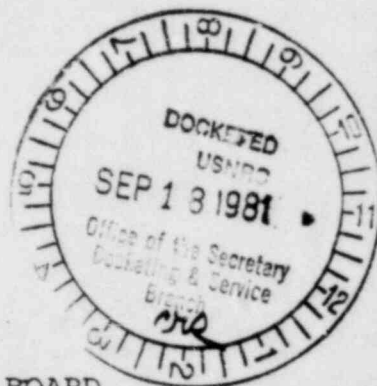


UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

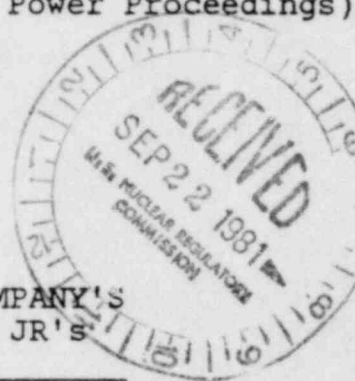


BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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In the Matter of )  
PACIFIC GAS AND ELECTRIC COMPANY )  
Diablo Canyon Nuclear Power Plant )  
Units Nos. 1 and 2 )

Docket No. 50-275  
Docket No. 50-323  
(Full Power Proceedings)



APPLICANT PACIFIC GAS AND ELECTRIC COMPANY'S  
ANSWERS TO GOVERNOR EDMUND G. BROWN JR.'S  
FIRST SET OF INTERROGATORIES

INTERROGATORY NO. 1:

(a) Describe and identify each study, evaluation, assessment or other document in the possession, custody or control of PG&E dealing with or relating in any way to the time(s) necessary for and/or the feasibility of protective actions in the event of a radiological emergency. By way of example only, "protective actions" include an evacuation of the Diablo Canyon site and adjoining areas, including the basic emergency planning zone, the extended planning zone, and the ingestion pathway zone.

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1 (b) Describe which of such documents are  
2 completed and which are underway. For those underway,  
3 state: (1) what has been completed; (2) what remains to be  
4 completed; and (3) the schedule for completion of the  
5 remaining work.

6  
7 RESPONSE TO INTERROGATORY NO. 1:

- 8 (a) 1. "Manual of Protective Action Guides and Protective  
9 Actions for Nuclear Incidents," U.S. Environmental  
10 Protection Agency (EPA-520/1-75-001), September  
11 1975 (revised June 1980).
- 12 2. "Reactor Safety Study," WASH-1400, October 1975.
- 13 3. "Accidental Radioactive Contamination of Human  
14 Food and Animal Feeds," U.S. DHEW (DHHS)/FDA,  
15 Federal Register, December 15, 1978 (43 FR 58790).
- 16 4. "Public Protection Strategies for Potential  
17 Nuclear Reactor Accidents - Sheltering Concepts  
18 with Existing Public and Private Structures,"  
19 Sandia Laboratory (SAND 77-1725).
- 20 5. "Examination of Offsite Radiological Emergency  
21 Measures for Nuclear Reactor Accidents Involving  
22 Core Melt," Sandia Laboratory (SAND 78-0454).

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- 1           6.    "Protective Action Evaluation Part II, Evacuation  
2           and Sheltering as Protective Actions Against  
3           Nuclear Accidents Involving Gaseous Releases,"  
4           U.S. Environmental Protection Agency (EPA  
5           520/1-78-001 B).
- 6           7.    "Evacuation Times Assessment for the Diablo Canyon  
7           Nuclear Power Plant," Alan M. Voorhees &  
8           Associates, September 1980.
- 9           8.    "Emergency Planning Zones for Serious Nuclear  
10          Power Plant Accidents," State of California Office  
11          of Emergency Services, November 1980.
- 12          9.    Draft "State of California Nuclear Power Plant  
13          Response Plan," January 1981 (revised March 1981).
- 14          10.   Draft "State of California Department of Health  
15          Services Implementing Procedures - Volume II,"  
16          March 1981.
- 17          11.   Draft "San Luis Obispo County Nuclear Power Plant  
18          Emergency Response Plan," May 1981.
- 19          12.    GandE Diablo Canyon Power Plant Units 1 & 2  
20          Emergency Plan, August 1981.
- 21          13.    PGandE Diablo Canyon Power Plant Units 1 & 2  
22          Emergency Procedure RB-10, "Protective Action  
23          Guidelines," September 1, 1981.
- 24          14.    TERA Report, "Earthquake Emergency Planning at  
25          Diablo Canyon," September 2, 1981.

26        ///

1 (b) All of the above documents are complete  
2 except numbers 9, 10, and 11, the completion dates of  
3 which are unknown.  
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8 INTERROGATORY NO. 2:

9 (a) Identify and describe the criteria that PG&E  
10 employees are trained to apply in determining whether to  
11 recommend evacuation (onsite and/or offsite) versus  
12 sheltering.

13 (b) Identify and describe all analyses or other  
14 documents which support or in any way relate to these  
15 criteria.

16 (c) Identify and describe all training manuals,  
17 operating procedures, or other instructive or educational  
18 materials that relate in any way to these criteria.

19 (d) Describe all equipment available to PG&E  
20 and/or offsite response personnel to assess and predict the  
21 likely consequences of an accidental radioactive release  
22 from Diablo Canyon. Include in your response a description  
23 of the onsite meteorological tower and computer used to  
24 determine real-time atmospheric dilution factors.

25 ///

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1        RESPONSE TO INTERROGATORY NO. 2:

2        (a)                Criteria for plume exposure pathway  
3                protective action recommendations for the general  
4                public are based on the "Manual of Protective Action  
5                Guides and Protective Actions for Nuclear Incidents  
6                (EPA-520/1-75-001). For the plume exposure pathway,  
7                the principal protective actions recommended for the  
8                public would be sheltering and/or evacuation.

9                The effectiveness of evacuation in limiting a  
10                radiation dose is a function of the time required to  
11                evacuate. In cases where there is no time to evacuate  
12                prior to arrival of the plume, or where the projected  
13                evacuation time and time before plume arrival are  
14                nearly equal, the dose reduction benefit of sheltering  
15                vs. evacuation and being overtaken by the passing plume  
16                would be evaluated on a case-by-case basis.

17                On-site protective action criteria are based  
18                on minimizing exposures for non-essential site  
19                personnel. Evacuation is the principal protective  
20                action and is considered at the Alert emergency action  
21                level when such action can prevent significant  
22                exposure. Evacuation of non-essential personnel is  
23                generally conducted at the Site Emergency level and is  
24                automatic at the General Emergency level. Sheltering  
25                would be used as a protective action for non-essential  
26                personnel in the event the dose expected during

1 evacuation is higher than that which would be received  
2 in a shielded or protected area.

3 (b) See response to interrogatory 1(a).

4 (c) See response to interrogatory 1(a).

5 (d) See Section 7.3 of the Diablo Canyon Power  
6 Plant Emergency Plan and Section 2.3 of the FSAR.

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11 INTERROGATORY NO. 3:

12 Identify and describe the public information  
13 program for emergency planning and preparedness proposed by  
14 PG&E to support PG&E's application for a full power  
15 operating license for the Diablo Canyon facility. Identify  
16 and describe all documents which in any way relate to this  
17 public information program including, without limitation,  
18 any brochures, statements to be published in news media or  
19 broadcast on radio or TV, materials to be sent to PG&E's  
20 customers (enclosed in bills or otherwise), or public  
21 notices (in draft or final form), which constitute any part  
22 of or relate in any way to the public information program.

23  
24 RESPONSE TO INTERROGATORY NO. 3:

25 Pacific Gas and Electric Company has initiated a  
26 variety of programs designed to effectively notify the

1 public about appropriate protective actions in the event of  
2 a plant emergency.

3           These efforts can be categorized as notification  
4 during an emergency and an ongoing community  
5 education/awareness project.

6                           NOTIFICATION DURING AN EMERGENCY

7           There are two levels of notifications --  
8 non-general emergency and general emergency.

9                           Non-General Emergency

10           If an unusual event reaches an alert stage and the  
11 San Luis Obispo County Emergency Operations Center and the  
12 Media Center at Cuesta College are activated, the County  
13 Public Information Officer will be issuing periodic news  
14 releases on the status of the emergency, the plant, and  
15 protective measures necessary, if any.

16           These releases and the press conferences will be a  
17 timely and effective way of notifying the public, especially  
18 since the local media -- including the radio and television  
19 stations -- will be able to disseminate the information  
20 quickly. During the recent compressed time field exercise  
21 conducted by NRC and FEMA to judge the on-site and off-site  
22 emergency response plans, news conferences were held and  
23 news statements released at least every hour.

24           Before the Media Center is activated, Pacific Gas  
25 and Electric Company is prepared to alert the public,  
26 through major local area and regional broadcast and other

1 media, of any actions the public might prepare for -- such  
2 as sheltering or evacuation.

3           The public can be referred to the Nuclear  
4 Emergency Response Plan Booklet, which will be  
5 hand-delivered to every residence, place of business, public  
6 institution and commercial establishment in the Emergency  
7 Planning Zone, with other distribution throughout the  
8 county.

9           Residents and others can also be referred to Page  
10 A-4 of the San Luis Obispo County telephone book Survival  
11 Guide (to be published in October 1981). (Please see the  
12 following Ongoing Community Education Awareness section for  
13 more information.)

14           Both the booklet and the telephone page contain  
15 basic information on radiation, the Diablo Canyon plant,  
16 nuclear power, sheltering and evacuation. Once the county  
17 approves its Nuclear Emergency Response Plan, more specific  
18 information on evacuation routes, reception and care  
19 centers, and other county elements of the emergency plan  
20 also will be available.

#### 21           General Emergency

22           If a general emergency (off-site radiological  
23 release) is declared, the Early Warning System (EWS) will  
24 be activated. The sounding of the sirens (and other  
25 measures to reach remote and/or transient populations) will  
26 alert the populace to tune their radios or televisions to

1 the Emergency Broadcasting System (EBS) station for further  
2 direction. The public will know to do this because of the  
3 ongoing community education program PGandE has begun and  
4 through county educational efforts.

5 The message on the EBS will be written and  
6 released by the county. Other area radio and television  
7 stations will have the capability to relay messages soon  
8 after the EBS broadcast. The messages will be repeated or  
9 changed as necessary at the direction of the county.

10 In addition to the EBS information, the media  
11 center will still be operating and the public will be  
12 receiving messages and information based on the statements  
13 released and news conferences held there.

#### 14 ONGOING COMMUNITY EDUCATION/AWARENESS

15 PGandE has developed a comprehensive community  
16 education and information plan to help ensure residents of  
17 the emergency planning zone are informed.

18 At this point in their development, none of these  
19 materials specifically refers to information that will be  
20 contained in the county's Nuclear Emergency Response Plan  
21 for its residents. Once the county adopts a final version  
22 of this plan, the materials will be updated to reflect the  
23 information in the county plan.

24 In general, updates or revisions are planned  
25 annually, with the exception of the "Diablo Canyon  
26 Newsletter" -- a quarterly publication.



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The program elements are:

Emergency Response Information: Booklet on Diablo Canyon Nuclear Power Plant and how it works, with information on radiation, what the public should do in an emergency, locations of emergency care centers and evacuation routes (once county plan is approved), and a phone number to call for further information.

Distribution: Door-to-door to all households, businesses, hotels, motels, and public institutions in the Emergency Planning Zone (EPZ). To appropriate public officials. By mail to residents in extended planning zone. Spanish language version to be available, with notice in Spanish and English in English version that a Spanish language booklet is available, with instructions on how to obtain it. Booklets will be furnished to all new customers. Booklets will also be available at all PGandE, state, county, and local government offices in the county.

Frequency: Annually. Distribution will be the same as in the first year except that mail delivery will be used instead of door-to-door.

Support: Advance radio, TV, print advertising, publicity, news releases, and local PGandE

1 bill inserts will call attention to the  
2 distribution and offer copies. Display in  
3 local PGandE offices will also be used, with  
4 follow-up ads and publicity.

5 Emergency pages in telephone book, will give instructions to  
6 the public on how to respond in an emergency  
7 and the place to call or write for further  
8 information. It will appear as page A-4 of  
9 the 1982 directory (October 1981).

10 Distribution: All telephone subscribers in San Luis Obispo  
11 County.

12 Frequency: Annually in each new book beginning October  
13 1981.

14 Support: News releases, features in a new Diablo  
15 Canyon newsletter to the community (see  
16 below), notices posted in hotels, motels, and  
17 public recreational areas. All will call  
18 attention to the phone book as a source of  
19 information on emergency planning.

20 Public Service announcements (PSAs) will be on local radio  
21 and television. These PSA's will call atten-  
22 tion to the telephone book information, on  
23 the need to know what to do in the event of  
24 an emergency and on other aspects of the  
25 emergency response plan. Stations will be  
26

1 provided with pre-recorded tapes and scripts,  
2 or both.

3 Distribution: All radio and TV outlets, including cable, in  
4 San Luis Obispo County.

5 Frequency: As appropriate. New PSAs will be furnished  
6 at least annually.

7 Posted Signs: Will be located in public places such as  
8 parks, beaches and recreation areas. These  
9 will also be suitable for use in schools,  
10 hospitals, public entertainment centers,  
11 hotels, and motels.

12 Distribution: At sites located within the EPZ, to be  
13 selected by the county.

14 Frequency: Updated as needed.

15 Emergency direction sheet will be provided for restaurants,  
16 hospitals and other institutions. These will  
17 not be posted for public viewing but for the  
18 information of institutional managers in  
19 advising guests or occupants what to do in an  
20 emergency.

21 Diablo Canyon Newsletter: This will be a periodic mailing  
22 to all homes and businesses in the EPZ,  
23 giving educational information on nuclear  
24 power, Diablo Canyon, radiation and health,  
25 emergency planning, shelters, etc. It will  
26 also contain news items about progress and

1 new developments at Diablo Canyon.. Its  
2 purpose will be to keep the community updated  
3 on new developments in emergency planning,  
4 sustain awareness of the plan, build  
5 confidence in the safety of the plant by  
6 increasing the community's familiarity with  
7 it and to lessen fears about radiation by  
8 providing regular information on the subject.  
9 It will give a place to call or write for  
10 additional information.

11 Distribution: By mail, to all residents and businesses  
12 within the EPZ.

13 Frequency: Quarterly, possibly more frequently.

14 Media backgrounders: These will be conducted at the place  
15 of business of the SLO County media. They  
16 will be formal programs, beyond the normal  
17 regular contacts, and will cover emergency  
18 plans, information concerning radiation and  
19 other nuclear subjects and how information  
20 will be handled during a plant emergency.

21 Distribution: To all interested radio, television, and  
22 print media throughout the PGandE service  
23 area, and to media in Los Angeles. Seminars  
24 may prove more suitable for out-of-county  
25 media.

26 Frequency: At least annually.

1 Speakers: Technical speakers from the plant's staff  
2 will be utilized as speakers within the  
3 surrounding communities.

4 Nuclear exhibits: Nuclear information displays, including  
5 the current Nuclear exhibit, will be set up  
6 in Los Padres district offices, covering,  
7 among other subjects, radiation.

8 Mobile Environmental Monitoring Lab: (MEML) Suitable for  
9 inspection by small groups.

10 Special audiences: Using speakers, slide shows and  
11 exhibits, outside experts, special printed  
12 material, audio-visual presentations, etc.,  
13 regular educational contacts will be  
14 maintained, with the community, government  
15 officials, public schools, clergy, service  
16 clubs, health agencies and societies,  
17 employees and other special agencies as  
18 required or requested.

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23 INTERROGATORY NO. 4:

24 Has PG&E commenced its full power public informa-  
25 tion program. If so, describe each and every step taken  
26 thus far and the schedule for remaining steps. If not,



1 describe PG&E's schedule for commencement and full  
2 implementation of that program.

3  
4 RESPONSE TO INTERROGATORY NO. 4:

5 Yes. As seen by the attached schedule (as of  
6 mid-August), many elements of the program outlined in the  
7 answer to interrogatory No. 3 are completed and in use. In  
8 addition, see answers to previous interrogatories propounded  
9 by Joint Intervenors.

10  
11 EMERGENCY RESPONSE INFORMATION

12	<u>Project</u>	<u>Project Due</u>	<u>% Done</u>	<u>Status</u>
13	1. Booklet on DCPD & Emergency	15 Dec	75	Text being revised.
14	Response Plan -- writing,			New layout made.
15	printing			
16	2. Above in Spanish	14 Aug	10	Awaiting English version Translators ready.
17	3. Distribute booklet	19 Aug	5	In holding pattern.
18	door-to-door			
19	4. Phone book emergency page	1 July	<u>100</u>	<u>Complete</u> To Printer.
20	5. (a) Radio, TV, PSAs on booklet	20 July	<u>100</u>	<u>Complete</u> .
21	6. News release on booklet	1 Oct	70	In holding pattern.
22	7. Advertising on booklet	1 Aug	50	(A) copy and layout developed.
23				In approval.
24			0	(b) Production.
25	8. Bill insert on booklet	1 Aug	51	(A) Developed. In approval.
26	///		0	(B) Production.

	<u>Project</u>	<u>Project Due</u>	<u>% Done</u>	<u>Status</u>
1				
2				
3	9. News release on phone page	1 Oct	50	<u>PTT to do</u>
4	10. (a) Emergency Plan signs	(a) 1 Nov	10	Awaiting County approval of plan.
5				Moñtana de Oro sign in clearance to NPO
6	(b) Arrange posting	(b) 15 Dec	0	
7	11. PSAs on Plan	30 July	50	Awaiting County approval of plan.
8	12. (a) Develop and	1 Nov	--	
9	(b) distribute posted instructions for motels,	15 Dec	25	Awaiting County approval of plan.
10	13a. Write notification to LPZ residents of Emergency procedures.	15 July	<u>100</u>	<u>Completed.</u>
11				
12	13b. Distribute notification.	15 Aug	50	New due date to verify identification of LPZ residents
13				
14				
15	14a. Slide show on response plan	15 July	<u>100</u>	<u>Completed.</u>
16	14b. Mini version	1 Aug	<u>100</u>	Completed-being shown
17	14c. Speakers support nuclear power	15 Sept	20	New program-approved.
18	15. Speeches on plan, radiation	15 July	<u>100</u>	<u>Complete</u> week.
19				
20	16. Videotape on A. Plan	30 July	100	<u>Complete-Showing</u>
21	B. Radiation		100	<u>Complete-Showing</u>
22	17. Overall video tape on DCNPP	15 Sept	1	Writing script.
23	18a. Develop and	1 Nov	10	Awaiting county approval of plan
24	18b. Distribute direction for instructions	19 Oct	20	
25	///			
26	///			

GENERAL EMERGENCY RESPONSE INFORMATION

Project	Project Due	% Done	Status
1. Quarterly Newsletter	20 July	100	<u>Completed.</u>
2. Media backgrounders	1 Aug	75	LA-to be done.
3. Press kit for			
(a) backgrounders,	20 July	100	<u>Complete</u>
(b) drill	10 Aug	75	<u>In progress</u>
(c) emergency	15 Aug	70	<u>Holding</u>
4. Plant tours	14 Aug	100	<u>Complete</u>
4a. Overlook Tours		100	<u>Complete</u>
5. Train speakers on D.C./nuclear	15 July	100	<u>Complete</u>
6. Community seminars on nuclear and radiation	14 Aug		Ongoing-% deleted
7. Mobile environmental monitoring lab (MEML)	17 Apr	100	<u>Showings complete.</u>
8. Publicity on MEML	6 May	100	<u>Complete.</u>
9. Displays in area local offices	1 Aug	100	<u>Completed</u>
10. General Informatic., special audiences	---	---	Ongoing
a. Doctors	1 Aug	100	<u>Complete</u>
b. Schools	1 Aug	100	<u>All contacts complete</u>
c. Government Officials	14 Aug		Ongoing-% deleted
d. Clergy	1 Aug	100	<u>Complete</u>
e. Employees			Ongoing
f. Community leaders			Ongoing-% deleted
11. Slide show and talk on general nuclear	1 Apr	100	<u>Complete</u>
12. Advertising on nuclear		76	Ongoing
13. Staff backgrounding	22 June	100	<u>Sessions complete.</u>
14. Selected Staff to PWR School	1 Aug	100	<u>Completed</u>
///			

GENERAL EMERGENCY RESPONSE INFORMATION

Project	Project Due	% Done	Status
1. Develop plan as per NUREG-0654	4 Feb	<u>100</u>	<u>Completed and approved</u>
2. Select media center and get approval	1 July	<u>100</u>	<u>Completed</u>
3a. Secure media center	15 Aug	<u>100</u>	<u>Completed</u>
3b. Rehabilitate annex	15 Aug	<u>100</u>	<u>Completed</u>
3c. Secure alt. media center	15 July	<u>100</u>	<u>Completed</u>
4. Staff up	15 Apr	<u>100</u>	<u>Completed</u>
5. Phones and other communications	1 Aug	68	Installation underway.
5a. Hard copy communications	7 July	<u>100</u>	<u>Completed</u> Training continuing
6. Employee information plan	30 July	<u>100</u>	<u>Completed</u>
7. Plan info delivery to PG&E Offices	15 June	<u>100</u>	Recommendation made to NPE and management
8. Clerical services	20 July	<u>100</u>	<u>Completed</u>
9. A-V, photo services	14 Aug	<u>100</u>	<u>Completed</u>
10. Rumor control center, SLO (Public Infor Center)	14 Aug	<u>100</u>	<u>Completed</u>
11. Training staff on ERP	14 Aug	85	Ongoing
12. Communications Equip.	1 Aug	80	Progress-waiting on PTT
13. Visuals	20 July	87	Proceeding
14. Develop with SLO County EBS radio-TV messages and get commitments.	1 Aug	<u>100</u>	Turned over to SLO Co. 7/28.
15. Develop timely exchange of info between spokespersons	1 Aug	80	Third meeting set for 8/8/81
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<u>Project</u>	<u>Project Due</u>	<u>% Done</u>	<u>Status</u>
16. Prepare public info program for site review team and EWS task force approval, including mailers for billings, telephone book inserts, briefings, etc.	1 Aug	40	Being developed
17. Implement PI plan for County EWS. Prepare and implement media programs	1 Aug	35	First release mailed 7/7/81
18. Provide area phone number on 24 hour basis	1 Aug	<u>100</u>	<u>Complete</u>

INTERROGATORY NO. 5:

(a) Identify and describe each and every drill or exercise which has occurred relating to or testing all or any part of the PG&E and/or offsite emergency preparedness to implement or carry out duties under the onsite and offsite emergency response plans.

(b) Identify all participants in and observers of each drill or exercise.

(c) Identify and describe all written critiques and other documents (including photographs and motion pictures) which relate in any way to these drills or exercises.

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1        RESPONSE TO INTERROGATORY NO. 5:

2                        Drills or exercises have been conducted at  
3        three levels: (i) corporate emergency response;  
4        (ii) onsite, and (iii) integrated.

5  
6        (a)(i)                Practical application of concepts introduced  
7        in formal emergency response classroom training  
8        was achieved through Table-Top walkthrough  
9        sessions, actual simulations or drills and the  
10       full FEMA exercise. These activities were  
11       structured to first test small portions of the  
12       emergency response organization, then integrate  
13       these responses in larger scale walkthroughs,  
14       drills, etc.

15                        Walkthrough sessions involved "round table"  
16        group discussions utilizing postulated accident  
17        scenarios to identify and review appropriate  
18        emergency response actions. Simulations, drills,  
19        and the FEMA exercise utilized postulated accident  
20        scenarios that were applied to test emergency  
21        responses in an actual field environment.

22                        A detailed schedule identifying participation  
23        of the Corporate Emergency Response Organization  
24        (CERO) in walkthrough sessions, simulations,  
25        drills and the FEMA exercise is provided in  
26        Attachment I.

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(b)(i) Participants in walkthrough sessions, simulations, drills, and the FEMA exercise were shown as needed from CERO personnel lists established in respective Corporate Emergency Response Plan (CERP) implementing procedures. Attachment II provides a current overall listing of CERO personnel. It is impossible to individually identify all participants in each drill or exercise since such comprehensive data was not collected at the time. The vast majority of the persons identified have participated in the drills.

EDS Nuclear Inc. provided personnel to observe walkthrough sessions and simulations involving the CERO. These individuals are listed in Attachment III.

(c)(i) EDS Nuclear Inc. provided critiques of the CERO walkthrough sessions and simulations. These critiques as well as scenarios generated to support these activities are listed in Attachment IV and are available as discovery documents.

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ATTACHMENT I  
SCHEDULE OF CERO PARTICIPATION

<u>Drill</u>	<u>Participating Departments</u>	<u>Date Conducted</u>
Walkthrough 3A	Entire Emergency Response Organization	3-20-81
Walkthrough 3B	Security, Personnel Relations	3-23-81
Walkthrough 3C	Communications	3-25-81
Walkthrough 3D	Materials General Construction Eng. & Tech. Support Div. Support Quality Assurance	3-27-81
Walkthrough 3E	Radiological Analysis and Protection	3-30-81
Walkthrough 3F	Gov. Relations Public Relations Law Insurance Safety, Health and Claims	4-1-81
Utility Corporate Training	PGandE State OES FEMA SLO County Stone & Webster Voorhees	4-2-81
Make-Up	Individuals from: Nuclear Projects Public Information Quality Assurance	6-2-81
Simulation 4A, 4B, 4C	Security Personnel Relations, Communications	5-2-81
Simulation 4D	Materials, General Construction, Engr. & Tech Support, Division Support Quality Assurance	5-5-81
Simulation 4E	Radiological Analysis and Protection	5-8-81

ATTACHMENT II

CERO PERSONNEL

1			
2			
3			
4	CWallen	JRHerrera	GSPrueett
5	RRAlvea	JBHoch	WTRapp
6	MRAmerio	GNHorne	CERalston
7	GHaster	RCHowe	WARaymond
8	RSBain	KHHuston	HWReynolds
9	RWBarbey	AJinkerson	RWRichardson
10	WRBarnes	WBKaefer	CLRichmond
11	DJBaxter	RLKelmenson	SPRobison
12	LCBeanland	DLKennedy	JVRocca
13	ALBechtold	WJKeyworth	BERoddick
14	RPBenton	EBLangley, Jr.	GMRueger
15	RVBettinger	BSLew	GCRussell
16	GABlanc	CALEwis	RRPutkowski
17	JVBoots	H Liu	BFSadler
18	HEBrennan	RFLocke	BTSaenz
19	SGBrown	RWLorenz	CGSarkiaian
20	PCBurgess	DGLubbock	COSchriel
21	LBCarter	LGLunsford	JOSchuyler
22	BJCasey	ANLyon	GNScourkes
23	LACole	JMacCormick	DPSerpa
24	DCorona	GAManeatis	JASexton
25	PACrane	CKMaxfield	BWShackleford
26	GCryer	BMcCloskey	DRShaffer
27	RPDavin	RJMcDevitt	HCSHaw
28	OHDavis	JSMcKarns	JDSHiffer
29	HEDeady	RJMcKell	CGShih
30	BADettman	AWMedcalf	AWSimila
31	TGdeUriate	EJMeyers	ALSimmons
32	FJDodd	FWMielke, Jr.	SMSkidmore
33	DL Duke	RHMiller	ACSmith
34	RDunleavy	MLMooney	BMSpeckman
35	RJEider	TFMorris	AGStrassburger
36	GAEnglish	RDMullikin	WMStubblefield
37	RDEtzler	JCNeel	GSwallow
38	RDFagg	AJNavolo	RMSwanson
39	SMFandel	RFNichols	PASzalinski
40	TRFerry	WPNoone	RDTesta
41	EHFletcher	RROchsner	RCThornberry
42	EFortner	DAOglesby	RHThuillier
43	JHFraser	ROHlbach	RGTohero
44	JLFrazier	DOKabayashi	JDTownsend
45	WHFujimoto	RPatterson	MRTresler
46	WFunabiki	HNPeelor	RTTwiddy
47	WSGarrett	RJPeters	JAVance
48	CDGilson	CHPeterson	JRVanSchaick
49	EAGiudici	GAPierce	JCVocke

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Attachment II    CERO Personnel (continued)

REGleason	HSPitner	RMWetherall
KMGodfrey	CTPolidoroff	VFWittman
DDGubara	DWPooler	LFWomack
DRHanes	JLPotter	SAWong
		RAYoung

ATTACHMENT III

EDS NUCLEAR INC. OBSERVERS

Robert B. Wester  
Klenne L. Herman  
Mark Goldstein  
Ronald M. Polivka  
Mark G. Smith  
Edward T. Quinn  
Robert Ridge  
David L. Powell  
Terrance W. Pellisero  
Vlada Kuceravy  
Laura S. Listug  
Dennis H. Paley  
Mark D. Schumann

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ATTACHMENT IV

DRILL SCENARIOS AND CRITIQUES

Drill Scenarios

PGandE Corporate Emergency Preparedness Drill Scenario  
Walkthroughs 3A-3F  
March 1981

PGandE Corporate Emergency Preparedness Drill Scenario  
Communications Test  
April 1981

PGandE Corporate Emergency Preparedness Drill Scenario  
Simulations 4A-4F  
May 1981

PGandE Corporate Emergency Preparedness Drill Scenario  
Walkthrough 3  
June 1981

Diablo Canyon Power Plant Emergency Preparedness  
Exercise Scenario  
Field Exercise Dress Rehearsal  
August 1981

Drill Critiques

Critique of Corporate Emergency Preparedness Walkthroughs 3A-3F

Critique of Corporate Emergency Preparedness Communications Test

Critique of Corporate Emergency Preparedness Simulation 4ABC

Critique of Corporate Emergency Preparedness Simulation 4D

Critique of Corporate Emergency Preparedness Simulation 4F

Critique of Corporate Emergency Preparedness Walkthrough 3E

Critique of Corporate Emergency Preparedness Simulation 4

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1 (a)(ii) The following drills have been conducted by  
2 the Diablo Canyon plant staff:

- 3 May 2, 1979 Emergency Exercise
- 4 August 20, 1980 Radiological Personnel Injury Drill
- 5 June 9, 1981 Radiological Personnel Injury Drill
- 6 July 3, 1981 Site Emergency Signal Drill
- 7 July 22, 1981 Plant Staff Notification Drill
- 8 August 13, 1981 Emergency Plan Exercise -  
Preparation Drill
- 9 August 17, 1981 Emergency Plan Exercise -  
Preparation Drill

10 (b)(ii) The following participated or observed the  
11 drills identified above:

- 12 May 2, 1979 Participants - Diablo Canyon Site Personnel,  
13 San Luis Obispo County, French  
14 Hospital, California Dept. of  
15 Forestry
- 16 August 20, 1980 Observers - NRC
- 17 Participants - Diablo Canyon Site Personnel,  
18 French Hospital
- 19 June 9, 1981 Observers - PGandE General Office Personnel
- 20 Participants - Diablo Canyon Plant Staff,  
21 French Hospital
- 22 Observers - Helgeson Nuclear Services,  
23 Inc. Personnel
- 24 July 3, 1981 Participants - Diablo Canyon Plant Staff  
25 Diablo Canyon Construction  
26 Personnel
- 27 Observers - Diablo Canyon Plant Staff  
28 PGandE General Office Personnel
- 29 July 22, 1981 Participants - Diablo Canyon Plant Staff
- 30 Observers - None
- 31 August 13, 1981 Participants - Diablo Canyon Plant Staff
- 32 Observers - Stone and Webster Personnel
- 33 August 17, 1981 Participants - Diablo Canyon Plant Staff  
34 PGandE General Office Personnel  
35 San Luis Obispo County  
36 Health Dept.  
37 California Office of  
38 Emergency Services
- 39 Observers - Stone and Webster Personnel

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1 (c)(ii) The following documents relate to the drills  
2 identified above:

- 3 1. Memo to File, "Discussion of Emergency  
4 Exercise of May 2, 1979" by J. D. Shiffer,  
5 undated.
- 6 2. Memorandum to File, Subject: Emergency  
7 Drill, Personnel Injury (Radiological),  
8 August 20, 1980, by J. V. Boots, 8/26/80.
- 9 3. Memorandum to File, Subject: Personnel  
10 Injury (Radiological), June 9, 1981, by  
11 H. W. C. Fong, 6/15/81.
- 12 4. Memorandum to File, Subject: Emergency Plan  
13 Drill Report (July 3, 1981), by W. J.  
14 Keyworth, 7/13/81.
- 15 5. Memorandum to File, Subject: Emergency Plan  
16 Drill Report (July 22, 1981), by W. J.  
17 Keyworth, 7/23/81.
- 18 6. Drill Log - August 13, 1981, undated,  
19 unsigned.
- 20 7. Drill Log - August 17, 1981, undated,  
21 unsigned.

22 (a)(iii) June 8 - 9 Medical Drill  
23 June 16 - 17 Briefings (2)  
24 Week of June 22 Preliminary Assessment Training  
25 July 8 Tabletop (key county people)  
26 July 9 Monitoring/EOF Drill  
Week of July 13 Accident Assessment Course/Drill  
July 14 Reception/Care Facility Drill  
July 21 - 22 Alert/Warning Evaluation  
July 28 Evacuation/Control Drill  
August 5 Full-Scale FOC Drill

1 August 17 TSC/EDF/EDAC/CIRC Drill  
2 August 19 Full Field Exercise  
3 August 21 Exercise Critique  
4  
5 (b)(iii) French Hospital  
6 San Luis Obispo  
7 San Luis Obispo/San Jose  
8 San Luis Obispo/San Jose  
9 C.S.T.I.  
10 Sheriff's/Field  
11 C.S.T.I.  
12 Paso Robles Fairgrounds  
13 San Luis Obispo  
14 Sheriff's Office  
15 Sheriff's Office  
16 Sheriff's Office  
17 San Luis Obispo  
18

19 (c)(iii) For each of the exercises listed above in  
20 5a(iii) sign up sheets were utilized. These  
21 documents are available under responses to  
22 requests for production.  
23  
24  
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26

1 INTERROGATORY NO. 6:

2 (a) Describe all training provided to onsite and  
3 offsite emergency response personnel to prepare them to  
4 respond to a radiological emergency at Diablo Canyon.

5 (b) Identify and describe all documents,  
6 including critiques, photographs and motion pictures, which  
7 pertain in any way to this training, including the complete  
8 PG&E training program designed to ensure that PG&E personnel  
9 and employees are prepared to respond adequately to a  
10 radiological emergency at Diablo Canyon.

11

12 RESPONSE TO INTERROGATORY NO. 6:

13 (a) The onsite and offsite training for emergency  
14 response personnel was conducted by PGandE and the  
15 State of California Office of Emergency Services. This  
16 combined training program for PGandE, county, state,  
17 and federal personnel was conducted on the following  
18 schedule:

19

20 SCHEDULE OF CERO TRAINING

21 <u>Session</u>	<u>Participating Departments</u>	<u>Date Conducted</u>
22 1	Executive Officers and Corporate 23 Emergency Response Organization 24 Recovery Managers and Primary Coordinators	2/20/81
25 2A	Security and Personnel Relations	2/23/81

26 ///



1			Date
2	<u>Session</u>	<u>Participating Departments</u>	<u>Conducted</u>
3	2B	Materials	2/25/81
4	2C	Corporate Emergency Response Plan Site Personnel	3/6/81
5	2D	Division Support	3/5/81
6	2E	Quality Assurance	3/2/81
7	2F	Communications	3/9/81
8	2G	General Construction, Engineering and Technical Support, and Computer Systems and Services	3/11/81
9			
10	2H	Radiological Analysis and Protection	3/13/81
11			
12	2I	Law, Insurance, and Safety, Health and Claims	3/16/81
13	2J	Governmental Relations and Public Relations	3/18/81
14			
15			
16			

DIABLO CANYON TRAINING

18	<u>Activity</u>	<u>Participants</u>	<u>Date</u>	<u>Location</u>	<u>Lead Agency</u>
19	Briefings (2)	All Officials	June 17-18	SLO	OES
20	Preliminary Assessment	County Health, Dept Ag, Air	June 22	SLO	OES
21	Training	Pollution Control			
22	Accident Assessment	County Health, Dept Ag, Air	July 13-16	CSTI	OES
23	Course	Pollution Control, PG&E, OES, DHS			
24					
25	Alert/Warning/Public Information Evaluation		July 21-23	SLO	FEMA/OES
26	///				

	<u>Activity</u>	<u>Participants</u>	<u>Date</u>	<u>Location</u>	<u>Lead Agency</u>
1					
2					
3	PIO Orientation	County & Utility PIO's	July 23	SLO	PG&E
4	Ambulance Attendant Training	San Francisco Ambulance, Air Ambulance	July 27	SF	PG&E
5					
6	Additional Accident Assessment Training	State & Local Personnel	Week of July 27	CSTI	
7					
8	PIO Planning Meeting	County, State, Utility, FEMA PIO's	July 28	SLO	OES/County
9					
10	Reception/Care Facility Training	County, State, Red Cross	July 29	Camp Roberts	OES
11	PIO Planning Mtg.	County, State, Utility, FEMA	Aug 12	SLO	OES/County
12					
13	UDAC Planning Mtg.	County, State, Utility	Aug 13	SLO	OES/County/PG&E
14	Press Briefing		Aug 18	SLO	County/OES
15	Congregate Care Mtg.	County, Red Cross	Aug 18	Camp Roberts	County
16	Exercise Critique	County, State, Utility, FEMA, NRC	Aug 21	SLO	County/FEMA
17					
18	Medical Personnel Training	St. Francis Hospital	Aug 24-28	Oak Ridge Farm	Oak Ridge Assoc. Univ.
19					
20					

(b) The following list of training documents depicts the onsite and offsite PGandE, county, state, and federal training program:

- (1) Nuclear Plant Administrative Procedure No. B-2, General Requirements for Training of On-site Personnel, Revision 2, dated 10/22/79.

///

- 1 (2) Diablo Canyon Power Plant Unit Nos. 1 and 2  
2 Administrative Procedure B-50, Safety and  
3 Emergency Planning Training Courses, Revision 1,  
4 dated 5/31/79.
- 5 (3) Handwritten revision (incomplete) to Diablo Canyon  
6 Power Plant Units Nos. 1 and 2, Administrative  
7 Procedure B-50, "Emergency Plan Training Courses,"  
8 undated, prepared by W. J. Keyworth.
- 9 (4) Memorandum, R. C. Thornberry to J. D. Shiffer,  
10 subject: Emergency Plan Training, dated July 7,  
11 1981.
- 12 (5) Memorandum, R. C. Thornberry to J. D. Shiffer,  
13 subject: Emergency Plan Training, dated 5/6/81.
- 14 (6) EPD-600 Basic Actions in the Event of an Emergency  
15 On-Site" originals of overhead slides, undated,  
16 prepared by W. J. Keyworth, date unknown.
- 17 (7) Lecture Notes, EPD-600, Basic Personnel Actions in  
18 the Event of an Emergency, by J. D. Shiffer,  
19 Rev. 0, dated 1/22/79.
- 20 (8) Lecture Notes, EPD-600, Rev. 1, 12/1/80, by W. J.  
21 Keyworth.
- 22 (9) Lecture Notes, EPD-600, Rev. 2, 8/27/81, Basic  
23 Actions in the Event of an Emergency On-Site, by  
24 W. J. Keyworth.
- 25 (10) Lecture Notes, EPD-500, Rev. ) 1/2/81, Overview of  
26 Diablo Canyon Emergency Plan and Procedures, by  
W. J. Keyworth.
- (11) Lecture Notes, EPD-500, Rev. 0, 1/2/81, Overview  
of Diablo Canyon Emergency Plan and Procedures,  
annotated Rev. 1, 6/1/81, annotated as updated  
7/6/81.
- (12) Radiological Emergency Plan Overview Exam, dated  
5/81 by W. J. Keyworth.
- (13) Radiological Emergency Plan and R-procedures Exam,  
dated 6/81, by W. J. Keyworth.
- (14) Lecture Notes, EPD-350, Maintenance and Repair  
under Radiological Emergency Condition, undated by  
W. J. Keyworth, date unknown.

- 1 (15) Nuclear Data Communications System (NDCS)  
2 Training, Class Outline, undated by Dr. T. C. Chu,  
3 date unknown.
- 4 (16) Diablo Canyon Power Plant Emergency Plan, Rev. 3,  
5 6/15/81, section 8 Maintaining Emergency  
6 Preparedness annotated by W. J. Keyworth, date  
7 unknown.
- 8 (17) Emergency Procedures, Volume 3 of the Diablo  
9 Canyon Power Plant Units 1 and 2 Plant Manual.
- 10 (18) The following draft emergency procedures:
- 11 R-2 (Rev. 3) Release of Airborne Radioactive Mat'l, 8/11/81
- 12 G-1 Accident Classification and Emergency Plan Activation, 9/1/81
- 13 G-2 Establishment of the On-site Emergency Organization, 7/25/81
- 14 G-3 Notification of Off-site Emergency Organizations, 7/27/81
- 15 G-4 Personnel Assembly and Accountability, 7/27/81
- 16 G-5 Evacuation of Nonessential Site Personnel, 7/8/81
- 17 OR-2 Release of Information to the Public, 7/24/81
- 18 EF-1 Activation of the Technical Support Center, 7/24/81
- 19 EF-2 Activation of the Operational Support Center, 7/24/81
- 20 EF-3 Activation of the Emergency Operations Facility, 7/10/81
- 21 EF-4 Activation of the Mobile Radiological Monitoring Van, 7/8/81
- 22 EF-5 Emergency Equipment, Instrument & Supplies, 5/26/81
- 23 EF-6 Activation of the Emergency Assessment and Response System, 7/24/81
- 24 EF-7 Activation of the Nuclear Data Communications System, 8/7/81
- 25 RB-2 Emergency Exposure Guides, 7/9/81
- 26 RB-3 Stable Iodine Thyroid Blocking, 6/23/81
- RB-4 Controlled Area Establishment, 7/21/81
- RB-5 Personnel Decontamination, 7/21/81
- RB-6 Area & Equipment Decontamination, 8/11/81
- RB-7 Emergency On-Site Radiological Environmental Monitoring, 7/24/81
- RB-8 Emergency Off-Site Radiological Environmental Monitoring, 7/24/81
- RB-9 Determination of Release Rates, 8/11/81
- RB-10 Protective Action Guidelines, 6/23/81
- RB-11 Emergency Off-Site Dose Calculations, 7/24/81
- (19) Corporate Emergency Response Plan Lesson Plans

1 INTERROGATORY NO. 7:

2 Describe all equipment available to San Luis  
3 Obispo County personnel (including personnel of any of the  
4 Cities responding pursuant to the County Plan) to respond to  
5 a Diablo Canyon radiological emergency.  
6

7 RESPONSE TO INTERROGATORY NO. 7:

8 Applicant objects to this question on the basis it  
9 is (a) impossible to answer, (b) overly broad and vague, (c)  
10 not within the knowledge of the answering party, and (d) not  
11 designed to lead to admissible evidence. The interrogatory  
12 asks for a listing of all equipment available to the County  
13 to respond to a radiological emergency. Such a question  
14 could generate answers from the number of pencils and  
15 erasers available to the number of Hewlett Packard 1010's  
16 for measuring radiological conditions. Clearly the number  
17 and kind of radiological monitoring equipment is material to  
18 the issue at bar. The number of pencils is not. Unfortun-  
19 nately the interrogatory makes no such distinction.  
20  
21  
22

23 INTERROGATORY NO. 8:

24 (a) Describe all plans for notification of  
25 transient persons within 10 miles of the Diablo Canyon  
26 facility in the event of a radiological emergency.



1 Transient persons include agricultural workers, visitors to  
2 Montana de Oro State Park, and other persons who may be  
3 temporarily visiting the San Luis Obispo area.

4 (b) Describe all documents which relate in any  
5 way to such notification, including, without limitation, any  
6 analyses of the time(s) necessary for and feasibility of  
7 notifying persons in the backcountry of Montana de Oro State  
8 Park.

9  
10 RESPONSE TO INTERROGATORY NO. 8:

11 (a) The detailed procedures for notification of  
12 transient populations can be found in the San Luis  
13 Obispo County Nuclear Power Plant Emergency Response  
14 Plan and Standard Operating Procedures.

15 There are two groups of transient populations  
16 which would be notified directly by PGandE at the  
17 request of the County Sheriff's Office as described  
18 below:

19 (1) Migrant farm workers along the DCP  
20 South access road. In addition to installing two  
21 non-electronically activated warning devices on  
22 existing structures, PGandE will dispatch from  
23 the plant a vehicle equipped with a megaphone or  
24 other loudspeaker devices which would proceed  
25 along the South access road to the pea farm  
26 located approximately 4.2 miles from the plant.

1 This vehicle would be used to notify all persons  
2 working in the area. See Diablo Canyon Power  
3 Plant Emergency Procedures, EP G-5, Rev. O.,  
4 entitled "Evacuation of Non-essential Site  
5 Personnel."

6 (2) Hikers in remote areas of Montana de Oro  
7 State Park. The San Luis Obispo County Nuclear  
8 Power Plant Emergency Response Plan Standard  
9 Operating Procedure III.12 entitled "State  
10 Department of Parks and Recreation" outlines a  
11 procedure for notification and evacuation of  
12 persons in the Park. PGandE currently has an  
13 agreement with Rogers Helicopter Service to  
14 provide a helicopter in the event of an emergency  
15 situation. This helicopter could be used to  
16 notify persons in the park if the County requested  
17 such assistance. Helicopters are available which  
18 could be used as a back-up or primary vehicle for  
19 notification of transient populations.

- 20
- 21 (b) (1) DCPPE Emergency Procedures - EP G-5  
22 (2) DCPPE Emergency Plan - Letters of Agreement  
23 (3) SLO Emergency Plan and Standard Operating  
24 Procedure  
25 (4) Evacuation Times Assessment for DCNPP,  
26 Voorhees 1980

1 (5) NUREG-0654, Appendix 3

2 (6) TERA report - "Earthquake Emergency  
3 Planning at Diablo Canyon"  
4  
5  
6  
7  
8

9 INTERROGATORY NO. 9:

10 (a) Describe the seismic qualification, including  
11 a description of the earthquake forces (acceleration,  
12 velocity and displacement) that the equipment is designed to  
13 withstand and still be completely functional, of: (1) the  
14 real-time monitors, both onsite and offsite (PG&E Plan, Fig.  
15 7.3-4); (2) the equipment at each of the offsite  
16 environmental monitoring stations (Figure 7.3-3); (3) the  
17 sirens utilized in the early warning system (Figure 7.2-8);  
18 and (4) the onsite meteorological tower.

19 (b) Identify and describe the manufacturer and  
20 the model numbers of all such equipment.

21 (c) Describe the structures to which all such  
22 equipment is attached and the seismic qualification of such  
23 structures.

24 (d) Identify and describe any tests or analyses  
25 which have been performed either by PG&E or others on the  
26 qualification, characteristics, and response features of the

1 foregoing equipment and structures proposed for use at  
2 Diablo Canyon, onsite and offsite.

3  
4 RESPONSE TO INTERROGATORY NO. 9:

5 (a) The real-time monitors, offsite environmental  
6 monitoring systems, sirens and the onsite  
7 meteorological tower have not been seismically  
8 qualified.

9  
10 (b) The real-time monitors and the environmental  
11 monitoring station equipment are described in section  
12 7.3 of the Diablo Canyon Site Emergency Plan.

13 The manufacturer of sirens is Federal Signal  
14 Corporation Signal Division. Model Numbers of the  
15 sirens are:

- 16 (1) Models 1000A & 1000B with RCMIA & RCMIB control  
17 cabinets and ARCH-S1 receivers and timers. Model  
18 1000 sirens are rated 125 dB.
- 19 (2) Models STH10A & STH10B with RC5WA & RC5WB control  
20 cabinets and ARCH-S1 receivers and timers. Model  
21 STH10 sirens are rated 115 dB.
- 22 (3) Models 5A & 5B with RC5WA & RC5WB control cabinets  
23 and ARCH-S1 receivers and timers. Model 5 sirens  
24 are rated 107 dB.
- 25 (4) Model 2 with RC5W control cabinet and ARCH-S1 re-  
26 ceiver and timer. Model 2 sirens are rated 102 dB.

1 (5) Model LCS-1 local coverage siren. Model LCS-1  
2 sirens are rated 85 dB.

3  
4 Meteorological instrumentation is comprised  
5 of:

6 (1) wind measurement by a Teledyne-Geotech Series 50  
7 system using three-cup anemometers and "quick one"  
8 vanes.

9 (2) temperature and temperature gradient measurements  
10 by a Teledyne Geotech Model 40.35 microprocessor  
11 system in conjunction with platinum resistance  
12 thermometers in Teledyne Geotech Model 327 aspi-  
13 rated radiation shields.

14 (3) precipitation measurement by a Belfort Model  
15 tipping bucket raingage with rainfall increments  
16 digitally accumulated by a Teledyne Geotech Model  
17 40.52 processor.

18 (4) dew point measurement by an EG&E Model 110-M  
19 chilled mirror dew point system with signal pro-  
20 cessing by a Teledyne Geotech Model 40.71 signal  
21 processing module.

22 (5) data acquisition of primary and backup tower data  
23 by Teledyne Geotech "Outomet V" digital data  
24 acquisition systems.

25 (6) mechanical backup for automated tower data by use  
26 of a Meteorology Research Incorporation Model 1071  
portable mechanical weather station.



1            (c)            All real-time monitors and on-and offsite  
2 monitoring stations are free standing structures  
3 located outside of any structure (except for the  
4 station at Morro Bay Power Plant).

5            The primary meteorological instrumentation is  
6 deployed on a 2 foot square 67 meter tall guyed tower  
7 of angle iron construction via retractible steel tube  
8 booms. Backup meteorological instrumentation is  
9 deployed on a 50 meter tall guyed tubular steel tower  
10 of triangular cross section; 18 inches on a side, via  
11 lowerable aluminum booms. The site of the backup tower  
12 is separated by 1.2 kilometers from the site of the  
13 primary tower. Acquisition and recording equipment are  
14 sheltered in small concrete block structures with  
15 corrugated steel roofs.

16  
17 (d)            The onsite meteorological tower is a light-  
18 weight structure which is not highly susceptible to  
19 earthquake forces. Instead, it is designed for wind.  
20 It has been determined capable of withstanding a 110  
21 mph wind within normal allowable working stresses.  
22 This is equivalent to a seismic loading of 1.2g.

23            The Federal Signal Company, the siren manu-  
24 facturer, has recently completed some seismic work on  
25 the largest siren, model 1000. This material is being  
26 forwarded to PGandE and will, when available, be used  
to supplement these answers.

1 INTERROGATORY NO. 10:

2           What is the status of implementation, testing and  
3 activation of the public notification system sirens (see  
4 PG&E Plan, Rev. 2, Figure 7.2-8)? In your response, do the  
5 following:

6           (a) Describe how each siren is mounted;

7           (b) Identify the final seleted [sic] location of  
8 each siren;

9           (c) The criteria for choosing each siren  
10 location;

11           (d) The population covered by each siren;

12           (e) The estimated population (both permanent and  
13 transient) within the early warning boundary system (see  
14 Figure 7.2-8) which is not covered by the siren system;

15           (f) The means, if any, by which the population  
16 not covered by the siren system will be notified of a Diablo  
17 Canyon emergency;

18           (g) Describe all tests of the siren system,  
19 including (1) tests designed to test the coverage of  
20 individual sirens and (2) tests designed to determine the  
21 seismic qualification of the siren system; and

22           (h) Identify and describe all documents which  
23 relate in any way to (a) - (g) above.

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1 RESPONSE TO INTERROGATORY NO. 10:

2 General Status

3 Seventy-three of the eighty-three sirens that  
4 currently comprise the system have been installed in the SLO  
5 County Basic Emergency Planning Zone. Five of the remaining  
6 sites have been cleared for construction, and four are  
7 awaiting additional approvals. Presently, the siren radio  
8 receivers are being retrofitted for a new frequency and also  
9 for subaudible tone activation in order to increase the  
10 security of the system. All of the parts and equipment  
11 necessary to retrofit the receivers are in order. It is  
12 anticipated that the existing system will be operational in  
13 November of 1981.

14 The activating encoder is installed in the County  
15 Sheriff's dispatch room and is operational.

16 Specific Parts

17 (a) Siren Mounting

18 (1) Models 1000A & B

19 Compressor platform is bolted to pole with  
20 2-3/4" through-bolts. Platform stabilizers are logged  
21 to pole and bolted to the platform.

22 Control and receiver cabinets are bolted to  
23 the platform and supported with cross-arm braces. The  
24 schedule to rigid steel air pipe from the compressor to  
25 the chopper assembly is attached to the pole with  
26 galvanized steel brackets at 5 ft. intervals. The

1 siren unit which includes the chopper assembly is  
2 attached to the steel pipe at the top of the pole.

3 (2) Models STH10A & B, 5A & B, 2

4 These sirens are bolted to a tri-mount  
5 bracket which in turn is bolted to the top of the pole.

6 The control cabinets, ARCH-S1 receivers and  
7 disconnect switch are bolted to a 6 ft. length of 6"  
8 channel which is "through-bolted" to the pole with 3/4"  
9 bolts.

10 (3) Model LCS-1

11 This self-contained siren is "through-bolted"  
12 to the pole with 1/2" bolts.

13  
14 (b) Location of each siren as shown on the map in  
15 the Emergency Plan.

16	<u>SIREN NO.</u>	<u>LOCATION</u>
17	1	North Morro Bay - near the intersection of Sequoia and Birch.
18	1A	Cayucos on Standard Oil property near 19 Highway 1.
20	1B	Near the Cayucos Cemetary on Highway 1.
21	1C	Cayucos near the intersection of 4th & 22 Park.
23	(2)	On PG&E property at the Morro Bay Power Plant.
24	(3)	In Morro Bay, on Morro Avenue north of 25 Olive.
26	3A	In Morro Bay, near the intersection of Ridgeway street and Fairview Avenue.

	<u>SIREN NO.</u>	<u>LOCATION</u>
1		
2	6A	In Baywood Park near the intersection of El Morro Avenue and 6th Street.
3		
4	7	In Los Osos on Pecho Valley Road several blocks west of Pine Avenue.
5	8A	Montana de Oro Park near the Ranger Station.
6		
7	8B	Montana de Oro Park near the Ranger's residence.
8	8C	On the Field's property south of the gate.
9		
10	8D	On the Field's property near the Field's residence.
11	9	Near Highway 1 on PG&E's Baywood substation yard.
12		
13	10	Near Highway 1 west of San Luisito Creek Road.
14	12	On Highway 1 just north of Cuesta College.
15		
16	13	On Highway 1 northwest of animal shelter.
17	14	On Highway 1 about 1/2 mile west of the California Division of Forestry.
18		
19	15	In San Luis Obispo across the street from City Fire Station on No. Chorro Street.
20		
21	16	In San Luis Obispo near Grand Avenue and Slack Street.
22	17	In San Luis Obispo in parking lot next to the fire station on Graden Street.
23		
24	18	On Clark Valley Road - near the PG&E 500 kV right of way.
25	19	Los Osos - near the end of Valley View Place.
26		



	<u>SIREN NO.</u>	<u>LOCATION</u>
1		
2	19C	Los Osos - near the end of Valley View Place.
3		
4	19D	In Los Osos - on Nipomo Avenue East of South Bay Boulevard.
5	19E	In Los Osos near the fire station on Calle Cardonay.
6		
7	20	On Los Osos Valley Road near the 500 kV right of way.
8	21	On Los Osos Valley Road east of Turri Road.
9		
10	22	On Los Osos Valley Road about 1.5 miles east of No. 21.
11	23	Near the intersection of O'Connor Way and Foothill Road.
12		
13	23A	On O'Connor Way about 2 miles west of 23.
14	24	On Perfumo Canyon Road.
15	24A	About 2000 ft. south of Perfumo Canyon Road.
16	24B	Near the end of Sycamore Canyon Road.
17	25	At the top of Perfumo Canyon Road.
18		
19	25A	On Coon Creek Road about 1-1/4 miles west of See Canyon Road.
20	26A	On Coon Creek Road about 1/2 miles west of See Canyon Road.
21		
22	27A	On See Canyon Road about 1 mile east of 27B.
23	27B	On See Canyon Road about 3500' west of 26A.
24		
25	27C	On See Canyon Road about 2500 east of Davis Canyon Road.
26	27	On See Canyon Road about 2500 east of Davis Canyon Road.

	<u>SIREN NO.</u>	<u>LOCATION</u>
1		
2	29	On Los Osos Valley Road about 2000' south of Madonna Road.
3		
4	29A	Off Los Osos Valley Road in Laguna Lake area.
5	30	In San Luis Obispo on Meisner Road.
6	31	In PG&E's Service Center yard on So. Higuera.
7		
8	31A	Near the end of Davenport Road.
9	31B	On Highway 101 Frontage Road south of So. Higuera off ramp.
10	31C	On Highway 101 Frontage Road about 2000 ft. north of 500 kV right of way.
11		
12	32	On Squire Canyon Road east of Highway 101.
13	33	Across street from Belleview - Santa Fe School on See Canyon Road.
14		
15	34	In Avila Beach near DCPD security gate.
16	35	In downtown Avila Beach near San Antonio Street.
17	36	On Highway 101 near Palisades Drive.
18	37A	At Shell Beach fire station.
19	38	On Mattie Road near McLintock's restaurant.
20		
21	38A	On Shell Beach Road north of Ocean Way.
22	39	In San Luis Obispo on Santa Fe Road south of Tank Farm Road.
23	40	On private property south of San Luis Airport.
24		
25	41	North of the Town of Edna.
26	42	On Price Canyon Road on Grace Oil property.

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SIREN NO.

LOCATION

43 On Price Canyon Road about 1 mile north of Pismo Beach.

44 In Pismo Beach on a watertank in subdivision above Pismo Beach.

45 In Pismo Beach on Bello Road near Veteran's Hall.

46 On Highway 1 South Pismo Beach.

47 In Grover City - 4th and Manhattan.

48 In Oceano on Railroad Avenue.

49 In Grover City at Water Tower.

50 On Halcyon Road near Oceano city limits.

51 In Arroyo Grande near new fire station.

51A At PGandE substation on Valley Road south of Arroyo Grande.

52 On Arroyo Grande Road east of Arroyo Grande.

52A On Printz Road north of Arroyo Grande.

52B On Noyes Road north of Printz Road.

49B On Central Boulevard north of Arroyo Grande.

49C On Central Boulevard about 4000 ft. north of 49B.

53 On Valley Road about 7000 ft. south of 51A.

56 Near intersection of El Campo & Clarkway.

57 On Valley Road about 7000 ft. South of 53.

58 On Stanton Road South of Los Berros Road.

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<u>SIREN NO.</u>	<u>LOCATION</u>
59	Near intersection of Los Berros and Keokee.
60	On Pomeroy Road.
61	On Willow Road at Black Lake County Club.

(c) Criteria

The two major criteria used in determining siren coverage were:

- (1) The NRC requirements for notification of the population as outlined in Appendix 3 of NUREG-0654 and,
- (2) The recommended 10 dB sound level above average daytime ambient background noise as a target level for the design of an adequate system (NUREG-0654, FEMA "Outdoor Warning Systems Guide").

In addition to sound propagation and notification of the population, several other criteria were thoroughly investigated before final siren site locations were selected.

- (3) Environmental Impact. PGandE's "Environmental Impact Analysis of Construction and Testing of the Early Warning System" evaluates the potential impact of the EWS on all known important wildlife and rare plant species. Several sites were

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1 relocated in order to avoid sensitive nesting  
2 areas and kangaroo rat habitats.

3 (4) Cultural Resources. A study entitled "DCPP Early  
4 Warning System Cultural Resources Literature  
5 Search and Report on the Field Investigations of  
6 Selected Pole Sitings" was performed by a  
7 consultant firm to avoid siting poles in  
8 archeologically active sites.

9 (5) Coastal Zone. In order to avoid potentially  
10 negative impacts on the aesthetic coastal  
11 environment, considerable effort was made to site  
12 sirens in this area on existing poles.

13  
14 (d) The population covered by each siren:

15 The siren system was designed so that the  
16 total population within the Basic Emergency Planning  
17 Zone would be alerted in the event of an emergency  
18 situation at DCP. The system was not designed from  
19 the standpoint of each siren covering a specific sector  
20 of the population.

21  
22 (e) The resident population within the 10-mile  
23 radius of the plant and the Basic Emergency Planning  
24 Zone presently not covered by the siren system is less  
25 than a fraction of 1 percent. The transient population  
26 within the siren system boundary would consist of



1 visitors in Montana de Oro State Park and farm workers  
2 along the DCPD southerly access road. The campground,  
3 all beach areas and all parking areas at Montana de Oro  
4 State Park are within the siren system coverage area.  
5

6 (f) Refer to interrogatory 8 response.  
7

8 (g) Testing of the Siren System.

9 Each siren is tested upon installation to en-  
10 sure that all component parts are operational. A full  
11 siren test will not occur until November 1981. A test-  
12 ing program is being prepared which will qualitatively  
13 and quantitatively assess the capability of the siren  
14 system to meet design criteria during the full siren  
15 test.

16 Maintenance system testing will be performed  
17 according to the manufacturer's requirements.

18 Individual siren coverage tests will not be  
19 performed.

20 No seismic testing is anticipated beyond what  
21 has been discussed in interrogatory 9.  
22

- 23 (h) 1. NUREG-0654, FEMA-REP-1, Rev. 1.  
24 2. FEMA Document GPG-1-17, FEMA Outdoor Warning  
25 Systems Guide.  
26 3. "Public Notification System Service Manual,"  
Engineering Systems, Federal Signal Corporation.

- 1 4. "Radio-Controlled Siren Alerting System for the  
2 Diablo Canyon Nuclear Plant," prepared by  
Engineering Systems, Federal Signal Corporation.
- 3 5. "Evacuation Times Assessment for the Diablo Canyon  
4 Nuclear Power Plant, September 1980, PRC Voorhees  
and Associates.
- 5 6. "Diablo Canyon Power Plant Early Warning System  
6 Cultural Resources Literature Search and Report on  
7 Field Investigations of Selected Pole Sitings,"  
Vance Bente, Mary Hilderman-Smith, Legion  
Archaeological Research.
- 8 7. "Environmental Impact Analysis of Construction and  
9 Testing of the Diablo Canyon Early Warning  
10 System," Report 411-80.396, PG&E Department of  
Engineering Research, January 1981.
- 11 8. "Rare Plant Survey and Wildlife Siting Information  
12 for 18 Relocated Pole Sites," July 17, 1981,  
13 letter from John Icanberry to C. J. Smith.
- 14 9. Isopleth map delineating current siren coverage.
- 15 10. Engineering Drawings.

16  
17  
18 INTERROGATORY NO. 11:

19 Attached to Revision 2 of the Diablo Canyon  
20 Emergency Response Plan are a number of agreements. For  
21 example, there are agreements with French Hospital and with  
22 San Luis Obispo Ambulance Service.

23 (a) Identify and describe: (1) all updated  
24 versions of these agreements; and (2) any other agreements  
25 which PG&E believes support in any way the preparedness of

26 ///

1 PG&E and/or offsite entities to respond to a radiological  
2 emergency at Diablo Canyon.

3 (b) Describe any plans of PG&E to enter into any  
4 further agreements related to emergency planning and  
5 preparedness that are in addition to those included in  
6 Revision 2 of PG&E's Emergency Response Plan.

7  
8 RESPONSE TO INTERROGATORY NO. 11:

9 Letters of Agreement have been obtained from 23  
10 public and private entities. Requests have been made to  
11 several additional agencies for letters of agreement which  
12 are still pending.

13 COMPLETED LETTERS OF AGREEMENT

- 14 1. State of California, Office of Emergency Services  
15 Effective May 27, 1981
- 16 2. French Hospital, San Luis Obispo, California  
Effective June 8, 1981
- 17 3. Condor Helicopters and Aviation, Inc.  
18 Ventura, California  
Effective July 31, 1981
- 19 4. Rogers Helicopters, Clovis, California  
20 Effective July 1, 1981
- 21 5. Rotor-Aids, Inc., Ventura, California  
Effective July 9, 1981
- 22 6. San Luis Ambulance Service, Inc.  
23 San Luis Obispo, California  
Effective May 13, 1981
- 24 7. State of California, Department of CALTRANS  
25 Effective May 11, 1981
- 26 8. State of California, Department of Rehabilitation  
Effective July 27, 1981

- 1 9. State of California, Department of Military  
2 Effective April 14, 1981
- 3 10. State of California, Department of Youth Authority  
4 Effective April 30, 1981
- 5 11. State of California, Department of General Services  
6 Effective April 22, 1981
- 7 12. State of California, Department of Forestry  
8 Effective April 20, 1981
- 9 13. State of California, Department of Corrections  
10 Effective April 27, 1981
- 11 14. American Red Cross  
12 Effective April 17, 1981
- 13 15. State of California, Department of Health Services  
14 Effective July 14, 1981
- 15 16. Air Ambulance Inc., San Carlos, California  
16 Effective July 8, 1981
- 17 17. State of California, Department of the California  
18 Highway Patrol  
19 Effective April 13, 1981
- 20 18. Camp San Luis Obispo, San Luis Obispo, California  
21 Effective July 2, 1981
- 22 19. Cuesta College, San Luis Obispo, California  
23 Effective May 26, 1981
- 24 20. State of California, Department of Fish and Game  
25 Effective June 12, 1981
- 26 21. San Luis Obispo Ranger Unit/County Fire Department  
Effective August 5, 1981
22. Southern California Edison Company,  
Sacramento Municipal Utility District,  
Pacific Gas and Electric Company,  
"Radiological Emergency Mutual Assistance Agreement"  
Effective June 1, 1981
23. San Francisco Ambulance Service  
San Francisco, California  
Effective June 25, 1981
- 24 ///

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24. Radiological Emergency Mutual Assistance Agreement between Southern California Edison, Pacific Gas and Electric Company and Sacramento Municipal Utility District, dated June 1, 1981.

25. Institute of Nuclear Power Operations, Letter, 8/27/80

26. Institute of Nuclear Power Operations, Voluntary Assistance Agreement, 1/15/81

OTHER PENDING LETTERS OF AGREEMENT

- 1. U.S. Coast Guard
- 2. U.S. Air Force, Vandenberg AFB
- 3. U.S. Army National Guard, Camp Roberts
- 4. California Department of Parks and Recreation
- 5. California Department of Food and Agriculture
- 6. San Luis Obispo County Sheriff's Department
- 7. A backup ambulance service
- 8. An alternate media center
- 9. St. Francis Memorial Hospital
- 10. Western Regional Nuclear Plant Energy Preparedness Assn.

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1     INTERROGATORY NO. 12:

2             (a) Is it PG&E's position that prior to full  
3 power operation, the onsite and offsite emergency  
4 preparedness at Diablo Canyon will comply fully with each  
5 and every one of the Planning Standards in Section 50.47(b)?

6             (b) If the answer is YES, describe in detail the  
7 basis for and specifically demonstrate the means by which  
8 each Planning Standard will be satisfied.

9             (c) If the answer is NO, describe each deficiency  
10 that PG&E anticipates and state whether PG&E, in that event,  
11 will rely on Section 50.47(c)(1) to support licensing of  
12 Diablo Canyon despite such deficiency.

13            (d) For each such deficiency, provide the  
14 technical basis for use of Section 50.47(c)(1).

15  
16     RESPONSE TO INTERROGATORY NO. 12:

17     (a)             Yes.

18     (b)             See Emergency Plans for applicant, county and  
19 state, and all implementing procedures.

20     (c)             N/A.

21     (d)             N/A.

22     ///

23     ///

24     ///

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1 INTERROGATORY NO. 13:

2 Describe each and every standard operating  
3 procedure for the San Luis Obispo County Emergency Plan  
4 (i.e., the draft version dated May 1981) which is in PG&E's  
5 possession, custody, or control, including the possession,  
6 custody, or control of PG&E's agents, consultants, or  
7 contractors.

8  
9 RESPONSE TO INTERROGATORY NO. 13:

10 These procedures will be described in pending  
11 responses to requests for production.  
12  
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16 INTERROGATORY NO. 14:

17 (a) Describe each and every system or means that  
18 PG&E plans to have available for communicating from the  
19 Diablo Canyon site to offsite governmental authorities.  
20 Include in your answer a description of: (1) the seismic  
21 qualification of each such communication system and related  
22 equipment and structures; and (2) all analyses, tests, and  
23 other documents which relate in any way to these systems and  
24 structures.

25 (b) Which of these systems does PG&E intend to  
26 use for communicating with each of the following

1 governmental authorities: San Luis Obispo County, the City  
2 of San Luis Obispo, the State of California (specifically,  
3 the Governor's Office, the Office of Emergency Services, and  
4 the Highway Patrol), the Nuclear Regulatory Commission  
5 (specifically, the regional office and headquarters), FEMA  
6 (specifically, the regional office and headquarters), and  
7 the Cities of Atascadero, Arroyo Grande, Grover City, Morro  
8 Bay, Paso Robles, and Pismo Beach.

9 (c) With respect to each of such cities, whom  
10 does PG&E intend to contact in the event of a radiological  
11 emergency at Diablo Canyon?  
12

13 RESPONSE TO INTERROGATORY NO. 14:

14 (a) The following means are available for com-  
15 municating from Diablo Canyon to offsite governmental  
16 authorities:

- 17 1. The NRC's emergency notification phone system to  
18 the NRC Operations Center.
- 19 2. The NRC's health physics phone network to NRC  
20 Region V, Region V power plants, and NRC  
21 Operations Center.
- 22 3. PGandE's Diablo Canyon phone exchange with access  
23 to Pacific Telephone Company's network.
- 24 4. Diablo Canyon phone exchange interconnection via  
25 microwave systems to PGandE's corporate  
26 headquarters in San Francisco. This

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interconnection allows access to the Pacific Telephone Company's network from San Francisco.

5. Unlisted Pacific Telephone Company private phones at Diablo Canyon.
6. Dedicated automatic tie line phone to the San Luis Obispo Sheriff's Office.
7. Dedicated automatic tie line phone to the California Office of Emergency Services (OES) in Sacramento, California.
8. A radio system between Diablo Canyon and the San Luis Obispo Sheriff's Office.

Major communications equipment has been strengthened and braced for seismic considerations. Seismic capability of the communications system is discussed in the aforementioned TERA Report, Chapter 5.

(b) PGandE intends to use the following systems for communications with:

1. San Luis Obispo County: radio system, dedicated automatic tie line, and the Pacific Telephone network.
2. City of San Luis Obispo: Pacific Telephone network.
3. State of California, et al.: dedicated automatic tie line to OES and the Pacific Telephone network.

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- 4. Nuclear Regulatory Commission: NRC emergency notification phone system, NRC health physics phone network, and the Pacific Telephone network.
- 5. FEMA: Pacific Telephone network.
- 6. Cities of Atascadero, Arroyo Grande, Grover City, Morro Bay, Paso Robles, and Pismo Beach: Pacific Telephone network.

(c) PG&E is required to notify the San Luis Obispo County Sheriff dispatcher in the event of a radiological emergency at Diablo Canyon. Notification of cities is the responsibility of the San Luis Obispo County Emergency Organization.

INTERROGATORY NO. 15:

(a) List each and every person PG&E may call or subpoena as a witness to any hearing which may be held on the emergency preparedness contention admitted by the Licensing Board in its Order of August 4, 1981.

(b) As to each witness, please state:

- (1) The name, occupation, address and telephone number of each such person and whether that person may appear for PG&E



1 as a voluntary witness or a subpoenaed  
2 witness.

3 (2) The field or science in which such  
4 person is sufficiently schooled and/or  
5 experienced to enable him or her to  
6 express opinion evidence.

7 (3) The qualifications of each such witness.

8 (4) Whether such witness will base his or  
9 her opinion in whole or in part upon  
10 facts acquired personally by that person  
11 in the course of an investigation or  
12 examination as to the facts, or solely  
13 upon information provided that person by  
14 others. If on the basis of investiga-  
15 tion or examination, please describe  
16 such and state the nature and dates of  
17 such. If on the basis of information  
18 provided by others, please identify such  
19 others and state their qualifications.

20 (5) Each and every fact and each and every  
21 document, photograph or report or item,  
22 or other tangible object supplied or  
23 made available to each such person.

24 (6) Whether each such witness rendered  
25 written reports regarding facts, bases,  
26 or opinions as respects your answers to

1 these interrogatories. If so, state the  
2 date of each such report and the name  
3 and address of the custodian of each  
4 such report.

5 (7) A summary of each such witness' proposed  
6 testimony.

7 (8) Identify any other NRC proceedings in  
8 which such witness has previously  
9 testified and provide copies of such  
10 testimony.

11  
12 RESPONSE TO INTERROGATORY NO. 15:

13 (a) and

14 (b) (1) (3) (8)

15 The following list identifies individuals that  
16 PGandE may call as a witness to any hearing which may be  
17 held on the emergency preparedness contention admitted by  
18 the Licensing Board in its order of August 4, 1981.  
19 Individuals listed under numbers 2, 3, and 4 may well have  
20 to be subpoenaed as well as Messrs. Waddell, Whiting, and  
21 Hubbard.

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<sup>1</sup>R. C. Thornberry  
R. Patterson  
W. B. Kaefer  
W. J. Keyworth  
J. M. Gisclon  
J. V. Boots  
B. A. Dettman  
A. J. Nevolo  
J. V. Rocca  
R. S. Bain  
G. A. Blanc  
J. D. Shiffer  
J. D. Townsend  
S. M. Skidmore  
R. J. McDevitt  
J. B. Hoch  
D. J. Baxter

<sup>1</sup>S. G. Brown  
G. N. Horne  
D. P. Serpa  
R. W. Lorenz  
K. M. Godfrey  
T. A. Mack  
J. L. Potter  
W. H. Fujimoto  
M. Mooney  
R. Thuillier  
T. Martin  
F. Rockmaker  
J. R. Torrena  
\*R. V. Bettinger  
R. N. Swanson  
C. O. Coffey

<sup>2</sup>S. MacElvaine  
D. Stillwell  
T. Ness  
T. Mazzacano  
R. Jensen

<sup>3</sup>J. Kearns  
A. Flook K  
O. Orr

<sup>4</sup>J. Eldridge  
W. Nauman  
V. Paule

<sup>5</sup>K. W. Campbell  
R. L. Cudlin  
B. J. Davis  
D. K. Davis  
C. P. Mortgat

<sup>5</sup>C. M. Payne  
J. Penzien  
S. W. Smith  
R. H. Winslow

R. F. Wester  
EDS Nuclear Inc.  
220 Montgomery Street  
San Francisco, CA 94104  
(415) 544-8000

R. Rogers  
Rogers Helicopters  
P.O. Box 4  
Clovis, CA 93612  
(209) 299-4903

T. Waddell  
P.O. Box 151  
San Luis Obispo, CA 93406  
(415) 543-4244

W. K. Brunot  
595 John Muir Drive #508  
San Francisco, CA 94132  
(415) 334-0586

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Sheriff G. Whiting  
Sheriff's Operations Facility  
San Luis Obispo, CA 93408  
(805) 543-2850

R. Hubbard  
MHB Technical Associates  
1723 Hamilton Avenue - Suite K  
San Jose, CA 95125  
(408) 266-2716

<sup>1</sup>Pacific Gas and Electric Company  
77 Beale Street  
San Francisco, CA 94106  
(415) 781-4211

<sup>2</sup>County Administration Office  
Courthouse Annex, Room A205  
San Luis Obispo, CA 93408  
(805) 549-5011

<sup>3</sup>Office of the Governor  
Office of Emergency Services  
Nuclear Power Plant  
Planning Section  
P.O. Box 9577  
Sacramento, CA 95823  
(916) 427-4341

<sup>4</sup>Federal Emergency Management Agency  
211 Main Street  
San Francisco, CA 94105  
(415) 556-9412

<sup>5</sup>TERA Corporation  
2150 Shattuck Avenue  
Berkeley, CA 94704  
(415) 845-5200

(b)(2) Resumés have previously been submitted on all witnesses listed in response to Joint Intervenors' interrogatories of August 4, 1981.

(b)(4) Applicant cannot answer this interrogatory as respects witnesses it may have to subpoena. As to witnesses it will call, testimony has not yet been written and therefore no "opinions" from which to answer this question are available. However, for the most part, it is anticipated that opinion testimony will be based largely upon facts acquired personally by the witness in conjunction with information supplied by others.

1 (b) Identify all analyses, reports, or other doc-  
2 uments which relate in any way to the complicating effects  
3 of an earthquake, including complications to the northern  
4 and southern evacuation routes from the Diablo Canyon site.  
5

6 RESPONSE TO INTERROGATORY NO. 16:

7 (a) Emergency planning for the Diablo Canyon site  
8 has included consideration of the complicating effects  
9 of earthquakes. Analyses of possible specific effects  
10 related to the three referenced earthquakes are not  
11 particularly useful to planning as the exact  
12 consequences are not amenable to a purely deterministic  
13 prediction. The objective of emergency planning for  
14 Diablo Canyon was to establish a flexible response  
15 capability able to respond to a spectrum of events and  
16 specific effects that could materialize.

17 The Diablo Canyon studies focused on two  
18 areas where the most significant earthquake  
19 interactions would be manifested: transportation and  
20 communications. The study also establishes a  
21 conceptual framework for an "earthquake response plan"  
22 which addresses both the response to the complicating  
23 effects of damage as well as advanced planning concepts  
24 to deal with the duality of radiological and earthquake  
25 emergency. The specific evaluations assumed a 7.5  
26 magnitude surface wave located on the Hosgri fault.



1                   The consideration of a single, specified  
2 large earthquake is appropriate for two reasons: (1)  
3 the specific earthquake that was considered is the most  
4 logical one to be involved in a combined radiologi-  
5 cal/earthquake emergency and (2) the planning concepts  
6 determined to be appropriate are not particularly  
7 sensitive to the choice of earthquake size or location.

8                   The postulated magnitude 7.5 earthquake on  
9 the Hosgri fault was chosen because of its use as the  
10 seismic design basis for the Diablo Canyon Power Plant  
11 and its dominant seismic hazard to the plant.  
12 Furthermore, the use of this large earthquake was  
13 responsive to the requests of FEMA and the NPC.

14                   A large variability of off-site damage would  
15 be expected to result from the Hosgri earthquake. This  
16 diversity in damage comprehensively challenges  
17 emergency plans and requires them to be extremely  
18 flexible. The variety of damage scenarios considered  
19 largely envelops the expected effects of both smaller  
20 and larger earthquakes that might occur within San Luis  
21 Obispo County, the main difference being the relative  
22 likelihood of specific scenarios. The specific  
23 earthquake effects for three defined earthquake damage  
24 levels are provided in the report referenced in part  
25 (b) of this response.

26                   ///

1                   The emergency responses to these earthquake  
2 effects will be highly dependent on the actual  
3 situation that develops. This has been considered in  
4 the development of an Earthquake Response Plan for  
5 Diablo Canyon that provides for feedback of off-site  
6 conditions to the responsible emergency organizations  
7 so that recommendations for protective actions related  
8 to radiological hazards can be appropriately adjusted.  
9 Postulates of lesser or greater off-site effects will  
10 not affect the type of response, but only the degree to  
11 which additional outside resources would need to be  
12 called on to supplement the local response.

13  
14 (b)                   Earthquake Emergency Planning At Diablo  
15 Canyon, TERA Corporation, September 2, 1981.

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19  
20 INTERROGATORY NO. 17:

21                   Describe all reports, assessments, studies,  
22 analyses, or other documents (written, filmed, or recorded)  
23 being prepared by or for PG&E that deal with any of the  
24 following:

- 25                   (a) The effects of an earthquake on emergency  
26                   response to a radiological emergency;

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(b) Evacuation time estimates for the evacuation of the Diablo Canyon facility and the emergency planning zones surrounding the facility;

(c) The Diablo Canyon public information program; and

(d) The consequences of a radiological emergency at Diablo Canyon on the capability of offsite entities to provide assistance to PG&E.

For each such item described, specify who is preparing the item, when it is scheduled to be completed, and what the purpose(s) of the item is (are) intended to be.

RESPONSE TO INTERROGATORY NO. 17:

(a) (b) and (d)

PGandE has ongoing efforts to assist local, state and federal authorities in their radiological emergency planning. However, no reports, assessments, studies, analyses or other documents are now in preparation by or for PGandE.

(c) In addition to the response above, the responses to interrogatories 3 and 4 provide this information.

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1 INTERROGATORY NO. 18:

2 State in detail each and every fact which PG&E  
3 believes evidences that PG&E's Emergency Response Plan will  
4 comply with 10 C.F.R. § 50.33(g) by October 1, 1981.

5  
6 RESPONSE TO INTERROGATORY NO. 18:

7 See interrogatory 26.

8  
9 INTERROGATORY NO. 19:

10 State in detail each and every fact which PG&E  
11 believes evidences that the State of California's Emergency  
12 Response Plan will comply with 10 C.F.R. § 50 33(g) by  
13 October 1, 1981.

14  
15 RESPONSE TO INTERROGATORY NO. 19:

16 See interro, ory 26.

17  
18 INTERROGATORY NO. 20:

19 State in detail each and every fact which PG&E  
20 believes evidences that the County of San Luis Obispo's  
21 Emergency Response Plan will comply with 10 C.F.R.  
22 § 50.33(g) by October 1, 1981.

23  
24 RESPONSE TO INTERROGATORY NO. 20:

25 See interrogatory 26.

26 ///

1 INTERROGATORY NO. 21:

2 State in detail each and every fact which PG&E  
3 believes evidences that PG&E's Emergency Response Plan will  
4 comply with 10 C.F.R. § 50.47 by October 1, 1981.  
5

6 RESPONSE TO INTERROGATORY NO. 21:

7 See interrogatory 26.  
8

9 INTERROGATORY NO. 22:

10 State in detail each and every fact which PG&E  
11 believes evidences that the State of California's Emergency  
12 Response Plan will comply with 10 C.F.R. § 50.47 by  
13 October 1, 1981.  
14

15 RESPONSE TO INTERROGATORY NO. 22:

16 See interrogatory 26.  
17

18 INTERROGATORY NO. 23:

19 State in detail each and every fact which PG&E  
20 believes evidences that the County of San Luis Obispo's  
21 Emergency Response Plan will comply with 10 C.F.R. § 50.47  
22 by October 1, 1981.  
23

24 RESPONSE TO INTERROGATORY NO. 23:

25 See interrogatory 26.  
26

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1 INTERROGATORY NO. 24:

2 State in detail each and every fact which PG&E  
3 belie.es evidences that the PG&E Emergency Response Plan  
4 will comply with 10 C.F.R. Part 50, Appendix E, by  
5 October 1, 1981.

6  
7 RESPONSE TO INTERROGATORY NO. 24:

8 See interrogatory 26.  
9

10 INTERROGATORY NO. 25:

11 State in detail each and every fact which PG&E  
12 believes evidences that the State of California's Emergency  
13 Response Plan will comply with 10 C.F.R. Part 50,  
14 Appendix E, by October 1, 1981.

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16 RESPONSE TO INTERROGATORY NO. 25:

17 See interrogatory 26.  
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1 INTERROGATORY NO. 26:

2 State in detail each and every fact which PG&E  
3 believes evidences that the County of San Luis Obispo's  
4 Emergency Response Plan will comply with 10 C.F.R. Part 50,  
5 Appendix E, by October 1, 1981.

6  
7 RESPONSE TO INTERROGATORY NO. 26:

8 In response to interrogatories 18 through 26, it  
9 is the Applicant's position that all applicable emergency  
10 plans will be in compliance with all applicable regulations  
11 prior to commercial operation of the Diablo Canyon nuclear  
12 power plant in order to assure that adequate protective  
13 measures can and will be taken in the event of a  
14 radiological emergency.

15 This opinion is based on the individual and  
16 collective judgment of Applicant's staff who have been  
17 intimately involved in emergency response planning for the  
18 past several years as well as the opinions of various  
19 federal, state and county emergency response planners and  
20 evaluators. In addition, Applicant has retained consultants  
21 who have reviewed the various plans and applicable  
22 regulations and have formed similar opinions. Finally, the  
23 joint full field exercise conducted on August 19, 1981  
24 demonstrated a capability to respond to a radiological  
25 emergency at Diablo Canyon.

26

1 INTERROGATORY NO. 27:

2 (a) Is it PG&E's position that the Diablo Canyon  
3 TSC, OSC, and EOF meet the reliability requirements of  
4 NUREG-0696? See NUREG-0696, p. 5.

5 (b) If the answer is YES, state in detail each  
6 and every fact that supports such position.

7 (c) If NO, please explain in detail.

8 (d) Identify and describe all documents which  
9 relate in any way to the emergency response facilities'  
10 compliance or noncompliance with these NUREG requirements.

11  
12 RESPONSE TO INTERROGATORY NO. 27:

13 (a) Yes.

14  
15 (b) NUREG-0737 further defines criteria for  
16 emergency operating facilities originally required by  
17 NUREG-0696. The Applicant plans to comply with these  
18 dated requirements.

19  
20 (c) Not applicable.

21  
22 (d) NUREG-0696, SER Supp. 14, D. G. Eisenhut's  
23 letter of February 18, 1981, NUREG-0737.

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1 INTERROGATORY NO. 28:

2 (a) Is it PG&E's position that the Diablo Canyon  
3 interim EOF meets the requirement that it be "well  
4 engineered for the design life of plant?" NUREG-0696,  
5 p. 18.

6 (b) If YES, identify and describe all analyses or  
7 other documents which relate in any way to the EOF's  
8 compliance or noncompliance with this requirement.

9 (c) If NO, please explain in detail, including a  
10 description of all documents which relate thereto.

11 (d) Describe the seismic qualification of PG&E's  
12 interim EOF, including a description of the facility and all  
13 analyses or other documents which relate in any way to the  
14 likelihood that that facility and all equipment therein  
15 would remain functional in the OBE, the SSE, and in the  
16 event of an earthquake greater than the SSE.

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18 RESPONSE TO INTERROGATORY NO. 28:

19 (a) No.

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21 (b) N/A.

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1 (c) The interim E.O.F. is a temporary facility  
2 and therefore is not designed for the life of the  
3 plant. It is PGandE's intention to construct a  
4 permanent E.O.F. designed for the life of the plant.  
5

6 (d) Refer to TERA Report "Earthquake Emergency  
7 Planning at Diablo Canyon," September 2, 1981.  
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12 INTERROGATORY NO. 29:

13 Identify and describe: (a) all measures taken by  
14 PG&E to integrate its security plan with its emergency plan;  
15 (b) all training provided to security personnel concerning  
16 the onsite emergency plan; (c) all drills or exercises of  
17 the emergency plan that involve the threat designated by 10  
18 C.F.R. § 73.1; and (d) all meetings held by PG&E with State  
19 and/or County officials concerning situations that would  
20 involve both the onsite and offsite emergency plan and the  
21 security plan.  
22

23 RESPONSE TO INTERROGATORY NO. 29:

24 Objected to by Applicant as totally irrelevant to  
25 the instant proceedings. The security plan and the details  
26 thereof are restricted and have been the subject of



1 litigation heretofore between the parties. The security  
2 plan is not a part of these proceedings nor can it be.  
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7 INTERROGATORY NO. 30:

8 Describe all human factors or other analyses which  
9 have been performed on or are proposed to be performed on  
10 PG&E's emergency operating procedures. When and by whom was  
11 each analysis performed?  
12

13 RESPONSE TO INTERROGATORY NO. 30:

14 Objected to as irrelevant and outside the scope of  
15 discovery. Emergency operating procedures are not the  
16 subject of the contention before this Board, but rather  
17 emergency planning under 10 C.F.R. §§ 50.33(g), 50.47 and  
18 Appendix E to Part 50.  
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23 INTERROGATORY NO. 31:

24 Describe all equipment which has not been  
25 seismically and environmentally qualified but which PG&E may  
26 use or rely upon in any way during a radiological emergency

1 at Diablo Canyon. Include in your response a description of  
2 the use(s) of each identified item of equipment.  
3

4 RESPONSE TO INTERROGATORY NO. 31:

5 As with interrogatory 7, this question is  
6 impossible to answer in that it asks for a list of all  
7 equipment which PGandE may use or rely on in any way during  
8 a radiological emergency. However, other than class one  
9 structures and systems at Diablo Canyon, little equipment  
10 which might be relied upon in any way would be seismically  
11 or environmentally "qualified" as no such requirement exists  
12 nor could reasonably be expected to exist.  
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17 INTERROGATORY NO. 32:

18 On Thursday, August 20, 1981, representatives of  
19 PG&E, San Luis Obispo County, and others met at the  
20 Sheriff's office to discuss, inter alia, the emergency  
21 exercise wich was conducted on August 19, 1981.

22 (a) Who was present at the August 20, 1981  
23 meeting on behalf of PG&E?

24 (b) Describe all statements of PG&E made at that  
25 meeting, including, without limitation, any statements  
26 concerning problems identified in the August 19 exercise.

1 (c) Identify and describe all documents which  
2 relate in any way to the August 20, 1981 meeting, including:  
3 (1) any notes taken by any person identified in (a) above;  
4 (2) any documents taken to the meeting by any such person;  
5 and (3) any memoranda or other documents prepared after the  
6 meeting which relate in any way to the meeting or to the  
7 August 19 exercise.  
8

9 RESPONSE TO INTERROGATORY NO. 32:

10 (a) The following PGandE personnel were present  
11 at the meeting held August 20, 1981 at the San Luis  
12 Obispo County Sheriff's Office:

13 W. B. Kaefer	R. J. McDevitt	D. J. Baxter
14 W. J. Keyworth	D. P. Serpa	J. L. Potter
15 J. D. Shiffer	D. L. Duke	S. M. Fandel
S. M. Skidmore	R. W. Lorenz	J. S. McKarns

16 (b) Three Company representatives made statements  
17 at the meeting. Their statements are summarized below:

- 18 (1) J. D. Shiffer -- Because he was stationed in EOF  
19 during the exercise, he did not directly observe  
20 EOC. However, things seemed to go well from his  
21 vantage point. He reminded people in EOC that if  
22 they needed assistance from PGandE, they should  
23 call Mr. Shiffer, who is the Company Recovery  
24 Manager.
- 25 (2) W. B. Kaefer -- He was impressed with county  
26 decision makers, and he agreed with their

1 decisions. He agreed that they should have  
2 provided more feedback to Mr. Shiffer.

3 (3) D. J. Baxter -- He was impressed with the number  
4 of news releases and the information they  
5 contained. The problems he observed were minor.  
6 He suggested more coordination between the Company  
7 and the county. He noted that the first press  
8 conference was held without a Company technical  
9 advisor being present.

10  
11 (c) No notes were taken by persons in (a) above  
12 at the August 20, 1981 meeting. Critiques of the  
13 August 19, 1981 drill and notes regarding that drill  
14 were developed by PGandE and will be produced pursuant  
15 to pending requests for production.

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20 INTERROGATORY NO. 33:

21 Describe the Uniform Dose Assessment Center  
22 ("UDAC") and its functions. Does PG&E contend that UDAC and  
23 related equipment will remain fully functional in the event  
24 of the OBE?, the SSE?, an earthquake greater than the SSE?  
25 Describe all analyses or other documents which relate in any  
26 way to UDAC and/or its seismic qualification.

1     RESPONSE TO INTERROGATORY NO. 33:

2             The Unified Dose Assessment Center (UDAC) is  
3 co-located with the County Emergency Operations Center (EOC)  
4 and the Emergency Operations Facility (EOF). Its function  
5 is to coordinate radiological data from field monitoring  
6 teams, the PGandE Emergency Assessment and Response System  
7 (EARS) dose projection system, dose projections by other  
8 means such as overlays and hand calculations within UDAC and  
9 other sources and to prepare integrated recommendations to  
10 the County Health Officer throughout the emergency  
11 situation.

12             The UDAC is under the direction of the SLO County  
13 Director of Environmental Health and represents the combined  
14 technical expertise (in radiological assessment) of the  
15 County, PGandE, State of California, and federal agencies.  
16 Therefore, the UDAC is utilized as the primary source of  
17 recommendations for instituting protective measures for the  
18 public which are presented to the County decision makers.  
19 The responsibilities of the UDAC include but are not limited  
20 to the following areas: (1) assessment of the radiological  
21 significance of the radioactive plume; (2) assessment of the  
22 significance of the radioactive plume on food and water  
23 supplies; (3) recommendation of protective actions which are  
24 presented to decision makers on plume and ingestion  
25 pathways; (4) review of data from the field and the making  
26 of recommendations to control exposure to emergency workers



1 or authorization of exposures in excess of exposure limits  
2 for emergency workers engaged in lifesaving operations; (5)  
3 assessment of the need to screen evacuees for radioactive  
4 contamination and recommending conduct of screening and  
5 decontamination actions if required; and (6) evaluation of  
6 contamination levels in areas evacuated in order to  
7 recommend actions to be taken during the recovery and  
8 reentry phase.

9           The Applicant assumes for purposes of answering  
10 questions regarding OBE and SSE that these earthquakes occur  
11 directly opposite the site on the Hogri resulting in OBE  
12 and SSE ground motion at the site. In such event, UDAC and  
13 its related equipment will remain functional. As for "an  
14 earthquake greater than the SSE," Applicant simply cannot  
15 answer. How much greater? As for documents, see answer to  
16 interrogatory 34.

17

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21 INTERROGATORY NO. 34:

22           For the OBE and the SSE, provide the peak  
23 horizontal ground accelerations, velocity, and displacement  
24 which PG&E predicts will occur at each of the following  
25 locations:

26 ///

- 1 (a) The onsite meterological [sic] tower.
- 2 (b) The mountain-top radio repeater.
- 3 (c) Morro Bay.
- 4 (d) The PG&E Information Center.
- 5 (e) The Avila Beach guard station.
- 6 (f) The EOF.
- 7 (g) Each siren location.
- 8 (h) Each offsite environmental monitoring station.
- 9 (i) Each real-time monitoring station.
- 10 (j) The Montana de Oro Campground.
- 11 (k) San Luis Ambulance Service.
- 12 (l) French Hospital.
- 13 (m) Shell beach.

14  
15 RESPONSE TO INTERROGATORY NO. 34:

16 The basis for estimating peak ground-motion values  
17 used in the earthquake emergency planning study is a TERA  
18 Corporation report entitled "Evaluation of Peak Horizontal  
19 Ground Acceleration Associated with the Hosgri Fault at  
20 Diablo Canyon Nuclear Power Plant," submitted to Pacific Gas  
21 and Electric Company in August, 1980. Equation 3-3 in this  
22 report has been used to estimate the horizontal peak ground  
23 acceleration at all locations as requested. These values  
24 may be found in the attached Tables I-IV.

25 For the purposes of estimating peak acceleration,  
26 the SSE was taken to be a surface magnitude 7.5 earthquake

1 located offshore on the Hosgri fault. The OBE has been  
2 specified only in terms of a peak acceleration of 0.2 g.  
3 Placing the OBE on the Hosgri fault, Equation 3-3 was used  
4 as a basis for estimating a local Richter magnitude of 5.7  
5 for this earthquake. This magnitude was then used to  
6 estimate peak acceleration for the OBE at all specified  
7 locations. Velocity and displacement values have not been  
8 calculated.

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TABLE 1  
ESTIMATED PEAK ACCELERATION  
AT ELEVEN MISCELLANEOUS SITES

LOCATION	DISTANCE FROM HOSGRI FAULT (km)	PEAK ACCELERATION (g)	
		SSE	OBE
On-Site Meterological Tower	5.8	.48	.20
Mountain-Top Radio Repeater	13.3	.32	.11
Morro Bay	14.1	.31	.10
PGandE Information Center	17.4	.27	.08
Avila Beach Guard Station	12.5	.33	.11
Emergency Off-Site Facility	21.6	.23	.07
Montana de Oro Campground	7.0	.44	.18
San Luis Ambulance Service	25.9	.21	.06
French Hospital	26.6	.20	.06
Shell Beach	17.2	.27	.08
Pismo Beach	18.1	.27	.08

TABLE II  
ESTIMATED PEAK ACCELERATION AT SIREN LOCATIONS

SIREN REFERENCE NUMBER*	DISTANCE FROM HOSGRI FAULT (km)	PEAK ACCELERATION (g)	
		SSE	OBE
1	13.4	.32	.10
2	14.0	.31	.10
3	14.0	.31	.10
4	14.6	.30	.10
5	13.7	.32	.10
6	13.3	.32	.10
7	14.8	.30	.10
8	16.8	.28	.09
9	19.1	.26	.08
10	21.6	.23	.07
11	23.5	.22	.06
12	25.6	.21	.06
13	25.8	.21	.06
14	27.4	.20	.06
15	25.4	.21	.06
16	26.6	.20	.06
17	24.2	.22	.06
18	22.0	.23	.07
19	24.7	.21	.06
20	22.5	.23	.06
21	24.5	.21	.06
22	26.0	.21	.06
23	22.7	.23	.06
24	19.7	.25	.07
25	18.6	.26	.08
26	19.5	.25	.07
27	18.1	.27	.08
28	16.5	.28	.09
29	16.5	.28	.09

\*See PGandE Emergency Plan Figure 7.2-3 for locations.



TABLE II (continued)

SIREN REFERENCE NUMBER	DISTANCE FROM HOSGRI FAULT (km)	PEAK ACCELERATION (g)	
		SSE	OBE
30	15.9	.28	.08
31	17.2	.27	.08
32	18.1	.27	.08
33	19.3	.25	.08
34	18.6	.26	.08
35	19.9	.25	.07
36	22.9	.23	.06
37	20.4	.24	.07
38	18.0	.27	.08
39	17.2	.27	.08
40	16.6	.28	.09
41	18.1	.27	.08
42	19.6	.25	.07
43	19.6	.25	.07
44	17.7	.27	.08
45	19.9	.25	.07
46	16.1	.29	.09
47	18.5	.26	.08
48	19.9	.25	.07
49	17.8	.27	.08
50	13.4	.32	.10
51	14.0	.31	.10
52	11.0	.36	.12
53	13.6	.32	.10
54	15.4	.29	.09
55	14.2	.31	.10
56	14.5	.31	.10
57	17.8	.27	.08
58	19.6	.25	.07
59	21.6	.24	.07
60	22.0	.23	.07
61	21.7	.23	.07

TABLE II (continued)

SIREN REFERENCE NUMBER	DISTANCE FROM HOSGRI FAULT (km)	PEAK ACCELERATION (g)	
		SSE	OBE
62	22.0	.23	.07
63	18.9	.26	.08
64	15.6	.29	.09
65	15.6	.29	.09
66	15.7	.29	.09
67	16.8	.28	.09
68	16.8	.28	.09
69	16.8	.28	.09
70	14.4	.31	.10
71	12.1	.34	.11
72	5.9	.47	.20
73	5.2	.49	.22
74	6.6	.45	.18
75	7.6	.43	.17
76	18.9	.26	.08

TABLE 111  
ESTIMATED PEAK ACCELERATION AT OFF-SITE  
ENVIRONMENTAL MONITORING STATIONS

ENVIRONMENTAL MONITORING STATION REFERENCE NUMBER*	DISTANCE FROM HOSGRI FAULT (km)	PEAK ACCELERATION (g)	
		SSE	OBE
1	14.1	.31	.10
2	13.4	.32	.10
3	11.0	.36	.12
4	13.8	.31	.10
5	7.6	.43	.17
6	5.2	.49	.22
7	5.6	.48	.21
8	3.6	.40	.15
9	11.4	.35	.12
10	14.4	.31	.10
11	13.4	.32	.10
12	17.0	.28	.08
13	27.0	.20	.05
14	26.2	.20	.06
15	25.4	.21	.06
16	14.0	.31	.10
17	13.6	.32	.10
18	17.4	.27	.08
19	19.6	.25	.07
20	16.1	.29	.09
21	16.8	.28	.09

\*See PGandE Emergency Plan Figure 7.3-3 for locations.

TABLE IV  
 ESTIMATED PEAK ACCELERATION AT OFF-SITE  
 REAL TIME RADIATION MONITORS

MONITOR REFERENCE NUMBER*	DISTANCE FROM HOSGRI FAULT (km)	PEAK ACCELERATION (g)	
		SSE	OBE
1	14.1	.31	.10
2	12.3	.34	.11
3	21.6	.23	.07
4	25.9	.21	.06
5	25.5	.21	.06
6	17.4	.27	.08
7	12.5	.33	.11
8	18.1	.27	.08
9	19.9	.25	.07

\*See PGandE Emergency Plan Figure 7.3-4 for locations.

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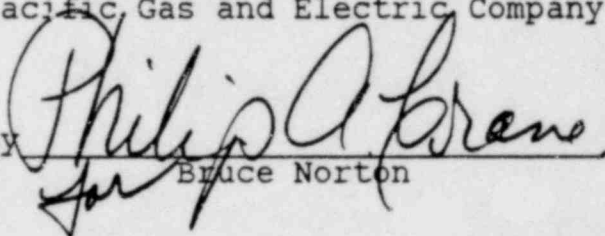

Respectfully submitted,

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Attorneys for  
Pacific Gas and Electric Company

BY   ✓  
Philip A. Crane  
for Bruce Norton

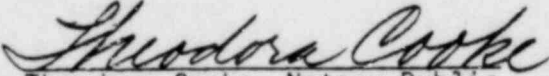
DATED: September 15, 1981.



I have assisted in preparing the answers to  
Interrogatories \_\_\_\_\_ 32 \_\_\_\_\_. Said answers are  
true and correct to the best of my knowledge and belief.

  
\_\_\_\_\_  
J. D. SHIFFER

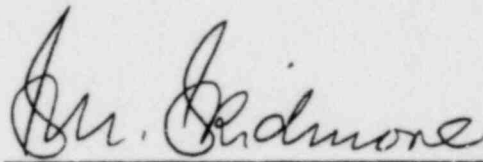
Subscribed and sworn to  
before me this 15th day  
of September, 1981.

  
Theodora Cooke, Notary Public  
in and for the City and County  
of San Francisco, State of  
California



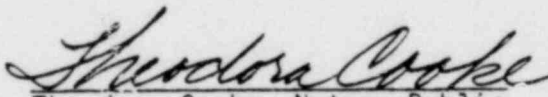
My Commission expires January 28, 1985

I have assisted in preparing the answers to  
Interrogatories 5, 6, 17 and 28. Said answers are  
true and correct to the best of my knowledge and belief.



S. M. SKIDMORE

Subscribed and sworn to  
before me this 15th day  
of September, 1981.

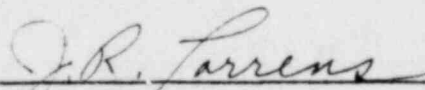


Theodora Cooke, Notary Public  
in and for the City and County  
of San Francisco, State of  
California

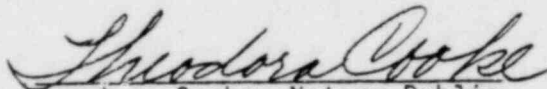
SEAL

My Commission expires January 28, 1985

I have assisted in preparing the answers to  
Interrogatories 11. Said answers are  
true and correct to the best of my knowledge and belief.

  
\_\_\_\_\_  
J. R. TORRENS

Subscribed and sworn to  
before me this 15th day  
of September, 1981.

  
Theodora Cooke, Notary Public  
in and for the City and County  
of San Francisco, State of  
California



My Commission expires January 28, 1985

I have assisted in preparing the answers to  
Interrogatories 28 and 33. Said answers are  
true and correct to the best of my knowledge and belief.

*F M Germano*

F. M. GERMANO

Subscribed and sworn to  
before me this 15th day  
of September, 1981.

*Theodora Cooke*

Theodora Cooke, Notary Public  
in and for the City and County  
of San Francisco, State of  
California

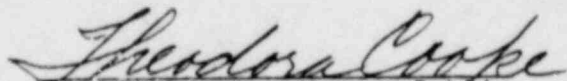
SEAL

My Commission expires January 28, 1985

I have assisted in preparing the answers to  
Interrogatories 11. Said answers are  
true and correct to the best of my knowledge and belief.

  
\_\_\_\_\_  
J. L. Potter

Subscribed and sworn to  
before me this 15th day  
of September, 1981.

  
Theodora Cooke, Notary Public  
in and for the City and County  
of San Francisco, State of  
California



My Commission expires January 28, 1985



I have assisted in preparing the answers to  
Interrogatories 3, 4, 6 and 17. Said answers are  
true and correct to the best of my knowledge and belief.

*F. J. Rockmaker*

F. ROCKMAKER

Subscribed and sworn to  
before me this 15th day  
of September, 1981.

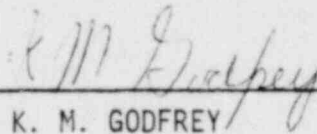
*Theodora Cooke*

Theodora Cooke, Notary Public  
in and for the City and County  
of San Francisco, State of  
California

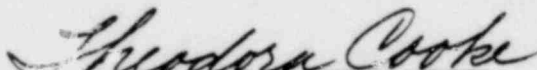
SEAL

My Commission expires January 28, 1983

I have assisted in preparing the answers to  
Interrogatories 8, 9 and 10. Said answers are  
true and correct to the best of my knowledge and belief.

  
K. M. GODFREY

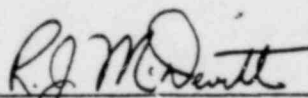
Subscribed and sworn to  
before me this 15th day  
of September, 1981.

  
Theodora Cooke, Notary Public  
in and for the City and County  
of San Francisco, State of  
California

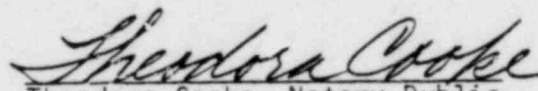
SEAL

My Commission expires January 26, 1985

I have assisted in preparing the answers to  
Interrogatories 5, 6, 12, 14, 15, 32. Said answers are  
true and correct to the best of my knowledge and belief.

  
\_\_\_\_\_  
R. J. McDEVITT

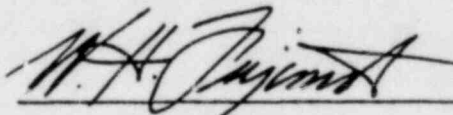
Subscribed and sworn to  
before me this 15th day  
of September, 1981.

  
Theodora Cooke, Notary Public  
in and for the City and County  
of San Francisco, State of  
California

SEAL

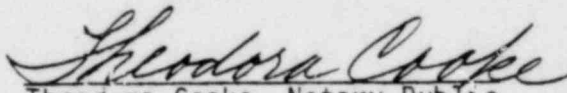
My Commission expires January 28, 1985

I have assisted in preparing the answers to  
Interrogatories 14 and 27. Said answers are  
true and correct to the best of my knowledge and belief.



W. H. FUJIMOTO

Subscribed and sworn to  
before me this 15th day  
of September, 1981.



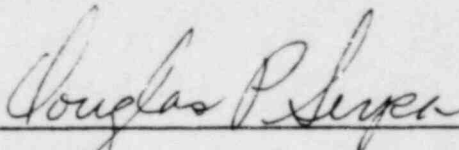
Theodora Cooke, Notary Public  
in and for the City and County  
of San Francisco, State of  
California



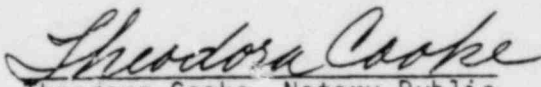
SEAL

My Commission expires January 28, 1985

I have assisted in preparing the answers to  
Interrogatories 2, 9. Said answers are  
true and correct to the best of my knowledge and belief.

  
\_\_\_\_\_  
D. P. SERPA

Subscribed and sworn to  
before me this 15th day  
of September, 1981.

  
\_\_\_\_\_  
Theodora Cooke, Notary Public  
in and for the City and County  
of San Francisco, State of  
California



My Commission expires January 28, 1985



I have assisted in preparing the answers to  
Interrogatories 27. Said answers are  
true and correct to the best of my knowledge and belief.

*G. Wallace*

G. WALLACE

Subscribed and sworn to  
before me this 15th day  
of September, 1981.

*Theodora Cooke*

Theodora Cooke, Notary Public  
in and for the City and County  
of San Francisco, State of  
California



My Commission expires January 28, 1985

I have assisted in preparing the answers to  
interrogatories 1 and 2. Said answers are  
true and correct to the best of my knowledge and belief.

*T. A. Mack*

T. A. MACK

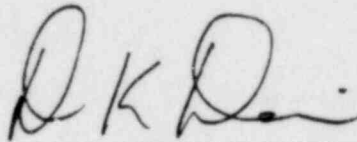
Subscribed and sworn to  
before me this 15th day  
of September, 1981.

*Theodora Cooke* (SEAL)

Theodora Cooke, Notary Public  
in and for the City and County  
of San Francisco, State of  
California

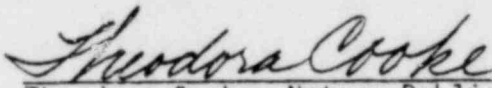
My Commission expires January 28, 1985

I have assisted in preparing the answers to  
Interrogatories 16, 17 and 34. Said answers are  
true and correct to the best of my knowledge and belief.



D. K. DAVIS

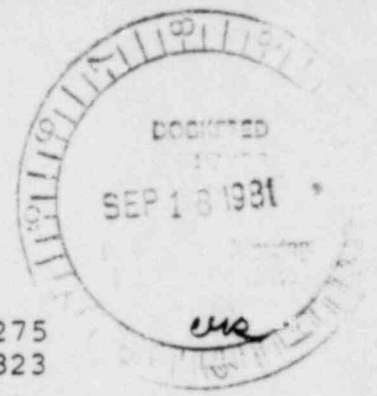
Subscribed and sworn to  
before me this 15th day  
of September, 1981.

  
Theodora Cooke, Notary Public  
in and for the City and County  
of San Francisco, State of  
California



My Commission expires January 28, 1985

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION



In the Matter of  
PACIFIC GAS AND ELECTRIC COMPANY  
Diablo Canyon Nuclear Power Plant,  
Units 1 and 2

EXHIBIT CORRESPONDENCE

) Docket No. 50-275  
) Docket No. 50-323  
)  
) (Full Power Proceeding)

CERTIFICATE OF SERVICE

The foregoing document(s) of Pacific Gas and Electric Company has (have) been served today on the following by deposit in the United States mail, properly stamped and addressed:

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Atomic Safety and Licensing Board  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555

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U. S. Nuclear Regulatory Commission  
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San Luis Obispo, California 93401

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Board Panel  
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Washington, D. C. 20555

Chairman  
Atomic Safety and Licensing  
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Washington, D. C. 20555

Secretary  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555

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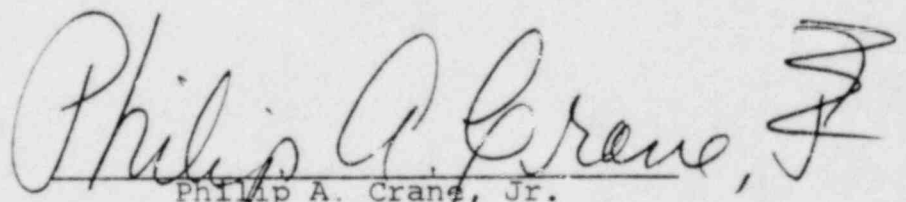
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Washington, D. C. 20555

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Appeal Board  
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Washington, D. C. 20555

Judge John H. Buck  
Atomic Safety and Licensing  
Appeal Board  
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Washington, D. C. 20555

  
Philip A. Crane, Jr.  
Attorney  
Pacific Gas and Electric Company

Date: September 15, 1981