-L029-12

Conclusion

The Department appreciates the opportunity to review and comment on the Notice of Intent to Reinitiate the Environmental Scoping Process for the Review of the Diablo Canyon Power Plant, Units 1 and 2, License Renewal Application. As always, Department personnel are available to discuss our concerns, comments and recommendations in greater detail. To arrange for discussion on marine biological resources, please contact Mr. Eric Wilkins, Environmental Scientist, Department of Fish and Wildlife, 20 Lower Ragsdale Dr. Suite 100, Monterey, CA, 93940, by e-mail at Eric.Wilkins@Wildlife.ca.gov, or (831) 649-2813. For discussions related to terrestrial biological resources, please contact Ms. Sarah Bahm, Environmental Scientist, Department of Fish and Wildlife, 1234 East Shaw Ave, Fresno, CA 93710, by e-mail at Sarah.Bahm@Wildlife.ca.gov, or (559) 243-4014 x306.

Sincerely,

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measure the air. We have our food checked. What they were concerned about was the increased air pollution from all the coal that had been burning to replace the fossil fuels.

They were worried about their children getting asthma. About their grandparents. And so that was of much concern. I think that should be an equal concern of the people living here about what would happen when, hopefully not, if Diablo Canyon closes.

(Applause)

MR. HAGAR: Okay. Mark? Bruce Campbell? James Brown?

UNKNOWN: He's outside.

MR. HAGAR: Okay. Carl Dudley? All right.

MR. SKINNER: Please deny the reli -- please deny the relicensing of Diablo Canyon. I have no confidence in PG&E's seismic study. PG&E has conducted a campaign of lies and evasion about the earthquake risks associated with the plant. 124-T002-52

PG&E's own seismic consultants had serious misgivings before the AB1632 Central Coast California Seismic Imaging Project was issued. PG&E did not evaluate the worst case possibility for damage to structures such as switch yards, which would have a

tremendous impact on the reliability of the plant.

Such ill preparation is misconduct. Placing the lives of Californians in grave danger. This is consistent with PG&E's corporate behavior. They just don't care.

124-T002-52 cont'd

(Applause)

MR. CAMPBELL: Short, sweet and true. Hi, I'm Bruce Campbell from -- still from LA. On a personal level I'd like to thank the NRC for coming today. However, the whole process is an astounding sham.

I happened to camp out with the Diablo Canyon Task Force of the Alliance for Survival at the Diablo seismic hearings in San Luis Obispo in the fall of 1980. I was particularly concerned I guess the two things that besides being not too far to the south, the things that really struck me were the 7.3 to 7.5 quake in the Hosgri fault zone west of Lompoc, November 4, 1927 and having experienced the LA quake of 1971.

So, anyway, they opened those seismic hearings in 1980 due to the high vertical ground acceleration readings for the Imperial Valley October 15, 1979 quake. The three-man Atomic Safety and Licensing Board ruled that Diablo Canyon was seismically safe.

Yet shortly before that ruling, Sherman

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Comment On: NRC-2009-0552-0026
Diablo Canyon Power Plant, Units 1 and 2; Notice of Intent to Prepare an Environmental Impact Statement

Document: NRC-2009-0552-DRAFT-0094
Comment on FR Doc # 2015-15921

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80 FR 37664

Submitter Information

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(100)

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General Comment

Diablo Canyon is built on earthquake faults. It needs to be dismantled and shut down. If we need to have rationed energy, so be it. Our P G & E bill for a month is $62 in a 2000 sq ft home. We installed solar hot water in around 1980. It pays to go solar. 125-L097-1

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Add= Mr. Wentzel (MJS212)

If not now, later. If not Diablo, another nuclear power plant.

But Diablo is extremely close to where I live. And it's extremely surrounded by earthquake faults. And somebody mentioned fracking, which is also very important.

The waste, what kind of a race of beings creates that much waste that they cannot safely dispose of? It's -- I'm just calling for common sense you guys. Just basic common sense.

We need to stop this. Enough is enough. We're blessed to be out of this without having something really bad happen. And it has happened, something further. Thank you.

(Applause)

MR. HAGAR: Now the speaker to follow Justin will be Kate Title. Is that right Kate?

UNKNOWN: She's not going to be, she had to leave.

MR. HAGAR: Okay. Kate?

UNKNOWN: She had to leave, so she's gone.

MR. HAGAR: She had to leave? Okay, then the next one will be Jessica Lovering.

MR. STANLEY: Hello. My name's Justin Stanley. I grew up in the bay area and particularly 126-T002-46

Napa, which as you all know, was hit by a very severe earthquake.

126-T002-46 cont'd

As a kid there was about a 5.0. And I remember waking up during that earthquake. As I got up, a giant sun sculpture fell right where I was sitting. So, as you can know, I have a very high understanding of what earthquakes can do.

As you may know, anyone who pays their PG&E bill, every month you pay for a decommission fee. And also a competition transition charge. I'd like to get my money's worth in that aspect.

As far as my other comments go, this is why I came. I entitled it nuclear fallacy. Diablo, Fukushima, Three Mile Island or Chernobyl. Is it really worth the risks so the elite get Armani suits and drive a Maserati?

Converting lush lands into desolate -- excuse me, converting lush terrain to desolate waste lands for a sequence of numbers of a computer. Risking the future that surpasses seven generations in the question for green rectangles that symbolize debt.

Creating a society hopelessly inept to see past their current state of being. Hijacking grounds belonging to the natives. They turn around and fill

your head with propagandized filth. We know the truth about Nikola Tesla and the future he could have manifested without the need for yellow cake, spent fuel and radioactive waste.

126-T002-46 cont'd

The potential to have an immense population deplaced -- displaced, excuse me, all for the love of money is utterly a disgrace. Take me back to the era of innovation devoid of greed.

Resurrect the Wardenclyffe Tower, let's distribute the power with complete efficiency. Let's do this for the lost souls from Chernobyl and Oka -- yes, excuse me, Okuma Fukushima.

The pain and the suffering handed down to the people to expose the ones reaping the benefits hiding in their lavish mansions. Lest us forget the earthquake faults located under measurable amounts of toxic contaminants.

Organizations claiming it as green while transmitting environmental pollutions. Constantly suppressing countless solutions. How many have to be affected before we accept the facts that nuclear energy are merely a complication with the power to slay global civilization.

(Applause)

MR. HAGAR: And after Jessica the speaker

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General Comment

Diablo Canyon must be immediately shut down and decommissioned.

There are significant environmental impacts to the local community and all of California and the entire earth from the operation of Diablo Canyon Power Plant.

127-L098-1

Diablo Canyon Power Plant should be shut down and the waste should be better contained or moved out of California.

Importantly, Diablo Canyon discharges huge amounts of tritium, strontium and cesium into the ocean continually. PG&E stated in 2014 that Diablo Canyon regularly discharges more tritium than Fukushima NPP in its melted down state is pouring into the ocean.

127-L098-2

That water [in 2012] contained 3,670 curies of tritium, or 136 trillion becquerels, according to the company, almost three-and- a-half times the amount released from the Fukushima plant into the ocean in the period starting May 2011. The plant also discharged cesium-137 and strontium-90, though at lower levels than Fukushima. [iii]

The Diablo Canyon Power Plant is old and does not comply with federal safety standards according to the Union of Concerned Scientists [i]

127-L098-3

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Add = M. Wentzel (MSTR)

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Template = ADM-013

There are reports of airborne radioactive releases, as well as periodic high releases when the reactors are re-fueled creating ongoing significant radioactive contamination of the environment in California and on earth. 127-L098-4

The NRC is not capable of enforcing the needed regulations for this nuclear power plant under its jurisdiction and the people who live in the vicinity. 127-L098-5

Shut down Diablo Canyon now.

[iii] http://www.telegram.com/article/20140203/NEWS/302039780/1052

Mendiola, Doris

From:	john stephens <stephens2@earthlink.net>
Sent:	Monday, August 24, 2015 6:55 PM
To:	Wentzel, Michael
Subject:	[External_Sender] Environmental affects of Diablo Canyo
Attachments:	WHY DIABLO Canyon 's ONCE THROUGH COOLING SYSTEM SHOULD BE CONSIDERED.docx

Hello Michael. I'm attaching the statement that I would have liked to present at the August 5th meeting, but ,of coarse, couldn't in 3 minutes. I srudied once through cooling at the power plant in Redondo beach, from 1974 through 1996 and this work has continued to the present5. I know of no better data concerning the affects of once through cooling on a fish assemblage than our 41 year study. See Attachment. John Stephens, Emeritus professor, Occidental college.

7/1/2015
80FR 37664
(21)

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Template = ADM – 013
E-RIDS= ADM -03
Add= M. Wentzel (MSW2)

WHY DIABLO CANYON'S ONCE THROUGH COOLING SYSTEM SHOULD BE CONSIDERED "STATE OF THE ART"

I am a marine biologist (an ichthyologist) retired (1996) after 38 years of teaching and research. During that time, I spent more than 20 years examining the affects of once through cooling at the Redondo Beach (King Harbor) steam electric generating facility, on the adjacent fish assemblage affected by the intake and hot water discharge. Both temperature change and entrapment/entrainment were examined. In this study, we monitored monthly the volume of plankton and number by species of fish larvae in the adjacent water column. We examined the recruitment of larval fishes to the adjacent rocky reefs and the abundance of juvenile, subadult, and adult fishes by quarterly diver counts on 5-7 transect areas. At the same time we monitored the fish assemblage in a kelp bed site, three miles to the south at Palos Verdes, with transects taken at the same depths as those in King harbor. We considered this site, as a control comparison. Additionally, we followed the fish entrapment for a number of years, including entrapment during heat treatments. We also examined the affects of chlorination on some of these species. This field study is still going on (41st year) carried out by my replacement and has produce more than twenty papers. I have listed a number of these papers for your interest at the end of this statement. In general, the fish assemblage surrounding the once through cooling system has remained abundant and diverse, when compared to that of the Palos Verdes kelp bed which is considered an important natural habitat, and the larval entrainment doesn't appear to have an effect on the fishes of the assemblage. This, though the assemblage has changed due to the transition from a cold PDO to a warm one, as well as due to El Nino events, habitat destruction from storms, and breakwater modification, etc. 128-L021-1

I have not been a strong supporter on nuclear power plants though I helped develop the fish return system that functioned at SONGS unit 2 before it was shut down. I am a fan of adequate electrical power and not of carbon producing hydrocarbon plants. The U. S. electrical grid is not ready to loose California's last functioning nuclear plant, which produces abundant carbon free energy. Coastal power plants do kill many fish larvae and a limited number of entrapped fishes but we see no evidence of an effect upon the local fish assemblage.

The once through cooling system at Diablo is unique, I believe for California. Both the intake and the discharge are in the intertidal zone, not in the subtidal. A large number of intertidal fishes are small benthic species, rarely swimming in the water column and thus not subject to entrapment. Entrapment of fishes generally occurs at night when a fishes rheotactic sense is marginal and entrapped fish are largely active schooling nocturnal species. (Queenfish, white croakers, anchovies etc). Further, the entrance to the intake was designed for three units and only two were built so that the opening is relatively large and thus produces a slower incurrent. Unfortunately, I know of no data concerning entrapment of fishes at Diablo or any study of entrapment at this site. However, entrapment, even in large subtidal intakes is rarely considered significant as opposed to the affects of recreational and commercial fishing. At King Harbor, thee daily entrapment was much less than the take by any active fishing vessel. Entrainment of plankton and larvae does kill lots of larval fishes and planktonic organisms. I have examined the larval fish data taken by Tenera in over ten years of meter net samples near the intake. Eleven of the top 20 larvae entrained are intertidal species. Of the 9 remaining, anchovies, white croakers and one species group of rockfish rank in the top group, anchovy larvae are abundant in most coastal inshore waters (including my work at Redondo beach), though they are more abundant during cold PDO's. Almost all of the top twenty species show considerable annual fluctuation with no obvious trend. Further, most oceanic or subtidal species of larvae that are taken in the intertidal would be unlikely to survive their settlement into this shallow highly competitive environment. Remember that fishes produce huge numbers of larvae, often greater than 1,000,000eggs/female because >99% will not survive predation, random drift or starvation. (which is the evolutionary pressure for production of so many). The loss to intakes has not been found to be significant. In order to document such an effect, assemblage populations would have to be shown to be declining due to lack of recruitment caused by power plant entrainment. All fish populations have large annual fluctuations and it is highly unlikely that any of these fluctuations could be ascribed to entrainment as fish larvae on the Pacific coast rarely return to their parental population. Suggested, no hard data has shown even a short term affect. A recent report to the California Energy Commission on the King harbor Ichthyoplankton (2008) shows that if the data is plotted from 1974 to 2008, there has

128-L021-1 cont'd

been a "steady "decrease in plankton abundance, yet no correlation between entrainment and this decline was discovered. The major decrease occurred in the late 1970's when the cool PDO ended. If we ignore the cool PDO data, the overall decrease disappears. No increase has been seen since the plant went largely offline in around 2010. 128-L021-1 cont'd

There has never been any long term effect demonstrated for a Pacific coast fish species from open coastal larval entrainment. The geological and oceanographic conditions in the eastern Pacific can not be compared to those of the Western Atlantic where the fish populations are often dependent on large embayments (sunken river mouths) for some stage in the life history and required annual migrations which increase vulnerability to entrapment or entrainment. Even there, marine entrainment has not been shown to be a long term problem.

Hot water discharge is benign for most local mobile fish species which simply move to appropriate thermal conditions.. As a biologist, the thought of a discharge through the intertidal, a wonderfully rich biological habitat, seemed insane. I observed it while lecturing to the plant scientists on fish thermal preference prior to the plants initial operation. Such a flow would certainly drive off motile organisms, including fish, and kill sedentary flora and fauna. Fishes driven from their preferred habitat are certainly more vulnerable to predation. With the initial start up of the plant, this happened. However, only a relatively small area of intertidal is strongly affected and even the worst impinged areas have been recolonized by tolerant species. When the plant is closed, this change should be reversed in several years. Fishes detect water temperature and avoid those that are harmful. The warm water rises quickly to the surface as the water deepens and is rapidly cooled, though the shallow discharge cove has certainly been significantly warmed. Some fishes that normally are known to be common south of Point Conception have taken advantage of this small area and live here happily. Many fish larvae from the warmer southern California environment drift north of the Point Conception faunal barrier, but few are able to survive or reproduce here. The Diablo warmer temperatures may be a harbinger of what will occur as sea water temperatures rise with global warming. What exists here today, due to once through cooling at Diablo is likely to be more prevalent in the future. Again, at King Harbor in Southern California, a number of tropical species have been observed living in the warm discharge water

including broomtail groupers, and the Cortez Chub. This appears to have little effect upon the indigenous species and they usually disappear after an unusually cold winter.

128-L021-1 cont'd

The once through cooling system at Diablo does not show a negative affect on the local fish species and because of its' intertidal intake and discharge is highly unlikely to in the future. Any change due to water warming should rapidly disappear once the plant is taken off line and conditions return to the then current status. Compared to the terrestrial effect of cooling towers, which also would require water for cooling, and could produce local weather changes, the present once through cooling system is the system of preference.

Literature of interst by Date..

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John S. Stephens, Jr. PhD James Irvine Professor of Environmental Biology Emeritus and founder, Director Emeritus, Vantuna Research Group, Occidental College, Los Angeles. Present address Arroyo Grande, Ca. 93420

MR. HAGAR: Following John will be Mary White. John, you'll need to use this mic.

MR. STEPHEN: This is the one? I'm a marine biologist. I was the James Irving professor of --

PARTICIPANT: Microphone.

MR. HAGAR: You've got to speak into the mic.

MR. STEPHEN: I'm a marine biologist. I'm professor emeritus from Occidental College. I have many, many, many, many years of experience doing research on fishes. I'm a fish man, primarily. Cooling water intakes do kill fishes and fish larvae. They also can affect fish populations by entrapment, but in general, there's been no data that shows that any of this has an effect on the existing populations. By contrast, entrainment does kill pythonic larvae and fishes, but these organisms are highly fecund, the evolutionary result of huge mortality of eggs and larvae, primarily from random drift, predation and starvation. Entrainment is a small addition to this, which appears to be unnoticeable in the parental populations. 128-T001-19

I worked for 20 years studying cooling water intakes in Los Angeles. I worked at King Harbor

studying the Redondo Beach plant, pumped 460 million gallons a day. We looked at larvae, we looked at settlement of larvae, we looked at adults. We followed them for the 20 years to see if there was any indication that anything that was going on in the plant was producing an impact. We found nothing. That study has all been published.

128-T001-19 cont'd

All those data are available. Anybody who wants to look at it, they can see it. The study is still going on. After I retired in 1996, I was replaced, and now we have 41 years of data looking at cooling water effects on fish populations in the adjacent area. Generally, cooling water intakes do have -- they do kill small organisms, but they have no effect on the adult populations. Compared to the alternatives -- we're talking about cooling towers, which present problems in the terrestrial environment -- cooling water intakes are still, in California, the best technology for cooling power plants. Thank you.

MR. HAGAR: Following Mary will be Diane Koletzke. Is that right, Diane?

MS. KOLETZKE: Yes.

MR. HAGAR: Okay, good.

MS. WHITE: Mary White, ED for Clean Oceans Competition and board member of ECOSLO. The

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Notice of Receipt and Availability of Application for Renewal of Diablo Canyon Nuclear Power Plant License

Comment On: NRC-2009-0552-0026
Diablo Canyon Power Plant, Units 1 and 2; Notice of Intent to Prepare an Environmental Impact Statement

Document: NRC-2009-0552-DRAFT-0055
Comment on FR Doc # 2015-15921

62

Submitter Information

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7/1/2015
80FR37664

Name: Sharon Steuer
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Email: ss@somanymeals.com

General Comment

It is unacceptably dangerous and extremely unsafe to allow a nuclear plant such as Diablo Canyon to continue to operate along fault lines in California!

129-L061-1

We MUST decommission the plant immediately.
Fukushima has demonstrated that there is no safe way to operate a plant on a faultand that disasters CAN happen!

Even without an earthquake the plant is harming people and the environment by generating waste that can't be properly disposed of, killing fish by returning hot water to the ocean, and regularly exposing neighbors to low-levels of radiation exposure.

SHUT DOWN DIABLO CANYON NOW!
We must not continue to increase our risks of disaster by allowing a nuclear plant to exist on a fault line at the ocean!

SUNSI Review Complete
Template = ADM – 013
E-RIDS= ADM-03
Add= Will Weatherzel (msw2)

MS. STRICKLAND: Terri Strickland. I'm a 35-year resident of San Luis Obispo County and most everything I wanted to say has been said. I'll keep this short. 130-T001-70

PG&E has been a good neighbor to the residents of San Luis Obispo County for all the years they've been operating and I'm in support of their license being renewed for all the reasons that have been stated previously. I had a bunch of letters from celebrities, but I'm not going to read them --

(Laughter)

MS. STRICKLAND: -- because their opinion isn't any more important than the rest of ours. Thank you.

(Applause)

MR. HAGAR: Our next speaker will be Polly Cooper. Polly?

MS. SCOTT: I'm not a scientist and I'm not a movie star, but I am here just recognizing that the temperature in this room could be lowered a couple of degrees.

(Laughter)

MS. SCOTT: And that would save a little bit. And if we're talking about a lot of places that we go to, we could consider this.

MR. HAGAR: All right. Well, we'll get back to where we were a minute ago.

Sherry Stuckey is the first speaker. So Sherry, you have the floor.

MS. STUCKEY: Hi everyone, I'm a private citizen. I wanted to thank Mothers for Peace for reminding me to show up to put something on record. And also the Nuclear Regulatory Commission for having a public comment.

MR. HAGAR: Sherry, you're going to need to speak closer to the microphone.

MS. STUCKEY: Okay. Pick it up. I'll probably turn it off if I pick it up, but I'll try it. Okay, can you hear me now? Thanks.

131-T002-1

So, I just wanted to be on record, you know, in hopes that my comments may influence present decision makers to use their influence to shut down not only the Diablo Canyon facility, but all nuclear plants in the northern hemisphere.

And also to urge all energy corporations to halt the building of new ones throughout the world. We clearly cannot 100 percent mitigate the factors that cause nuclear accidents.

These include earthquakes, tsunamis, solar flares and mechanical and human error. If there is an

accident, we cannot even clean it up. We merely sacrifice that part of the earth where the accident occurs.

131-T002-1 cont'd

We cannot afford to keep doing this after Chernobyl. Now Fukushima, Three Mile Island, probably various other places we don't even know about.

The three melted cores at Fukushima are a perfect example of how we cannot control nuclear technology. They're down there. There's no way to get them out. The robots can't get in there. I'm not sure how we're going to even begin to clean that up.

Recent evidence includes dead and dying sea life washing up on the beaches of America's west coast. And this is just, you know, over the past three years. So God knows what's going to happen, you know, over the next ten.

So, this destruction will only increase as these leaking isotopes take hundreds and thousands of years to break down. So the technology's been in place since the 50s. And you know, it's only 50 years.

If an event such as Fukushima were to happen in California, the seventh largest economy in the world would be destroyed. The food for much of our nation would be contaminated. And the crown jewel of culture, history and art that is California would become a bitter

memory.

This is an ethical question. How can we permit a technology that cannot be tamed by humans or robots to continue and possibly destroy the biosphere as we know it. 131-T002-1 cont'd

I for one do not want it. And believe that the use of this uncontrollable technology is a gross breach of our human duty. I encourage us to join Germany and other nations who have recently implemented the shutdown of all of their nuclear facilities to set an example worldwide.

Thank you for your time this evening.

(Applause)

MR. HAGAR: Okay. Following Harvey Wasserman will be Dr. Gene Nelson.

MR. WASSERMAN: It's her birthday. Say happy birthday.

(HAPPY BIRTHDAY)

MR. WASSERMAN: Okay. We all know Diablo is going to shut. The question is whether it's going to shut before the earthquake destroys it and us.

We had Dr. Peck at the plant, one of the leading experts in the entire Nuclear Regulatory Commission, who issued a report saying the reactors could not withstand a likely earthquake deliverable by

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Comment On: NRC-2009-0552-0026
Diablo Canyon Power Plant, Units 1 and 2; Notice of Intent to Prepare an Environmental Impact Statement

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General Comment

Diablo Canyon employees plays a big part in their communities and the local economies. The employees live in the cities and unincorporated areas that make up San Luis Obispo County. With home ownership, property taxes and sales tax there is a multiplying effect of dollars that Diablo Canyon's head of household jobs provide. PG&E partners with the local communities on many fronts. From donations to libraries, Fire fighting infrastructure, charitable organizations and community events PG&E is an outstanding community partner. As an elected official I have experienced first hand the difference that this support has made in my community. This is all in addition to the large amount of property taxes that are paid to the county every year. Diablo Canyon's employees not only support their communities financially but they also donate their time and talents to improve where they live. This makes the overall community of San Luis Obispo county a great place to live. I appreciate this opportunity to share my thoughts and encourage a thorough environmental impact study to be completed based on facts and not public emotion. At the end of the day I know that you will find the operation of Diablo Canyon to be safe, reliable and affordable and that we are capable of continued performance through the period of license extension. 132-L018-1

Regards,

Brian Sturtevant

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Template = ADM – 013
E-RIDS= ADM -03
Add= M. Wentzel (MSW2)

Atascadero City Councilman & DCPP QV Assessor Supervisor

My father's birthday is tomorrow. He's going to be 93. And I remember him giving me advice when I was going through a bad breakup as a young woman. Don't kick a dead horse.

And I feel like this is a dying horse. And my grandparents all lived to be in their 80s and 90s. Late 90s, all of them.

I don't think that's going to happen in my family and for many of us because of things like this. Not the only thing, but anyway. Thank you.

MR. HAGAR: Okay. Thanks.

(Applause)

MR. HAGAR: And the speaker to follow Laura will be Justin Stanley.

133-T002-45

MS. SUTTON: Hi -- oh, it's the other one. This one, okay. My name is Laura Sutton. And I was at Diablo Canyon in 1981 amongst I believe it was 1,700 people that were arrested to intervene with the opening of that plant or the continuation of the plant.

I feel very strongly. I felt very strongly about it then. And I feel very strongly even more so about it now. I feel like the intervening years has been an unspeakable stroke of luck that nothing has happened of significance at Diablo Canyon.

However, things of significance, of great

significance have happened in nuclear power plants as we know. They have. And I thought after Three Mile Island, I thought okay. They'll close them down. This is a God given warning.

133-T002-45 cont'd

After Chernobyl I thought okay. This is going to -- they're going to close them down. This is the God given warning. This is what we knew could happen and it did happen.

And now we have -- excuse me, I won't swear. Now we have Fukushima. And Fukushima is drifting this way. There is no end in sight in the reactive material that's coming our way and is in our way.

I'm not eating Pacific seafood personally anymore. There is no containment at Fukushima. It's not under control at all. We're not really given much information in the mainstream media about it. It is way not under control. We probably haven't seen even the beginning of it.

The lack of common sense, the lack of just straight human intelligence in this whole procedure, it's unbelievable to me, okay. We just -- we're people. We're all people. You guys are people too. I realize that.

And let's just get our feet on the ground. Let's get some common sense. This is a death sentence.

133-T002-45 cont'd

If not now, later. If not Diablo, another nuclear power plant.

But Diablo is extremely close to where I live. And it's extremely surrounded by earthquake faults. And somebody mentioned fracking, which is also very important.

The waste, what kind of a race of beings creates that much waste that they cannot safely dispose of? It's -- I'm just calling for common sense you guys. Just basic common sense.

We need to stop this. Enough is enough. We're blessed to be out of this without having something really bad happen. And it has happened, something further. Thank you.

(Applause)

MR. HAGAR: Now the speaker to follow Justin will be Kate Title. Is that right Kate?

UNKNOWN: She's not going to be, she had to leave.

MR. HAGAR: Okay. Kate?

UNKNOWN: She had to leave, so she's gone.

MR. HAGAR: She had to leave? Okay, then the next one will be Jessica Lovering.

MR. STANLEY: Hello. My name's Justin Stanley. I grew up in the bay area and particularly

To the NRC Re: Environmental Scoping Topics for Docket ID NRC-2009-0552
www.regulations.gov

From: **San Luis Obispo Mothers for Peace**
P.O. Box 3608
San Luis Obispo, CA 93403
www.mothersforpeace.org

The Nuclear Regulatory Commission (NRC) intends to develop and publish an environmental impact statement (EIS) for the proposed license renewal of the Diablo Canyon Nuclear Power Plant, Units 1 and 2, and seeks public comment on environmental issues to be included in the report. San Luis Obispo Mothers for Peace (SLOMFP) submits comments below.

The energy produced from Diablo Canyon nuclear plant is not needed. Renewable energy alternatives exist.

134-L078-1

The consideration of energy alternatives is a site-specific issue, as the need for energy is relevant only to California. New information shows that there is a range of renewable alternatives that negates any need for license renewal for the Diablo Canyon plant. PG&E has skewed its new analysis of energy alternatives to ignore or reject a wide range of renewable energy options available to replace the power generated by Diablo Canyon.

Mark Cooper is Senior Fellow for Economic Analysis at the Institute for Energy and the Environment at Vermont Law School. He is an expert in the field of economic and policy analysis with a focus on energy, technology, and communications issues.

Mark Cooper's Declaration in Support of SLOMFP's Motion to File New Contentions Regarding Adequacy of Environmental Report for Diablo Canyon License Renewal Application is available at http://pbadupws.nrc.gov/docs/ML1509/ML15096A614.pdf

In this report, Mark Cooper points out that

> "PG&E's focus on 'standalone' energy sources reflects two irrational and unsupported biases: first, towards reliance on "baseload" generation by a single source, and second towards "utility-scale" generation. But these biases have been outdated by the ongoing transformation of the electric utility sector. As one prominent financial firm that specializes in analysis of the electricity sector, UBS, put it, 'Large-scale power generation . . . will be the dinosaur of the future energy system.' 1 They are: 'Too big, too inflexible, not even relevant for backup power in the long run.' 2 While UBS ties the shift to the spread of battery technology other major firms see the shift being driven by the development of other technologies including solar, 3 wind, 4 efficiency, 5 as well as the increasing ability to actively integrate and manage supply and demand. 6"

1. UBS, 2014, Global Utilities, Autos & Chemicals Will solar, batteries and electric cars re-shape the electricity system?, August 20, p. 1. UBS "is considered the world's largest manager of private wealth assets," http://en.wikipedia.org/wiki/UBS
2. Id
3. Bernstein Energy and Power Blast: If solar wins, Who Loses?, Bernstein Research, April 2. Lazard, 2013, Levelized Cost of Energy Analysis – Version 8.0, June.

4. Eggers, Dan, et al., 2014, A Thought... The Transformational Impact of Renewables, Credit Suisse, December 20; CITI Research, 2012, Shale & Renewables: A Symbiotic Relationship, September 12.

5. Eggers, Dan, 2013, A Thought... Energy Efficiency: The Reality of Slower Power Demand Growth, Credit Suisse, February 11; McKinsey and Company, 2010, Energy Efficiency: A Compelling Global Resource

6. UBS, 2014, Global Utilities, Autos & Chemicals Will solar, batteries and electric cars re-shape the electricity system?, August 20; Frankel, David , Kenneth Ostrowski, and Dickon Pinner, 2014, "The disruptive potential of solar power: As costs fall, the importance of solar power to senior executives is rising," McKinsey Quarterly, April.

In another paper, Mark Cooper makes the case that "Nuclear reactors old and new are far from a necessary part of a low-carbon solution. Nuclear power, with its war against the transformation of the electricity system, is part of the problem, not the solution."
http://www-assets.vermontlaw.edu/Assets/iee/Power_Shift_Mark_Cooper_June_2015.PDF

134-L078-1 cont'd

California has a goal, set by the California Energy Commission and Governor Brown, to increase the proportion of renewable, carbon-free energy to 33% by 2020. See http://www.energy.ca.gov/renewables/index.html Diablo Canyon's electrical output will be an obstacle to reaching that goal, because nuclear is not a flexible source of energy. It is unsafe to ramp down the level of output of a nuclear plant, so when there is an overabundance of energy available to the Western Grid, it will be the more flexible renewable sources that have to be shut down. See article by David Howarth and Bill Monsen, with MRW & Associates, LLC in Oakland, California titled *Renewables Face Daytime Curtailments in California.*
http://www.chadbourne.com/Renewables-Face-Daytime-Curtailmentsin-California_projectfinance/

Paragraph 5:

> "The California Independent System Operator (CAISO) is concerned that there may be times when there is so much variable wind, solar and other renewable energy being scheduled onto its system that the other generators who will have to adjust to accommodate it will not have the flexibility needed to do so."

Paragraph 8:

> "Some generators, such as nuclear, small hydroelectric and most geothermal and combined heat and power plants, need to run and have little ability to shut down because they have limited flexibility."

SLPMFP contends that California has all the renewable energy it needs to replace the power from the dirty, dangerous, and expensive Diablo Canyon.

Furthermore, the Environmental Protection Agency does not believe that nuclear power is needed in order to combat climate disruption. According to the recently-released Clean Power Plan, the following measures will be taken:

134-L078-2

- Nuclear reactors under construction are not counted in the emissions targets, but neither are existing nuclear reactors, including the 6% of uneconomical, "at-risk" nuclear reactors. By the same token, relicensed reactors do not count either.
- ONLY new reactors that actually operate before 2030 (the five in construction or any others) and power uprates of existing reactors can count toward meeting emissions goals.

That means there is no INCENTIVE under the rule to keep uneconomical reactors operating and no incentive to complete building new reactors. States can achieve compliance with new nuclear (but not with existing nuclear), and they are given no justification for preferring nuclear over renewables. In fact, there are several statements in the rule that indicate just the opposite.

- Existing reactors cannot qualify as emissions offsets for fossil fuel generation, at least so far as compliance with the Clean Power Plan is concerned. 134-L078-2 cont'd

States could create a subsidy for new reactors or power uprates for existing reactors, but there is no incentive for them to do so.

There are significant seismic concerns. 134-L078-3

The original siting of the Diablo Canyon reactors was a mistake, for the area is riddled with a multitude of active faults. If PG&E were to come to the NRC today to request a construction permit, it would certainly be denied.

PG&E is ignoring the fact that its licensing basis requires it to prove it can manage a Double Design Earthquake shutdown. PG&E points out that no other nuclear plant has such a requirement. That is because no other nuclear plant has been given an operating license despite being sited within two and a half miles of a known major, active earthquake fault – the Hosgri Fault. This is a site-specific issue, pertaining only to the geographical specifics of the Diablo Canyon site.

Pacific Gas & Electric Company (PG&E), operator of Diablo Canyon nuclear plant, attempts to placate the public with assurances that the aging facility can withstand the ground motion of any seismic event from any of the 13 faults – some of them intersecting - surrounding the plant. It also claims that the facility is safe from a tsunami despite its location on the California coast. SLOMFP contends, however, that PG&E's program to protect against earthquake/tsunami impacts is inadequate because severe risks have been greatly understated.

PG&E's Severe Accident Mitigation Alternatives Analysis for Diablo Canyon fails to resolve important questions about the potential for earthquakes very near the plant, and for potentially very large earthquakes. Clearly these are site-specific issues, being unique to the Diablo Canyon plant.

PG&E's seismic hazards analysis fails to account for reasonably foreseeable earthquakes located nearer to the DCPP than PG&E has assumed. For instance, the seismic stations used to locate earthquakes on the Shoreline Fault are all onshore, east of the fault, so that the fault's east-west location is highly uncertain. Thus the fault could be closer to or further from DCPP than assumed in DC03.

PG&E's understatement of magnitude stems from its reliance on "scaling relations", which are equations relating magnitude to rupture length or rupture area. But scaling of earthquake magnitudes from fault geometry has been demonstrated to be unsupportable, because the mapped fault length is no limit to the ultimate rupture length. Many earthquakes have ruptures exceeding the length of the faults on which they started. Even PG&E implicitly acknowledges this: examples listed in the SSC Report at page 6-6 include the 2002 Denali, AK (magnitude 7.9), the 1992 Landers, CA (magnitude 7.3), and the 1999 Hector Mine, CA (magnitude 7.1). Other major earthquakes occur on previously unknown faults, even in areas with extensive prior geological study: the 1989 Loma Prieta earthquake (magnitude 7.1; Spudich, 1996); the 1994 Northridge, CA (magnitude 6.7); and the 2010 Darfield, NZ (magnitude 7.1) earthquakes. Perhaps the most astounding example was the 2012 magnitude 8.6 strike-slip earthquake off the coast of northern Sumatra (Ishii et al., 2013). Nevertheless, PG&E disregards this information and unjustifiably relies on the scaling relationships to estimate maximum magnitude from fault length.

PG&E's assertion that Diablo can survive anything Mother Nature comes up with is a hopeful projection, not a prediction that can be backed up with any certainty. The catastrophic consequences of a large earthquake should not be imposed on citizens for the sake of PG&E's bottom line.
http://mothersforpeace.org/data/2015/2015-04-15-new-contention-regarding-adequacy-of-severe-accident-

mitigation-alternatives-analysis

Emergency plans are woefully inadequate.

Emergency planning for the communities surrounding the Diablo Canyon nuclear plant should be classified as a site-specific issue because the population density, roads and bridges, geography, and earthquake potential of the Central Coast is unique.

134-L078-4

Natural versus Technological Disasters and Panic: Emergency response plans for a *nuclear* disaster are generally modeled after studies of responses to *natural* disasters, but research makes it clear that people tend to respond differently in technological disasters. Studies indicate that panic often does not occur in a natural disaster. Panic in an emergency situation is most likely to occur when there is a perception that:

- the danger is increasing rapidly; (Radiation is unseen, it seems mysterious, it can cause major health problems, and there is no way of knowing how fast the plume will arrive or how long it will remain.)
- the escape routes are closing off. (In the communities surrounding Diablo Canyon nuclear plant, the escape routes are very limited and people know that they could easily be closed off by accidents or the rush of traffic. This is a small town area with a highway system built for an area of small towns, but it is also a major tourist locale that can easily draw 150,000 people for an event. It would be impossible to evacuate all of the tourists and homeless people from the area. Furthermore, homeless people and tourists in the many camp grounds would have no way to shelter.)

Protective Action Zones and Shadow Evacuations: Protective Action Zones are central to the Diablo Canyon Emergency Response Plan, and it is assumed that people will follow the instructions given for their zones – but this might not be the case in a real nuclear emergency. In contrast to the reluctance by some people to evacuate during natural disasters, people sometimes overreact in technological disasters. This is particularly true when radiation is involved because, as noted above, people panic when the event seems mysterious; the threat cannot be seen or felt. Research in the 1980s indicated that evacuations by zones were not likely to work.

Cutter, S.L. (1984). Emergency preparedness and planning for nuclear power plant accidents. Applied Geography, 4, 235-245.

Zeigler, D.J., Brunn, S.D., & Johnson, J.H., Jr. (1981). Evacuation from a nuclear technological disaster. Geographical Review, 71, 5-7.

In March of 2013, the Government Accountability Office (GAO) issued a requested report to Congress that was publically released April 10, 2013, claiming that the NRC needs to better understand the effect of **shadow evacuations**, the voluntary evacuation of people from areas outside a declared evacuation area. Shadow evacuees congest roadways and interfere with the departure of the targeted group. The NRC disagreed with that recommendation, but GAO responded:

> "To better inform radiological emergency preparedness efforts, GAO recommends that NRC obtain information on public awareness and likely public response outside the 10-mile zone, and incorporate insights into guidance, as appropriate. NRC generally disagreed with GAO's finding, stating that its research shows public response outside the zone would generally have no significant impact on evacuations. GAO continues to believe that its recommendation could improve radiological emergency preparedness efforts and is consistent with NRC guidance." (http://www.gao.gov/products/GAO-13-243)

According to an article in *The Professional Geographer*:

"The 10-mile emergency planning zone is a politically arbitrary distance. It has no bases in meteorology, radiation releases mechanisms and human behavior. In fact studies of human behavior following the Three Mile Island accident in 1979, where a limited evacuation advisory was issued by Pennsylvania Governor Thornberg, provides evidence that people will be spontaneously leaving their homes well beyond the current 10-mile planning zones." ("Evacuation Behavior In Response To Nuclear Power Plant Accidents," by Donald Zeigler and James Johnson, Jr. in the May, 1984 issue of *The Professional Geographer*)

After the Three Mile Island accident, pregnant women and preschool children in the area around the plant were advised to evacuate (about 2,500 people). An estimated 144,000 people (39% of the population) actually left (Zeigler, Brunn, & Johnson, 1981).

134-L078-4 cont'd

Role Conflict: Emergency response plans rely on the assumption that first responders function efficiently despite being personally impacted by the disaster. These first responders, however, are susceptible to the same fears and concerns as the general public and face "role conflict".

"Research conducted in the vicinity of the now closed Shoreham nuclear power station on Long Island, NY questioned bus drivers and volunteer fireman. 'What do you think you would do first if an accident requiring a full scale evacuation of the population within 10 miles of the nuclear reactor were to occur?' The results found that 68% of 291 fire fighters, 73% of the 246 bus drivers indicated that family obligations would take precedence over emergency duties.

Additionally, during the TMI accident, role conflict was documented among many emergency workers including the exodus of physicians, nurses, and technicians required to staff both the short term and long term medical facilities."

http://www.nirs.org/reactorwatch/emergency/emergencyplanning71301.htm

Fire Emergency: San Luis Obispo County Fire Chief Robert Lewin examined the emergency management of the Fukushima disaster and applied what he learned to nuclear facilities in the United States. He determined that the small PG&E fire-fighting crew would not be able to manage a fire emergency coupled with a radiation release.

"The lesson those power plants teach is clear: Protection of nuclear facilities by skilled full-time onsite fire departments and well trained and equipped offsite fire departments needs to be significantly increased. The US Nuclear Regulatory Commission (NRC) must require that industry, local, state and federal firefighting services review and participate in comprehensive improvements to the way nuclear power plants are protected. If US firefighters are expected to follow the example of what Japanese firefighters did to stabilize damaged reactors, then comprehensive changes must occur at and around nuclear power plants...

Offsite firefighters are essential to the protection of a nuclear power plant and they must be ready to protect their communities by containing a radiological emergency at its source. While the NRC requires training of offsite responders, that training is not rigorous enough. The training must include responding to a hostile fire and responding to a nuclear power accident. Whether the local fire department is all-volunteer or from a large municipality, that fire department needs to be educated and ready.

In the event of a hostile radiological fire or a reactor losing its cooling, it would take more than a single engine company to handle the disaster. Hundreds of firefighters would need to rotate in and out of the

fight to limit their exposure to radiation. Again, fire commanders must understand and practice the strategy of time, distance and shielding to protect their firefighters while still putting them into the fight."

http://www.hstoday.us/focused-topics/emergency-managementdisaster-preparedness/single-article-page/in-the-shadow-of-fukushima-facing-the-fires-of-a-meltdown/242a4119dabc5511e28a97a206016ef6.html

134-L078-4 cont'd

The reactor pressure vessels at Diablo Canyon are embrittled.

The reactor pressure vessels at Diablo Canyon are embrittled. In a letter from the NRC to Entergy Nuclear Operations, Inc. dated April 18, 2013, the NRC states that Diablo Canyon's Unit 1 is on the list of the top five most embrittled pressurized water reactors. The letter states: "The NRC currently estimates that the following plants will exceed the PTS screening criteria of 10 CFR 50.61 during their 20-year period of operation beyond their original 40-year licenses."
http://pbadupws.nrc.gov/docs/ML1310/ML13108A336.pdf - pg. 5

134-L078-5

Embrittlement happens over time as the steel in the reactor pressure vessel becomes weakened by intense long-term neutron bombardment from the radioactive fuel inside. As the reactors age, they become increasingly vulnerable to "pressurized thermal shock risks." Rapid severe cooling plus sudden re-pressurization could shatter the weakened reactor vessel and allow intense radioactivity to escape. There is speculation that an earthquake can be the initiating factor in this shattering.
http://www.nrc.gov/reading-rm/doc-collections/fact-sheets/prv.html
http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1806/v2/

A 2014 report "Irradiation Embrittlement of Reactor Pressure Vessels (RPVs) in Nuclear Power Plants" states, "While this degradation mechanism was factored into the initial design and considers in the selection of materials of the RPV, a failure of the RPV by rupture or brittle fracture is ***beyond the design basis of the plant***." (emphasis added)
"Irradiation Embrittlement of Reactor Pressure Vessels (RPVs) in Nuclear Power Plants": Editor: N Soneda 22 Aug 2014, Woodhead Publishing, ISBN: 9781845699673

"Thus far, the industry has not created any method by which it can directly measure the neutron bombardment to the wall of the nuclear reactor other than to sample the coupons of metal welds put inside each vessel when it is manufactured. These capsule coupons were designed to be removed periodically, so that each one may be subjected to destructive testing in order to directly measure the vessel's level of embrittlement.
Declaration of Arnold Gundersen - United States of America Nuclear Regulatory Commission before the Atomic Safety and Licensing Board – Dec. 1, 2014

SLOMFP asserts that this site-specific issue must be thoroughly studied. The impact from earthquakes and high burn-up fuel on the embrittled RPV must be considered.

PG&E has lost its credibility.

The Japanese Parliament concluded that collusion between regulator, industry, and government officials was the root cause of the ongoing Fukushima nuclear catastrophe.
https://www.nirs.org/fukushima/naiic_report.pdf

134-L078-6

Frighteningly, the Diablo Canyon plant is operated by PG&E, a company under multiple federal indictments for safety violations in the recent fatal explosion of its San Bruno, CA gas pipeline, and embroiled in an evolving

scandal about illegal back-channel communications with the state's Public Utilities Commission. 134-L078-6 cont'd
http://www.mercurynews.com/business/ci_27785310/pg-e-executives-harvest-pay-raises
http://www.bizjournals.com/sanfrancisco/morning_call/2015/05/pge-cpuc-federal-grand-jury-email-san-bruno-blast.html
This is a site specific issue, relating only to the owner of the Diablo Canyon nuclear facility.

Diablo Canyon is vulnerable to terrorist attack.

Security issues must be considered site-specific in the case of Diablo Canyon facility because of its unique geographical vulnerabilities. 134-L078-7

Attack by air

No plant in the United States – including Diablo Canyon – is prepared for a large-scale attack by air.

On August 15, 2013, the Nuclear Proliferation Prevention Project (NPPP) at The University of Texas at Austin's LBJ School of Public Affairs released a report titled "Protecting U.S. Nuclear Facilities from Terrorist Attack: Re-assessing the Current 'Design Basis Threat' Approach".

One of the authors of this report, Prof. Kuperman, commented: "More than 10 years have come and gone since the events of September 2001, and America's civilian nuclear facilities remain unprotected against a terrorist attack of that scale. Instead, our civilian reactors prepare only against a much smaller-scale attack, known as the "design basis threat," while the government fails to provide supplementary protection against a realistic 9/11-type attack. It would be a tragedy if the United States had to look back after such an attack on a nuclear reactor and say that we could have and should have done more to prevent the catastrophe."
http://www.utexas.edu/lbj/news/2013/study-us-nuclear-reactors-vulnerable-terrorist-attack

Water-borne attack

Diablo Canyon is vulnerable to water-borne attacks. A small boat may be able to evade the coast guard long enough to get close enough to the plant to launch a missile. The waste storage area is not covered by a protective dome and is most vulnerable to that kind of attack.

One possible protection is a boat barrier. Wave Dispersion Technologies, Inc. – a manufacturer and marketer of floating security barriers and floating wave attenuators, pointed out that "Boat barriers provide a visible physical deterrent for inadvertent recreational boat traffic from entering the security zone. Boat barriers also establish a physical layer of security to deter, deny and delay terrorists utilizing water-borne improvised explosive devices (WBIED) delivered via a small boat." http://www.whisprwave.com/category/nuclear-security/

There are no such water barriers at the Diablo Canyon plant. Although boats and ships are directed to stay more than a mile away from the plant that does not always happen. Fishing craft have been sighted within Diablo Cove by members of Mothers for Peace while touring the plant site with the Diablo Canyon Independent Safety Committee. (Jane Swanson, **janeslo@icloud.com**)

During that incident, the Coast Guard appeared from around a breakwater shortly after the PG&E guide explained that the yellow craft appearing to be within a hundred yards of the intake structure was a PG&E craft. The Coast Guard ship used a megaphone to tell the craft that it was in waters not allowed, and ordered the fishing vessel to turn out to sea. The Coast Guard then escorted that vessel out beyond the mile mark.

Drones

Drones present yet another potential threat to Diablo Canyon nuclear plant.

> "Recent security breaches with small unmanned aircraft systems ("sUAS") have garnered much attention. Last fall, UAS overflew 13 of France's 19 nuclear power plants in an apparent coordinated fashion. In January, a private UAS crashed onto the lawn of the White House. In April, Japanese security forces found a UAS on the roof of the Japanese prime minister's office carrying a small camera and a bottle containing radioactive Cesium-137.

134-L078-7 cont'd

> Nuclear facility operators now operate sUAS under Federal Aviation Administration ("FAA") exemptions for beneficial purposes, including electrical facility inspections, but others may operate UAS for destructive and subversive purposes. sUAS could be used to monitor a facility's security activities, divert security forces' attention from a second threat to physical security, or carry and release destructive conventional, chemical, biological, or radiological payloads. As sUAS become more popular and less expensive, it is likely that nuclear and other sensitive facilities will face an increasing number of potentially-problematic flyovers." (May 28, 2015, http://www.uaslawblog.com/2015/05/28/uas-and-nuclear-power-plant-security/#more-102)

> "Drones can pose a number of problems for nuclear facilities. Flyovers could be used for reconnaissance by hostile actors, for example in the collection of photos and video footage of guard movements and the site layout. This could help to prepare for a ground-based attack. Drones could also provide air support in the event of an actual ground-based attack: They could drop explosives to damage power or communications networks, or could deliver weapons to insiders within the plant. Drones could also be used to bomb spent-fuel pools, which are less well protected than reactor cores." http://www.newsweek.com/drones-threat-nuclear-plants-294458?piano_t=1

Force-on-Force Drills

Force-on-Force drills must be considered a category 2 issue because each plant has unique susceptibilities related to plant design and geography.

Force-on-Force drills should retain an element of surprise, and they should use independent "mock attackers" not connected with the utility. But that does not happen at nuclear facilities. In fact, the NRC has been weakening the drills instead of strengthening them.

> "In response to industry complaints, the NRC already has reduced the number of FOF exercises per inspection from three to two and is proposing to reduce it to only one by 2017. In exchange, the NRC will give more credit to licensee-run security drills and will observe one such drill in each inspection cycle. This is a slippery slope toward the industry's ultimate goal: to take control of the process and eliminate the potentially embarrassing FOF exercises altogether. Even worse, the NRC commissioners have directed the staff to review the entire FOF program with an apparent eye toward weakening it even further." (http://allthingsnuclear.org/the-nrcs-security-inspections-at-nuclear-power-plants-are-again-under-attack/)

There are an unacceptable number of human performance deficiencies at the Diablo Canyon site, particularly involving identification and resolution of problems.

134-L078-8

There were 29 violations documented by the NRC at Diablo Canyon Nuclear Power Plant in 2014, and overwhelmingly, the root cause of these violations pointed to human performance deficiencies. This must be

considered a site-specific issue because the workforce is unique to PG&E's employees at the Diablo Canyon site.

The violations involved fire protection, inoperable emergency diesel generators, occupational radiation safety, poor maintenance planning on safety-related equipment, failure to follow procedures, problems with design control, and multiple instances of failure to identify and evaluate system interactions regarding seismically-induced systems. Eleven of the violations involved security or materials control. One finding identified a violation dating back to the original construction welding process from 1974 - over 40 years ago.

Three of the violations involved the corrective action program - identifying and resolving problems. There is an enormous backlog of problems involving operable but longstanding, degraded conditions at the plant. Some problems were simply not identified in a timely manner, some disregarded and not put into the corrective action program, and others inappropriately delayed.

As of August 2014, there were 29 documented degraded conditions affecting safety-related equipment - the oldest dating from June 2008. The median age of the problems was 1,176 days **post-identification**. In the words of the NRC from the inspection report, there exists "a large number of longstanding degraded or non-conforming conditions, some of which had not been appropriately addressed by compensatory measures or interim corrective actions."

134-L078-8 cont'd

A more recent blunder was revealed in May of this year. 19 of its 34 dry casks used to store spent fuel were not loaded to the manufacturer's technical specifications, particularly as they relate to the proper ratio of older and newer spent fuel. The root cause was determined to be Reactor Engineering personnel misinterpreting the technical specifications.

> While TS 2.1.2 specifies that "fuel assemblies with the longest post-irradiation cooling times shall be loaded into fuel storage locations at the periphery of the basket," the reactor engineers misinterpreted this to mean assemblies with low decay heat and did not use post irradiation cooling time as the applicable criterion. This misunderstanding overrode the review of the procedure and calculations, and the discussion of loading criteria, including cooling time, that occurred in the technical pre-job brief prior to performing this task. http://pbadupws.nrc.gov/docs/ML1518/ML15187A239.pdf

Once-Through-Cooling degrades the marine environment.

Diablo Canyon uses a once-through cooling (OTC) water system that withdraws 2.45 billion gallons of raw seawater from the Pacific Ocean per day through shoreline intake and discharge structures. It discharges back into the ocean at a separate location and 20 degrees warmer. In this process, three major environmental impacts occur:

134-L078-9

- Entrainment ~ smaller organisms such as larvae and eggs are drawn through the cooling system and destroyed
- Impingement ~ larger organisms are trapped against the intake screens
- Thermal effects ~ the release of heated water affects the plants and animals populations in the vicinity

Intensive monitoring over the years of operation (since 1976) has generated tremendous amounts of evidence that the OTC system has resulted in significant degradation to the marine environment in Diablo Cove.

According to the EPA (7/09), "These OTC systems, many of which have been in operation for 30 years or more, present a considerable and chronic stressor to the State's coastal aquatic ecosystems by reducing important fisheries and contributing to the overall degradation of the State's marine and estuarine environments."

In 1972, Congress passed the Clean Water Act. While it focuses mostly on the discharge of pollution, the law also regulates cooling water intake structures. It requires the EPA to issue regulations requiring "best technology available for minimizing adverse environmental impact."

134-L078-9 cont'd

In 2001, the EPA ordered new plants to use "closed-cycle cooling" where water withdrawn from a natural body of water is circulated through condensers to remove the plant's heat, then circulated through cooling towers, and then sent back to the condensers. This closed-cycle cooling system reduces total water withdrawals by about 95%, resulting in a corresponding reduction in the impact on fish and other species. The EPA, however, has not mandated existing power plants to modernize and phase out once-through cooling.

In 2010, the California State Water Resources Control Board adopted a policy requiring power plants to comply with the federal Clean Water Act. Power plants have choices regarding compliance.

1. Cooling Towers: The use of cooling towers is the most effective method for reducing the impacts of OTC. It is, however, costly. They, too, would cause their own severe environmental impacts because the installation of the towers would require major excavation of a mountain behind Diablo Canyon.
2. Modification: One alternative is to modify the existing OTC system to include additional mesh screens and to bury the intake pipes offshore to reduce the number of larvae that enter the system.
3. Mitigation: Another option is to offset environmental damage by implementing mitigation projects. These projects would strive to increase the overall health and productivity of the ocean (development of rocky reefs, marine reserves to enhance fish stocks and increase biodiversity, etc.
4. Plant Closure: The immediate and permanent closure of Diablo Canyon would end the problems of impingement, entrainment, and thermal pollution.

Resolution is pending. SLOMFP asserts that the cumulative impacts on the marine environment from years of operation of Diablo Canyon Nuclear Power Plant under current licenses is unacceptable; this is a site-specific environmental issue that must be rectified.

There is a risk of a devastating tsunami at Diablo Canyon.

PG&E and the NRC claim that the tsunami threat is baseless because of the 85 foot cliff and the placement of the snorkels, but that is a site-specific issue which needs greater examination.

134-L078-10

In a report which the NRC held private for 11 years, *A preliminary Numerical Study of the Hazard for Local Landslide Tsunami Scenarios at the Diablo Canyon Site in Central California*, published November 22, 2003, the investigator Dr. R.T. Sewell concluded that, "the existing tsunami design bases and perceptions of tsunami risk for the Diablo Canyon site no longer reflect modem scientific understanding and methods; there is compelling evidence to suggest that the tsunami threat may be considerably more significant than held in these existing bases and perceptions; and correspondingly, such existing bases and perceptions no longer appear adequate."

Dr. Sewell made 6 recommendations in his concluding comments, one of them being that the licensee of the Diablo Canyon site "justify and/or re-evaluate the tsunami design bases and perform a state-of-the-art assessment of tsunami hazard and risk (including DCPP and DC-ISFSI) within the umbrella of its existing long-term seismic program (LTSP)."

When combining the effects of tsunami, tide, storm surge, and winds, all of Sewell's 13 postulated scenarios in his investigation produced waves that go beyond Diablo Canyon's design basis. In fact, all 13 scenarios produced wave heights that could impact the seawater intake.
http://pbadupws.nrc.gov/docs/ML1429/ML14293A559.pdf

134-L078-10 cont'd

Have we learned from Fukushima?

134-L078-11

An NRC task force provided studied the events of the Fukushima accident and formulated recommendations to enhance U.S. reactor safety. ALL of these recommendations must be implemented before considering license renewal at Diablo Canyon nuclear facility.
http://www.nrc.gov/reactors/operating/ops-experience/japan-dashboard/priorities.html

There are safety issues with the Holtec dry cask canisters being used at Diablo Canyon.

With no permanent repository on the horizon, "interim" storage will for all intents and purposes become permanent at the Diablo Canyon site. There are numerous concerns about the qualifications of the casks used at Diablo Canyon - both for storage and eventually, possibly, for transportation by truck and rail through major cities.

134-L078-12

The casks have not been designed for extended use.
The dry storage canisters at Diablo Canyon are just 5/8" thick stainless steel. In other countries, such as Germany, 14" to 20" thick ductile cast iron canisters/casks are used, such as the CASTOR V/19.

The NRC claims fuel must be reloaded into new canisters every 100 years, unless there is a permanent repository. However, there is data that indicates a much sooner potential failure rate:

- NRC metallurgist Darrell Dunn claims that cracks of the thin stainless steel spent fuel containers may initiate in 16 years.
- Vendor claims of longer storage times are not supported by data.

There is not an effective method for monitoring the casks for cracks.
The nuclear industry has not been routinely inspecting installed dry storage canisters and has yet to develop a method to inspect them for cracks. A 2014 inspection of only two Diablo Canisters ranging from just 2 to 3.5 years in service found sea salt crystals on one canister that had only been loaded for two years. Sea salts and low temperatures are needed to initiate the stress corrosion cracking — this one obviously much sooner than the NRC expected.

Dry cask nuclear waste storage at Diablo Canyon is troubling. The salt fog environment of the coast has corrosive effects on metal – which could lead to failure and radiation release. This is a site-specific issue facing Diablo Canyon nuclear facility.

http://energy.gov/sites/prod/files/2013/12/f5/INLFacilitiesDry%20StorHBUFViabilRptR1b.pdf
http://www.nwtrb.gov/meetings/2014/aug/boyle.pdf

There are problems with leaks in dry casks.
Below are some remarks made by Dr. Kris Singh, CEO of Holtec International, the manufacturer of dry casks at Diablo Canyon. These quotes are from a video made October 14, 2014 at a public meeting of Southern California Edison in San Juan Capistrano and available at

https://www.youtube.com/watch?v=euaFZt0YPi4&feature=youtu.be

*"...**It is not practical to repair a canister if it were damaged**... if that canister were to develop a leak, let's be realistic; you have to find it, that crack, where it might be, and then find the means to repair it. **You will have millions of curies of radioactivity coming out of the canister**; we think it's not a path forward...*

*and...**A canister that develops a microscopic crack (all it takes is a microscopic crack to get the release)**, to precisely locate it... And then if you try to repair it (remotely by welding)...**the problem with that is you create a rough surface, which becomes a new creation site for corrosion down the road. I don't advocate repairing the canister**."*

134-L078-12 cont'd

Instead, Dr. Singh states
..."you can easily isolate that canister in a cask that keeps it cool and basically you have provided the next confinement boundary, you're not relying on the canister. So that is the practical way to deal with it and that's the way we advocate for our clients."

However, there are many problems with Dr. Singh's solution of putting cracked and leaking canisters inside [transport] casks.

- **There are no NRC approved Holtec specifications** that address Dr. Singh's solution of using the "Russian doll" approach of putting a cracked canister inside a [transport] cask.
- **NRC requirements for transport casks require the interior canister to be intact for transport.** This NRC requirement provides some level of redundancy in case the outer cask fails. Does this mean this leaking canister can never safely be moved? Who will allow this to be transported through their communities? How stable is the fuel inside a cracked canister? And where will the cracked canister go? There is no repository for high level radioactive waste in the US.
- **What is the seismic rating of a cracked canister** (even if it has not yet cracked all the way through)? The NRC has no seismic rating for a cracked canister, but plans to allow up to a 75% crack. There is no existing technology that can currently inspect for corrosion or cracks. The NRC is allowing the nuclear industry 5 years to develop it. It is likely to be inadequate due to the requirement the canisters must be inspected while in the concrete overpacks.
- **What is the cost for the transport casks** that will be needed for storage? Will they be on-site? Where is this addressed? Transport casks are intended to be reusable because of their higher cost. How and where will they be stored and secured on-site?
- **How will the leaking canisters be handled** by the Department of Energy at the receiving end of the transport? The DOE currently requires fuel to be retrievable from the canister.

A better solution is to use casks that are not susceptible to cracks, that can be inspected and repaired and that have early warning monitoring systems that send out an alert **before** radiation leaks into the environment.

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Comment On: NRC-2009-0552-0026
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Document: NRC-2009-0552-DRAFT-0042
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General Comment

Please... not anywhere near the large population, key fisheries, fault lines... and particularly, our ailing oceans and declining fish/protein supplies! Best regards, David Traub, Executive Producer, JOBS

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DIABLO CANYON IS NOT A SOLUTION TO REDUCING ATMOSPHERIC CARBON

136-L030-1

Diablo Canyon will prevent California from succeeding in its goal to achieve carbon-free energy of 33% by 2020. Energy analyst Mark Cooper makes the case that, "Nuclear reactors old and new are far from a necessary part of a low-carbon solution. Nuclear power, with its war against the transformation of the electricity system, is part of the problem, not the solution."

DIABLO CANYON IS NOT NEEDED TO FILL CALIFORNIA'S ENERGY DEMANDS

136-L030-2

The California Independent System Operator oversees energy distribution throughout California by managing the grid. CAISO has expressed concern that there may be times when there is so much variable wind, solar and other renewable energy being scheduled onto its system that the other generators, such as nuclear, who will have to adjust to accommodate it, will not have the flexibility needed to do so.

NUCLEAR IS OUTMODED

136-L030-3

"PG&E's focus on "standalone" energy sources is outmoded and unrealistic. First, PG&E focuses on "baseload" generation by a single source. Second, PG&E is not recognizing the increase, flexibility, and resilience of distributed power generation and is promoting outdated, inflexible "utility-scale" generation. PG&E's assumptions are outdated because of the ongoing transformation of the electric utility sector. As one prominent financial firm that specializes in analysis of the electricity sector, UBS, put it, "Large-scale power generation . . . will be the dinosaur of the future energy system." They are: "Too big, too inflexible, not even relevant for backup power in the long run." While UBS ties the shift to the spread of battery technology, other major firms see the shift being driven by the development of technologies including solar, wind, efficiency, and the increasing ability to actively integrate and manage supply and demand."

SEISMIC DANGERS

136-L030-4

Diablo Canyon is built adjacent to 13 known earthquake faults, and it may actually be built directly over the Shoreline Fault. No one – not PG&E, not the US Geological Survey, not the Independent Peer Review Panel – no one actually knows how far east the Shoreline Fault extends. For PG&E to claim that it does is both dangerous and fatuous.

TERRORISM

136-L030-5

Almost 15 years have come and gone since the events of September 2001, and America's civilian nuclear facilities remain unprotected against a terrorist attack of that scale. Instead, our civilian reactors prepare only against a much smaller-scale attack, known as the "design basis threat," while the NRC fails to provide supplementary protection against a realistic 9/11-type attack at Diablo Canyon.

PLUTONIUM 136-L030-6

Plutonium is the most toxic substance in the world. It is only produced through a nuclear reaction. Its half-life is 24,000 years. Plutonium can be transported in the atmosphere usually when it is attached to particles in the air. It can be deposited on land or water by settling or by rain. Plutonium can stick to particles in soil, sediment, and water.

FORCE-ON-FORCE DRILLS 136-L030-7

Because of industry complaints, the NRC already has reduced the number of Force-On-Force exercises per inspection cycle from three to two, and is proposing to reduce it to only one by 2017. In exchange, the NRC will give more credit to licensee-run security drills and will observe one drill in each inspection cycle. This is a slippery slope toward the industry's ultimate goal: to take control of the process and eliminate the potentially embarrassing FOF exercises altogether. Even worse, the NRC commissioners have directed the staff to review the entire FOF program with an apparent eye toward weakening it even further.

DRY CASK STORAGE 136-L030-8

The dry casks selected for use at Diablo Canyon are just 5/8 inch thick stainless steel. Lower quality canisters are being used, choosing profits over our safety. NRC documents provide data that indicate thin storage containers can fail 16 years after a crack initiates.

LEAKY CASKETS

ONCE-THROUGH COOLING SACRIFICES MARINE LIFE 136-L030-9

PG&E, for many years, provided state water authorities with skewed data on Diablo Canyon. The data showed that the plant's intake of billions of gallons of water a day did very little harm to surrounding marine life. PG&E's conclusions were based on the unscientific formula that the amount of sea life drawn into the system at the intake port could be accurately measured by the amount of small fish and other organisms at the outflow of the cooling system.

EMBRITTLED. 136-L030-10

Diablo Canyon's Unit 1 is on the NRC's list of the most embrittled pressurized water reactors in the U.S. http://pbadupws.nrc.gov/docs/ML1310/ML13108A336.pdf

Embrittlement happens over time as the steel in the reactor pressure vessel becomes weakened by intense long-term neutron bombardment from the radioactive fuel inside. As the reactors age, they become increasingly vulnerable to "pressurized thermal shock risks." Rapid severe cooling plus sudden re-pressurization could shatter the weakened reactor vessel and allow intense radioactivity to escape.h

PUBLIC SUBMISSION

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Comment On: NRC-2009-0552-0026
Diablo Canyon Power Plant, Units 1 and 2; Notice of Intent to Prepare an Environmental Impact Statement

Document: NRC-2009-0552-DRAFT-0039
Comment on FR Doc # 2015-15921

46

Submitter Information

7/1/2015
80 FR 37664

Name: Anonymous Anonymous

General Comment

Risks not worth it 136-L045-1

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2015 SEP -1 PM 5:17
RULES AND DIRECTIVES BRANCH USNRC

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Add= m. Wentzel (MSW2)

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Comment on FR Doc # 2015-15921

7/1/2015
80 FR 37664

(48)

RECEIVED
2015 SEP -1 PM 5:17
RULES AND DIRECTIVES BRANCH USNRC

Submitter Information

Name: Anonymous Anonymous

General Comment

Please don't re-license the Diablo Canyon Nuclear Power Plant. California has a 40% surplus of energy WITHOUT the two nuclear plants. The risk is unnecessary. San Luis Obispo is a beautiful place, I would hate for anything to happen to the California coast. 136-L046-1

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Add= M. Wentzel (MJW2)

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Comment On: NRC-2009-0552-0026
Diablo Canyon Power Plant, Units 1 and 2; Notice of Intent to Prepare an Environmental Impact Statement

Document: NRC-2009-0552-DRAFT-0045
Comment on FR Doc # 2015-15921

52

Submitter Information

7/1/2015
80FR37664

Name: Anonymous Anonymous

General Comment

Have we not learn't our lessons from Japan. Nuclear power is not worth it. 136-L052-1

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Add= M. Wentzel (mjw2)

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E-RIDS=ADM-013
Add = Mr. Wentzel (MTSwe)

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Diablo Canyon Power Plant, Units 1 and 2; Notice of Intent to Prepare an Environmental Impact Statement

Document: NRC-2009-0552-DRAFT-0080
Comment on FR Doc # 2015-15921

7/1/2015
80 FR 37664

86

RECEIVED
2015 SEP -1 PM 5:29
RULES AND DIRECTIVES BRANCH USNRC

Submitter Information

Name: Anonymous Anonymous

General Comment

ID: NRC-2009-0552-0026

I oppose the relicensing of these reactors at Diablo Canyon.

The existence of serious earthquakes in California is sufficient enough that these reactors should never have opened. They certainly shouldn't be relicensed.

136-L076-1

There is not only a direct risk to the nuclear power station, but road infrastructure failure can keep backup and emergency workers from arriving.

Even if the reactor survives there may not be workers.

The SAFER program has been shown by the NRC to be a ridiculous "comedy" of errors and the location is not near Diablo. They ultimately want to depend upon the Military-National Guard, who will have other things to do. Katrina gives a heads up of what can be expected from the other branches of the Federal Government.

There is also a major fire risk.

The piping is apparently not up to earthquake standards.

An accident at Diablo will contaminate much of the US and Canada and kill many. If Fukushima doesn't finish off the Pacific, it will.

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Do you know that if you kill ocean plankton there won't be oxygen to breathe?

136-L076-1 cont'd

If you wish to downplay the risk through collusion with PG&E you can't change reality.

Much of America's food comes from California. The FDA "standards" are the highest in the world and will result in high cancer rates from food alone. Where will you get clean food? From Fukushima?

Why are you hiding comments? There is great opposition to this and almost no new comments posted.

That you are even considering relicensing Diablo proves that you are stark raving mad and/or diabolic-evil with intent to murder. What else to expect from an agency that proposes that the "safe" limit of radiation be raised to be 400 times that allowed by the US EPA, and 100 times the current NRC "limit", thus guaranteeing cancer for everyone.

Chickens will come home to roost soon. A US nuclear accident is imminent and it's not upping the dose you consider safe by 100 fold, as you plan, which will change reality. While I predict that you won't get by with these cons much longer, if you do you will still have to be accountable when you die. So, it's best to repent now, come clean, and stop this relicensing and all of the other financial and health crimes. There's no forgiveness without repentance. You appear hell-bent to roast and toast America with radiation. Do you want to roast and toast in hell when you die, as well?

please, please, decommission this plant and make PG&E pay for the clean up. Thank you.

(Applause)

MR. HAGAR: I just got a note there's somebody on the phone that wants to speak. So operator, do you have somebody there that wants to make a comment?

OPERATOR: Let me just double check real quick. Yes, we have -- has a question. Sir, your line is open.

PUBLIC SPEAKER: Great. Can you hear me at the meeting? Can you hear me?

136-T002-71

MR. HAGAR: Yes, we hear you.

PUBLIC SPEAKER: Okay. I just want to make a comment. I listened to all of the personal statements -- personal statement on nuclear power.

And I direct -- I fairly --

MR. HAGAR: Let me interrupt you You're breaking up. We're not hearing you very well. Could you speak a little more directly into the microphone?

PUBLIC SPEAKER: I'm -- okay, I'm -- and there's some -- Can you hear me now?

MR. HAGAR: Yes. That's much better.

PUBLIC SPEAKER: Okay. And to everybody -- merchants of power --

MR. HAGAR: No, you're still breaking up.

We're not hearing you.

PUBLIC SPEAKER: People have to realize how they're getting it in their mind. So tobacco, industries working to put their doubt in mind. It's happening with the nuclear.

136-T002-71 cont'd

It happened with acid rain. It happened with global warming. People -- you all people know this about the global warming, that the oil companies they propagandize.

And they get the certain kind to talk about doubt. To raise that doubt. Well doubt is being raised about nuclear right now. And that's how you're getting all this fearful stuff.

I just ask you to look at the actual casualties and deaths. I mean, in the United States. It's very hard pressed to find anything. Look at -- I'm asking you to look at facts.

You tell the fear mongers that come to you and try to influence you and get folks together to go away. And ask them where are the bodies? Where are the people?

They talk about -- but when they look for them, they're in the San Luis Obispo area. And did a big study and then could find none of these people that a study by Joseph Mangano did for the fear industry.

Turned none of this stuff he found.

He had only statistics. -- And so he -- this is all a -- to me it just went -- switch power sources, the power source is on enough would raise fossil fuel.

136-T002-71 cont'd

It has to be very powerful to do that. And there's only one on the horizon. It's nuclear power that now does 20 percent of our power.

So, that's my comment. And I hope that it was heard at the meeting. Thank you.

MR. HAGAR: Okay. Thank you. Operator is there any other speakers on the phone that want to make a comment?

OPERATOR: Not at this time, there's not.

MR. HAGAR: All right, thank you.

MS. COMER: I would like to make a comment. Hi. My name is Gayle Comer and I'm from -- oh, this one? Okay. Los Osos, I'm here for 34 years, a member living here.

And I was motivated after hearing Kathi DiPeri speaking about how it's not just looking at the relicensing problems in the future. But it's happening here right now.

And as this last gentleman had also said, you know, what are, you know, look at the studies of what's happening right now. But the fact is, is the

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Diablo Canyon Power Plant, Units 1 and 2; Notice of Intent to Prepare an Environmental Impact Statement

Document: NRC-2009-0552-DRAFT-0061
Comment on FR Doc # 2015-15921

4/1/2015
80 FR 37664

Submitter Information

68

Name: Nikohl Vandel

General Comment

If you wouldn't build the Diablo Canyon plant there today, AND we know this quality of technology will never be used again here on earth, close it down now. They pay for moving nuclear materials off of the ocean realm. Thank you. 137-L068-1

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2015 SEP -1 PM 5:20
RULES AND DIRECTIVES BRANCH USNRC

SUNSI Review Complete
Template = ADM – 013
E-RIDS= ADM-03
Add= M. Wentzel (MJW2)

we consider the long range operation of this plant that we are not looking seriously and taking into consideration in the relicensing, the implication that this new information, since the previous license was granted that we have now on seismic activity.

I encourage the Commission to address these issues.

(Applause)

MR. HAGAR: The speaker after Charles Varni will be Sybil Ashley.

MR. VARNI: Hi there. My name is Charles Varni. I live in Oceano downwind. I've got my favorite Einstein quote. That the kind of thinking that created a problem cannot at the same time be the source of its solution. 138-T002-37

You folks at the NRC know that you've got a little bit of a credibility problem here in San Luis Obispo. We understand that you were created to first and foremost promote the development of nuclear energy in the United States.

And at the same time, you know, presumably keep it safe. It's a tough line to keep in balance.

There is a new variable on the scene and a couple of people have addressed it. And I think it's really important. I understand that I need to go to a 138-T002-38

2.206 request for this.

138-T002-38 cont'd

But, we live in the Monterey shale. And it is being fracked like crazy. And deep -- deep injection wells are being used to get rid of toxic fracking liquids.

And we know that with the fracking in Oklahoma, they went from a State that is pretty much zip for earthquakes to experiencing more than 300 a year.

And there is fracking going on all around in proximity to the Hosgri fault and it's connecting faults. And that is something new that needs to be looked at very seriously.

And the fact that we're allowing oil companies to be doing deep well disposal of fracking liquids on the San Andreas fault is absolute fracking insanity. If you get my point.

138-T002-39

Other folks have spoken to concerns that I have as well. Especially around the storage of nuclear waste. I think one thing we can be sure of that we'll be even more screwed on that issue in 2025 then we are now.

So, the only real alternative that we're looking for is shut this baby down now. Thank you.

(Applause)

MR. HAGAR: And the speaker after Sybil

took much longer. And some people have never recovered as you know, like 32 students died in Northridge.

And this is without any radioactive poison in our environment. This was just the earthquake. We don't need this. We live in California and we have a history of earthquakes.

Having an unstable nuclear reactor in a populated area where there's a history of earthquakes is unsafe and life threatening. We cannot control nature.

But, we can control what happens with Diablo. And we can eliminate a disaster. Thank you.

(Applause)

MR. HAGAR: Amy Anderson will be the next speaker.

MR. WADDELL: When we consider whether this license should be renewed, it's not about PG&E profits, it's not about us, it's not about you. It's about them and their peers. 139-T002-33

These are my grandchildren, Oden Skywalker Grafton, age eight. Shelby Viola Grafton, five. Do we have the right to impose obvious and unknown consequences on them and the many generations that follow for a relatively small amount of power produced for us?

Please, do not approve any extension of the nuclear -- Diablo nuclear power plant. And do everything in your power to ensure that those who profited from its existence, bear the demolition costs and the responsibility for the waste containment until it is no longer a health hazard. 139-T002-33 cont'd

We have burdened future generations with so much. Let's not add to it by extending this license. Especially when we have so many clean power options now. In fact, let's consider a date to shut the plant down as soon as possible.

If critical thinking had been a factor when this plant was constructed, this plant would not have been constructed on earthquake faults. If critical thinking had been a factor, this plant would not have been constructed anywhere on this coast.

If critical thinking had been considered, no nuclear power plant would have been constructed anywhere.

(Applause)

MR. HAGAR: Okay. Now after Amy speaks I'm going to check on the phone and see if any of the people on the phone have some comments.

So Operator, just a heads up. After this speaker speaks, I'll invite people on the phone to

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7/1/2015 (12)

Document: NRC-2009-0552-DRAFT-0027
Comment on FR Doc # 2015-15921

80FR 37664

RECEIVED 2015 AUG 20 PM 2:14 RULES AND DIRECTIVES BRANCH USNRC

Submitter Information

Name: Lynn Walter

General Comment

I advocate for continuing the process of extending the operating license for the Diablo Canyon Power Plant by preparing the environmental impact statement. There are two main reasons that I advocate for this:

140-L012-1

1. I am unwilling to accept even one tiny bit of increased pollution to the environment. Diablo Canyon is safely generating pollution free electricity 24/7. If this plant is shutdown, our green house gas emissions will increase due to the gas fired plants that will have to run to supplant the power that Diablo Canyon currently produces.
2. I enjoy the economic vitality that Diablo Canyon provides to my county and my town. Without this station generating electricity, thousands of head-of-household jobs will disappear along with the extended economic benefit to the county from those jobs.

Many new technologies need to become economically viable in order to be able to match our California renewables and distributed solar with pollution free power. This is going to require new generation of nuclear (such as small modular reactors) and better batteries for solar and wind generation. We need a carbon-free grid that works with distributed solar generation too. However, innovations in technology that would be able to make this a reality are decades away. Until then, we need to extend the Diablo Canyon license because it is the only way we can continue to enjoy electricity 24/7 under our current carbon footprint.

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E-RIDS= ADM -03
Add= Lynn. Wentzel (mSW2)

Fukushimas -- there were no problems with any earthquake problems at all. Every one of those reactors -- I think there were 12 -- went through that with no problems at all. In fact, they shut off automatically, as expected, and the cooling water pumps started up immediately, started cooling them down.

An hour later, when the tsunami hit, then we had, in two of the sites, water, when it comes into the intake manifold of a diesel engine, will destroy that engine in under a second. Am I done? I just feel that there should have been backup capabilities for cooling at Fukushima 1. It was basically just the water.

MR. HAGAR: Okay, thank you. The speaker after Lynn will be Carole Hisasue. Carole, you're next.

MS. WALTER: Hi, my name is Lynn Walter. I am speaking for myself. I'm a resident of Avila Beach. I live ten miles from the plant. I want to start with reminding myself and everybody here what happened when San Onofre shut down. I know you all know. Thousands of head of household jobs went away like that. 140-T001-51

There's been many studies of the air down there. There's been almost a 35 percent increase in bad air. I'm a native Californian. I love California. I

love the fact that our future in California will be carbon free. That's my goal for it. But I don't want to have what happened here in this county, in my town, happen that happened in San Onofre. I want to breathe clean air.

140-T001-51 cont'd

I want my air to be -- I like Diablo Canyon because it doesn't spew particulates and carbon into the air. If we shut down Diablo Canyon and we don't have the solar and wind and special small modular reactors to take the place of that power, we're going to have an increase in bad air. I am personally unwilling to accept any increase in air pollution as a result of having to shut Diablo Canyon down. Now good news, there are innovations on the way. Battery science is improving. Solar panels are getting cheaper and better. I'm really excited about these small modular reactors. I have a good friend who's self-identified as anti-nuclear and all of her concerns are answered by these small, modular reactors.

But until those innovations can be commercially viable, which is two to three decades away, we need to make sure we do not supplant Diablo Canyon's power with this natural gas, which is really dirty and bad for our air. Diablo Canyon is our bridge to a future where innovative energy solutions and our grid is carbon

free in California. I choose to live near Diablo Canyon. I live there comfortably. I choose clean, natural uranium over dirty natural gas.

140-T001-51 cont'd

MR. HAGAR: The speaker after Carole will be Dorah Rosen Shivey, is that right?

MS. HISASUE: My name is Carole Hisasue. I'm a local rancher, as well as member of Mothers for Peace. I'm also concerned about air quality, too. One of the problems I have about living so close to Diablo Canyon is that when you have a Geiger counter, it does pick up radioactive air. It's in the air near, and it's higher than in other parts of the state. But that's not what I was going to say. In my eyes, the greatest problem with relicensing, as well as continued operation, is the nuclear waste that keeps accumulating on our coast, turning it into a giant nuclear dump. This isn't a what if. It's happening.

You can't think about relicensing Diablo Canyon or any other nuclear facility until you have a solution to this nuclear waste issue. You were supposed to do so, but 40 years down the line, there's still no answer to the question what do we do with this highly radioactive waste? How can anyone think nuclear is green? It's beyond me. It has the most lethal, toxic, harmful waste product of all energy options.

This is enough energy to meet the needs of more than 3 million northern and central Californians. Diablo Canyon generates more than 20 percent of the electricity used by PG&E customers, with zero emissions power from nuclear power, and more than half of the electricity is generated from carbon-free sources. Nuclear energy produces more clean air energy than any other source and is the only source that can produce such large amounts of energy 24/7. Lastly, this is important to our local economy, something that's near and dear to my heart. Those were my brief comments, thank you.

MR. HAGAR: Okay, thank you, Lynn. Harvey Wasserman is next, and the next people would be Molly Johnson -- Molly, are you here?

MR. WASSERMAN: Hi there, I'm Harvey Wasserman from nukefree.org. David Crosby is here. We represent, also, Bonnie Raitt, Jackson Browne and Graham Nash, who have submitted statements for the shutdown of the Diablo Canyon nuclear plant. We want the Commission to recognize that we are in favor of full employment for all the operators at Diablo Canyon. It will be shutting down. We hope that the operators at Diablo will stay on for the decommissioning process because they know the plant better than anybody. We also understand that when Diablo is shut, there will be

141-T001-2

many, many thousands of jobs in the renewable energy industry that will take up the -- that will create more jobs, more wealth, and certainly be better for the environment than what Diablo Canyon is. 141-T001-2 cont'd

We understand that since Diablo has come on line, a dozen earthquake faults have been found within the proximity of the reactors. That needs to be discussed. 141-T001-3

We want to know what happened to Dr. Michael Peck, who is the resident safety inspector who did the report on the seismic dangers at Diablo Canyon, said that they cannot withstand the earthquakes there. We want Dr. Peck back at Diablo Canyon, and his report dealt with properly. 141-T001-4

We also understand that there is embrittlement at these reactors, and there are water issues that the State of California needs to take up. The State of California can shut Diablo Canyon. 141-T001-5 141-T001-6

It is not in compliance with the law on water quality standards in many different ways, and it's up to us, as Californians, to get the state to shut this reactor as soon as possible. We also want the evacuation plans looked at once again. We want to know about the cracked and the dry casks where there has been improper loading of spent fuel. Above all, we want to make it clear that Diablo Canyon will shut. We need it shut before the next earthquake. We want the people at 141-T001-7

the plant to continue to be there for the decommissioning process, and we look forward to the transition to renewable energy, to Solartopia, which is happening right now. That's where the jobs are. That's where the economy is. That's where the future of this planet is. Thank you very much. 141-T001-7 cont'd

MR. HAGAR: Okay, our next speaker, after Molly Johnson, David Crosby. Come on up here, Dave.

MS. JOHNSON: Hi, my name is Molly Johnson. I am a fourth generation San Luis Obispo County resident. I am very concerned about Diablo Canyon. My subject today is embrittlement. This is directly from the NRC. Reactor pressure vessels which contain the nuclear fuel in nuclear power plants are made of thick steel plates that are welded together.

Neutrons from the fuel in the reactor irradiate the vessel as the reactor is operated. This can embrittle the steel or make it less tough and less capable of withstanding flaws which may be present. Pressurized water reactors, such as Diablo Canyon, are more susceptible to embrittlement than boiling water reactors. NRC regulations at 10 CFR 50.61 provide fracture toughness requirements for protection against pressurized thermal shock, or PTS, events at pressurized water reactors. A PTS can occur when water

memory.

This is an ethical question. How can we permit a technology that cannot be tamed by humans or robots to continue and possibly destroy the biosphere as we know it.

I for one do not want it. And believe that the use of this uncontrollable technology is a gross breach of our human duty. I encourage us to join Germany and other nations who have recently implemented the shutdown of all of their nuclear facilities to set an example worldwide.

Thank you for your time this evening.

(Applause)

MR. HAGAR: Okay. Following Harvey Wasserman will be Dr. Gene Nelson.

MR. WASSERMAN: It's her birthday. Say happy birthday.

(HAPPY BIRTHDAY)

MR. WASSERMAN: Okay. We all know Diablo is going to shut. The question is whether it's going to shut before the earthquake destroys it and us. 141-T002-2

We had Dr. Peck at the plant, one of the leading experts in the entire Nuclear Regulatory Commission, who issued a report saying the reactors could not withstand a likely earthquake deliverable by

the dozen faults there.

If you get to relicensing, this has to be dealt with. Dr. Peck has to be brought back to Diablo Canyon out of exile from Chattanooga. 141-T002-2 cont'd

It's so rare that we get a candid report from inside the Commission. And you need to look and the entire Commission needs to look much more closely at what Dr. says about -- Dr. Peck says about the dozen earthquake faults that have been found around Diablo.

I was arrested at Diablo in 1984 where the -- we're still arguing about the Hosgri Fault. And now there are a dozen there. I should also point out and you need to look at the fact that Diablo is 45 miles from the San Andreas Fault, which is half as far as Fukushima was from the earthquake that destroyed it.

You also need to look now at the tsunami issue. It's been generally poo-pooed. But the reality is that there are intake pipes at sea level and even below at Diablo Canyon that would be impacted by a tsunami even if the reactors themselves are 85 feet in the air. 141-T002-3

That has to be looked at very closely. We are already having dry cask cracking. In terms of the waste storage, there's embrittlement. They're at evacuation issues. 141-T002-4 141-T002-5

There are also health impacts. Since you will be looking at this, I coauthored a book called Killing Our Own in 1982. I interviewed people in Central Pennsylvania after the Three Mile Island accident. 141-T002-6

It was the worst week of my life. I guarantee you people were killed at Three Mile Island. This needs to be revisited. And we also see a million person death toll documented at Chernobyl.

And God knows what's going to happen at Fukushima. Three hundred tons of radioactive water are still pouring into the ocean there. 141-T002-7

I was in Japan when Fukushima was being opened. We were assured that of course nothing like an earthquake or a tsunami could happen there that would destroy it.

Finally, on the jobs impact, this -- I'm not sure if you're going to look at the economic impacts in this particular proceeding. But everyone here who opposes Diablo should understand that the jobs are a real issue. 141-T002-8

We want a Federal jobs program for all the people who are working at the reactors. We want them kept on for the decommissioning process. And we want them placed in the industry that does have a future in

141-T002-8 cont'd

this country, which is renewable energy.

141-T002-9

And when you look at relicensing anything like this, you need to look at the economic and ecological impacts of the transition from an old decrepit nuclear power plant like Diablo into the world of solar panels, wind power and all the stuff that actually does work and will create an environment in the future where our children and grandchildren can survive.

Thank you very much for your time. Shut them down.

(Applause)

MR. HAGAR: Okay. Dr. Nelson and then Rochelle Becker.

MS. BECKER: I'm waiving my time.

MR. HAGAR: Okay. I understand Rochelle Becker is skipping her time. Tom Campbell will be next then. Is Tom Campbell here?

DR. NELSON: Good evening. My name is Dr. Gene Nelson. I served on the Cal Poly Engineering Faculty. And currently serve in the Cuesta College Physical Sciences Faculty.

Critical thinking is really, really important. And I strongly endorse any efforts to encourage critical thinking. And I understand in fact

and I've talked to a few recreational fishermen and fisherwomen. They all state that the fishing along our coastal waters is fantastic. It's great. In fact, the lady at the commercial fishing operation said that daily, they get their quota of indigenous rockfish and lingcod.

For those who are not aware, there is a one-mile off shore exclusion zone from Diablo Canyon which protects the many species of fish in Diablo Cove and beyond to that one-mile radius. These fish species include many that find their way into Diablo Canyon with the warm water storm which we experienced not too long ago with the last rainfall. To give other people opportunity to speak, I thank you for allowing me to speak, but I want you to know again that I speak to you from up close and personal experience.

MR. HAGAR: The speaker after Wesley Weisenberger will be Lynn Walter.

DR. WEISENBERGER: Can you hear me?

PARTICIPANT: Pick it up.

DR. WEISENBERGER. I'm Wes Weisenberger. I actually have a PhD in nuclear physics. I relate the industry to the power, but not exactly the power industry. Can you see what these are? They're golf balls. Each golf ball is the size of the --

142-T001-49

PARTICIPANT: Do you want to show that? I'll hold the microphone for you. You don't want to use these?

DR. WEISENBERGER: I'll be fine. Each golf ball is the size of the amount of U235 that goes through fission for a complete day at each of the towers. So two of those creates all of the power for 1,100 megawatts of power continuously through the day. To generate that same amount of power requires 600 freight cars of coal -- 600. That's a mile-long hunk of coal, ten feet wide and six feet tall. That's an amazing difference in terms of what it takes. The other thing about it is if you start with this much uranium, and there is a tiny amount lost in terms of mass, but the radioactive waste is very similar in size to this. We're not talking about a huge amount of extra waste being created every day. Anyway, the concentration -- the other thing is it doesn't take very many big diesel trucks to carry half a dozen or a dozen or even 20 golf balls up the hill.

142-T001-49 cont'd

We're not talking about huge transportation costs that we've been hearing about in the paper. The other thing I wanted to say -- just slightly change -- that is that Fukushima and at Onagawa, Fukushima 2 -- there are two

142-T001-50

Fukushimas -- there were no problems with any earthquake problems at all. Every one of those reactors -- I think there were 12 -- went through that with no problems at all. In fact, they shut off automatically, as expected, and the cooling water pumps started up immediately, started cooling them down.

142-T001-50 cont'd

An hour later, when the tsunami hit, then we had, in two of the sites, water, when it comes into the intake manifold of a diesel engine, will destroy that engine in under a second. Am I done? I just feel that there should have been backup capabilities for cooling at Fukushima 1. It was basically just the water.

MR. HAGAR: Okay, thank you. The speaker after Lynn will be Carole Hisasue. Carole, you're next.

MS. WALTER: Hi, my name is Lynn Walter. I am speaking for myself. I'm a resident of Avila Beach. I live ten miles from the plant. I want to start with reminding myself and everybody here what happened when San Onofre shut down. I know you all know. Thousands of head of household jobs went away like that.

There's been many studies of the air down there. There's been almost a 35 percent increase in bad air. I'm a native Californian. I love California. I

environmental center of San Luis Obispo has a 42-year history of protecting and cherishing San Luis Obispo's environment. Clean Oceans Competition cultivates responsible solutions for oceanic pollution. ECOSLO and Clean Oceans Competition knows that there are better ways to secure and sustain our energy future than using 50-year-old nuclear technology.

But today, I will only address the EIR for the proposed license renewal. In December of 2014, Tom Luster, senior environmental specialist for the California Coastal Commission stated unequivocally that Diablo Canyon Nuclear Power Plant is the largest marine predator on the West Coast, and the entrainment of billions of fresh seawater daily to cool the power plant is affecting the sea life for 500 miles in the coastal shoreline waters. Mitigation for this dramatic deterioration of marine life are almost impossible. The cooling tower proposed to lower some of the effects may help, but their costs range from $2 to $10 billion and creates their own list of environmental impacts. 144-T001-20

Any EIR developed as part of the proposed license renewal must address this loss to the health of the ocean, not only through mitigation measures, but through true cost benefit analysis. The cost benefit

analysis must address the destructive effects of the whole marine food chain and the health of the ocean as an economic and environmental cost. The EIR must address effective mitigations. We have 40 years of new marine science to draw from. Evidence is clear that removing huge amounts of larvae, small-food fish and plankton could collapse the whole marine life cycle. 144-T001-20 cont'd

The world's ocean health is under extreme stress already from toxic plumes, plastic, climate change, and the EIR for license renewal of the Diablo Canyon Nuclear Power Plant must provide a comprehensive study of these added stressors and clear plan for avoiding system collapse within a 500-mile radius of the plant.

MR. HAGAR: Following Diane will be Paula Ash.

MS. KOLETZKE: My name is Diane Koletzke, and I have been asked by Bonnie Raitt, musician and member of Musicians United for Safe Energy, to bring you this statement, and I am a resident of Paso Robles. Honorable Commissioners, good afternoon, my name is Bonnie Raitt. Thank you for letting us submit this testimony today.

As I'm sure you're aware, your responsibility for regulating these two reactors

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Comment On: NRC-2009-0552-0026
Diablo Canyon Power Plant, Units 1 and 2; Notice of Intent to Prepare an Environmental Impact Statement

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Comment on FR Doc # 2015-15921

7/1/2015
80 FR 37664

Submitter Information

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USNRC

13

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General Comment

Cal Poly recently hosted a movie entitled, "Pandoras Promise", which described the evolution of militant environmentalists towards accepting nuclear power as the main source of power for the future. The first third of the movie examined all the issues posed by the nuclear power industry and that it should be avoided at all cost. In the final two-thirds of the movie, it appeared that these militant environmentalists had an epiphany and realized that after thoroughly reviewing all the options for the future finally concluded that nuclear power was the way forward for the planet. Their analysis should not be taken lightly since they took the time to visit both the Fukashima Plant and the Chernobyl Plant and still came to the same conclusion.

145-L013-1

As I understand it, there is similar opposition to not only the Diablo Canyon Nuclear Plant but any other sources of energy here in San Luis Obispo County, so to those in that section of the community, I encourage them to view the movie and engage in the debate. I know that many consider power generation to be incompatible with our rural lifestyle in San Luis Obispo County, but we are not going to sustain or even improve our lifestyles with the "soft" alternatives, namely, solar and wind.

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Submitter Information

Name: Meagan Wilson

General Comment

The environmental impact study is a positive next step in the future of Diablo Canyon. With the shuttering of San Onofre, California's energy profile has become increasingly carbon heavy. To not pursue the continued safe and reliable operation of Diablo Canyon would make the situation worse. Nuclear energy in the United States is a safe, clean, and reliable way of making energy and should continue to be a part of our energy future. Additionally, the economic benefits that Diablo Canyon provides to the community cannot be discounted. Thank you for considering this important step in maintaining the state's and the country's clean energy supply. 146-L089-1

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Add= 711. Wentzel (MSW)

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Submitter Information

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7/1/2015
80 FR 37664

Name: Rosemary Wilvert
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General Comment

Dear NRC,

Please do your job and protect the citizens of America from the hazards of leaking radioactivity from aging dry casks. It is immoral for our generation to keep adding more spent fuel to sites such as Diablo for future generations to take care of.

147-L073-1

Sincerely,

Rosemary Wilvert
Cal Wilvert

San Luis Obispo CA

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E-RIDS= ADM-03
Add= M. Weatzel (mjw2)

I was going to talk about terrorism, but I thought it needed a little lightening in this room, and so I made up this story. If we were in a film and the film was about a nuclear power plant being put on earthquake faults, we'd walk out of the movie and we'd say that is so unbelievable. Who would ever dream of doing something like that? Well, indeed it is the truth. So that film will end. It will be put somewhere in an archive and I think the Nuclear Regulatory Commission needs to put Diablo Canyon in an archive. Thank you.

(Applause)

MR. HAGAR: Okay. The next speaker will be Marianne Mellow. Marianne Mellow, are you here?

MS. MELLOW: I'm here.

MR. HAGAR: Okay.

MS. WELBERT: I am Rosemary Welbert from San Luis Obispo. Polly Cooper had to leave and she donated her time to me.

I want to speak about two issues among the many that have me terribly concerned. The first one, as people have mentioned, is the waste issue. The word "waste" is really a misnomer. It sounds like something that's weak and half worn out. But the waste that comes out of this power plant is a million times more

147-T001-72

radioactive than the material that went in. My mind can hardly grasp that, but I've researched that and I wanted to put it out. 147-T001-72 cont'd

The other issue is the evacuation issue, among many others. Last Friday my husband and I drove home from Los Angeles on Friday afternoon. The road -- the traffic was in soup all the way to Santa Barbara from people just trying to escape Los Angeles for the weekend. My mind also can't grasp what it would be like for the people in San Luis Obispo to hit the roads in the case of an emergency. 147-T001-73

So obviously I am urging the NRC not to allow relicensing of this aged worn out plant. 147-T001-74

(Applause)

MR. HAGAR: Next speaker will be Jill Zamek. Jill, are you here?

MS. MELLOW: My name is Marianne Mellow. I've lived in SLO county for over 60 years and I welcome all of the folks that came to support us.

Earthquake faults lie under, around and near the Diablo Canyon Nuclear Power Plant. Had that fact been revealed before construction of the nuclear plant began, the plant would never have been allowed to be licensed or built.

It is reported that PG&E and the NRC have

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U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Docket ID NRC-2009-0552

Comments on Pacific Gas & Electric proposal to re-license the Diablo Canyon Nuclear Power Plant

I very strongly oppose the proposal to renew the Pacific Gas & Electric license for the Diablo Canyon Nuclear Power Plant. Given the fact that PG&E was unaware of the extent of earthquake faults under or adjacent to the site ("13 intersecting earthquake faults in a tsunami zone on California's coast north of Santa Barbara" http://nonukesca.net/?p=616) when the Diablo Canyon nuclear power plant was designed, sited, and built, that alone should be cause to dismiss the application for an extension of the aging plant. Japan's experience of the Fukushima disaster demonstrates why the NRC should undertake immediately the closure of the Diablo Canyon plant, similarly located on the coast of the Pacific Ocean adjacent to earthquake faults. Even if the plant had been sited in a less dangerous location, by now its age alone warrants its closure. The NRC itself lists the Diablo Canyon Unit 1 as one of the five worst embrittled pressurized water reactors in the U.S. 148-L010-1

In addition, its archaic cooling system does not meet California's 2010 policy mandate that coastal power plants put in place less destructive cooling systems. It takes an estimated 2.5 billion gallons of ocean water per day, returning it to the ocean 20 degrees hotter, killing untold numbers of fish and adding to the huge problem of warming oceans.

It is time for the NRC to respect the 1976 California law to prohibit further investment in nuclear energy until such time as a permanent, secure storage of radioactive waste is devised. Since the US is further than ever from a permanent, reliably safe solution for storing radioactive waste, it would be grossly irresponsible for the NRC to renew the license for this aged-out power plant.

The discovery of how 13 earthquake faults intersect at or near the site, not known when the plant was designed, and the absence of a permanent storage of the radioactive waste the plant continues to produce provide more than sufficient reason to reject the renewal proposal and to close this aged plant now. The potential horrific consequences to the people and the state of California if the plant's license were renewed can now be readily envisioned as we see the extent of ongoing damage wrought by the Fukushima disaster.

Sincerely,

Charlene M. Woodcock

Charlene M. Woodcock
2355 Virginia Street
Berkeley CA 94709

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Add= M. Wentzel (MSW2)

price to ensure profits for PG&E.

You know the truth. It would be an irresponsible disregard of public safety to extend the Diablo Canyon Nuclear Power Plant and operating license for another 20 years. We deserve more. Thank you.

(Applause)

MR. HAGAR: The next speaker will be Gary Corsiglia. Gary, are you here?

(No audible response)

MS. ZAMEK: Hi, I'm Jill Zamek with San Luis Obispo Mothers for Peace and I live in Arroyo Grande. The topic I'd like the NRC to look at is human performance deficiencies. 149-T001-76

There are an unacceptable number of human performance deficiencies at the Diablo Canyon facility, particularly involving identification and resolution of problems. There were 29 violations documented by the NRC in 2014, and overwhelmingly the root cause of these violations pointed to human performance deficiencies. These violations involved fire protection, inoperable emergency diesel generators, occupational radiation safety, poor maintenance planning on safety-related equipment, failure to follow procedures, problems with design control and multiple

instances of failure to identify and evaluate system interactions regarding seismically-induced systems. Eleven of the violations involved security or materials control.

149-T001-76 cont'd

One finding identified a violation dating back to the original construction welding process from 1974. Three of the violations involved the Corrective Action Program identifying and resolving problems. There is an enormous backlog of problems involving operable but long-standing degraded conditions at the plant. Some problems were simply not identified in a timely manner, some disregarded and not put into the Corrective Action Program and other inappropriately delayed.

As of August 2014 there were 29 documented degraded conditions affecting safety-related equipment, the oldest dating from June 2008. The median age of the problems was 1,176 days post-identification. In the words of the NRC from the inspection report there exists, quote, "a large number of long-standing degraded or non-conforming conditions some of which had not been appropriately addressed by compensatory measures or interim corrective actions."

A more recent blunder was revealed in May of this year. Nineteen of its thirty-four dry casks

used to store spent fuel were loaded to the manufacturer's technical specifications particularly as they relate to the proper ratio of older and newer spent fuel. The root cause was determined to be reactor engineering personnel misinterpreting the technical specifications.

149-T001-76 cont'd

At the June 24th, 2015 NRC PG&E 2014 performance assessment in San Luis Obispo Ed Halpin referring to these performance flaws as gaps in excellence. The numerous documented gaps demonstrate the enormous risk we face. The plant should not only be denied relicensing, it should cease to operate now.

(Applause)

MR. HAGAR: After Gary the speaker will be Mike Brown.

MR. CORSIGLIA: Hello. My name is Gary Corsiglia. I'm a resident of San Luis Obispo. I'm a retired electrical engineer from PG&E. I worked on geothermal power plants, on fossil power plants, and I worked at Diablo Canyon Nuclear Plants.

I've heard many people say today earthquake faults are in and around Diablo Canyon. Well, I'd like to say earthquake faults lie in and around every major and minor city in California. How can we as citizens continue to allow that to happen and yet the tallest

MR. SAWADA: Thank you.

MR. HAGAR: All right. Our next speaker will be Jill Zamek. Is Jill here? Okay. And following Jill will be Simone Malboeuf. Did I say it right Simone?

MS. MALBOEUF: Malboeuf.

MR. HAGAR: Malboeuf. Okay.

MS. ZAMEK: Okay. Can you hear okay? I'm Jill Zamek with Mothers for Peace. I live in Arroyo Grande.

I would like to first preface my comments with the acknowledgment that the NRC is looking for new information here today. Issues to look at specifically for Diablo Canyon. And there are numerous such issues.

But the two most pressing, which are not new, are one, this plant has been absurdly sited in an area riddled with active earthquake faults. 149-T002-15 And two, we still don't know how to protect the byproduct known as high level radioactive waste, which remains toxic for hundreds of thousands of years. 149-T002-16

You might label these generic issues. But they are the primary concerns of the residents in this community.

And additional issue is that Pacific Gas & Electric Company has lost its credibility. The 149-T002-17

Japanese Parliament concluded that collusion between regulator, industry and government officials was the root cause of the ongoing Fukushima nuclear catastrophe.

149-T002-17 cont'd

Frighteningly, the Diablo Canyon plant is operated by PG&E, a company under multiple federal indictments for safety violations in a recent fatal explosion of its San Bruno, California gas pipeline.

It is also embroiled in an evolving scandal about illegal back channel communications with the State's Public Utility Commission. We cannot trust the company to maintain public safety as their highest priority.

We do not want a Fukushima in California. This is a site specific issue relating only to the owner of the Diablo Canyon Nuclear Facility.

A further topic is the threat of tsunami. I understand that PG&E and the NRC feel protected from the tsunami threat because of the 85-foot cliff. And the placement of the snorkels. But that secure feeling is not shared by all.

149-T002-18

In a report which the NRC held private for 11 years, a preliminary numerical study of the hazard for local landslide tsunami scenarios at the Diablo Canyon site in central California, published November

22, 2003, the investigator, Dr. R.T. Sewell concluded that "the existing tsunami design basis and perceptions of tsunami risks for the Diablo Canyon site no longer reflect modern scientific understanding and methods. 149-T002-18 cont'd

There is compelling evidence to suggest that the tsunami threat may be considerably more significant then held in these existing basis and perceptions. And correspondingly, such existing basis and perceptions no longer appear adequate."

Dr. Sewell provided six recommendations in his concluding comments of his report. One of them being that the licensee of the Diablo Canyon site "justify and/or reevaluate the tsunami designed basis. And perform a state of the art assessment of tsunami hazard and risk, including the plant and the sea within the umbrella of it's existing long term seismic program."

When combining -- just a couple more sentences. Rochelle's time. When combining the effects of tsunami tied storm surge and winds, all of Sewell's 13 postulated scenarios and his investigation produced waves that go beyond Diablo Canyon to design basis.

In fact all 13 scenarios produced waved heights that could impact the sea water intake. This

issue is certainly site specific environmental concern. Allow Fukushima to be our warning. 149-T002-18 cont'd

(Applause)

MR. HAGAR: Simone? And following Simone will be Elizabeth Broose. Are you still here? Elizabeth Broose? Okay, yes, there you are.

MS. MALBOEUF: The distinction between the past, present and future is only a stubbornly persistent illusion, by Albert Einstein. In the 1950s Congress passed the Atomic Energy Act which launched the development of commercial nuclear power.

Along with an aggressive propaganda campaign, the notion that nuclear power is safe, clean and economical was put forward. The corporate American industrial nuclear juggernaut was born.

New documentation, right here, by former nuclear control technician and PG&E whistle blower, Bob Ryan, I this have his book, My Humble Diary, a True Betrayal of Public Trust, reveals that PG&E's record as the owner and operator of the world's first privately funded nuclear plant at Humboldt was a disaster waiting to happen.

Like Michael Peck, Bob was fired for trying to uphold industry safety standards. Over 500 pages of riveting documentation that everyone will want to read.

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General Comment

Thank you for the opportunity to comment. I'm an environmentalist and believe in leaving this planet in much better shape than when I inherited it. I also believe in life, civilization, and the realities of electrical supply and demand.

150-L020-1

That being said, Diablo Canyon (and nuclear power, in general) provide safe, clean and cost effective energy that should be encouraged and continued. By providing large baseload emission free electrical supply, Diablo provides safety, security, and clean air for our society.

Please consider that if the plant is closed, we will essentially be expanding the use of fossil fuels (burning gas or coal) and we will be polluting our environment even more.

150-L020-2

Thank you so much.

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