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Pacific Gas and Electric Company

Diablo Canyon Power Plant
P.O. Box 56
Avila Beach, CA 93424
805/541-7616

John D. Townsend
Vice President–Diablo Canyon Operations
and Plant Manager

July 20, 1992

Mr. William Leonard, Executive Officer
California Regional Water Quality Control Board
Central Coast Region
81 Higuera Street, Suite 200
San Luis Obispo, California 93401-5414

Dear Mr. Leonard:

Discharge Monitoring and Reporting Program
Diablo Canyon Power Plant -- NPDES No. CA0003751

The report for the second quarter of 1992 of the Diablo Canyon Power Plant Discharge Monitoring Program, in accordance with Order 90-09 NPDES No. CA0003751 is enclosed.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. The results of the influent and effluent monitoring presented are the observed results of the measurements and analyses required by the monitoring program, and is neither an assertion of the adequacy of any instrument reading or any analytical result, nor an endorsement of the appropriateness of any analytical or measurement procedure. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations.

If you have further questions, please contact Mr. Thomas C. Wilson at (805) 545-4439.

Dan Marlin for

JDT:ksb

Enclosure

JE25

cc: Chief, Environmental Services Division
California Department of Fish and Game
Resources Building
1416 Ninth Street
Sacramento, California 95814

Regional Administrator, Region 9
U. S. Environmental Protection Agency
75 Hawthorne Street
San Francisco, California 94105
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Region 5
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Washington, DC 20555

Chief, Marine Resources Division
California Department of Fish and Game
Resources Building
1416 Ninth Street
Sacramento, California 95814

PACIFIC GAS AND ELECTRIC COMPANY

NUCLEAR POWER GENERATION

REPORT ON

DISCHARGE MONITORING AT

DIABLO CANYON POWER PLANT

SECOND QUARTER OF 1992

TABLE OF CONTENTS

OVERVIEW

A. During the second quarter of 1992, discharges occurred from Discharge Paths 001 (once through cooling water), 001B, 001D, 001E, 001F, 001G, 001H, 001J, 001L, 001M, 001N, 001P, 002 through 016. No discharges occurred from Discharge Paths 001I, 001K, and 017.

B. The substances listed in Table B of the 1990 Ocean Plan were each analyzed and reported in either the permit renewal application for Diablo Canyon submitted in 1989, or the Engineering Report Evaluation of Diablo Canyon's compliance with the Ocean Plan, submitted in November, 1990.

There have been no changes in the activities conducted at the plant which would have significantly affected the results reported previously in the referenced documents.

C. In all cases, chemical, radiochemical, and toxicity analyses were performed in accordance with chemical analysis procedures contained in the Diablo Canyon Power Plant, Units 1 and 2 Plant Manual, Volume 8, by State approved laboratories, or laboratories meeting the requirements specified in the California Regional Water Quality Control Board Central Coast Region: "Standard Provisions and Reporting Requirements" dated January 25, 1985. Receiving water monitoring was performed in accordance with approved biological and oceanographic procedures.

SUMMARY OF MONITORING PROGRAM

A. Monitoring of Plant Influent and Effluent

1. The results of the April, May and June plant influent and effluent monitoring are reported in Appendices 1, 2, and 3, respectively.

2. Results from one acute bioassay on water sampled from Discharge 001, performed April 13, 1992, are included in Appendix 4.

3. Results from two chronic bioassays performed January 7 and April 7, 1992, on water sampled from Discharge 001 are included in Appendices 5 & 6. These quarterly chronic toxicity bioassays were conducted in accordance with the 1990 California Ocean Plan.

4. Listed below are the detection limits used for the analyses performed during the quarter. The limits are based upon published values, contract laboratory reports, or Diablo Canyon's analytical experience. Diablo Canyon submitted its application for laboratory accreditation to the State of California on

October 11, 1991. As part of the accreditation process, Diablo Canyon has proceduralized a method to formally determine method detection limits based upon the guidelines in 40 CFR 136; and is in the process of determining the limits.

Parameter	Detection Limit (mg/1)
Oil and Grease	3
Total Res Chlorine	0.020 (amperometric)
	0.010 (electrode)
Suspended Solids	1
Settleable Solids	0.01 ml/l
Ammonia (N)	0.054
Metals	
(Chromium, Copper, Nickel, Zinc)	0.001 (chelation extraction)

5. Each of the Appendices 1 through 3 contain additional laboratory results located following the normal Q-2 forms that was used to develop "average" values reported on the Q-2 forms. This information is provided to ensure that all analytical data is reported "uncensored."

   Normally, the additional data will include results for analyses performed several times in one day, such as Total Residual Chlorine, for which an average value is reported on the Q-2.

B. Monitoring of Receiving Waters

1. Ecological Studies at Diablo Canyon

   Ecological studies conducted during the second quarter in the vicinity of Diablo Cove, referred to as the Diablo Canyon Thermal Effects Monitoring Program (TEMP), are summarized in the following table.

Subtask	Month Completed
Subtidal Fish Observations	June
Subtidal Benthic Stations	June
Intertidal Horizontal Bands	June
Intertidal Vertical Bands	May
Intertidal Algal Scrapes	June

2. Sediment Analysis

Annual sediment samples are collected in September. Results will be reported in the third quarter report.

3. Stratified Water Temperatures

Stratified water temperatures measured on June 29, 1992, are reported in Appendix 7.

4. Dissolved Oxygen and pH of Receiving Waters

Results of Dissolved Oxygen and pH sampling conducted on June 29, 1992, are reported in Appendix 8.

5. In Situ Bioassay

Results of the Mussel Watch program will be reported to the Board directly from the California Department of Fish and Game in their periodic report for this program.

APPENDIX 1

Influent and Effluent Monitoring

April 1992

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
1102A LAUREL LANE
SAN LUIS OBISPO,CA 93401

DISCHARGE SELF MONITORING REPORT

PACIFIC GAS AND ELECTRIC CO.
DIABLO CANYON NUCLEAR POWER PLANT
PO BOX 56
AVILA BEACH,CALIF 93424

FACILITY I.D.	YEAR/ MO / DAY	YEAR/ MO /DAY	STATE CODE	NPDES PERMIT #
3 402003001	BEGINNING 92 / 04 / 01	ENDING 92 / 04 / 30	06	CA0003751

STATION	INFLUENT	EFFLUENT 001	DELTA TEMP	EFFLUENT 001	INFLUENT	EFFLUENT 001	EFFLUENT 001P	EFFLUENT 002
ANALYSIS	TEMPERATURE	TEMPERATURE	TEMPERATURE	FLOW	pH	pH	pH	pH
UNITS	DEGREES F	DEGREES F	DEGREES F	MGD	pH UNITS	pH UNITS	pH UNITS	pH UNITS
SMPL TYPE	METERED	METERED	METERED	RECORDED	GRAB	GRAB	GRAB	GRAB
FREQ.	CONTINUOUS	CONTINUOUS	CONTINUOUS	DAILY	MONTHLY	MONTHLY (‡‡‡)	MONTHLY	MONTHLY
APRIL	‡	‡	‡	‡	‡	‡	‡	‡
1	58.0	76.9	18.9	2557				
2	58.5	77.5	19.0	2559				2 8.0
3	56.4	75.5	19.1	2557				
4	55.8	74.9	19.1	2561				
5	54.2	73.5	19.3	2447				
6	54.9	74.0	19.1	2559				
7	55.2	74.3	19.1	2565	7.9	7.9		
8	54.1	73.3	19.2	2563				
9	54.6	73.5	18.9	2564				
10	56.9	76.0	19.1	2559				
11	56.9	76.0	19.1	2559				
12	57.9	77.1	19.2	2563				
13	56.6	76.0	19.4	2564				
14	54.9	74.3	19.4	2561			7.9	
[illegible]	53.9	73.3	19.4	2541				
[illegible]	53.5	72.7	19.2	2483				
[illegible]	52.8	72.1	19.3	2550				
18	52.4	71.6	19.2	2557				
19	53.0	72.3	19.3	2554				
20	53.8	73.1	19.3	2548				
21	52.6	71.9	19.3	2555				
22	51.5	70.9	19.4	2552				
23	51.4	70.8	19.4	2550				
24	51.8	70.9	19.1	2523				
25	52.1	65.8	13.7	1923				
26	52.1	64.9	12.8	2055				
27	52.0	68.6	16.6	2551				
28	52.3	70.8	18.5	2536				
29	52.9	71.5	18.6	2550				
30	52.6	71.3	18.7	2554				
31								
MONTHLY AVG	54.2	72.8	18.6	2511				8.0
MONTHLY HIGH	58.5	77.5	19.4	2565				8.0
MONTHLY LOW	51.4	64.9	12.8	1923				8.0
TIMES EXCEEDED	NO LIMIT	NO LIMIT	MAX 22 =0 (‡‡)	MAX 2760 = 0	NO LIMIT	NO LIMIT	NO LIMIT	NO LIMIT
TIMES EXCEEDED								
TIMES EXCEEDED								

REMARKS: (‡) Number of Samples taken during the day. (‡‡) Except During Demusseling.
(‡‡‡) Daily when discharging chemical cleaning wastes from discharges 001D, F, I, L and/or M.

PRINCIPAL EXECUTIVE OFFICER
JAMES D. SHIFFER

SIGNATURE OF AUTHORIZED AGENT	DATE
[signature]	7/15/92

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
1102A LAUREL LANE
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DISCHARGE SELF MONITORING REPORT

PACIFIC GAS AND ELECTRIC CO.
DIABLO CANYON NUCLEAR POWER PLANT
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AVILA BEACH, CALIF 93424
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3 402003001	BEGINNING 92 / 04 / 01	ENDING 92 / 04 / 30	06	CA0003751

STATION	EFFLUENT 003		EFFLUENT 004		EFFLUENT 001N		EFFLUENT 001P		EFFLUENT 003		EFFLUENT 001F		EFFLUENT 001		EFFLUENT 001	
ANALYSIS	pH		pH		OIL & GREASE		OIL & GREASE		OIL & GREASE		OIL & GREASE		T CHLOR RES		CHLORINE USED	
UNITS	pH UNITS		pH UNITS		mg/l		mg/l		mg/l		mg/l		ug/l		lbs/day	
SMPL TYPE	GRAB		GRAB		COMPOSITE		GRAB		GRAB		GRAB		GRAB		RECORDED	
FREQ.	MONTHLY		MONTHLY		WEEKLY		WEEKLY (‡‡)		WEEKLY (‡‡‡)		MONTHLY		2 per CYCLE		MONTHLY	
APRIL	‡		‡		‡		‡		‡		‡		‡		‡	
1													8	20		288
2		7.7		8.0									8	30		288
3						6							8	30		288
4																
5																
6													6	30		216
7													8	20		288
8													8	30		288
9													8	<20		288
10						5							8	30		288
11																
12																
13													6	<20		156
16						5										
17												<3				
18																
19																
20													8	30		216
21						3							8	40		288
22													8	30		288
23													8	20		276
24													8	40		288
25																
26																
27													8	30		278
28						6										
29													8	20		328
30													8	30		389
31																
MONTHLY AVG						5		NO DISCHARGE		NO DISCHARGE				28		261
MONTHLY HIGH						6								40		389
MONTHLY LOW						3								<20		156
TIMES EXCEEDED	NO LIMIT		NO LIMIT		MO AVG 15 =0		MO AVG 15 =0		MO AVG 15 =0		MO AVG 15 =0		I MAX 200 =0		NO LIMIT	
TIMES EXCEEDED					D MAX 20 =0		D MAX 20 =0		D MAX 20 =0		D MAX 20 =0					
TIMES EXCEEDED																

NOTES: (‡) Number of Samples taken during the day.
(‡‡) When 001N is discharging to 001P. (‡‡‡) When 001P is discharging to 003.

PRINCIPAL EXECUTIVE OFFICER
JAMES D. SHIFFER

SIGNATURE OF AUTHORIZED AGENT	DATE
[signature]	7/15/92

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DISCHARGE SELF MONITORING REPORT

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3 402003001	BEGINNING 92 / 04 / 01	ENDING	92 / 04 / 30	06	CA0003751

STATION	EFF 001N=>003	EFF 001N=>003	EFFLUENT 001D			EFFLUENT 001F		
ANALYSIS	TOTL COLIFORM	FECAL COLIFORM	SUSPENDED SOLIDS			SUSPENDED SOLIDS		
UNITS	MPN/100ml	MPN/100ml	mg/l 1st FLTR	mg/l 2nd FLTR	mg/l NET	mg/l 1st FLTR	mg/l 2nd FLTR	mg/l NET
SMPL TYPE	GRAB	GRAB		GRAB			GRAB	
FREQ.	4 TIMES/WEEK	4 TIMES/WEEK		MONTHLY			MONTHLY	
APRIL	‡	‡	‡	‡	‡	‡	‡	‡
1								
2								
3								
4								
5								
6								
7								
8								
9								
10			1	<1	1			
11								
12								
13								
14								
17						7	<1	7
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
MONTHLY AVG	NO DISCHARGE	NO DISCHARGE						
MONTHLY HIGH								
MONTHLY LOW								
TIMES EXCEEDED	80% SMPLS>1K	MEAN>200=0	NO LIMIT	NO LIMIT	MO AVG 30= 0	NO LIMIT	NO LIMIT	MO AVG 30 =0
TIMES EXCEEDED	=0	90% SMPLS>400			D MAX 100 =0			D MAX 100 =0
TIMES EXCEEDED	I MAX >10K=0	=0						

NOTES: (‡) Number of Samples taken during the day.

PRINCIPAL EXECUTIVE OFFICER	SIGNATURE OF AUTHORIZED AGENT	DATE
JAMES D. SHIFFER	JAR Knemeyer	7/15/92

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
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DISCHARGE SELF MONITORING REPORT

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3 402003001	BEGINNING 92 / 04 / 01	ENDING	92 / 04 / 30	06	CA0003751

STATION	EFFLUENT 001G			EFFLUENT 001H		
ANALYSIS	SUSPENDED SOLIDS			SUSPENDED SOLIDS		
UNITS	mg/l 1st FLTR	mg/l 2nd FLTR	mg/l NET	mg/l 1st FLTR	mg/l 2nd FLTR	mg/l NET
SMPL TYPE		GRAB			GRAB	
FREQ.		MONTHLY			MONTHLY	
APRIL	‡	‡	‡	‡	‡	‡
1						
2						
3						
4						
5						
6				<1	<1	<1
7						
8						
9						
10						
11						
12						
13						
[illegible]	5	<1	5			
[illegible]						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
MONTHLY AVG						
MONTHLY HIGH						
MONTHLY LOW						
TIMES EXCEEDED	NO LIMIT	NO LIMIT	NO AVG 30 =0	NO LIMIT	NO LIMIT	NO AVG 30 =0
TIMES EXCEEDED			D MAX 100 =0			D MAX 100 =0
TIMES EXCEEDED						

‡: (1) Number of Samples taken during the day.

PRINCIPAL EXECUTIVE OFFICER
JAMES D. SHIFFER

SIGNATURE OF AUTHORIZED AGENT	DATE
Jack Krumeyer	7/15/92

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DISCHARGE SELF MONITORING REPORT

PACIFIC GAS AND ELECTRIC CO.
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3 402003001	BEGINNING 92 / 04 / 01	ENDING 92 / 04 / 30	06	CA0003751

STATION	EFFLUENT 001I			EFFLUENT 001J		
ANALYSIS	SUSPENDED SOLIDS			SUSPENDED SOLIDS		
UNITS	mg/l 1st FLTR	mg/l 2nd FLTR	mg/l NET	mg/l 1st FLTR	mg/l 2nd FLTR	mg/l NET
SMPL TYPE		GRAB			GRAB	
FREQ.		MONTHLY			MONTHLY	
APRIL	#		#		#	
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
MONTHLY AVG			NO DISCHARGE			NO DISCHARGE
MONTHLY HIGH						
MONTHLY LOW						
TIMES EXCEEDED	NO LIMIT	NO LIMIT	NO AVG 30 =0	NO LIMIT	NO LIMIT	NO AVG 30 =0
TIMES EXCEEDED			D MAX 100 =0			D MAX 100 =0
TIMES EXCEEDED						

REMARKS: (#) Number of Samples taken during the day.

PRINCIPAL EXECUTIVE OFFICER
JAMES D. SHIFFER

SIGNATURE OF AUTHORIZED AGENT	DATE
Jack R Kremeyer	7/15/92

CALIFORNIA REGIONAL WATER QUALITY
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DISCHARGE SELF MONITORING REPORT

PACIFIC GAS AND ELECTRIC CO.
DIABLO CANYON NUCLEAR POWER PLANT
PO BOX 56
AVILA BEACH,CALIF 93424

FACILITY I.D.	YEAR/ MO / DAY		YEAR/ MO /DAY	STATE CODE	NPDES PERMIT #
3 402003001	BEGINNING 92 / 04 / 01	ENDING	92 / 04 / 30	06	CA0003751

STATION	EFFLUENT 001K			EFFLUENT 001L		
ANALYSIS	SUSPENDED SOLIDS			SUSPENDED SOLIDS		
UNITS	mg/l 1st FLTR	mg/l 2nd FLTR	mg/l NET	mg/l 1st FLTR	mg/l 2nd FLTR	mg/l NET
SMPL TYPE		GRAB			GRAB	
FREQ.		MONTHLY			MONTHLY	

APRIL	‡		‡		‡		‡		‡		‡		‡		‡	
1																
2																
3																
4																
5																
6																
7																
8																
9								<1		<1	2	<1				
10																
11																
12																
13																
14																
15																
16																
17																
18																
19																
20																
21																
22																
23																
24																
25																
26																
27																
28																
29																
30																
31																
MONTHLY AVG						NO DISCHARGE						<1				
MONTHLY HIGH												<1				
MONTHLY LOW												<1				
TIMES EXCEEDED	NO LIMIT		NO LIMIT			NO AVG 30 =0		NO LIMIT		NO LIMIT		NO AVG 30 =0				
TIMES EXCEEDED						D MAX 100 =0						D MAX 100 =0				
TIMES EXCEEDED																

S:_(‡)_Number_of_Samples_taken_during_the_day.

PRINCIPAL EXECUTIVE OFFICER	SIGNATURE OF AUTHORIZED AGENT	DATE
JAMES D. SHIFFER	Jack R Knemeyer	7/15/92

CALIFORNIA REGIONAL WATER QUALITY
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DISCHARGE SELF MONITORING REPORT

PACIFIC GAS AND ELECTRIC CO.
DIABLO CANYON NUCLEAR POWER PLANT
PO BOX 56
AVILA BEACH,CALIF 93424

FACILITY I.D.	YEAR/ MO / DAY		YEAR/ MO /DAY	STATE CODE	NPDES PERMIT #
3 402003001	BEGINNING 92 / 04 / 01	ENDING	92 / 04 / 30	06	CA0003751

STATION	EFFLUENT 001M			EFFLUENT 001N	EFFLUENT 001P		
ANALYSIS	SUSPENDED SOLIDS			SUSPENDED SLDS	SUSPENDED SOLIDS		
UNITS	mg/l 1st FLTR	mg/l 2nd FLTR	mg/l NET	mg/l	mg/l 1st FLTR	mg/l 2nd FLTR	mg/l NET
SMPL TYPE		GRAB		COMPOSITE		GRAB	
FREQ.		MONTHLY		WEEKLY		MONTHLY	
APRIL	‡	‡	‡	‡	‡	‡	‡
1							
2							
3				17			
4							
5							
6							
7							
8							
9							
10				18			
11							
12							
13							
[illegible]					53	29	24
[illegible]				25			
17							
18							
19							
20							
21				23			
22							
23							
24							
25							
26							
27							
28				12			
29							
30							
31							
MONTHLY AVG			NO DISCHARGE	19			
MONTHLY HIGH				25			
MONTHLY LOW				12			
TIMES EXCEEDED	NO LIMIT	NO LIMIT	NO AVG 30 =0	NO AVG 60 =0	NO LIMIT	NO LIMIT	NO AVG 30 =0
TIMES EXCEEDED			D MAX 100 =0				D MAX 100 =0
TIMES EXCEEDED							

[illegible]S:_(‡)_Number_of_Samples_taken_during_the_day.

PRINCIPAL EXECUTIVE OFFICER	SIGNATURE OF AUTHORIZED AGENT	DATE
JAMES D. SHIFFER	J.A.R. Knemeyer	7/15/92

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
1102A LAUREL LANE
SAN LUIS OBISPO,CA 93401

DISCHARGE SELF MONITORING REPORT

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DIABLO CANYON NUCLEAR POWER PLANT
PO BOX 56
AVILA BEACH,CALIF 93424

FACILITY I.D.	YEAR/ MO / DAY		YEAR/ MO /DAY	STATE CODE	NPDES PERMIT #
3 402003001	BEGINNING 92 / 04 / 01	ENDING	92 / 04 / 30	06	CA0003751

STATION	EFFLUENT 002			EFFLUENT 003		
ANALYSIS	SUSPENDED SOLIDS			SUSPENDED SOLIDS		
UNITS	mg/l 1st FLTR	mg/l 2nd FLTR	mg/l NET	mg/l 1st FLTR	mg/l 2nd FLTR	mg/l NET
SMPL TYPE		GRAB			GRAB	
FREQ.		MONTHLY			MONTHLY	
APRIL	#	#	#	#	#	#
1						
2	7	6	2 1	27	19	8
3						
4						
5						
6						
7						
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25						
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27						
28						
29						
30						
31						
MONTHLY AVG			1			
MONTHLY HIGH			1			
MONTHLY LOW			<1			
TIMES EXCEEDED	NO LIMIT	NO LIMIT	NO AVG 30 =0	NO LIMIT	NO LIMIT	NO AVG 30 =0
TIMES EXCEEDED			I MAX 100 =0			I MAX 100 =0
TIMES EXCEEDED						

NOTE:_(#)_Number_of_Samples_taken_during_the_day._____

PRINCIPAL EXECUTIVE OFFICER	SIGNATURE OF AUTHORIZED AGENT	DATE
JAMES D. SHIFFER	Jack Krumeyer	7/15/92

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
1102A LAUREL LANE
SAN LUIS OBISPO,CA 93401

DISCHARGE SELF MONITORING REPORT

PACIFIC GAS AND ELECTRIC CO.
DIABLO CANYON NUCLEAR POWER PLANT
PO BOX 56
AVILA BEACH,CALIF 93424
PAGE (M) 9

FACILITY I.D.	YEAR/ MO / DAY	YEAR/ MO /DAY	STATE CODE	NPDES PERMIT #
3 402003001	BEGINNING 92 / 04 / 01	ENDING 92 / 04 / 30	06	CA0003751

STATION	EFFLUENT 003			EFFLUENT 001N	EFFLUENT 001	EFFLUENT 001	EFFLUENT 001	EFFLUENT 001
ANALYSIS	SUSPENDED SOLIDS			SETTL SOLIDS	T CHROMIUM	COPPER	NICKEL	ZINC
UNITS	mg/l 1st FLTR	mg/l 2nd FLTR	mg/l NET	ml/l	ug/l	ug/l	ug/l	ug/l
SMPL TYPE	GRAB			GRAB	GRAB	GRAB	GRAB	GRAB
FREQ.	WEEKLY WHEN 001N & 001P => 003			WEEKLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY

APRIL	*		*		*		*		*		*		*		*	
1																
2																
3								<0.1								
4																
5																
6																
7										<1		<1		<1		<1
8																
9																
10								<0.1								
11																
12																
13																
14																
15																
16								.8								
17																
18																
19																
20																
21								.2								
22																
23																
24																
25																
26																
27																
28								<0.1								
29																
30																
31																

MONTHLY AVG	NO DISCHARGE	.3						
MONTHLY HIGH		.8						
MONTHLY LOW		<0.1						

TIMES EXCEEDED	NO LIMIT	NO LIMIT	MO AVG 30 =0	MO AVG 1.0 =0	6M-MEAN 10 =0	6M-MEAN 10 =0	6M-MEAN 30 =0	6M-MEAN 70 =0
TIMES EXCEEDED			D MAX 100 =0	D MAX 3.0 =0	D MAX 40 =0	D MAX 50 =0	D MAX 100 =0	D MAX 380 =0
TIMES EXCEEDED					I MAX 100 =0	I MAX 140 =0	I MAX 260 =0	I MAX 990 =0

NOTES: (*) Number of Samples taken during the day.

PRINCIPAL EXECUTIVE OFFICER	SIGNATURE OF AUTHORIZED AGENT	DATE
JAMES D. SHIFFER	Jack Kremenya	7/15/92

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
1102A LAUREL LANE
SAN LUIS OBISPO,CA 93401

DISCHARGE SELF MONITORING REPORT

PACIFIC GAS AND ELECTRIC CO.
DIABLO CANYON NUCLEAR POWER PLANT
PO BOX 56
AVILA BEACH,CALIF 93424

FACILITY I.D.	YEAR/ MO / DAY	YEAR/ MO /DAY	STATE CODE	NPDES PERMIT #
3 402003001	BEGINNING 92 / 04 / 01	ENDING 92 / 04 / 30	06	CA0003751

STATION	INFLUENT	INFLUENT	INFLUENT	INFLUENT	EFFLUENT 001	EFFLUENT 001D	EFFLUENT 001G	EFFLUENT 001H
ANALYSIS	T CHROMIUM	COPPER	NICKEL	AMMONIA (N)	AMMONIA (N)	OIL & GREASE	OIL & GREASE	OIL & GREASE
UNITS	ug/l	ug/l	ug/l	ug/l	ug/l	mg/l	mg/l	mg/l
SMPL TYPE	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB
FREQ.	JA/AP/JUL/OCT	JA/AP/JUL/OCT	JA/AP/JUL/OCT	JA/AP/JUL/OCT	JA/AP/JUL/OCT	JA/AP/JUL/OCT	JA/AP/JUL/OCT	JA/AP/JUL/OCT
APRIL	#	#	#	#	#	#	#	#
1								
2								
3								
4								
5								
6								<3
7	<1	<1	<1	<54	<54			
8								
9								
10								
11								
12								
13								
[illegible]							<3	
[illegible]								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30						<3		
31								
MONTHLY AVG								
MONTHLY HIGH								
MONTHLY LOW								
TIMES EXCEEDED	NO LIMIT	NO LIMIT	NO LIMIT	NO LIMIT	6M-MEAN 3060 =0	MO AVG 15 =0	MO AVG 15 =0	MO AVG 15 =0
TIMES EXCEEDED					D MAX 12240 =0	D MAX 20 =0	D MAX 20 =0	D MAX 20 =0
TIMES EXCEEDED					I MAX 30600 =0			

[illegible]S: (#) Number of Samples taken during the day.

PRINCIPAL EXECUTIVE OFFICER	SIGNATURE OF AUTHORIZED AGENT	DATE
JAMES D. SHIFFER	Jack R Krueger	7/15/92

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
1102A LAUREL LANE
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DISCHARGE SELF MONITORING REPORT

PACIFIC GAS AND ELECTRIC CO.
DIABLO CANYON NUCLEAR POWER PLANT
PO BOX 56
AVILA BEACH,CALIF 93424

FACILITY I.D.	YEAR/ MO / DAY		YEAR/ MO /DAY	STATE CODE	NPDES PERMIT #
3 402003001	BEGINNING 92 / 04 / 01	ENDING	92 / 04 / 30	06	CA0003751

STATION	EFFLUENT 001I	EFFLUENT 001J	EFFLUENT 001K	EFFLUENT 001L	EFFLUENT 001M	EFFLUENT 001P	EFFLUENT 002	EFFLUENT 003
ANALYSIS	OIL & GREASE	OIL & GREASE	OIL & GREASE	OIL & GREASE	OIL & GREASE	OIL & GREASE	OIL & GREASE	OIL & GREASE
UNITS	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
SMPL TYPE	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB
FREQ.	JA/AP/JUL/OCT	JA/AP/JUL/OCT	JA/AP/JUL/OCT	JA/AP/JUL/OCT	JA/AP/JUL/OCT	JA/AP/JUL/OCT	JA/AP/JUL/OCT	JA/AP/JUL/OCT
APRIL	#		#		#		#		#		#		#		#	
1																
2													2	<3		<3
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7																
8																
9							2	<3								
10																
11																
12																
13																
[illegible]												<3				
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28																
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30																
31																
MONTHLY AVG	NO DISCHARGE		NO DISCHARGE		NO DISCHARGE		<3		NO DISCHARGE				<3			
MONTHLY HIGH							<3						<3			
MONTHLY LOW							<3						<3			
TIMES EXCEEDED	MO AVG 15 =0		MO AVG 15 =0		MO AVG 15 =0		MO AVG 15 =0		MO AVG 15 =0		MO AVG 15 =0		MO AVG 15 =0		MO AVG 15 =0	
TIMES EXCEEDED	D MAX 20 =0		D MAX 20 =0		D MAX 20 =0		D MAX 20 =0		D MAX 20 =0		D MAX 20 =0		D MAX 20 =0		D MAX 20 =0	
TIMES EXCEEDED																

S:_(#)_Number_of_Samples_taken_during_the_day.

PRINCIPAL EXECUTIVE OFFICER	SIGNATURE OF AUTHORIZED AGENT	DATE
JAMES D. SHIFFER	John R Kremeyer	7/15/93

CALIFORNIA REGIONAL WATER QUALITY
CONTROL BOARD
CENTRAL COAST REGION
1102A LAUREL LANE
SAN LUIS OBISPO,CA 93401

DISCHARGE SELF MONITORING REPORT

PACIFIC GAS AND ELECTRIC CO.
DIABLO CANYON NUCLEAR POWER PLANT
PO BOX 56
AVILA BEACH,CALIF 93424

FACILITY I.D.	YEAR/ MO / DAY		YEAR/ MO /DAY	STATE CODE	NPDES PERMIT #
3 402003001	BEGINNING 92 / 04 / 01	ENDING	92 / 04 / 30	06	CA0003751

STATION	EFFLUENT 004	EFFLUENT 001	EFFLUENT 001D	EFFLUENT 001H	EFFLUENT 001L	EFFLUENT 001F
ANALYSIS	OIL & GREASE	TOX CONCEN	CADMIUM	CADMIUM	CADMIUM	CADMIUM
UNITS	mg/l	TU	ug/l	ug/l	ug/l	ug/l
SMPL TYPE	GRAB	GRAB	QTRLY COMP	QTRLY COMP	QTRLY COMP	1 WEEK COMP
FREQ.	JA/AP/JUL/OCT	JA/AP/JUL/OCT	JA/AP/JUL/OCT	JA/AP/JUL/OCT	JA/AP/JUL/OCT	JA/AP/JUL/OCT

APRIL	*		*		*		*		*		*		*		*	
1						<62	2	<62	2	<62		<62				
2		<3														
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7																
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30																
31																

MONTHLY AVG				<62	<62	
MONTHLY HIGH				<62		
MONTHLY LOW				<62		

TIMES EXCEEDED	MO AVG 15 =0	6M-MEAN 0.26	NO LIMIT	NO LIMIT	NO LIMIT	NO LIMIT
TIMES EXCEEDED	D MAX 20 =0	=0				
TIMES EXCEEDED						

NOTES:_(*)_Number_of_Samples_taken_during_the_day._(**)_No_Mortalities._____

PRINCIPAL EXECUTIVE OFFICER
JAMES D. SHIFFER

SIGNATURE OF AUTHORIZED AGENT	DATE
Jack Krenmayer	7/15/92

CALIFORNIA REGIONAL WATER QUALITY
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1102A LAUREL LANE
SAN LUIS OBISPO,CA 93401

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PACIFIC GAS AND ELECTRIC CO.
DIABLO CANYON NUCLEAR POWER PLANT
PO BOX 56
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FACILITY I.D.	YEAR/ MO / DAY	YEAR/ MO /DAY	STATE CODE	NPDES PERMIT #
3 402003001	BEGINNING 92 / 04 / 01	ENDING 92 / 04 / 30	06	CA0003751

STATION	EFFLUENT 001D	EFFLUENT 001H	EFFLUENT 001L	EFFLUENT 001F	EFFLUENT 001D	EFFLUENT 001H	EFFLUENT 001L	EFFLUENT 001F
ANALYSIS	CHROMIUM	T CHROMIUM	T CHROMIUM	T CHROMIUM	COPPER	COPPER	COPPER	COPPER
UNITS	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
SMPL TYPE	QTRLY COMP	QTRLY COMP	QTRLY COMP	1 WEEK COMP	QTRLY COMP	QTRLY COMP	QTRLY COMP	1 WEEK COMP
FREQ.	JA/AP/JUL/OCT	JA/AP/JUL/OCT	JA/AP/JUL/OCT	JA/AP/JUL/OCT	JA/AP/JUL/OCT	JA/AP/JUL/OCT	JA/AP/JUL/OCT	JA/AP/JUL/OCT
APRIL	#		#		#		#		#		#		#		#	
1		10	2	113	2	3		8		13	2	308	2	39		22
2																
3																
4																
5																
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30																
31																
MONTHLY AVG				113		3						308		39		
MONTHLY HIGH				118		4						418		50		
MONTHLY LOW				107		<2						197		27		
TIMES EXCEEDED	NO LIMIT		NO LIMIT		NO LIMIT		NO LIMIT		NO LIMIT		NO LIMIT		NO LIMIT		NO LIMIT	
TIMES EXCEEDED																
TIMES EXCEEDED																

NOTES: (#) Number of Samples taken during the day.

PRINCIPAL EXECUTIVE OFFICER	SIGNATURE OF AUTHORIZED AGENT	DATE
JAMES D. SHIFFER	JAR Kremenz	7/15/92

CALIFORNIA REGIONAL WATER QUALITY
CONTROL BOARD
CENTRAL COAST REGION
1102A LAUREL LANE
SAN LUIS OBISPO,CA 93401

DISCHARGE SELF MONITORING REPORT

PACIFIC GAS AND ELECTRIC CO.
DIABLO CANYON NUCLEAR POWER PLANT
PO BOX 56
AVILA BEACH,CALIF 93424
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FACILITY I.D.	YEAR/ MO / DAY	YEAR/ MO /DAY	STATE CODE	NPDES PERMIT #
3 402003001	BEGINNING 92 / 04 / 01	ENDING 92 / 04 / 30	06	CA0003751

STATION	EFFLUENT 001D	EFFLUENT 001H	EFFLUENT 001L	EFFLUENT 001F	EFFLUENT 001D	EFFLUENT 001H	EFFLUENT 001L	EFFLUENT 001F
ANALYSIS	LEAD	LEAD	LEAD	LEAD	MERCURY	MERCURY	MERCURY	MERCURY
UNITS	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
SMPL TYPE	QTRLY COMP	QTRLY COMP	QTRLY COMP	1 WEEK COMP	QTRLY COMP	QTRLY COMP	QTRLY COMP	1 WEEK COMP
FREQ.	JA/AP/JUL/OCT	JA/AP/JUL/OCT	JA/AP/JUL/OCT	JA/AP/JUL/OCT	JA/AP/JUL/OCT	JA/AP/JUL/OCT	JA/AP/JUL/OCT	JA/AP/JUL/OCT
APRIL	‡	‡	‡	‡	‡	‡	‡	‡
1	17	2 322	2 6	39	2.8	2 .6	2 <0.3	7.9
2								
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28								
29								
30								
31								
MONTHLY AVG		322	6			.6	<0.3	
MONTHLY HIGH		322	7			.9	<0.3	
MONTHLY LOW		322	5			.3	<0.3	
TIMES EXCEEDED	NO LIMIT	NO LIMIT	NO LIMIT	NO LIMIT	NO LIMIT	NO LIMIT	NO LIMIT	NO LIMIT
TIMES EXCEEDED								
TIMES EXCEEDED								

NOTES: (‡) Number of Samples taken during the day.

PRINCIPAL EXECUTIVE OFFICER	SIGNATURE OF AUTHORIZED AGENT	DATE
JAMES D. SHIFFER	Jack Kremenga	7/15/92

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
1102A LAUREL LANE
SAN LUIS OBISPO,CA 93401

DISCHARGE SELF MONITORING REPORT

PACIFIC GAS AND ELECTRIC CO.
DIABLO CANYON NUCLEAR POWER PLANT
PO BOX 56
AVILA BEACH,CALIF 93424
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FACILITY I.D.	YEAR/ MO / DAY	YEAR/ MO /DAY	STATE CODE	NPDES PERMIT #
3 402003001	BEGINNING 92 / 04 / 01	ENDING 92 / 04 / 30	06	CA0003751

STATION	EFFLUENT 001D	EFFLUENT 001H	EFFLUENT 001L	EFFLUENT 001F	EFFLUENT 001D	EFFLUENT 001H	EFFLUENT 001L	EFFLUENT 001F
ANALYSIS	NICKEL	NICKEL	NICKEL	NICKEL	SILVER	SILVER	SILVER	SILVER
UNITS	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
SMPL TYPE	QTRLY COMP	QTRLY COMP	QTRLY COMP	1 WEEK COMP	QTRLY COMP	QTRLY COMP	QTRLY COMP	1 WEEK COMP
FREQ.	JA/AP/JUL/OCT	JA/AP/JUL/OCT	JA/AP/JUL/OCT	JA/AP/JUL/OCT	JA/AP/JUL/OCT	JA/AP/JUL/OCT	JA/AP/JUL/OCT	JA/AP/JUL/OCT
APRIL	*	*	*	*	*	*	*	*
1	<63	2 242	2 <63	<63	<11	2 21	2 <11	<11
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28								
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30								
31								
MONTHLY AVG		242	<63			21	<11	
MONTHLY HIGH		245	<63			22	<11	
MONTHLY LOW		238	<63			20	<11	
TIMES EXCEEDED	NO LIMIT	NO LIMIT	NO LIMIT	NO LIMIT	NO LIMIT	NO LIMIT	NO LIMIT	NO LIMIT
TIMES EXCEEDED								
TIMES EXCEEDED								

REMARKS: (*) Number of Samples taken during the day.

PRINCIPAL EXECUTIVE OFFICER	SIGNATURE OF AUTHORIZED AGENT	DATE
JAMES D. SHIFFER	J.A.R. Kremer	7/15/92

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
1102A LAUREL LANE
SAN LUIS OBISPO,CA 93401

DISCHARGE SELF MONITORING REPORT

PACIFIC GAS AND ELECTRIC CO.
DIABLO CANYON NUCLEAR POWER PLANT
PO BOX 56
AVILA BEACH,CALIF 93424
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FACILITY I.D.	YEAR/ MO / DAY	YEAR/ MO /DAY	STATE CODE	NPDES PERMIT #
3 402003001	BEGINNING 92 / 04 / 01	ENDING 92 / 04 / 30	06	CA0003751

STATION	EFFLUENT 001D		EFFLUENT 001H		EFFLUENT 001L		EFFLUENT 001F	
ANALYSIS	ZINC		ZINC		ZINC		ZINC	
UNITS	ug/l		ug/l		ug/l		ug/l	
SMPL TYPE	QTRLY COMP		QTRLY COMP		QTRLY COMP		1 WEEK COMP	
FREQ.	JA/AP/JUL/OCT		JA/AP/JUL/OCT		JA/AP/JUL/OCT		JA/AP/JUL/OCT	
APRIL	#		#		#		#	
1		143	2	106	2	12		150
2								
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29								
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31								
MONTHLY AVG				106		12		
MONTHLY HIGH				114		15		
MONTHLY LOW				97		<9		
TIMES EXCEEDED	NO LIMIT		NO LIMIT		NO LIMIT		NO LIMIT	
TIMES EXCEEDED								
TIMES EXCEEDED								

NOTES: (#) Number of Samples taken during the day.

PRINCIPAL EXECUTIVE OFFICER	SIGNATURE OF AUTHORIZED AGENT	DATE
JAMES D. SHIFFER	J. A. R. Kremenga	7/15/92

CALIFORNIA REGIONAL WATER QUALITY
CONTROL BOARD
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1102A LAUREL LANE
SAN LUIS OBISPO,CA 93401

DISCHARGE SELF MONITORING REPORT

PACIFIC GAS AND ELECTRIC CO.
DIABLO CANYON NUCLEAR POWER PLANT
PO BOX 56
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FACILITY I.D.	YEAR/ MO / DAY	YEAR/ MO /DAY	STATE CODE	NPDES PERMIT #
3 402003001	BEGINNING 92 / 04 / 01	ENDING 92 / 04 / 30	06	CA0003751

STATION	EFFLUENT 001D	EFFLUENT 001F	EFFLUENT 001I	EFFLUENT 001L	EFFLUENT 001M
ANALYSIS	COPPER	COPPER	COPPER	COPPER	COPPER
UNITS	ug/l	ug/l	ug/l	ug/l	ug/l
SMPL TYPE	24-HR COMP.	24-HR COMP.	24-HR COMP.	24-HR COMP.	24-HR COMP.
FREQ.	METAL CLNG	METAL CLNG	METAL CLNG	METAL CLNG	METAL CLNG

APRIL	*		*		*		*		*		*		*		*	
1																
2																
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MONTHLY AVG	NO DISCHARGE	NO DISCHARGE	NO DISCHARGE	NO DISCHARGE	NO DISCHARGE
MONTHLY HIGH					
MONTHLY LOW					
TIMES EXCEEDED	MO AVG 1 =0	MO AVG 1 =0	MO AVG 1 =0	MO AVG 1 =0	MO AVG 1 =0
TIMES EXCEEDED	D MAX 1 =0	D MAX 1 =0	D MAX 1 =0	D MAX 1 =0	D MAX 1 =0
TIMES EXCEEDED					

NOTES: (*) Number of Samples taken during the day.

PRINCIPAL EXECUTIVE OFFICER
JAMES D. SHIFFER

SIGNATURE OF AUTHORIZED AGENT	DATE
Joe R. Kremenga	7/15/92

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
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1102A LAUREL LANE
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FACILITY I.D.	YEAR/ MO / DAY	YEAR/ MO /DAY	STATE CODE	NPDES PERMIT #
3 402003001	BEGINNING 92 / 04 / 01	ENDING 92 / 04 / 30	06	CA0003751

STATION	EFFLUENT 001D	EFFLUENT 001F	EFFLUENT 001I	EFFLUENT 001L	EFFLUENT 001M
ANALYSIS	IRON	IRON	IRON	IRON	IRON
UNITS	mg/l	mg/l	mg/l	mg/l	mg/l
SMPL TYPE	24-HR COMP.	24-HR COMP.	24-HR COMP.	24-HR COMP.	24-HR COMP.
FREQ.	METAL CLNG	METAL CLNG	METAL CLNG	METAL CLNG	METAL CLNG

APRIL	#		#		#		#		#		#		#		#	
1																
2																
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29																
30																
31																

MONTHLY AVG	NO DISCHARGE	NO DISCHARGE	NO DISCHARGE	NO DISCHARGE	NO DISCHARGE
MONTHLY HIGH					
MONTHLY LOW					
TIMES EXCEEDED	MO AVG 1 =0	MO AVG 1 =0	MO AVG 1 =0	MO AVG 1 =0	MO AVG 1 =0
TIMES EXCEEDED	D MAX 1 =0	D MAX 1 =0	D MAX 1 =0	D MAX 1 =0	D MAX 1 =0
TIMES EXCEEDED					

REMARKS: (#) Number of Samples taken during the day.

PRINCIPAL EXECUTIVE OFFICER	SIGNATURE OF AUTHORIZED AGENT	DATE
JAMES D. SHIFFER	John R. Kremenga	7/15/92

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
1102A LAUREL LANE
SAN LUIS OBISPO,CA 93401

DISCHARGE SELF MONITORING REPORT

PACIFIC GAS AND ELECTRIC CO.
DIABLO CANYON NUCLEAR POWER PLANT
PO BOX 56
AVILA BEACH,CALIF 93424

FACILITY I.D.	YEAR/ MO / DAY	YEAR/ MO /DAY	STATE CODE	NPDES PERMIT #
3 402003001	BEGINNING 92 / 04 / 01	ENDING 92 / 04 / 30	06	CA0003751

STATION	EFFLUENT 001	INFLUENT	EFFLUENT	INFLUENT	EFFLUENT 001	INFLUENT	EFFLUENT 001	INFLUENT
ANALYSIS	TITANIUM	ARSENIC	ARSENIC	CADMIUM	CADMIUM	LEAD	LEAD	ZINC
UNITS	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
SMPL TYPE	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB
FREQ.	OCTOBER	OCTOBER	OCTOBER	OCTOBER	OCTOBER	OCTOBER	OCTOBER	OCTOBER
APRIL	*	*	*	*	*	*	*	*
1								
2								
3								
4								
5								
6								
7								** 2
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
MONTHLY AVG								
MONTHLY HIGH								
MONTHLY LOW								
TIMES EXCEEDED	NO LIMIT	NO LIMIT	6M-MEAN 30 =0	NO LIMIT	6M-MEAN 10 =0	NO LIMIT	6M-MEAN 10 =0	
TIMES EXCEEDED			D MAX 150 =0		D MAX 20 =0		D MAX 40 =0	
TIMES EXCEEDED			I MAX 400 =0		I MAX 50 =0		I MAX 100 =0	

REMARKS: (*) Number of Samples taken during the day. (**) Influent Zinc analyzed for comparison to effluent analysis. All other analysis will be performed in October.

PRINCIPAL EXECUTIVE OFFICER	SIGNATURE OF AUTHORIZED AGENT	DATE
JAMES D. SHIFFER	J A R Knemeyer	7/15/92

Unit: 0 NPDES
001 EFFLUENT CHLORINATION

From: 4/01/92 0:01
Through: 4/30/92 23:59

Parameter: / Sample Time:	CWP 1-1 1ST SMPL PPM	CWP 1-1 2ND SMPL PPM	CWP 1-2 1ST SMPL PPM	CWP 1-2 2ND SMPL PPM	CWP 2-1 1ST SMPL PPM	CWP 2-1 2ND SMPL PPM	CWP 2-2 1ST SMPL PPM	CWP 2-2 2ND SMPL PPM
4/01/92 10:00	<0.020	0.050	<0.020	0.070	<0.020	0.060	<0.020	0.040
4/02/92 10:00	0.080	0.070	0.070	0.080	0.050	0.060	0.070	0.070
4/03/92 10:00	0.060	0.050	0.060	0.070	0.060	0.070	0.070	0.060
4/06/92 10:00	0.020	0.050			0.060	0.060	0.070	0.080
4/07/92 10:00	0.020	0.020	0.070	0.080	0.040	<0.020	0.050	0.060
4/08/92 10:00	0.020	0.060	<0.020	0.090	0.050	0.090	0.070	0.080
4/09/92 10:00	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
4/10/92 10:00	<0.020	0.030	0.070	0.090	0.050	0.080	0.070	0.100
4/13/92 10:00	<0.020	<0.020	<0.020	<0.020	0.020	<0.020		
4/20/92 11:00			<0.020	<0.020	0.050	0.090	0.050	0.070
4/21/92 10:00	0.120	0.090	0.080	0.070	0.060	<0.020	0.080	0.040
4/22/92 10:00	0.080	0.080	0.100	0.110	0.080	<0.020	<0.020	<0.020
4/23/92 10:00	<0.020	<0.020	<0.020	<0.020	0.060	0.060	0.050	0.070
4/24/92 10:00	<0.020	<0.020	0.080	0.100	0.080	0.080	0.100	0.090
4/27/92 10:04	<0.020	<0.020	0.060	0.050	0.030	0.060	0.070	0.060
4/29/92 10:00	0.060	0.080	0.080	0.070	<0.020	<0.020	0.020	<0.020
4/30/92 10:00	0.090	0.090	0.080	0.080	0.040	0.050	0.040	0.080

NOTE: Individual sample results for Total Residual Chlorine (TRC) are adjusted by the following formula to account for dilution by the unchlorinated Circulating Water Pumps on the opposite operating Unit. It is assumed that no chlorine demand exists in the seawater:

$$\text{ppm TRC} \times \frac{\text{\# of operating pumps on chlorinated Unit}}{\text{\# of operating pumps for both Units}}$$

The daily average TRC value reported on the Q2 forms is the average of the adjusted TRC results for the day, which could include up to eight individual results (two analyses per chlorination cycle for a maximum of 4 cycles per day)

PACIFIC GAS & ELECTRIC - DIABLO CANYON POWER PLANT
SANITARY WASTEWATER TREATMENT SYSTEM
CONTRACT # Z78-2104-86 (REV. 5/90)

Sanitation and Operation Consultants, INC.
16340 E. Maplegrove Street
La Puente, CA 91744

Pacific Gas and Electric Co.
Contacts:
Randy Falcke (805) 595-4362
John Knemeyer (805) 595-4472

CONSTITUENTS	UNITS	FREQ.	LIMITS		SAMPLE		RESULTS
			MONTHLY AVERAGE	DAILY MAX	DATE	TIME	
1. GREASE & OIL	mg/l	WEEKLY	15	20	4-3	1038	5.7 mg/l Ave of 3
2. "	mg/l	"	15	20	4-10	1150	5.0 mg/l " " "
3. "	mg/l	"	15	20	4-16	1212	4.7 mg/l " " "
4. "	mg/l	"	15	20	4-21	1209	3.3 mg/l " " "
5. "	mg/l	"	15	20	4-28	1035	6.3 mg/l " " "
1. SUSPENDED SLDS	mg/l	WEEKLY	60	N/A	4-3	1012	17.0 mg/l
2. "	mg/l	"	60	N/A	4-10	1126	18.0 mg/l
3. "	mg/l	"	60	N/A	4-16	1158	25.0 mg/l
4. "	mg/l	"	60	N/A	4-21	1147	23.0 mg/l
5. "	mg/l	"	60	N/A	4-28	1017	12.0 mg/l
1. SETTLEABLE SLD	ml/l	WEEKLY	1.0	3.0	4-3	1026	< 0.1 ml/l
2. "	ml/l	"	1.0	3.0	4-10	1154	< 0.1 ml/l
3. "	ml/l	"	1.0	3.0	4-16	1208	0.8 ml/l
4. "	ml/l	"	1.0	3.0	4-21	1230	0.2 ml/l
5. "	ml/l	"	1.0	3.0	4-28	1037	< 0.1 ml/l

NOTE:
1. ANALYSIS RESULTS ABOVE THE MONTHLY AVERAGE SHALL BE REPORTED VERBALLY, WITHIN 8 HOURS, TO A PG&E CONTACT LISTED ABOVE.
2. G&O AND SUSP. SLDS. SAMPLES ARE COMPOSITES DURING 1 DISCHARGE CYCLE.

COMMENTS:

SLUDGE DISPOSAL DATA

MONTH REMOVED	VOLUME REMOVED	WEIGHT REMOVED	DISPOSAL SITE
APRIL 1992		4845 lbs	Walsh - Nipomo

DATA SHEET COMPLETED BY: Mike Bee Cooper DATE: 5-6-92

APPENDIX 2

Influent and Effluent Monitoring

May 1992

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
1102A LAUREL LANE
SAN LUIS OBISPO,CA 93401

DISCHARGE SELF MONITORING REPORT

PACIFIC GAS AND ELECTRIC CO.
DIABLO CANYON NUCLEAR POWER PLANT
PO BOX 56
AVILA BEACH,CALIF 93424

FACILITY I.D.	YEAR/ MO / DAY	YEAR/ MO /DAY	STATE CODE	NPDES PERMIT #
3 402003001	BEGINNING 92 / 05 / 01	ENDING 92 / 05 / 31	06	CA0003751

STATION ANALYSIS UNITS SMPL TYPE FREQ.	INFLUENT TEMPERATURE DEGREES F METERED CONTINUOUS		EFFLUENT 001 TEMPERATURE DEGREES F METERED CONTINUOUS		DELTA TEMP TEMPERATURE DEGREES F METERED CONTINUOUS		EFFLUENT 001 FLOW MGD RECORDED DAILY		INFLUENT pH pH UNITS GRAB MONTHLY		EFFLUENT 001 pH pH UNITS GRAB MONTHLY (‡‡‡)		EFFLUENT 001P pH pH UNITS GRAB MONTHLY		EFFLUENT 002 pH pH UNITS GRAB MONTHLY	
MAY	‡		‡		‡		‡		‡		‡		‡		‡	
1		52.1		70.5		18.4		2537								
2		52.9		71.2		18.3		1924								
3		55.2		72.9		17.7		2178								
4		54.6		72.7		18.1		2555								
5		55.1		73.2		18.1		2550		8.2		8.1				
6		55.0		73.2		18.2		2557								
7		54.3		72.5		18.2		2554								
8		52.8		71.0		18.2		2554								
9		53.1		71.2		18.1		2557								
10		54.9		73.0		18.1		2557								
11		55.8		74.0		18.2		2554								
12		54.7		72.9		18.2		2550						7.6		
13		54.3		72.5		18.2		2557								
[illegible]		54.0		72.3		18.3		2553								
[illegible]		53.9		72.2		18.3		2475								
16		54.0		72.3		18.3		2555								
17		54.0		72.7		18.7		2552								
18		54.3		72.7		18.4		2554								
19		54.7		73.2		18.5		2545							2	8.0
20		54.1		72.7		18.6		2554								
21		53.5		71.1		17.6		2555								
22		53.8		72.3		18.5		2556								
23		54.7		73.3		18.6		2554								
24		55.9		74.7		18.8		2550								
25		54.5		73.6		19.1		2554								
26		52.7		71.4		18.7		2552								
27		54.0		72.7		18.7		2554								
28		55.1		74.1		19.0		2555								
29		54.9		73.7		18.8		2554								
30		55.1		73.8		18.7		2530								
31		54.6		73.6		19.0		2558								
MONTHLY AVG		54.3		72.7		18.4		2518								8.0
MONTHLY HIGH		55.9		74.7		19.1		2558								8.0
MONTHLY LOW		52.1		70.5		17.7		1924								8.0
TIMES EXCEEDED		NO LIMIT		NO LIMIT		MAX 22 =0 (‡‡)		MAX 2760 = 0		NO LIMIT		NO LIMIT		NO LIMIT		NO LIMIT
TIMES EXCEEDED																
TIMES EXCEEDED																

REMARKS: (‡) Number of Samples taken during the day. (‡‡) Except During Dewatering.
(‡‡‡) Daily when discharging chemical cleaning wastes from discharges 001D, F, I, L and/or M.

PRINCIPAL EXECUTIVE OFFICER	SIGNATURE OF AUTHORIZED AGENT	DATE
JAMES D. SHIFFER	[signature]	7/15/92

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
1102A LAUREL LANE
SAN LUIS OBISPO,CA 93401

DISCHARGE SELF MONITORING REPORT

PACIFIC GAS AND ELECTRIC CO.
DIABLO CANYON NUCLEAR POWER PLANT
PO BOX 56
AVILA BEACH,CALIF 93424

FACILITY I.D.	YEAR/ MO / DAY	YEAR/ MO /DAY	STATE CODE	NPDES PERMIT #
3 402003001	BEGINNING 92 / 05 / 01	ENDING 92 / 05 / 31	06	CA0003751

STATION	EFFLUENT 003		EFFLUENT 004		EFFLUENT 001N		EFFLUENT 001P		EFFLUENT 003		EFFLUENT 001F		EFFLUENT 001		EFFLUENT 001	
ANALYSIS	pH		pH		OIL & GREASE		OIL & GREASE		OIL & GREASE		OIL & GREASE		T CHLOR RES		CHLORINE USED	
UNITS	pH UNITS		pH UNITS		mg/l		mg/l		mg/l		mg/l		ug/l		lbs/day	
SMPL TYPE	GRAB		GRAB		COMPOSITE		GRAB		GRAB		GRAB		GRAB		RECORDED	
FREQ.	MONTHLY		MONTHLY		WEEKLY		WEEKLY (‡‡)		WEEKLY (‡‡‡)		MONTHLY		2 per CYCLE		MONTHLY	
MAY	‡		‡		‡		‡		‡		‡		‡		‡	
1													8	60		288
2																
3																
4																
5													8	<20		139
6													2	<20		36
7													6	<20		84
8					5								8	20		130
9																
10																
11													8	<20		144
12												<3	8	<20		144
13																
[illegible]					5								8	<20		144
[illegible]																
17																
18													8	<20		144
19		7.7		8.2									8	<20		144
20					3								8	<20		270
21													8	30		216
22													8	20		216
23																
24																
25													8	20		216
26													8	40		216
27					5								8	<20		216
28													8	<20		216
29													8	<10		147
30																
31																
MONTHLY AVG					5		NO DISCHARGE		NO DISCHARGE				23			172
MONTHLY HIGH					5								<10			288
MONTHLY LOW					3								60			36
TIMES EXCEEDED	NO LIMIT		NO LIMIT		MO AVG 15	=0	MO AVG 15	=0	MO AVG 15	=0	MO AVG 15	=0	I MAX 200	=0	NO LIMIT	
TIMES EXCEEDED					D MAX 20	=0	D MAX 20	=0	D MAX 20	=0	D MAX 20	=0				
TIMES EXCEEDED																

[illegible]KS: (‡) Number of Samples taken during the day.
[illegible] (‡‡) When 001N is discharging to 001P. (‡‡‡) When 001P is discharging to 003.

PRINCIPAL EXECUTIVE OFFICER	SIGNATURE OF AUTHORIZED AGENT	DATE
JAMES D. SHIFFER	JAR Kremayer	7/15/92

CALIFORNIA REGIONAL WATER QUALITY
. CONTROL. BOARD
CENTRAL COAST REGION
1102A LAUREL LANE
SAN LUIS OBISPO,CA 93401

DISCHARGE SELF MONITORING REPORT

PACIFIC GAS AND ELECTRIC CO.
DIABLO CANYON NUCLEAR POWER PLANT
PO BOX 56
AVILA BEACH,CALIF 93424

FACILITY I.D.	YEAR/ MO / DAY	YEAR/ MO /DAY	STATE CODE	NPDES PERMIT #
3 402003001	BEGINNING 92 / 05 / 01	ENDING 92 / 05 / 31	06	CA0003751

STATION	EFF 001N=>003	EFF 001N=>003	EFFLUENT 001D			EFFLUENT 001F		
ANALYSIS	TOTL COLIFORM	FECAL COLIFORM	SUSPENDED SOLIDS			SUSPENDED SOLIDS		
UNITS	MPN/100ml	MPN/100ml	mg/l 1st FLTR	mg/l 2nd FLTR	mg/l NET	mg/l 1st FLTR	mg/l 2nd FLTR	mg/l NET
SMPL TYPE	GRAB	GRAB		GRAB			GRAB	
FREQ.	4 TIMES/WEEK	4 TIMES/WEEK		MONTHLY			MONTHLY	
MAY	‡	‡	‡	‡	‡	‡	‡	‡
1			2	1	1			
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12						6	<1	6
13								
14								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
MONTHLY AVG	NO DISCHARGE	NO DISCHARGE						
MONTHLY HIGH								
MONTHLY LOW								
TIMES EXCEEDED	80% SMPLS>1K	MEAN>200=0	NO LIMIT	NO LIMIT	NO AVG 30= 0	NO LIMIT	NO LIMIT	NO AVG 30 =0
TIMES EXCEEDED	=0	90% SMPLS>400			D MAX 100 =0			D MAX 100 =0
TIMES EXCEEDED	1 MAX >10K=0	=0						

NOTES: (‡) Number of Samples taken during the day.

PRINCIPAL EXECUTIVE OFFICER	SIGNATURE OF AUTHORIZED AGENT	DATE
JAMES D. SHIFFER	John R Kreuzer	7/15/92

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
1102A LAUREL LANE
SAN LUIS OBISPO,CA 93401

DISCHARGE SELF MONITORING REPORT

PACIFIC GAS AND ELECTRIC CO.
DIABLO CANYON NUCLEAR POWER PLANT
PO BOX 56
AVILA BEACH,CALIF 93424
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FACILITY I.D.	YEAR/ MO / DAY	YEAR/ MO /DAY	STATE CODE	NPDES PERMIT #
3 402003001	BEGINNING 92 / 05 / 01	ENDING 92 / 05 / 31	06	CA0003751

STATION	EFFLUENT 001G			EFFLUENT 001H		
ANALYSIS	SUSPENDED SOLIDS			SUSPENDED SOLIDS		
UNITS	mg/l 1st FLTR	mg/l 2nd FLTR	mg/l NET	mg/l 1st FLTR	mg/l 2nd FLTR	mg/l NET
SMPL TYPE		GRAB			GRAB	
FREQ.		MONTHLY			MONTHLY	
MAY	‡	‡	‡	‡	‡	‡
1						
2						
3						
4						
5						
6						
7						
8				8	3	5
9						
10						
11						
12						
13						
16						
17						
18						
19	2	<1	2			
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
MONTHLY AVG						
MONTHLY HIGH						
MONTHLY LOW						
TIMES EXCEEDED	NO LIMIT	NO LIMIT	MO AVG 30 =0	NO LIMIT	NO LIMIT	MO AVG 30 =0
TIMES EXCEEDED			D MAX 100 =0			D MAX 100 =0
TIMES EXCEEDED						

‡S:_(‡)_Number_of_Samples_taken_during_the_day.

PRINCIPAL EXECUTIVE OFFICER	SIGNATURE OF AUTHORIZED AGENT	DATE
JAMES D. SHIFFER	John R Kremeyer	7/15/92

CALIFORNIA REGIONAL WATER QUALITY
CONTROL BOARD
CENTRAL COAST REGION
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DISCHARGE SELF MONITORING REPORT

PACIFIC GAS AND ELECTRIC CO.
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FACILITY I.D.	YEAR/ MO / DAY	YEAR/ MO /DAY	STATE CODE	NPDES PERMIT #
3 402003001	BEGINNING 92 / 05 / 01	ENDING 92 / 05 / 31	06	CA0003751

STATION	EFFLUENT 001I			EFFLUENT 001J		
ANALYSIS	SUSPENDED SOLIDS			SUSPENDED SOLIDS		
UNITS	mg/l 1st FLTR	mg/l 2nd FLTR	mg/l NET	mg/l 1st FLTR	mg/l 2nd FLTR	mg/l NET
SMPL TYPE		GRAB			GRAB	
FREQ.		MONTHLY			MONTHLY	
MAY	‡	‡	‡	‡	‡	‡
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
MONTHLY AVG	NO DISCHARGE			NO DISCHARGE		
MONTHLY HIGH						
MONTHLY LOW						
TIMES EXCEEDED	NO LIMIT	NO LIMIT	NO AVG 30 =0	NO LIMIT	NO LIMIT	NO AVG 30 =0
TIMES EXCEEDED			D MAX 100 =0			D MAX 100 =0
TIMES EXCEEDED						

NOTES: (‡) Number of Samples taken during the day.

PRINCIPAL EXECUTIVE OFFICER	SIGNATURE OF AUTHORIZED AGENT	DATE
JAMES D. SHIFFER	John R Kreemayer	7/15/92

CALIFORNIA REGIONAL WATER QUALITY
CONTROL BOARD
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PO BOX 56
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FACILITY I.D.	YEAR/ MO / DAY	YEAR/ MO /DAY	STATE CODE	NPDES PERMIT #
3 402003001	BEGINNING 92 / 05 / 01	ENDING 92 / 05 / 31	06	CA0003751

STATION	EFFLUENT 001K			EFFLUENT 001L		
ANALYSIS	SUSPENDED SOLIDS			SUSPENDED SOLIDS		
UNITS	mg/l 1st FLTR	mg/l 2nd FLTR	mg/l NET	mg/l 1st FLTR	mg/l 2nd FLTR	mg/l NET
SMPL TYPE		GRAB			GRAB	
FREQ.		MONTHLY			MONTHLY	
MAY	*	*	*	*	*	*
1						
2						
3						
4						
5						
6.						
7						
8						
9						
10						
11						
12	<1	<1	2 <1			
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
MONTHLY AVG	NO DISCHARGE			<1		
MONTHLY HIGH				<1		
MONTHLY LOW				<1		
TIMES EXCEEDED	NO LIMIT	NO LIMIT	NO AVG 30 =0	NO LIMIT	NO LIMIT	NO AVG 30 =0
TIMES EXCEEDED			D MAX 100 =0			D MAX 100 =0
TIMES EXCEEDED						

NOTES: (*) Number of Samples taken during the day.

PRINCIPAL EXECUTIVE OFFICER
JAMES D. SHIFFER

SIGNATURE OF AUTHORIZED AGENT	DATE
John R Kremeyer	7/15/92

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
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DIABLO CANYON NUCLEAR POWER PLANT
PO BOX 56
AVILA BEACH,CALIF 93424
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FACILITY I.D.	YEAR/ MO / DAY	YEAR/ MO /DAY	STATE CODE	NPDES PERMIT #
3 402003001	BEGINNING 92 / 05 / 01	ENDING 92 / 05 / 31	06	CA0003751

STATION	EFFLUENT 001M			EFFLUENT 001N	EFFLUENT 001P		
ANALYSIS	SUSPENDED SOLIDS			SUSPENDED SLDS	SUSPENDED SOLIDS		
UNITS	mg/l 1st FLTR	mg/l 2nd FLTR	mg/l NET	mg/l	mg/l 1st FLTR	mg/l 2nd FLTR	mg/l NET
SMPL TYPE		GRAB		COMPOSITE		GRAB	
FREQ.		MONTHLY		WEEKLY		MONTHLY	
MAY	‡	‡	‡	‡	‡	‡	‡
1							
2							
3							
4							
5							
6							
7							
8				13			
9							
10							
11							
12					45	26	19
13							
14				10			
15							
16							
17							
18							
19							
20				28			
21							
22							
23							
24							
25							
26							
27				8			
28							
29							
30							
31							
MONTHLY AVG			NO DISCHARGE	15			
MONTHLY HIGH				28			
MONTHLY LOW				8			
TIMES EXCEEDED	NO LIMIT	NO LIMIT	NO AVG 30 =0	NO AVG 60 =0	NO LIMIT	NO LIMIT	NO AVG 30 =0
TIMES EXCEEDED			D MAX 100 =0				D MAX 100 =0
TIMES EXCEEDED							

REMARKS: (‡) Number of Samples taken during the day.

PRINCIPAL EXECUTIVE OFFICER	SIGNATURE OF AUTHORIZED AGENT	DATE
JAMES D. SHIFFER	[signature]	7/15/92

CALIFORNIA REGIONAL WATER QUALITY
'CONTROL' BOARD
CENTRAL COAST REGION
1102A LAUREL LANE
SAN LUIS OBISPO, CA 93401

DISCHARGE SELF MONITORING REPORT

PACIFIC GAS AND ELECTRIC CO.
DIABLO CANYON NUCLEAR POWER PLANT
PO BOX 56
AVILA BEACH, CALIF 93424
PAGE (M) 8

FACILITY I.D.	YEAR/ MO / DAY	YEAR/ MO /DAY	STATE CODE	NPDES PERMIT #
3 402003001	BEGINNING 92 / 05 / 01	ENDING 92 / 05 / 31	06	CA0003751

STATION	EFFLUENT 002			EFFLUENT 003		
ANALYSIS	SUSPENDED SOLIDS			SUSPENDED SOLIDS		
UNITS	mg/l 1st FLTR	mg/l 2nd FLTR	mg/l NET	mg/l 1st FLTR	mg/l 2nd FLTR	mg/l NET
SMPL TYPE		GRAB			GRAB	
FREQ.		MONTHLY			MONTHLY	
MAY	*	*	*	*	*	*
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
17						
18						
19	15	12	2 3	28	16	12
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
MONTHLY AVG			3			
MONTHLY HIGH			4			
MONTHLY LOW			1			
TIMES EXCEEDED	NO LIMIT	NO LIMIT	NO AVG 30 =0	NO LIMIT	NO LIMIT	NO AVG 30 =0
TIMES EXCEEDED			I MAX 100 =0			I MAX 100 =0
TIMES EXCEEDED						

NOTES: (*) Number of Samples taken during the day.

PRINCIPAL EXECUTIVE OFFICER	SIGNATURE OF AUTHORIZED AGENT	DATE
JAMES D. SHIFFER	John R Kremeyer	7/15/92

CALIFORNIA REGIONAL WATER QUALITY
CONTROL BOARD
CENTRAL COAST REGION
1102A LAUREL LANE
SAN LUIS OBISPO, CA 93401

DISCHARGE SELF MONITORING REPORT

PACIFIC GAS AND ELECTRIC CO.
DIABLO CANYON NUCLEAR POWER PLANT
PO BOX 56
AVILA BEACH, CALIF 93424

FACILITY I.D.	YEAR/ MO / DAY		YEAR/ MO /DAY	STATE CODE	NPDES PERMIT #
3 402003001	BEGINNING 92 / 05 / 01	ENDING	92 / 05 / 31	06	CA0003751

STATION	EFFLUENT 003			EFFLUENT 001N	EFFLUENT 001	EFFLUENT 001	EFFLUENT 001	EFFLUENT 001
ANALYSIS	SUSPENDED SOLIDS			SETTL SOLIDS	T CHROMIUM	COPPER	NICKEL	ZINC
UNITS	mg/l 1st FLTR	mg/l 2nd FLTR	mg/l NET	ml/l	ug/l	ug/l	ug/l	ug/l
SMPL TYPE		GRAB		GRAB	GRAB	GRAB	GRAB	GRAB
FREQ.	WEEKLY WHEN 001N & 001P => 003			WEEKLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY

MAY	*		*		*		*		*		*		*		*	
1																
2																
3																
4																
5										<1		<1		<1		<1
6																
7																
8								<0.1								
9																
10																
11																
12																
13																
[illegible]								<0.1								
[illegible]																
17																
18																
19																
20								<0.1								
21																
22																
23																
24																
25																
26																
27								<0.1								
28																
29																
30																
31																

MONTHLY AVG	NO DISCHARGE	<0.1						
MONTHLY HIGH		<0.1						
MONTHLY LOW		<0.1						

TIMES EXCEEDED	NO LIMIT	NO LIMIT	MO AVG 30 =0	MO AVG 1.0 =0	6M-MEAN 10 =0	6M-MEAN 10 =0	6M-MEAN 30 =0	6M-MEAN 70 =0
TIMES EXCEEDED			D MAX 100 =0	D MAX 3.0 =0	D MAX 40 =0	D MAX 50 =0	D MAX 100 =0	D MAX 380 =0
TIMES EXCEEDED					I MAX 100 =0	I MAX 140 =0	I MAX 260 =0	I MAX 990 =0

REMARKS: (*) Number of Samples taken during the day.

PRINCIPAL EXECUTIVE OFFICER
JAMES D. SHIFFER

SIGNATURE OF AUTHORIZED AGENT	DATE
J. R. Knemeyer	7/15/92

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
1102A LAUREL LANE
SAN LUIS OBISPO, CA 93401

DISCHARGE SELF MONITORING REPORT

PACIFIC GAS AND ELECTRIC CO.
DIABLO CANYON NUCLEAR POWER PLANT
PO BOX 56
AVILA BEACH, CALIF 93424

FACILITY I.D.	YEAR/ MO / DAY BEGINNING	YEAR/ MO /DAY ENDING	STATE CODE	NPDES PERMIT #
3 402003001	92 / 05 / 01	92 / 05 / 31	06	CA0003751

STATION	INFLUENT	INFLUENT	INFLUENT	INFLUENT	EFFLUENT 001	EFFLUENT 001D	EFFLUENT 001G	EFFLUENT 001H
ANALYSIS	T CHROMIUM	COPPER	NICKEL	AMMONIA (N)	AMMONIA (N)	OIL & GREASE	OIL & GREASE	OIL & GREASE
UNITS	ug/l	ug/l	ug/l	ug/l	ug/l	mg/l	mg/l	mg/l
SMPL TYPE	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB
FREQ.	JA/AP/JUL/OCT	JA/AP/JUL/OCT	JA/AP/JUL/OCT	JA/AP/JUL/OCT	JA/AP/JUL/OCT	JA/AP/JUL/OCT	JA/AP/JUL/OCT	JA/AP/JUL/OCT
MAY	*	*	*	*	*	*	*	*
1								
2								
3								
4								
5	<1 (**)	<1 (**)	<1 (**)					
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
MONTHLY AVG								
MONTHLY HIGH								
MONTHLY LOW								
TIMES EXCEEDED	NO LIMIT	NO LIMIT	NO LIMIT	NO LIMIT	6M-MEAN 3060 =0	MO AVG 15 =0	MO AVG 15 =0	MO AVG 15 =0
TIMES EXCEEDED					D MAX 12240 =0	D MAX 20 =0	D MAX 20 =0	D MAX 20 =0
TIMES EXCEEDED					I MAX 30600 =0			

NOTES: (*) Number of Samples taken during the day. (**) Influent metal analysis performed for comparison to effluent analysis. quarterly analysis were performed in April.

PRINCIPAL EXECUTIVE OFFICER
JAMES D. SHIFFER

SIGNATURE OF AUTHORIZED AGENT	DATE
Jack Kremayer	7/15/92

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
1102A LAUREL LANE
SAN LUIS OBISPO,CA 93401

DISCHARGE SELF MONITORING REPORT

PACIFIC GAS AND ELECTRIC CO.
DIABLO CANYON NUCLEAR POWER PLANT
PO BOX 56
AVILA BEACH,CALIF 93424

FACILITY I.D.	YEAR/ MO / DAY	YEAR/ MO /DAY	STATE CODE	NPDES PERMIT #
3 402003001	BEGINNING 92 / 05 / 01	ENDING 92 / 05 / 31	06	CA0003751

STATION	EFFLUENT 001	INFLUENT	EFFLUENT	INFLUENT	EFFLUENT 001	INFLUENT	EFFLUENT 001	INFLUENT
ANALYSIS	TITANIUM	ARSENIC	ARSENIC	CADMIUM	CADMIUM	LEAD	LEAD	ZINC
UNITS	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
SMPL TYPE	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB
FREQ.	OCTOBER	OCTOBER	OCTOBER	OCTOBER	OCTOBER	OCTOBER	OCTOBER	OCTOBER
MAY	*	*	*	*	*	*	*	*
1								
2								
3								
4								
5								3 (**)
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
MONTHLY AVG								
MONTHLY HIGH								
MONTHLY LOW								
TIMES EXCEEDED	NO LIMIT	NO LIMIT	6M-MEAN 30 =0	NO LIMIT	6M-MEAN 10 =0	NO LIMIT	6M-MEAN 10 =0	
TIMES EXCEEDED			D MAX 150 =0		D MAX 20 =0		D MAX 40 =0	
TIMES EXCEEDED			I MAX 400 =0		I MAX 50 =0		I MAX 100 =0	

REMARKS: (*) Number of Samples taken during the day. (**) Influent Zinc analysis performed to compare with effluent analysis. All other annuals will be performed in October.

PRINCIPAL EXECUTIVE OFFICER	SIGNATURE OF AUTHORIZED AGENT	DATE
JAMES D. SHIFFER	J. R. Knemayer	7/15/92

Unit: 0 NPDES
001 EFFLUENT CHLORINATION

From: 5/01/92 0:01
Through: 5/31/92 23:59

Parameter: / Sample Time:	CWP 1-1 1ST SMPL PPM	CWP 1-1 2ND SMPL PPM	CWP 1-2 1ST SMPL PPM	CWP 1-2 2ND SMPL PPM	CWP 2-1 1ST SMPL PPM	CWP 2-1 2ND SMPL PPM	CWP 2-2 1ST SMPL PPM	CWP 2-2 2ND SMPL PPM
5/01/92 10:00	0.090	0.120	0.130	0.100	0.130	0.120	0.140	0.130
5/05/92 10:00	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
5/06/92 10:00					<0.020	<0.020		
5/07/92 10:00	<0.020	0.020	0.020	0.030	<0.020	0.050		
5/08/92 10:00	<0.020	0.050	<0.020	0.070	<0.020	0.090	<0.020	0.040
5/11/92 10:00	0.020	0.030	0.020	0.030	<0.020	0.020	<0.020	<0.020
5/12/92 10:00	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.030
5/14/92 10:00	<0.020	0.020	0.020	0.020	<0.020	<0.020	<0.020	<0.020
5/18/92 10:00	<0.020	0.030	0.020	0.030	<0.020	<0.020	<0.020	<0.020
5/19/92 10:00	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
5/20/92 10:00	<0.020	<0.020	<0.020	0.020	<0.020	<0.020	<0.020	0.040
5/21/92 10:00	0.070	0.100	0.060	0.060	0.040	0.050	0.050	0.050
5/22/92 10:00	0.040	0.040	0.030	0.040	0.030	0.040	0.050	0.050
5/25/92 10:00	<0.020	0.050	0.040	0.050	0.040	0.050	0.050	0.050
5/26/92 10:00	0.050	0.080	<0.020	0.110	0.060	0.120	0.060	0.120
5/27/92 10:00	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
5/28/92 10:00	0.020	0.020	<0.020	<0.020	0.020	<0.020	0.030	0.020
5/29/92 10:00	<0.010	<0.010	<0.010	<0.010	0.020	0.020	0.015	0.030

NOTE: Individual sample results for Total Residual Chlorine (TRC) are adjusted by the following formula to account for dilution by the unchlorinated Circulating Water Pumps on the opposite operating Unit. It is assumed that no chlorine demand exists in the seawater:

$$\text{ppm TRC} \times \frac{\text{\# of operating pumps on chlorinated Unit}}{\text{\# of operating pumps for both Units}}$$

The daily average TRC value reported on the Q2 forms is the average of the adjusted TRC results for the day, which could include up to eight individual results (two analyses per chlorination cycle for a maximum of 4 cycles per day)

PACIFIC GAS & ELECTRIC - DIABLO CANYON POWER PLANT
SANITARY WASTEWATER TREATMENT SYSTEM
CONTRACT # Z78-2104-86 (REV. 5/90)

Sanitation and Operation Consultants, INC.
16340 E. Maplegrove Street
La Puente, CA 91744

Pacific Gas and Electric Co.
Contacts:
Randy Falcke (805) 595-4362
John Knemeyer (805) 595-4472

CONSTITUENTS	UNITS	FREQ.	LIMITS		SAMPLE		RESULTS
			MONTHLY AVERAGE	DAILY MAX	DATE	TIME	
1. GREASE & OIL	mg/l	WEEKLY	15	20	5-8	11:01	4.7 mg/l Ave of 3
2. "	mg/l	"	15	20	5-14	12:18	4.7 mg/l Ave of 3
3. "	mg/l	"	15	20	5-20	12:36	3.3 mg/l Ave of 3
4. "	mg/l	"	15	20	5-27	12:44	4.7 mg/l Ave of 3
5. "	mg/l	"	15	20			
1. SUSPENDED SLDS	mg/l	WEEKLY	60	N/A	5-8	10:37	13mg/l
2. "	mg/l	"	60	N/A	5-14	12:02	10 mg/l
3. "	mg/l	"	60	N/A	5-20	12:10	28 mg/l
4. "	mg/l	"	60	N/A	5-27	12:28	8 mg/l
5. "	mg/l	"	60	N/A			
1. SETTLEABLE SLD	ml/l	WEEKLY	1.0	3.0	5-8	11:03	<0.1 ml/l
2. "	ml/l	"	1.0	3.0	5-14	12:10	<0.1 ml/l
3. "	ml/l	"	1.0	3.0	5-20	12:20	<0.1 ml/l
4. "	ml/l	"	1.0	3.0	5-27	12:36	<0.1 ml/l
5. "	ml/l	"	1.0	3.0			

NOTE:
1. ANALYSIS RESULTS ABOVE THE MONTHLY AVERAGE SHALL BE REPORTED VERBALLY, WITHIN 8 HOURS, TO A PG&E CONTACT LISTED ABOVE.
2. G&O AND SUSP. SLDS. SAMPLES ARE COMPOSITES DURING 1 DISCHARGE CYCLE.

COMMENTS:

SLUDGE DISPOSAL DATA

MONTH REMOVED	VOLUME REMOVED	WEIGHT REMOVED	DISPOSAL SITE
MAY 1992		1913 lbs	WALSH - NIPOMO

DATA SHEET COMPLETED BY: Michael A Berlo DATE: 6-4-92

APPENDIX 3

Influent and Effluent Monitoring

June 1992

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
1102A LAUREL LANE
SAN LUIS OBISPO,CA 93401

DISCHARGE SELF MONITORING REPORT

PACIFIC GAS AND ELECTRIC CO.
DIABLO CANYON NUCLEAR POWER PLANT
PO BOX 56
AVILA BEACH,CALIF 93424

FACILITY I.D.	YEAR/ MO / DAY		YEAR/ MO /DAY	STATE CODE	NPDES PERMIT #
3 402003001	BEGINNING 92 / 06 / 01	ENDING	92 / 06 / 30	06	CA0003751

STATION ANALYSIS UNITS SMPL TYPE FREQ.	INFLUENT TEMPERATURE DEGREES F METERED CONTINUOUS		EFFLUENT 001 TEMPERATURE DEGREES F METERED CONTINUOUS		DELTA TEMP TEMPERATURE DEGREES F METERED CONTINUOUS		EFFLUENT 001 FLOW MGD RECORDED DAILY		INFLUENT pH pH UNITS GRAB MONTHLY		EFFLUENT 001 pH pH UNITS GRAB MONTHLY (‡‡‡)		EFFLUENT 001P pH pH UNITS GRAB MONTHLY		EFFLUENT 002 pH pH UNITS GRAB MONTHLY	
JUNE	‡		‡		‡		‡		‡		‡		‡		‡	
1		53.7		72.8		19.1		2557								
2		53.8		72.7		18.9		2557								
3		53.8		72.7		18.9		2554								
4		54.2		73.0		18.8		2556								
5		56.0		74.7		18.7		2554							2	8.0
6		56.8		75.6		18.8		2558								
7		55.3		74.5		19.2		2556								
8		54.1		72.9		18.8		2552								
9		53.7		72.6		18.9		2550		8.1		8.0				
10		55.0		73.7		18.7		2538								
11		53.7		72.8		19.1		2551								
12		52.1		71.0		18.9		2558								
13		50.9		69.6		18.7		2542								
14		50.7		67.4		16.7		2357								
[illegible]		50.7		69.3		18.6		2558								
[illegible]		50.5		69.2		18.7		2556								
17		50.6		69.2		18.6		2552								
18		51.0		69.7		18.7		2555						7.8		
19		51.0		69.7		18.7		2554								
20		50.6		69.3		18.7		2555								
21		51.8		70.4		18.6		2554								
22		52.1		70.9		18.8		2550								
23		51.8		71.1		19.3		2527								
24		52.1		70.5		18.4		2558								
25		52.1		70.8		18.7		2551								
26		51.8		70.6		18.8		2557								
27		51.6		70.4		18.8		2553								
28		52.2		70.9		18.7		2555								
29		53.1		71.8		18.7		2550								
30		54.8		73.5		18.7		2550								
31																
MONTHLY AVG		52.7		71.4		18.7		2546								8.0
MONTHLY HIGH		56.8		75.6		19.3		2558								8.0
MONTHLY LOW		50.5		67.4		17		2357								8.0
TIMES EXCEEDED		NO LIMIT		NO LIMIT		MAX 22 (‡‡)	=0	MAX 2760 = 0		NO LIMIT		NO LIMIT		NO LIMIT		NO LIMIT
TIMES EXCEEDED																
TIMES EXCEEDED																

REMARKS: (‡) Number of Samples taken during the day. (‡‡) Except During Demusseling.
(‡‡‡) Daily when discharging chemical cleaning wastes from discharges 001D, F, I, L and/or M.

PRINCIPAL EXECUTIVE OFFICER
JAMES D. SHIFFER

SIGNATURE OF AUTHORIZED AGENT	DATE
John R Kremayr	7/15/92

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
1102A LAUREL LANE
SAN LUIS OBISPO,CA 93401

DISCHARGE SELF MONITORING REPORT

PACIFIC GAS AND ELECTRIC CO.
DIABLO CANYON NUCLEAR POWER PLANT
PO BOX 56
AVILA BEACH,CALIF 93424
PAGE (M) 2

FACILITY I.D.	YEAR/ MO / DAY	YEAR/ MO /DAY	STATE CODE	NPDES PERMIT #
3 402003001	BEGINNING 92 / 06 / 01	ENDING 92 / 06 / 30	06	CA0003751

STATION	EFFLUENT 003	EFFLUENT 004	EFFLUENT 001H	EFFLUENT 001P	EFFLUENT 003	EFFLUENT 001F	EFFLUENT 001	EFFLUENT 001
ANALYSIS	pH	pH	OIL & GREASE	OIL & GREASE	OIL & GREASE	OIL & GREASE	T CHLOR RES	CHLORINE USED
UNITS	pH UNITS	pH UNITS	mg/l	mg/l	mg/l	mg/l	ug/l	lbs/day
SMPL TYPE	GRAB	GRAB	COMPOSITE	GRAB	GRAB	GRAB	GRAB	RECORDED
FREQ.	MONTHLY	MONTHLY	WEEKLY	WEEKLY (‡‡)	WEEKLY (‡‡‡)	MONTHLY	2 per CYCLE	MONTHLY
JUNE	‡	‡	‡	‡	‡	‡	‡	‡
1							8 <10	216
2							8 <10	216
3								
4			4				8 20	216
5	7.7	8.0					8 <10	216
6								
7								
8							8 10	216
9							8 20	216
10			<3				8 10	216
11							8 10	216
12							8 10	216
13								
14								
15							8 10	216
16							8 20	216
17						8		
18								
19			4				8 10	216
20								
21								
22								
23								
24								
25			4				8 20	216
26							8 <10	216
27								
28								
29							8 15	216
30							8 <10	216
31								
MONTHLY AVG			4	NO DISCHARGE	NO DISCHARGE		13	216
MONTHLY HIGH			4				20	216
MONTHLY LOW			<3				<10	216
TIMES EXCEEDED	NO LIMIT	NO LIMIT	MO AVG 15 =0	MO AVG 15 =0	MO AVG 15 =0	MO AVG 15 =0	I MAX 200 =0	NO LIMIT
TIMES EXCEEDED			D MAX 20 =0	D MAX 20 =0	D MAX 20 =0	D MAX 20 =0		
TIMES EXCEEDED								

REMARKS: (‡) Number of Samples taken during the day.
(‡‡) When 001H is discharging to 001P. (‡‡‡) When 001P is discharging to 003.

PRINCIPAL EXECUTIVE OFFICER	SIGNATURE OF AUTHORIZED AGENT	DATE
JAMES D. SHIFFER	John Kremeyer	7/15/92

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
1102A LAUREL LANE
SAN LUIS OBISPO,CA 93401

DISCHARGE SELF MONITORING REPORT

PACIFIC GAS AND ELECTRIC CO.
DIABLO CANYON NUCLEAR POWER PLANT
PO BOX 56
AVILA BEACH,CALIF 93424

FACILITY I.D.	YEAR/ MO / DAY	YEAR/ MO /DAY	STATE CODE	NPDES PERMIT #
3 402003001	BEGINNING 92 / 06 / 01	ENDING 92 / 06 / 30	06	CA0003751

STATION	EFF 001N=>003	EFF 001N=>003	EFFLUENT 001D			EFFLUENT 001F		
ANALYSIS	TOTL COLIFORM	FECAL COLIFORM	SUSPENDED SOLIDS			SUSPENDED SOLIDS		
UNITS	MPN/100ml	MPN/100ml	mg/l 1st FLTR	mg/l 2nd FLTR	mg/l NET	mg/l 1st FLTR	mg/l 2nd FLTR	mg/l NET
SMPL TYPE	GRAB	GRAB		GRAB			GRAB	
FREQ.	4 TIMES/WEEK	4 TIMES/WEEK		MONTHLY			MONTHLY	

JUNE	‡		‡		‡		‡		‡		‡		‡		‡	
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
17												19		<1		19
18																
19																
20																
21																
22																
23																
24																
25						6		<1		6						
26																
27																
28																
29																
30																
31																

MONTHLY AVG	NO DISCHARGE	NO DISCHARGE						
MONTHLY HIGH								
MONTHLY LOW								
TIMES EXCEEDED	80% SMPLS>1K	MEAN>200=0	NO LIMIT	NO LIMIT	NO AVG 30= 0	NO LIMIT	NO LIMIT	NO AVG 30 =0
TIMES EXCEEDED	=0	90% SMPLS>400			D MAX 100 =0			D MAX 100 =0
TIMES EXCEEDED	I MAX >10K=0	=0						

REMARKS: (‡) Number of Samples taken during the day.

PRINCIPAL EXECUTIVE OFFICER	SIGNATURE OF AUTHORIZED AGENT	DATE
JAMES D. SHIFFER	John L Kneemeyer	7/15/92

CALIFORNIA REGIONAL WATER QUALITY
CONTROL BOARD
CENTRAL COAST REGION
1102A LAUREL LANE
SAN LUIS OBISPO,CA 93401

DISCHARGE SELF MONITORING REPORT

PACIFIC GAS AND ELECTRIC CO.
DIABLO CANYON NUCLEAR POWER PLANT
PO BOX 56
AVILA BEACH,CALIF 93424
PAGE (N) 4

FACILITY I.D.	YEAR/ MO / DAY	YEAR/ MO /DAY	STATE CODE	NPDES PERMIT #
3 402003001	BEGINNING 92 / 06 / 01	ENDING 92 / 06 / 30	06	CA0003751

STATION	EFFLUENT 001G			EFFLUENT 001H		
ANALYSIS	SUSPENDED SOLIDS			SUSPENDED SOLIDS		
UNITS	mg/l 1st FLTR	mg/l 2nd FLTR	mg/l NET	mg/l 1st FLTR	mg/l 2nd FLTR	mg/l NET
SMPL TYPE		GRAB			GRAB	
FREQ.		MONTHLY			MONTHLY	
JUNE	‡	‡	‡	‡	‡	‡
1						
2						
3						
4						
5	<1	<1	<1			
6						
7						
8						
9				8	5	3
10						
11						
12						
13						
16						
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20						
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23						
24						
25						
26						
27						
28						
29						
30						
31						
MONTHLY AVG						
MONTHLY HIGH						
MONTHLY LOW						
TIMES EXCEEDED	NO LIMIT	NO LIMIT	MO AVG 30 =0	NO LIMIT	NO LIMIT	MO AVG 30 =0
TIMES EXCEEDED			D MAX 100 =0			D MAX 100 =0
TIMES EXCEEDED						

NOTES: (‡) Number of Samples taken during the day.

PRINCIPAL EXECUTIVE OFFICER	SIGNATURE OF AUTHORIZED AGENT	DATE
JAMES D. SHIFFER	[signature]	7/15/92

CALIFORNIA REGIONAL WATER QUALITY
CONTROL BOARD
CENTRAL COAST REGION
1102A LAUREL LANE
SAN LUIS OBISPO,CA 93401

DISCHARGE SELF MONITORING REPORT

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DIABLO CANYON NUCLEAR POWER PLANT
PO BOX 56
AVILA BEACH,CALIF 93424
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FACILITY I.D.	YEAR/ MO / DAY	YEAR/ MO /DAY	STATE CODE	NPDES PERMIT #
3 402003001	BEGINNING 92 / 06 / 01	ENDING 92 / 06 / 30	06	CA0003751

STATION	EFFLUENT 001I			EFFLUENT 001J		
ANALYSIS	SUSPENDED SOLIDS			SUSPENDED SOLIDS		
UNITS	mg/l 1st FLTR	mg/l 2nd FLTR	mg/l NET	mg/l 1st FLTR	mg/l 2nd FLTR	mg/l NET
SMPL TYPE		GRAB			GRAB	
FREQ.		MONTHLY			MONTHLY	
JUNE	#		#		#	
1						
2						
3						
4						
5						
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12						
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16						
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19						
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24						
25						
26						
27						
28						
29						
30						
31						
MONTHLY AVG	NO DISCHARGE			NO DISCHARGE		
MONTHLY HIGH						
MONTHLY LOW						
TIMES EXCEEDED	NO LIMIT	NO LIMIT	MO AVG 30 =0	NO LIMIT	NO LIMIT	MO AVG 30 =0
TIMES EXCEEDED			D MAX 100 =0			D MAX 100 =0
TIMES EXCEEDED						

NOTES: (#) Number of Samples taken during the day.

PRINCIPAL EXECUTIVE OFFICER	SIGNATURE OF AUTHORIZED AGENT	DATE
JAMES D. SHIFFER	Jack Kremayr	7/15/92

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
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SAN LUIS OBISPO,CA 93401

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DIABLO CANYON NUCLEAR POWER PLANT
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AVILA BEACH,CALIF 93424

FACILITY I.D.	YEAR/ MO / DAY	YEAR/ MO /DAY	STATE CODE	NPDES PERMIT #
3 402003001	BEGINNING 92 / 06 / 01	ENDING 92 / 06 / 30	06	CA0003751

STATION	EFFLUENT 001K			EFFLUENT 001L		
ANALYSIS	SUSPENDED SOLIDS			SUSPENDED SOLIDS		
UNITS	mg/l 1st FLTR	mg/l 2nd FLTR	mg/l NET	mg/l 1st FLTR	mg/l 2nd FLTR	mg/l NET
SMPL TYPE		GRAB			GRAB	
FREQ.		MONTHLY			MONTHLY	

JUNE	#		#		#		#		#		#		#		#	
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
17								<1		<1		2 <1				
18																
19																
20																
21																
22																
23																
24																
25								<1		<1		<1				
26																
27																
28																
29																
30																
31																

MONTHLY AVG	NO DISCHARGE					
MONTHLY HIGH						
MONTHLY LOW						
TIMES EXCEEDED	NO LIMIT	NO LIMIT	MO AVG 30 =0	NO LIMIT	NO LIMIT	MO AVG 30 =0
TIMES EXCEEDED			D MAX 100 =0			D MAX 100 =0
TIMES EXCEEDED						

NOTES: (#) Number of Samples taken during the day.

PRINCIPAL EXECUTIVE OFFICER	SIGNATURE OF AUTHORIZED AGENT	DATE
JAMES D. SHIFFER	Jack Krueger	7/15/92

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
1102A LAUREL LANE
SAN LUIS OBISPO,CA 93401

DISCHARGE SELF MONITORING REPORT

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FACILITY I.D.	YEAR/ MO / DAY	YEAR/ MO /DAY	STATE CODE	NPDES PERMIT #
3 402003001	BEGINNING 92 / 06 / 01	ENDING 92 / 06 / 30	06	CA0003751

STATION	EFFLUENT 001N			EFFLUENT 001N	EFFLUENT 001P		
ANALYSIS	SUSPENDED SOLIDS			SUSPENDED SLDS	SUSPENDED SOLIDS		
UNITS	mg/l 1st FLTR	mg/l 2nd FLTR	mg/l NET	mg/l	mg/l 1st FLTR	mg/l 2nd FLTR	mg/l NET
SMPL TYPE		GRAB		COMPOSITE		GRAB	
FREQ.		MONTHLY		WEEKLY		MONTHLY	

JUNE	‡		‡		‡		‡		‡		‡		‡		‡	
1																
2																
3																
4								8								
5																
6																
7																
8																
9																
10								15								
11																
12																
13																
14																
15																
16																
17																
18										27		24		3		
19								33								
20																
21																
22																
23																
24																
25								26								
26																
27																
28																
29																
30																
31																

MONTHLY AVG			ND DISCHARGE	21			
MONTHLY HIGH				33			
MONTHLY LOW				8			
TIMES EXCEEDED	ND LIMIT	ND LIMIT	MO AVG 30 =0	MO AVG 60 =0	ND LIMIT	ND LIMIT	MO AVG 30 =0
TIMES EXCEEDED			D MAX 100 =0				D MAX 100 =0
TIMES EXCEEDED							

KS: (‡) Number of Samples taken during the day.

PRINCIPAL EXECUTIVE OFFICER	SIGNATURE OF AUTHORIZED AGENT	DATE
JAMES D. SHIFFER	JAR Kremayer	7/15/92

CALIFORNIA REGIONAL WATER QUALITY
CONTROL BOARD
CENTRAL COAST REGION
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SAN LUIS OBISPO,CA 93401

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FACILITY I.D.	YEAR/ MO / DAY	YEAR/ MO /DAY	STATE CODE	NPDES PERMIT #
3 402003001	BEGINNING 92 / 06 / 01	ENDING 92 / 06 / 30	06	CA0003751

STATION	EFFLUENT 002			EFFLUENT 003		
ANALYSIS	SUSPENDED SOLIDS			SUSPENDED SOLIDS		
UNITS	mg/l 1st FLTR	mg/l 2nd FLTR	mg/l NET	mg/l 1st FLTR	mg/l 2nd FLTR	mg/l NET
SMPL TYPE		GRAB			GRAB	
FREQ.		MONTHLY			MONTHLY	
JUNE	‡	‡	‡	‡	‡	‡
1						
2						
3						
4						
5	8	6	2 2	15	11	4
6						
7						
8						
9						
10						
11						
12						
13						
14						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
MONTHLY AVG			2			
MONTHLY HIGH			2			
MONTHLY LOW			2			
TIMES EXCEEDED	NO LIMIT	NO LIMIT	NO AVG 30 =0	NO LIMIT	NO LIMIT	NO AVG 30 =0
TIMES EXCEEDED			I MAX 100 =0			I MAX 100 =0
TIMES EXCEEDED						

KS: (‡) Number of Samples taken during the day.

PRINCIPAL EXECUTIVE OFFICER	SIGNATURE OF AUTHORIZED AGENT	DATE
JAMES D. SHIFFER	[signature]	7/15/92

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
1102A LAUREL LANE
SAN LUIS OBISPO,CA 93401

DISCHARGE SELF MONITORING REPORT

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AVILA BEACH,CALIF 93424
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FACILITY I.D.	YEAR/ MO / DAY	YEAR/ MO /DAY	STATE CODE	NPDES PERMIT #
3 402003001	BEGINNING 92 / 06 / 01	ENDING 92 / 06 / 30	06	CA0003751

STATION	EFFLUENT 003			EFFLUENT 001N	EFFLUENT 001	EFFLUENT 001	EFFLUENT 001	EFFLUENT 001
ANALYSIS	SUSPENDED SOLIDS			SETTL SOLIDS	T CHROMIUM	COPPER	NICKEL	ZINC
UNITS	mg/l 1st FLTR	mg/l 2nd FLTR	mg/l NET	ml/l	ug/l	ug/l	ug/l	ug/l
SMPL TYPE	GRAB			GRAB	GRAB	GRAB	GRAB	GRAB
FREQ.	WEEKLY WHEN 001N & 001P => 003			WEEKLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
JUNE	#	#	#	#	#	#	#	#
1								
2								
3								
4				<0.1				
5								
6								
7								
8								
9					<6	<1	<2	<1
10				<0.1				
11								
12								
13								
14								
17								
18								
19				<0.1				
20								
21								
22								
23								
24								
25				<0.1				
26								
27								
28								
29								
30								
31								
MONTHLY AVG			NO DISCHARGE	<0.1				
MONTHLY HIGH				<0.1				
MONTHLY LOW				<0.1				
TIMES EXCEEDED	NO LIMIT	NO LIMIT	MO AVG 30 =0	MO AVG 1.0 =0	6M-MEAN 10 =0	6M-MEAN 10 =0	6M-MEAN 30 =0	6M-MEAN 70 =0
TIMES EXCEEDED			D MAX 100 =0	D MAX 3.0 =0	D MAX 40 =0	D MAX 50 =0	D MAX 100 =0	D MAX 380 =0
TIMES EXCEEDED					I MAX 100 =0	I MAX 140 =0	I MAX 260 =0	I MAX 990 =0

REMARKS: (#) Number of Samples taken during the day.

PRINCIPAL EXECUTIVE OFFICER	SIGNATURE OF AUTHORIZED AGENT	DATE
JAMES D. SHIFFER	Joel R Kremenyer	7/15/92

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
1102A LAUREL LANE
SAN LUIS OBISPO,CA 93401

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PO BOX 56
AVILA BEACH,CALIF 93424

FACILITY I.D.	YEAR/ MO / DAY	YEAR/ MO /DAY	STATE CODE	NPDES PERMIT #
3 402003001	BEGINNING 92 / 06 / 01	ENDING 92 / 06 / 30	06	CA0003751

STATION	INFLUENT	INFLUENT	INFLUENT	INFLUENT	EFFLUENT 001	EFFLUENT 001D	EFFLUENT 001G	EFFLUENT 001H
ANALYSIS	T CHROMIUM	COPPER	NICKEL	AMMONIA (N)	AMMONIA (N)	OIL & GREASE	OIL & GREASE	OIL & GREASE
UNITS	ug/l	ug/l	ug/l	ug/l	ug/l	mg/l	mg/l	mg/l
SMPL TYPE	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB
FREQ.	JA/AP/JUL/OCT	JA/AP/JUL/OCT	JA/AP/JUL/OCT	JA/AP/JUL/OCT	JA/AP/JUL/OCT	JA/AP/JUL/OCT	JA/AP/JUL/OCT	JA/AP/JUL/OCT
JUNE	*	*	*	*	*	*	*	*
1								
2								
3								
4								
5								
6								
7								
8								
9	<6 (**)	<1 (**)	<2 (**)					
10								
11								
12								
13								
14								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
MONTHLY AVG								
MONTHLY HIGH								
MONTHLY LOW								
TIMES EXCEEDED	NO LIMIT	NO LIMIT	NO LIMIT	NO LIMIT	6M-MEAN 3060 =0	MO AVG 15 =0	MO AVG 15 =0	MO AVG 15 =0
TIMES EXCEEDED					D MAX 12240 =0	D MAX 20 =0	D MAX 20 =0	D MAX 20 =0
TIMES EXCEEDED					I MAX 30600 =0			

NOTES:_(*)_Number_of_Samples_taken_during_the_day._(**)_Influent_metal_analysis_performed_for_comparison_to_effluent_analysis.___
Quarterly_analysis_were_performed_in_April._____

PRINCIPAL EXECUTIVE OFFICER	SIGNATURE OF AUTHORIZED AGENT	DATE
JAMES D. SHIFFER	Jack Knemayer	7/15/92

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
1102A LAUREL LANE
SAN LUIS OBISPO, CA 93401

DISCHARGE SELF MONITORING REPORT

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DIABLO CANYON NUCLEAR POWER PLANT
PO BOX 56
AVILA BEACH, CALIF 93424

FACILITY I.D.	YEAR/ MO / DAY	YEAR/ MO /DAY	STATE CODE	NPDES PERMIT #
3 402003001	BEGINNING 92 / 06 / 01	ENDING 92 / 06 / 30	06	CA0003751

STATION	EFFLUENT 001	INFLUENT	EFFLUENT	INFLUENT	EFFLUENT 001	INFLUENT	EFFLUENT 001	INFLUENT
ANALYSIS	TITANIUM	ARSENIC	ARSENIC	CADMIUM	CADMIUM	LEAD	LEAD	ZINC
UNITS	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
SMPL TYPE	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB
FREQ.	OCTOBER	OCTOBER	OCTOBER	OCTOBER	OCTOBER	OCTOBER	OCTOBER	OCTOBER
JUNE	*	*	*	*	*	*	*	*
1								
2								
3								
4								
5								
6								
7								
8								
9								2 (**)
10								
11								
12								
13								
14								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
MONTHLY AVG								
MONTHLY HIGH								
MONTHLY LOW								
TIMES EXCEEDED	NO LIMIT	NO LIMIT	6M-MEAN 30 =0	NO LIMIT	6M-MEAN 10 =0	NO LIMIT	6M-MEAN 10 =0	
TIMES EXCEEDED			D MAX 150 =0		D MAX 20 =0		D MAX 40 =0	
TIMES EXCEEDED			I MAX 400 =0		I MAX 50 =0		I MAX 100 =0	

REMARKS: (*) Number of Samples taken during the day. (**) Influent Zinc analyzed for comparison to effluent analysis. All other metal analysis will be performed in October.

PRINCIPAL EXECUTIVE OFFICER	SIGNATURE OF AUTHORIZED AGENT	DATE
JAMES D. SHIFFER	JoAR Kneuer	7/15/92

Unit: 0 NPDES
001 EFFLUENT CHLORINATION

From: 6/01/92 0:01
Through: 6/30/92 23:59

Parameter: / Sample Time:	CWP 1-1 1ST SMPL PPM	CWP 1-1 2ND SMPL PPM	CWP 1-2 1ST SMPL PPM	CWP 1-2 2ND SMPL PPM	CWP 2-1 1ST SMPL PPM	CWP 2-1 2ND SMPL PPM	CWP 2-2 1ST SMPL PPM	CWP 2-2 2ND SMPL PPM
6/01/92 10:00	<0.010	0.030	<0.010	0.030	<0.010	<0.010	<0.010	0.030
6/02/92 10:00	0.020	0.030	0.020	0.020	<0.010	<0.010	0.030	0.020
6/04/92 10:00	0.040	0.040	0.040	0.040	0.030	0.030	0.030	0.040
6/05/92 10:00	<0.010	0.020	0.010	0.030	<0.010	<0.010	<0.010	<0.010
6/08/92 10:00	0.020	0.030	0.030	0.030	0.020	0.030	0.020	0.030
6/09/92 10:00	0.030	0.030	0.030	0.040	0.020	0.030	0.030	0.030
6/10/92 10:00	0.020	0.030	0.020	0.030	0.020	0.020	0.020	0.030
6/11/92 10:00	0.020	0.020	0.030	0.030	0.020	0.020	0.020	0.020
6/12/92 10:00	0.030	0.030	0.030	0.040	0.020	0.020	0.020	0.030
6/15/92 10:00	0.020	0.040	0.030	0.040	0.020	0.030	0.020	0.020
6/16/92 10:00	0.020	0.040	0.040	0.050	0.030	0.040	0.040	0.040
6/19/92 10:00	0.020	0.020	0.010	0.030	0.010	0.020	0.010	0.030
6/25/92 10:00	0.030	0.030	0.030	0.040	0.030	0.040	0.030	0.040
6/26/92 10:00	0.020	0.030	<0.010	<0.010	0.030	0.040	<0.010	<0.010
6/29/92 10:00	0.010	0.020	0.020	0.030	0.010	0.010	0.010	0.030
6/30/92 10:00	<0.010	0.020	0.020	0.020	0.010	0.020	0.015	0.020

NOTE: Individual sample results for Total Residual Chlorine (TRC) are adjusted by the following formula to account for dilution by the unchlorinated Circulating Water Pumps on the opposite operating Unit. It is assumed that no chlorine demand exists in the seawater:

$$\text{ppm TRC} \times \frac{\text{\# of operating pumps on chlorinated Unit}}{\text{\# of operating pumps for both Units}}$$

The daily average TRC value reported on the Q2 forms is the average of the adjusted TRC results for the day, which could include up to eight individual results (two analyses per chlorination cycle for a maximum of 4 cycles per day)

PACIFIC GAS & ELECTRIC - DIABLO CANYON POWER PLANT
SANITARY WASTEWATER TREATMENT SYSTEM
CONTRACT # Z78-2104-86 (REV. 5/90)

Sanitation and Operation Consultants, INC.
16340 E. Maplegrove Street
La Puente, CA 91744

Pacific Gas and Electric Co.
Contacts:
Randy Falcke (805) 595-4362
John Knemeyer (805) 595-4472

CONSTITUENTS	UNITS	FREQ.	LIMITS		SAMPLE		RESULTS
			MONTHLY AVERAGE	DAILY MAX	DATE	TIME	
1. GREASE & OIL	mg/l	WEEKLY	15	20	6-4	12:32	4.0 MG/L AVE OF
2. "	mg/l	"	15	20	6-10	1:08	<3.0 MG/L " "
3. "	mg/l	"	15	20	6-19	9:46	4.0 MG/L " "
4. "	mg/l	"	15	20	6-25	10:07	4.0 MG/L " "
5. "	mg/l	"	15	20			
1. SUSPENDED SLDS	mg/l	WEEKLY	60	N/A	6-4	12:08	8.0 MG/L
2. "	mg/l	"	60	N/A	6-10	12:44	15.0 MG/L
3. "	mg/l	"	60	N/A	6-19	9:28	33.0 MG/L
4. "	mg/l	"	60	N/A	6-25	9:45	26.0 MG/1
5. "	mg/l	"	60	N/A			
1. SETTLEABLE SLD	ml/l	WEEKLY	1.0	3.0	6-4	12:25	< 0.1 ML/L
2. "	ml/l	"	1.0	3.0	6-10	1:10	< 0.1 ML/L
3. "	ml/l	"	1.0	3.0	6-19	9:52	< 0.1 ML/L
4. "	ml/l	"	1.0	3.0	6-25	10:22	< 0.1 ML/L
5. "	ml/l	"	1.0	3.0			

NOTE:
1. ANALYSIS RESULTS ABOVE THE MONTHLY AVERAGE SHALL BE REPORTED VERBALLY, WITHIN 8 HOURS, TO A PG&E CONTACT LISTED ABOVE.
2. G&O AND SUSP. SLDS. SAMPLES ARE COMPOSITES DURING 1 DISCHARGE CYCLE.

COMMENTS:

SLUDGE DISPOSAL DATA

MONTH REMOVED	VOLUME REMOVED	WEIGHT REMOVED	DISPOSAL SITE
JUNE 1992		1897 LBS	WALSH - NIPOMO

DATA SHEET COMPLETED BY: Michael J. Beckley DATE: 7-6-92

APPENDIX 4

Diablo Canyon Acute Bioassay Report

April 13, 1992

Report Issued: May 13, 1992 Report ODES-420-92.06

PACIFIC GAS AND ELECTRIC COMPANY
NOS Onsite Dosimetry and Environmental Services
P.O. Box 56
Avila Beach, California 93424

LABORATORY TEST REPORT

SUBJECT: ACUTE TOXICITY ASSESSMENT OF DISCHARGE WATER FROM DIABLO CANYON POWER PLANT, SECOND QUARTER OF 1992

Introduction:

One acute toxicity bioassay was conducted at the Nuclear Operations Support Diablo Canyon Biological Laboratory on water sampled on April 13, 1992, from Diablo Canyon Power Plant's discharge 001. This bioassay satisfies the quarterly requirement for acute toxicity testing in Diablo Canyon Power Plant's NPDES Permit.

Methods:

The bioassay was a standard 96-hour static acute toxicity test conducted using the guidelines in Kopperdahl (1976) and EPA (1985). The concentrations tested were 100 percent effluent and a dilution water control. Juvenile red abalone (*Haliotis rufescens*) were used as the test species.

Results:

The bioassay (DCPP-185) was begun within twenty-four hours of sample collection. Toxicity was 0 (no mortality was observed). All measured chemical and physical parameters fell within accepted limits. The data sheet is attached.

SUMMARY OF RESULTS

Assay No.	Date Sampled	Location	Toxicity (TU)
DCPP-185	April 13, 1992	Discharge 001	0 (no mortality)

References:

Kopperdahl, Fredric R. 1976. Guidelines for Performing Static Acute Toxicity Fish Bioassays in Municipal and Industrial Wastewaters. State Water Resources Control Board, and California Department of Fish and Game.

EPA, 1985. Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms. Third Edition. EPA/600/4-85/013.

Distribution: JVBoots
DCSommerville
RWLorenz
TCWilson
RMS Indexer

DATE May 13, 1992
TESTED BY James L. Kelly
APPROVED D Sommerville
FILE NO.

TES 70-327 (2/87)

PACIFIC GAS & ELECTRIC COMPANY

DIABLO CANYON BIOLOGICAL LABORATORY

STATIC BIOASSAY REPORT SHEET

One Concentration

ASSAY NO. DCPP-185

TEST ORGANISM DATA

TEST SPECIES Red Abalone, Haliotis rufescens

SOURCE Cayucas Abalone Farm

AVERAGE LENGTH 16.9 mm RANGE 13-23 mm

ACCLIMATION TIME 3 mo. TEMPERATURE 13.9°C

WATER SOURCE DCPP Biological Lab Pump

TEST SOLUTION DATA

SOURCE OF TEST SOLUTION Diablo Canyon Power Plant Unit 1 and Unit 2 Discharge Effluent Grab Sample

DATE/TIME SAMPLED 13 April 1992 / 10:15 am BKC

DATE STARTED 13 April 1992

TIME STARTED 15:30 HRS.

VOLUME/DEPTH OF TEST SOLUTION 16 Liter / 19 cm

RENEWAL OF TEST SOLUTION AT ~ HR. INTERVALS

TYPE OF AERATION Ring Compressor

NUMBER OF ORGANISMS PER CONCENTRATION 30

DILUTION WATER SOURCE Control, Bio Lab Pump

TEST CONCENTRATIONS

	100%	CONTROL	INITIALS
0 HOURS			
TEMP.	14.3°C	14.3°C	BKC
D.O.	7.6	8.0	BKC
pH	8.0	8.0	BKC
SALINITY/HARDNESS	33.5	32.5	BKC
24 HOURS			
ORGANISMS SURVIVING	30	30	BKC
% SURVIVL	100	100	BKC
TEMP.	13.2	13.2	BKC
D.O.	7.8	8.0	BKC
pH	7.9	8.0	BKC
48 HOURS			
ORGANISMS SURVIVING	30	30	BKC
% SURVIVAL	100	100	BKC
TEMP.	12.7	12.7	BKC
D.O.	8.0	8.2	BKC
pH	7.8	7.8	BKC
72 HOURS			
ORGANISMS SURVIVING	30	30	BKC
% SURVIVAL.	100	100	BKC
TEMP.	12.8	12.8	BKC
D.O.	8.2	8.0	BKC
pH	7.7	7.5	BKC
96 HOURS			
ORGANISMS SURVIVING	30	30	BKC
% SURVIVAL	100	100	BKC
TEMP.	12.1°C	12.1°C	BKC
D.O.	8.4	8.2	BKC
pH	7.7	7.6	BKC
SALINITY/HARDNESS	34.5	34.0	BKC

TU: 0, No Mortality

Procedure No. 2.3

Temp. Probe. No. 054

Cal. Due Date 20 May 1992

TESTED BY BK Cunningham

Reviewed by James L. Kelly

APPENDIX 5

Diablo Canyon Chronic Bioassay Report

First Quarter 1992

Report Issued: February 11, 1992 Report ODES-420-92.02

PACIFIC GAS AND ELECTRIC COMPANY
NOS Onsite Dosimetry and Environmental Services
P.O. Box 56
Avila Beach, California 93424

LABORATORY TEST REPORT

SUBJECT: CHRONIC TOXICITY ASSESSMENT OF DISCHARGE WATER FROM DIABLO CANYON POWER PLANT, FIRST QUARTER OF 1992

Introduction:

One chronic toxicity bioassay was conducted at the Nuclear Operations Support Diablo Canyon Biological Research Laboratory on water sampled January 14 through 15, 1992, from the discharge of Diablo Canyon Power Plant (DCPP). This bioassay satisfies the quarterly requirement for chronic toxicity testing in the 1990 California Ocean Plan.

Methods:

The assay was a 48-hour chronic test conducted using state approved protocols developed by the Water Resources Control Board. Larval red abalone (*Haliotis rufescens*) were used as the test organism.

Results:

The bioassay (DCPP-184) was begun within twenty-four hours of sample collection. The highest concentration that was not significantly different from the Control was the 100% dilution (No Observed Effect Concentration (NOEC) = 100%). Toxicity (TUc) = 100/NOEC = 1. All measured chemical and physical parameters fell within accepted limits. Data sheets are attached.

SUMMARY OF RESULTS

Assay No.	Date Sampled	Location	Toxicity (TUc)
DCPP-184	January 14, 1992	Discharge	1 (NOEC = 100%)

The calculated effluent concentration limit from Chapter IV, Section A of the 1990 California Ocean Plan is 5.11. Since the measured toxicity (1) is below this limit, DCPP is in compliance with the 1990 California Ocean Plan.

References:

State of California. October 1990. Procedures Manual for Conducting Toxicity Tests Developed by the Marine Bioassay Project. Water Resources Control Board.

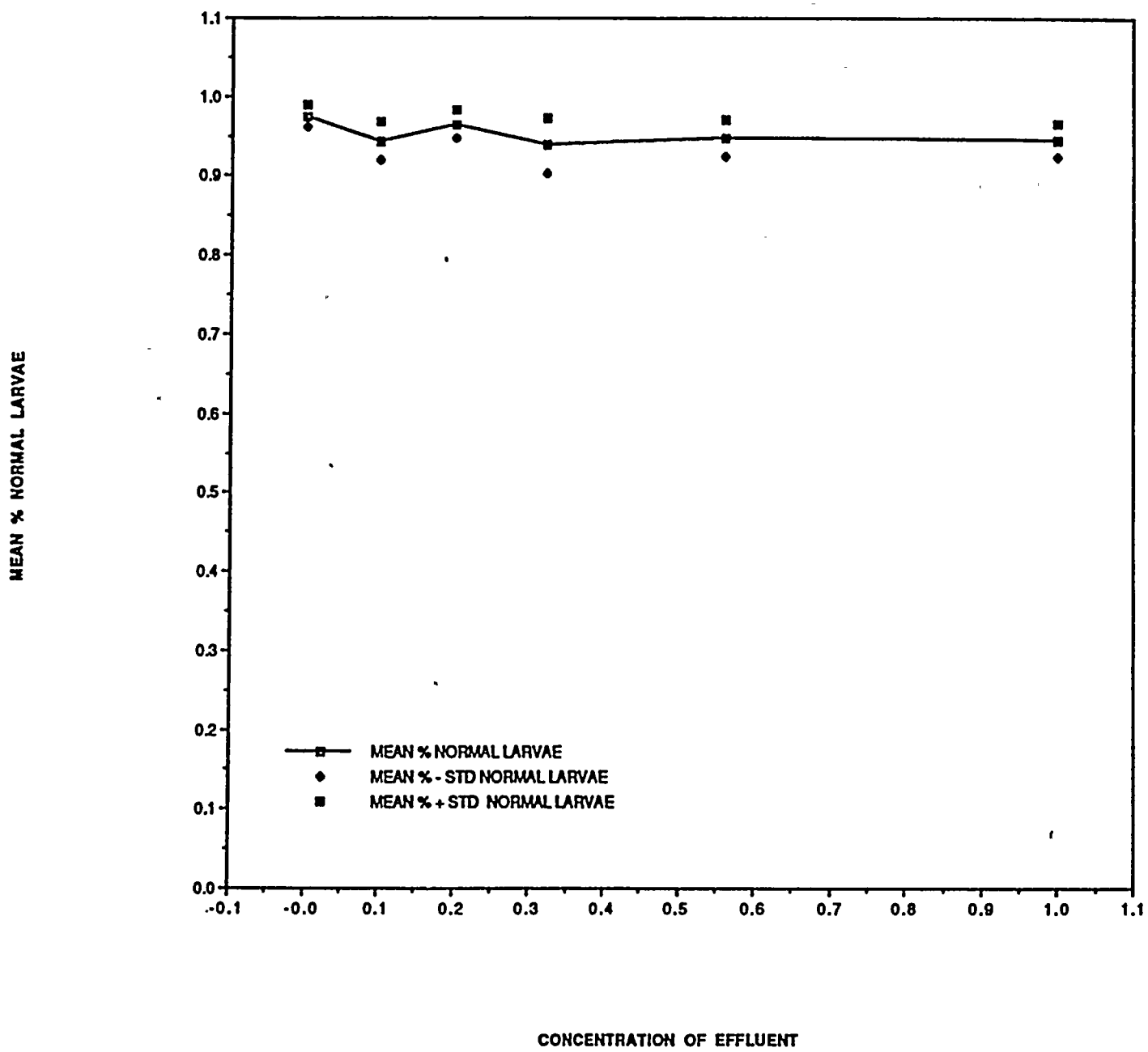
Distribution: JVBoots
DCSommerville
RWLorenz
JWWarrick
TCWilson
RMS Indexer

DATE February 11, 1992
TESTED BY James L. Kelly
APPROVED [illegible]
FILE NO.

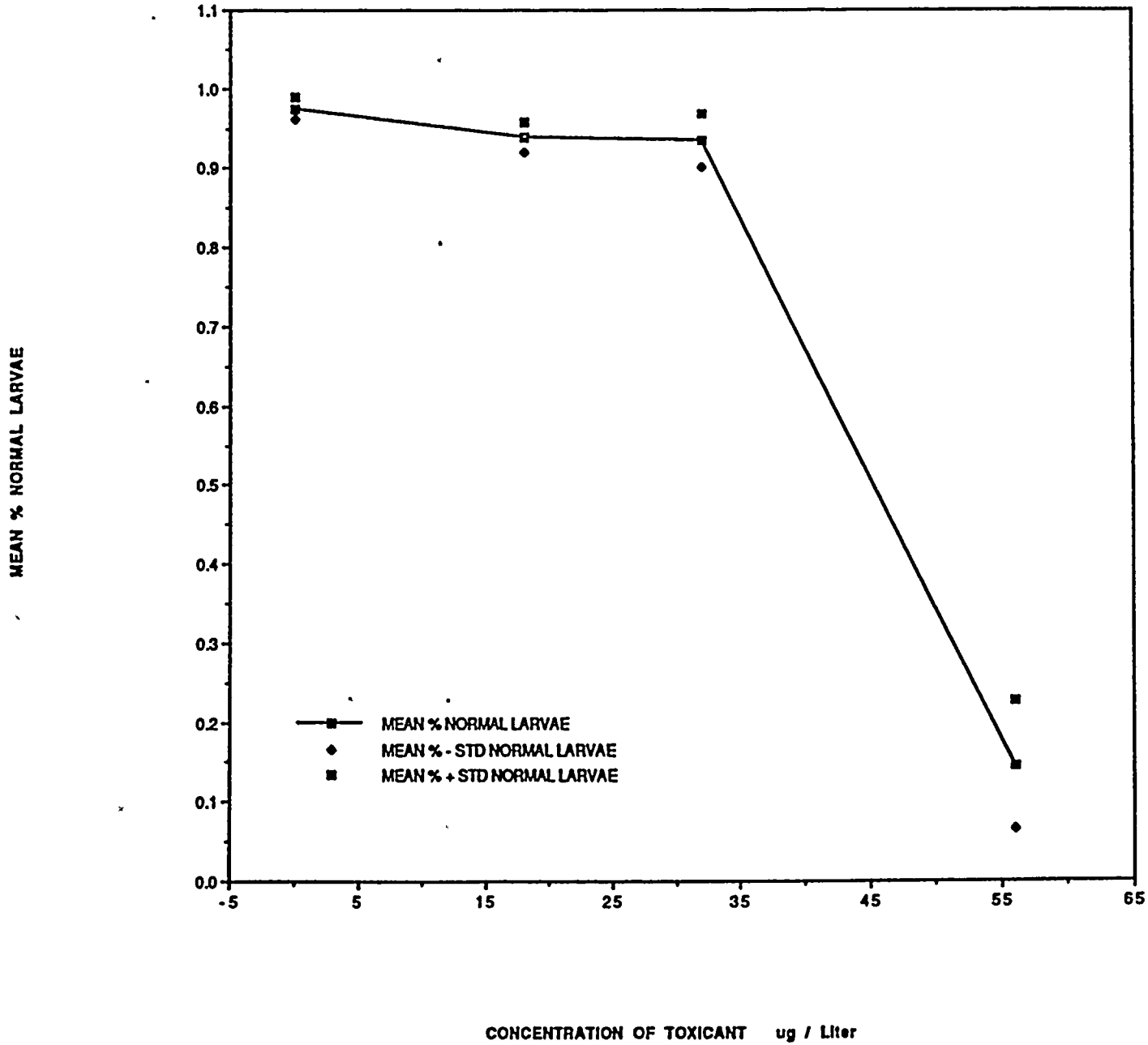
Test Container Number	Effluent Concentration Percent	Number Abnormal Larvae	Number Normal Larvae	Percentage of Normal Larvae	Mean % Normal Larvae	Standard Deviation Normal L.	Mean less Standard Deviation	Mean plus Standard Deviation	Percentage of Abnormal Larvae	Mean % Abnormal Larvae
14	0.0%	1	199	99.50%	0.975	0.013	0.962	0.988	0.50%	0.025
35		6	194	97.00%					3.00%	
44		4	196	98.00%					2.00%	
49		6	194	97.00%					3.00%	
68		8	192	96.00%					4.00%	
1	10.0%	8	192	96.00%	0.943	0.024	0.919	0.967	4.00%	0.057
18		8	192	96.00%					4.00%	
25		8	192	96.00%					4.00%	
67		15	185	92.50%					7.50%	
69		18	182	91.00%					9.00%	
4	20.0%	11	189	94.50%	0.964	0.018	0.946	0.982	5.50%	0.036
7		3	197	98.50%					1.50%	
20		10	190	95.00%					5.00%	
43		4	196	98.00%					2.00%	
64		8	192	96.00%					4.00%	
6	32.0%	11	189	94.50%	0.938	0.034	0.904	0.972	5.50%	0.062
12		5	195	97.50%					2.50%	
38		19	181	90.50%					9.50%	
41		20	180	90.00%					10.00%	
61		7	193	96.50%					3.50%	
3	56.0%	10	190	95.00%	0.947	0.024	0.923	0.971	5.00%	0.053
9		6	194	97.00%					3.00%	
40		6	194	97.00%					3.00%	
59		14	186	93.00%					7.00%	
65		17	183	91.50%					8.50%	
10	100.0%	12	188	94.00%	0.945	0.020	0.925	0.965	6.00%	0.055
21		16	184	92.00%					8.00%	
29		13	187	93.50%					6.50%	
48		8	192	96.00%					4.00%	
53		6	194	97.00%					3.00%	

Test Container Number	Effluent Concentration ug per Liter	Number Abnormal Larvae	Number Normal Larvae	Percentage of Normal Larvae	Mean % Normal Larvae	Standard Deviation Normal L.	Mean less Standard Deviation	Mean plus Standard Deviation	Percentage of Abnormal Larvae	Mean % Abnormal Larvae
14	0.0	1	199	99.50%	0.975	0.013	0.962	0.988	0.50%	0.025
35		6	194	97.00%					3.00%	
44		4	196	98.00%					2.00%	
49		6	194	97.00%					3.00%	
68		8	192	96.00%					4.00%	
8	18.0	15	185	92.50%	0.939	0.019	0.920	0.958	7.50%	0.061
11		17	183	91.50%					8.50%	
36		9	191	95.50%					4.50%	
45		8	192	96.00%					4.00%	
55		12	188	94.00%					6.00%	
17	32.0	13	187	93.50%	0.935	0.033	0.902	0.968	6.50%	0.065
31		19	181	90.50%					9.50%	
51		5	195	97.50%					2.50%	
57		8	192	96.00%					4.00%	
66		20	180	90.00%					10.00%	
2	56.0	182	18	9.00%	0.145	0.081	0.064	0.226	91.00%	0.855
39		172	28	14.00%					86.00%	
46		149	51	25.50%					74.50%	
50		162	38	19.00%					81.00%	
70		190	10	5.00%					95.00%	

DCPP-184 Chronic Abalone Bioassay Diablo Canyon Unit 1 and Unit 2 Discharge January 15-17, 1992



DCPP-184 , MBPP-45 Chronic Abalone Bioassay Zinc Sulfate Reference Toxicant data January 15-17, 1992



PHYSICAL / CHEMICAL MEASUREMENTS
Red Abalone Chronic Bioassay
Diablo Canyon Biological Laboratory

Test Start Date/Time : 15 January 1992 , 14:30.

Test Finish Date/Time : 17 January 1992 , 14:30

Bioassay Number (s) : DCPP-184 , MBPP-45

Collection Date (s) : 14 Jan. 1992 - 15 Jan. 1992

Test Organism : Haliotis rufescens

	MEASUREMENTS AT START OF ASSAY			MEASUREMENTS AT FINISH OF ASSAY			
	PH	D.OXYGEN	SALINITY	CONTAINER	PH	D.OXYGEN	SALINITY
CONTROL	7.98	7.69	32.5	68	7.97	7.48	34
REFERENCE TOXICANT : ZnSO4							
18ug / L	8.04	7.68	34	55	7.96	7.88	34.5
32ug / L	8.04	7.72	32	51	8.00	7.89	34.5
56ug / L	8.06	7.86	33.5	46	8.04	7.75	35
Effluent Source : DCPP Unit 1, Unit 2 Discharge				Collection Date/Time : 14-15 Jan.1992, 08:30			
10%	8.03	7.76	33	18	8.00	7.86	35.5
20%	8.04	7.75	34	7	7.95	7.70	34.5
32%	8.05	7.78	33.5	38	7.97	7.68	36
56%	8.06	7.65	33	9	7.98	7.81	35
100%	8.08	7.32	33	21	8.01	7.59	35.5
Effluent Source : MBPP Composite Discharge				Collection Date/Time : 14-15 Jan. 1992, 07:00			
10%	8.02	7.72	33.5	47	7.98	7.71	34
20%	8.05	7.37	34	34	8.00	7.64	36
32%	8.05	7.90	34	26	8.00	7.66	35.5
56%	8.04	7.66	34.5	62	7.99	7.69	35
100%	8.06	8.01	33.5	54	8.01	7.86	35

Hourly Temperature Data

Hour 01	Hour 13	Hour 25	Hour 37
14.92	15.09	14.91	15.15
14.84	15.11	14.96	15.10
14.93	15.09	14.99	15.16
15.02	15.11	15.05	15.08
15.12	15.04	15.16	15.11
15.13	15.09	15.21	15.13
15.09	15.10	15.25	15.10
15.11	15.22	15.23	15.16
15.16	14.92	15.21	15.11
15.10	14.65	15.14	15.08
15.11	14.77	15.16	14.99
15.14	14.85	15.16	14.93
Hour 12	Hour 24	Hour36	Hour48

Mean Temperature 48 Hour Static Test

15.07 Degrees Celcius

Analyzed By : BK CUNNINGHAM

Date Analyzed : 15 January 1992 , 17 January 1992

Reviewed by : James L. Kelly

Date Reviewed : January 23, 1992

ABALONE SPAWN AND FERTILIZATION WORKSHEET

Red Abalone Chronic Bioassay
Diablo Canyon Biological Laboratory

Test Start Date/Time : 15 JAN 1992, 14:30 Bioassay Number(s) : DCPP - 184, MBPP - 45

Test Finish Date/Time : 17 JAN 1992, 14:30 Effluent Source (s) : DCPP, MBPP DISCHARGE

Test Organism : Haliotis rufescens Collection Date/Time : 14 JAN - 15 JAN 1992

	Males Used	Gonad Index	Date Last Used		Females Used	Gonad Index	Date Last Used
1	UNMARKED	4		1	UNMARKED	4	
2		4		2		4	
3		3		3		4	
4		3		4		3	

Method of spawning : (✓) Peroxide ( ) UV irradiated seawater ( ) Other _____

Beginning of spawning treatment : 10:25

First male spawns : 12:30

First female spawns : 12:55

ADDITION OF SPERM TO EGGS 13:20

Multiple spawners : Male : 12:40 Female : 13:10

Condition of spawn : Males : ( ) light (✓) moderate ( ) heavy : Females : ( ) light ( ) moderate (✓) heavy

Time fertilization complete : 13:40

Condense the fertilized eggs into a beaker and determine the density. Counts of 1 ml samples :

1: 517 2 : 616 3 : 549 4 : 601 5 : 623

Mean : 581.2 STD : _____ Σ = 2906

Add 1000 embryos to each test container :
Pipette the volume calculated below from the well-mixed beaker sampled above.

(1000 embryos/test container) / (581 #embryos/ml) = 1.72 ml/test container

Temperature of embryos : 15.5° Celcius Temperature of test containers : 14.87° Celcius

Time all containers in incubator : 14:30

Comments : FOLLOWING FERTILIZATION APPROXIMATELY 15-20 SPERM IN CONTACT WITH OUTER MEMBRANE OF EGG. 1.8 MILLILITERS OF EMBRYO SOLUTION ADDED TO EACH TEST CONTAINER

Prepared By : BK CUNNINGHAM Reviewed By : James L. Kelly

Date Prepared : 15 JANUARY 1992 Date Reviewed : January 23, 1992

DCPP First Quarter 1992 Chronic
File: DCPP-184 Transform: ARC SINE(SQUARE ROOT(Y))

Shapiro Wilks test for normality

D = 0.072

W = 0.934

Critical W (P = 0.05) (n = 30) = 0.927
Critical W (P = 0.01) (n = 30) = 0.900

Data PASS normality test at P=0.01 level. Continue analysis.

DCPP First Quarter 1992 Chronic
File: DCPP-184 Transform: ARC SINE(SQUARE ROOT(Y))

Bartletts test for homogeneity of variance

Calculated B statistic = 1.11
Table Chi-square value = 15.09 (alpha = 0.01)
Table Chi-square value = 11.07 (alpha = 0.05)

Average df used in calculation ==> df (avg n - 1) = 4.00
Used for Chi-square table value ==> df (#groups-1) = 5

Data PASS homogeneity test at 0.01 level. Continue analysis.

DCPP First Quarter 1992 Chronic
File: DCPP-184 Transform: ARC SINE(SQUARE ROOT(Y))

ANOVA TABLE

SOURCE	DF	SS	MS	F
Between	5	0.033	0.007	2.333
Within (Error)	24	0.072	0.003	
Total	29	0.105		

Critical F value = 2.62 (0.05,5,24)
Since F < Critical F FAIL TO REJECT Ho:All groups equal

DCPP First Quarter 1992 Chronic
File: DCPP-184 Transform: ARC SINE(SQUARE ROOT(Y))

DUNNETTS TEST - TABLE 1 OF 2 Ho:Control<Treatment

GROUP	IDENTIFICATION	TRANSFORMED MEAN	MEAN CALCULATED IN ORIGINAL UNITS	T STAT	SIG
1	Control	1.418	0.975		
2	10%	1.334	0.943	2.448	*
3	20%	1.385	0.964	0.959	
4	32%	1.327	0.938	2.636	*
5	56%	1.343	0.947	2.166	
6	100%	1.337	0.945	2.340	

Dunnett table value = 2.36 (1 Tailed Value, P=0.05, df=24,5)

DCPP First Quarter 1992 Chronic
File: DCPP-184 Transform: ARC SINE(SQUARE ROOT(Y))

STEELS MANY-ONE RANK TEST - Ho:Control<Treatment

GROUP	IDENTIFICATION	TRANSFORMED MEAN	RANK SUM	CRIT. VALUE	df	SIG
1	Control	1.418				
2	10%	1.334	16.50	16.00	5.00	
3	20%	1.385	23.00	16.00	5.00	
4	32%	1.327	19.00	16.00	5.00	
5	56%	1.343	19.00	16.00	5.00	
6	100%	1.337	17.50	16.00	5.00	

Critical values use k = 5, are 1 tailed, and alpha = 0.05

MBPP & DCPP First Quarter 1992 Reference Toxicant
File: ZMBDC-45.184 Transform: ARC SINE(SQUARE ROOT(Y))

Shapiro Wilks test for normality

D = 0.093

W = 0.986

Critical W (P = 0.05) (n = 20) = 0.905
Critical W (P = 0.01) (n = 20) = 0.868

Data PASS normality test at P=0.01 level. Continue analysis.

MBPP & DCPP First Quarter 1992 Reference Toxicant
File: ZMBDC-45.184 Transform: ARC SINE(SQUARE ROOT(Y))

Bartletts test for homogeneity of variance

Calculated B statistic = 5.02
Table Chi-square value = 11.34 (alpha = 0.01)
Table Chi-square value = 7.81 (alpha = 0.05)

Average df used in calculation ==> df (avg n - 1) = 4.00
Used for Chi-square table value ==> df (#groups-1) = 3

Data PASS homogeneity test at 0.01 level. Continue analysis.

MBPP & DCPP First Quarter 1992 Reference Toxicant
File: ZMBDC-45.184 Transform: ARC SINE(SQUARE ROOT(Y))

ANOVA TABLE

SOURCE	DF	SS	MS	F
Between	3	3.598	1.199	199.833
Within (Error)	16	0.093	0.006	
Total	19	3.691		

Critical F value = 3.24 (0.05,3,16)
Since F > Critical F REJECT Ho:All groups equal

MBPP & DCPP First Quarter 1992 Reference Toxicant
File: ZMBDC-45.184 Transform: ARC SINE(SQUARE ROOT(Y))

DUNNETTS TEST - TABLE 1 OF 2 Ho:Control<Treatment

GROUP	IDENTIFICATION	TRANSFORMED MEAN	MEAN CALCULATED IN ORIGINAL UNITS	T STAT	SIG
1	Control	1.418	0.975		
2	18 ug/l	1.324	0.939	1.934	
3	32 ug/l	1.320	0.935	2.004	
4	56 ug/l	0.379	0.145	21.220	*

Dunnett table value = 2.23 (1 Tailed Value, P=0.05, df=16,3)

MBPP & DCPP First Quarter 1992 Reference Toxicant
File: ZMBDC-45.184 Transform: ARC SINE(SQUARE ROOT(Y))

STEELS MANY-ONE RANK TEST - Ho:Control<Treatment

GROUP	IDENTIFICATION	TRANSFORMED MEAN	RANK SUM	CRIT. VALUE	df	SIG
1	Control	1.418				
2	18 ug/l	1.324	15.50	17.00	5.00	*
3	32 ug/l	1.320	18.50	17.00	5.00	
4	56 ug/l	0.379	15.00	17.00	5.00	*

Critical values use k = 3, are 1 tailed, and alpha = 0.05

APPENDIX 6

Diablo Canyon Chronic Bioassay Report

Second Quarter 1992

Report Issued: May 13, 1992 Report ODES-420-92.07

PACIFIC GAS AND ELECTRIC COMPANY
NOS Onsite Dosimetry and Environmental Services
P.O. Box 56
Avila Beach, California 93424

LABORATORY TEST REPORT

SUBJECT: CHRONIC TOXICITY ASSESSMENT OF DISCHARGE WATER FROM DIABLO CANYON POWER PLANT, SECOND QUARTER OF 1992

Introduction:

One chronic toxicity bioassay was conducted at the Nuclear Operations Support Diablo Canyon Biological Research Laboratory on water sampled April 14 through 15, 1992, from Diablo Canyon Power Plant's Discharge 001. This bioassay satisfies the quarterly requirement for chronic toxicity testing in the 1990 California Ocean Plan.

Methods:

The bioassay was a 48-hour chronic test conducted using a state approved protocol developed by the Water Resources Control Board. Larval red abalone (*Haliotis rufescens*) were used as the test organism.

Results:

The bioassay (DCPP-186) was begun within thirty-six hours of sample collection. The highest concentration that was not significantly different from the Control was the 100% concentration (No Observed Effect Level (NOEL) = 100%). Toxicity (TUc) = 100/NOEL = 1. Reference toxicant toxicity and all measured chemical and physical parameters fell within accepted limits. The data were analysed using ANOVA with Dunnet's Test. The test met all specified acceptance criteria. Data sheets are attached.

SUMMARY OF RESULTS

Test Solution	Assay No.	Date Sampled	Toxicity (TUc)
Discharge 001	DCPP-186	April 14-15, 1992	1.0 (NOEL = 100%)
Reference Toxicant	NA	April 16, 1992	3.13 (NOEL = 32%)

The calculated effluent concentration limit from Chapter IV, Section A of the 1990 California Ocean Plan is 5.11. Since the measured toxicity (1) is below this limit, DCPP is in compliance with the 1990 California Ocean Plan.

References:

State of California. October 1990. Procedures Manual for Conducting Toxicity Tests Developed by the Marine Bioassay Project. Water Resources Control Board.

Distribution: JVBoots, DCSommerville, RWLorenz, JWWarrick, TCWilson, RMS Indexer

DATE May 13, 1992
TESTED BY James L. Kelly
APPROVED D C Sommerville
FILE NO.

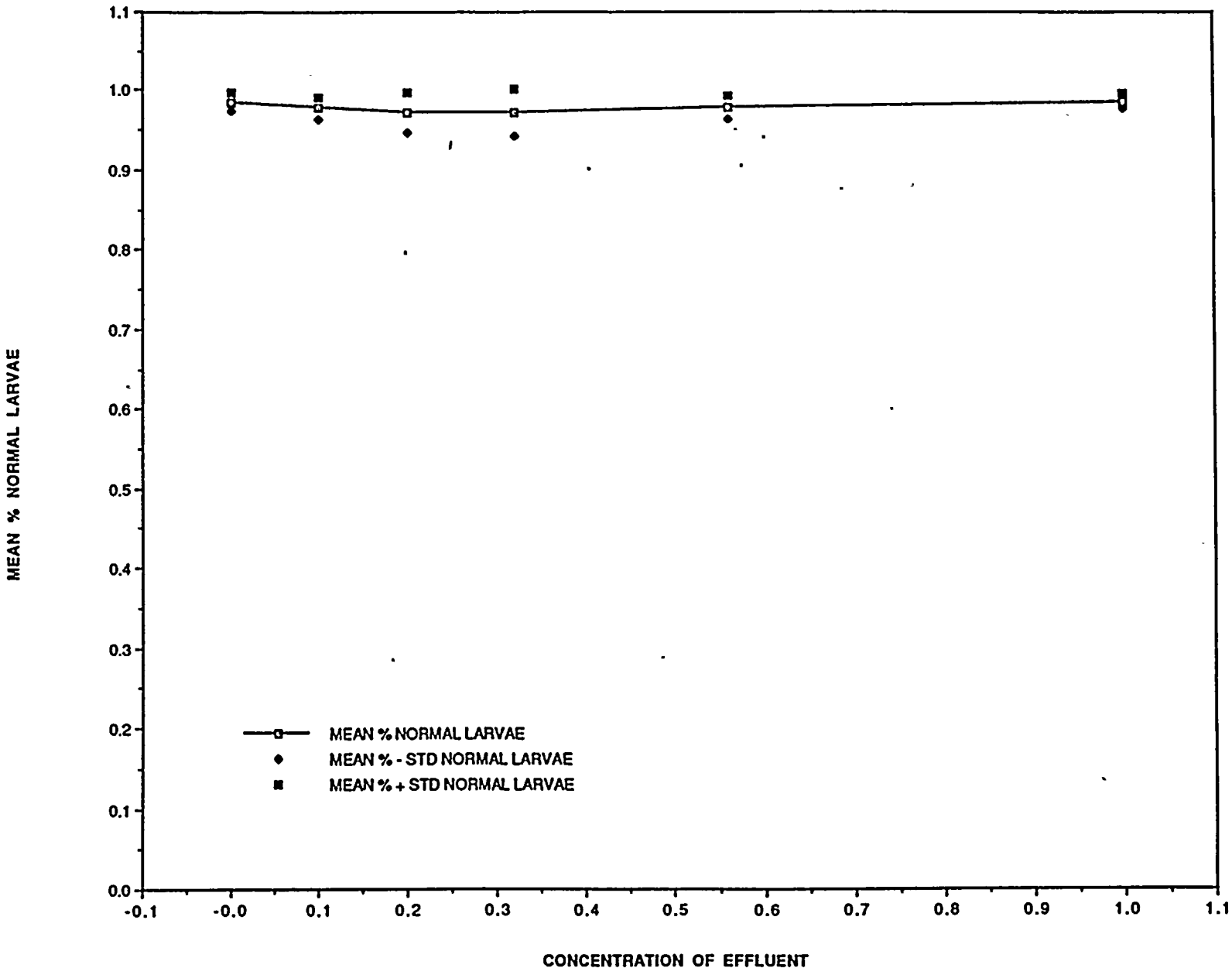
DCPP - 186 Chronic Abalone Bioassay Diablo Canyon Power P. 1 and Unit 2 Discharge Effluent 24 Hour Composite Sample

Test Container Number	Effluent Concentration Percent	Number Abnormal Larvae	Number Normal Larvae	Percentage of Normal Larvae	Mean % Normal Larvae	Standard Deviation Normal	Mean less Standard Deviation	Mean plus Standard Deviation	Percentage of Abnormal Larvae	Mean % Abnormal Larvae
5	0.0%	2	198	99.00%	0.985	0.012	0.973	0.997	1.00%	0.015
6		1	199	99.50%					0.50%	
24		3	197	98.50%					1.50%	
38		2	198	99.00%					1.00%	
40		7	193	96.50%					3.50%	
32	10.0%	8	192	96.00%	0.977	0.013	0.964	0.990	4.00%	0.023
45		4	196	98.00%					2.00%	
46		1	199	99.50%					0.50%	
52		4	196	98.00%					2.00%	
61		6	194	97.00%					3.00%	
16	20.0%	2	198	99.00%	0.972	0.025	0.947	0.997	1.00%	0.028
17		8	192	96.00%					4.00%	
51		13	187	93.50%					6.50%	
69		1	199	99.50%					0.50%	
70		4	196	98.00%					2.00%	
29	32.0%	4	196	98.00%	0.972	0.030	0.942	1.002	2.00%	0.028
31		5	195	97.50%					2.50%	
37		2	198	99.00%					1.00%	
49		16	184	92.00%					8.00%	
60		1	199	99.50%					0.50%	
18	56.0%	4	196	98.00%	0.977	0.015	0.962	0.992	2.00%	0.023
43		9	191	95.50%					4.50%	
44		3	197	98.50%					1.50%	
47		1	199	99.50%					0.50%	
58		6	194	97.00%					3.00%	
8	100.0%	3	197	98.50%	0.985	0.009	0.976	0.994	1.50%	0.015
15		1	199	99.50%					0.50%	
34		6	194	97.00%					3.00%	
36		3	197	98.50%					1.50%	
59		2	198	99.00%					1.00%	

Test Container Number	Effluent Concentration ug per Liter	Number Abnormal Larvae	Number Normal Larvae	Percentage of Normal Larvae	Mean % Normal Larvae	Standard Deviation Normal L.	Mean less Standard Deviation	Mean plus Standard Deviation	Percentage of Abnormal Larvae	Mean % Abnormal Larvae
5	0.0	2	198	99.00%	0.985	0.012	0.973	0.997	1.00%	0.015
6		1	199	99.50%					0.50%	
24		3	197	98.50%					1.50%	
38		2	198	99.00%					1.00%	
40		7	193	96.50%					3.50%	
4	18.0	4	196	98.00%	0.981	0.010	0.971	0.991	2.00%	0.019
10		2	198	99.00%					1.00%	
27		2	198	99.00%					1.00%	
50		7	193	96.50%					3.50%	
57		4	196	98.00%					2.00%	
1	32.0	3	197	98.50%	0.986	0.012	0.974	0.998	1.50%	0.014
23		4	196	98.00%					2.00%	
30		6	194	97.00%					3.00%	
39		1	199	99.50%					0.50%	
62		0	200	100.00%					0.00%	
7	56.0	139	61	30.50%	0.279	0.091	0.188	0.370	69.50%	0.721
11		138	62	31.00%					69.00%	
21		147	53	26.50%					73.50%	
35		173	27	13.50%					86.50%	
66		124	76	38.00%					62.00%	

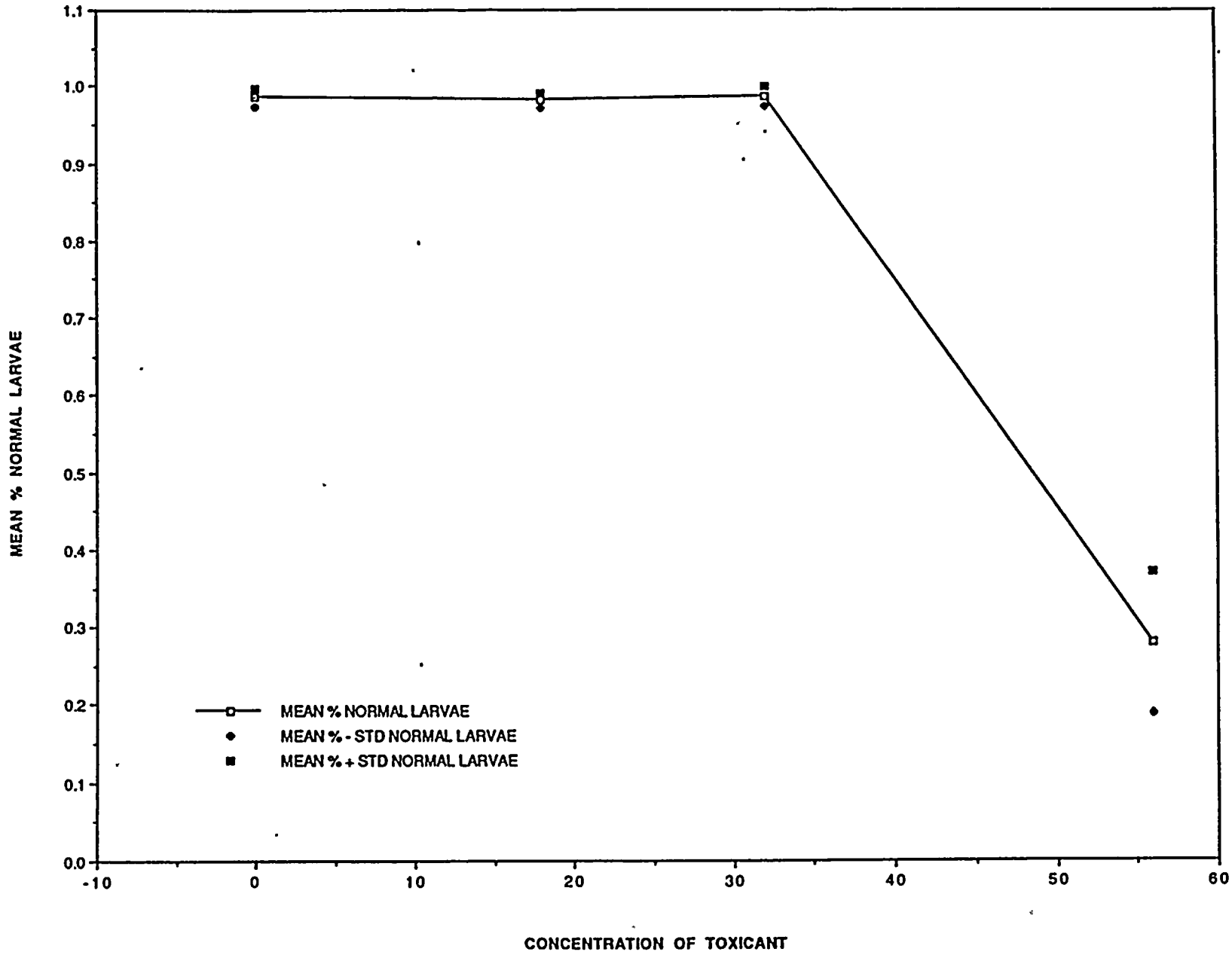
CPP - 186 Chronic Abalone Bioassay Diablo Canyon Power Plant Unit 1 and Unit 2 Discharge Effluent

April 16 - 18 , 1992



DCPP - 186 Chronic Abalone Bioassay Zinc Reference. Toxicant Preparations

April 16 - 18 , 1992



PHYSICAL / CHEMICAL MEASUREMENTS
Red Abalone Chronic Bioassay
Diablo Canyon Biological Laboratory

Test Start Date/Time : 16 April 1992 @ 14:30

Bioassay Number (s) : DCPP - 186

Test Finish Date/Time : 18 April 1992 @ 14:30

Collection Date (s) : April 14-15 , 1992 @ 11:00

Test Organism : Haliotis rufescens

	MEASUREMENTS AT START OF ASSAY			MEASUREMENTS AT FINISH OF ASSAY			
	PH	D.OXYGEN	SALINITY	CONTAINER	PH	D.OXYGEN	SALINITY
CONTROL	7.9	7	34	5	7.8	7.3	35.5

REFERENCE TOXICANT : ZnSO4

18ug / L	7.9	7.3	34	50	7.8	7.4	35
32ug / L	7.9	7.3	34	39	7.8	7.5	35
56ug / L	7.9	7.2	34	66	7.8	7.4	35

Effluent Source : DCPP Unit 1 and Unit 2 Discharge. Collection Date/Time : April 14-15, 1992 @ 11:00

10%	7.9	7.2	33	45	7.7	7.5	34
20%	7.8	7.1	33	70	7.7	7.3	34
32%	7.9	7.1	32.5	37	7.8	7.4	34.5
56%	7.9	7.1	32.5	43	7.8	7.3	34
100%	7.9	6.9	32.5	36	7.8	7.2	35

Hourly Temperature Data

Hour 01	Hour 13	Hour 25	Hour 37
15.33	14.94	14.77	15.01
15.30	14.94	14.92	15.02
15.16	14.95	14.99	14.99
15.02	14.93	14.90	14.99
14.95	14.92	14.86	14.99
14.90	14.85	14.84	14.94
14.87	14.78	14.87	14.86
14.89	14.68	14.92	14.74
14.88	14.60	14.92	14.66
14.90	14.61	14.91	14.65
14.89	14.67	14.94	14.65
14.90	14.64	14.98	14.65
Hour 12	Hour 24	Hour 36	Hour 48

Mean Temperature 48 Hour Static Test

14.88 Degrees Celcius

Standard Deviation Hourly Temperature

0.16

Analyzed By : BK Cunningham

Date Analyzed : April 15, 1992 . April 18, 1992

Reviewed by : James L. Kelly

Date Reviewed : April 22, 1992

ABALONE SPAWN AND FERTILIZATION WORKSHEET
Red Abalone Chronic Bioassay
Diablo Canyon Biological Laboratory

Test Start Date/Time : 16 Apr 1992, 14:30 Bioassay Number(s) : DCPP-186 , MBPP-46

Test Finish Date/Time : 18 Apr 1992, 14:30 Effluent Source(s) : DCPP Discharge , MBPP Discharge

Test Organism : Haliotis rufescens Collection Date/Time : Apr.14-15, 1992 : 24 Hr Composite

	Males Used	Gonad Index	Date Last Used		Females Used	Gonad Index	Date Last Used
1	Unmarked	4		1	19F	4	
2	Unmarked	3		2	Unmarked	4	
3	Unmarked	3		3	Unmarked	4	
4	Unmarked	3		4	Unmarked	4	

Method of spawning : (✓) Peroxide ( ) UV irradiated seawater ( ) Other _____

Beginning of spawning treatment : 09:20

First male spawns : 12:35

First female spawns : 12:50

Comments : Peroxide Flushed out 12:00
No Second Male, 1 of 7 Spawned

Multiple spawners : Male : 0 Female : 13:10

Condition of spawn : Males : (✓) light ( ) moderate ( ) heavy : Females : ( ) light ( ) moderate (✓) heavy

Sperm Added to Egg Container : 13:20 Time fertilization complete : 13:35

Condense the fertilized eggs into a beaker and determine the density. Counts of 1 ml samples :

1: 242 2 : 289 3 : 213 4 : 275 5 : 211

Mean : 246 STD : _____

Add 1000 embryos to each test container :
Pipette the volume calculated below from the well-mixed beaker sampled above.

(1000 embryos/test container) / (246 #embryos/ml) = 4.06 ml/test container

Temperature of embryos : 14.5° Celcius Temperature of test containers : 15.13° Celcius

Time all containers in incubator : 14:30

Comments : Due to failure to induce successful spawn of males on previous day, 3 Additional Unmarked males, gonad index 3, placed in a second isolated spawn bucket and treated with peroxide (same time interval.) in order to increase potential for male spawn. 4.0 ml of Embryo Solution Added.

Prepared By : B K Cunningham Reviewed By : James L. Kelly

Date Prepared : April 16 , 1992 Date Reviewed : April 22, 1992

DCPP-186 DCPP 2nd Quarter 1992 Chronic Bioassay
File: DCPP-186 Transform: ARC SINE(SQUARE ROOT(Y))

Shapiro Wilks test for normality

D = 0.085

W = 0.959

Critical W (P = 0.05) (n = 30) = 0.927
Critical W (P = 0.01) (n = 30) = 0.900

Data PASS normality test at P=0.01 level. Continue analysis.

DCPP-186 DCPP 2nd Quarter 1992 Chronic Bioassay
File: DCPP-186 Transform: ARC SINE(SQUARE ROOT(Y))

Bartletts test for homogeneity of variance

Calculated B statistic = 3.51
Table Chi-square value = 15.09 (alpha = 0.01)
Table Chi-square value = 11.07 (alpha = 0.05)

Average df used in calculation ==> df (avg n - 1) = 4.00
Used for Chi-square table value ==> df (#groups-1) = 5

Data PASS homogeneity test at 0.01 level. Continue analysis.

DCPP-186 DCPP 2nd Quarter 1992 Chronic Bioassay
File: DCPP-186 Transform: ARC SINE(SQUARE ROOT(Y))

ANOVA TABLE

SOURCE	DF	SS	MS	F
Between	5	0.007	0.001	0.250
Within (Error)	24	0.085	0.004	
Total	29	0.092		

Critical F value = 2.62 (0.05,5,24)
Since F < Critical F FAIL TO REJECT Ho:All groups equal

DCPP-186 DCPP 2nd Quarter 1992 Chronic Bioassay
File: DCPP-186 Transform: ARC SINE(SQUARE ROOT(Y))

DUNNETTS TEST - TABLE 1 OF 2 Ho:Control<Treatment

GROUP	IDENTIFICATION	TRANSFORMED MEAN	MEAN CALCULATED IN ORIGINAL UNITS	T STAT	SIG
1	Control	1.454	0.985		
2	10%	1.425	0.977	0.740	
3	20%	1.416	0.972	0.950	
4	32%	1.419	0.972	0.881	
5	56%	1.426	0.977	0.706	
6	100%	1.453	0.985	0.043	

Dunnett table value = 2.36 (1 Tailed Value, P=0.05, df=24,5)

DCPP-186 DCPP 2nd Quarter 1992 Chronic Bioassay
File: DCPP-186 Transform: ARC SINE(SQUARE ROOT(Y))

STEELS MANY-ONE RANK TEST - Ho:Control<Treatment

GROUP	IDENTIFICATION	TRANSFORMED MEAN	RANK SUM	CRIT. VALUE	df	SIG
1	Control	1.454				
2	10%	1.425	22.50	16.00	5.00	
3	20%	1.416	23.50	16.00	5.00	
4	32%	1.419	24.50	16.00	5.00	
5	56%	1.426	23.00	16.00	5.00	
6	100%	1.453	26.50	16.00	5.00	

Critical values use k = 5, are 1 tailed, and alpha = 0.05

ZnSO4 Reference Toxicant for DCPP-186
File: ZDCMB186.46 Transform: ARC SINE(SQUARE ROOT(Y))

Shapiro Wilks test for normality

D = 0.072

W = 0.928

Critical W (P = 0.05) (n = 20) = 0.905
Critical W (P = 0.01) (n = 20) = 0.868

Data PASS normality test at P=0.01 level. Continue analysis.

ZnSO4 Reference Toxicant for DCPP-186
File: ZDCMB186.46 Transform: ARC SINE(SQUARE ROOT(Y))

Bartletts test for homogeneity of variance

Calculated B statistic = 5.31
Table Chi-square value = 11.34 (alpha = 0.01)
Table Chi-square value = 7.81 (alpha = 0.05)

Average df used in calculation ==> df (avg n - 1) = 4.00
Used for Chi-square table value ==> df (#groups-1) = 3

Data PASS homogeneity test at 0.01 level. Continue analysis.

ZnSO4 Reference Toxicant for DCPP-186
File: ZDCMB186.46 Transform: ARC SINE(SQUARE ROOT(Y))

ANOVA TABLE

SOURCE	DF	SS	MS	F
Between	3	3.036	1.012	253.000
Within (Error)	16	0.072	0.004	
Total	19	3.107		

Critical F value = 3.24 (0.05,3,16)
Since F > Critical F REJECT Ho:All groups equal

ZnSO4 Reference Toxicant for DCPP-186
File: ZDCMB186.46 Transform: ARC SINE(SQUARE ROOT(Y))

DUNNETTS TEST - TABLE 1 OF 2 Ho:Control<Treatment

GROUP	IDENTIFICATION	TRANSFORMED MEAN	MEAN CALCULATED IN ORIGINAL UNITS	T STAT	SIG
1	Control	1.454	0.985		
2	18 ug/l	1.436	0.981	0.451	
3	32 ug/l	1.462	0.986	-0.186	
4	56 ug/l	0.551	0.279	22.576	*

Dunnett table value = 2.23 (1 Tailed Value, P=0.05, df=16,3)

ZnSO4 Reference Toxicant for DCPP-186
File: ZDCMB186.46 Transform: ARC SINE(SQUARE ROOT(Y))

STEELS MANY-ONE RANK TEST - Ho:Control<Treatment

GROUP	IDENTIFICATION	TRANSFORMED MEAN	RANK SUM	CRIT. VALUE	df	SIG
1	Control	1.454				
2	18 ug/l	1.436	23.50	17.00	5.00	
3	32 ug/l	1.462	28.00	17.00	5.00	
4	56 ug/l	0.551	15.00	17.00	5.00	*

Critical values use k = 3, are 1 tailed, and alpha = 0.05

APPENDIX 7

Stratified Water Temperature

June 29, 1992

DIABLO CANYON POWER PLANT
RECEIVING WATER
STRATIFIED WATER TEMPERATURES

June 29, 1992

On June 29, 1992, stratified water temperatures were measured at six stations inside Diablo Cove (Figure 1). Swell was from the northwest at a height of about 2-3 feet. There was light wind during the sampling. Air temperature was approximately 65 - 70 degrees Fahrenheit.

Water temperatures were measured at one meter depth intervals utilizing a Pacer Systems, Inc. Model 1003/TDR temperature and depth recorder. This instrument was used in place of the electronic bathythermograph, which was malfunctioning. The Pacer TDR is a self-contained unit with a temperature sensor which has a response time of 60 seconds at full scale, which is 30°C, and an accuracy to ±0.1°C. Due to the slower response time of this unit when compared to the bathythermograph, the TDR was lowered to depth a meter at a time and held at that depth for 60 seconds. Response time within the temperature range recorded appeared to be less than 10 seconds. This procedure was followed at each station, except at Station 12 where the unit was lowered 2 meters at a time after the first 6 meters. Temperatures at all stations were recorded from the surface to bottom according to the requirements of the plant's NPDES Permit.

Instrument depth is determined by a pressure transducer with a resolution of 0.02% (full scale). The TDR's yearly temperature and pressure calibration is traceable to the National Institute of Standards and Technology.

Water temperatures (Table 1) ranged from a high of 68.2°F at the surface at Station 10 to a low of 52.6°F on the bottom at Stations 11 and 12. The range of water temperatures measured between the top and bottom at any one station varied from 15.4°F at Station 10 to 8.9°F at Station 14. Stratification of the water column is influenced by the thermal discharge plume.

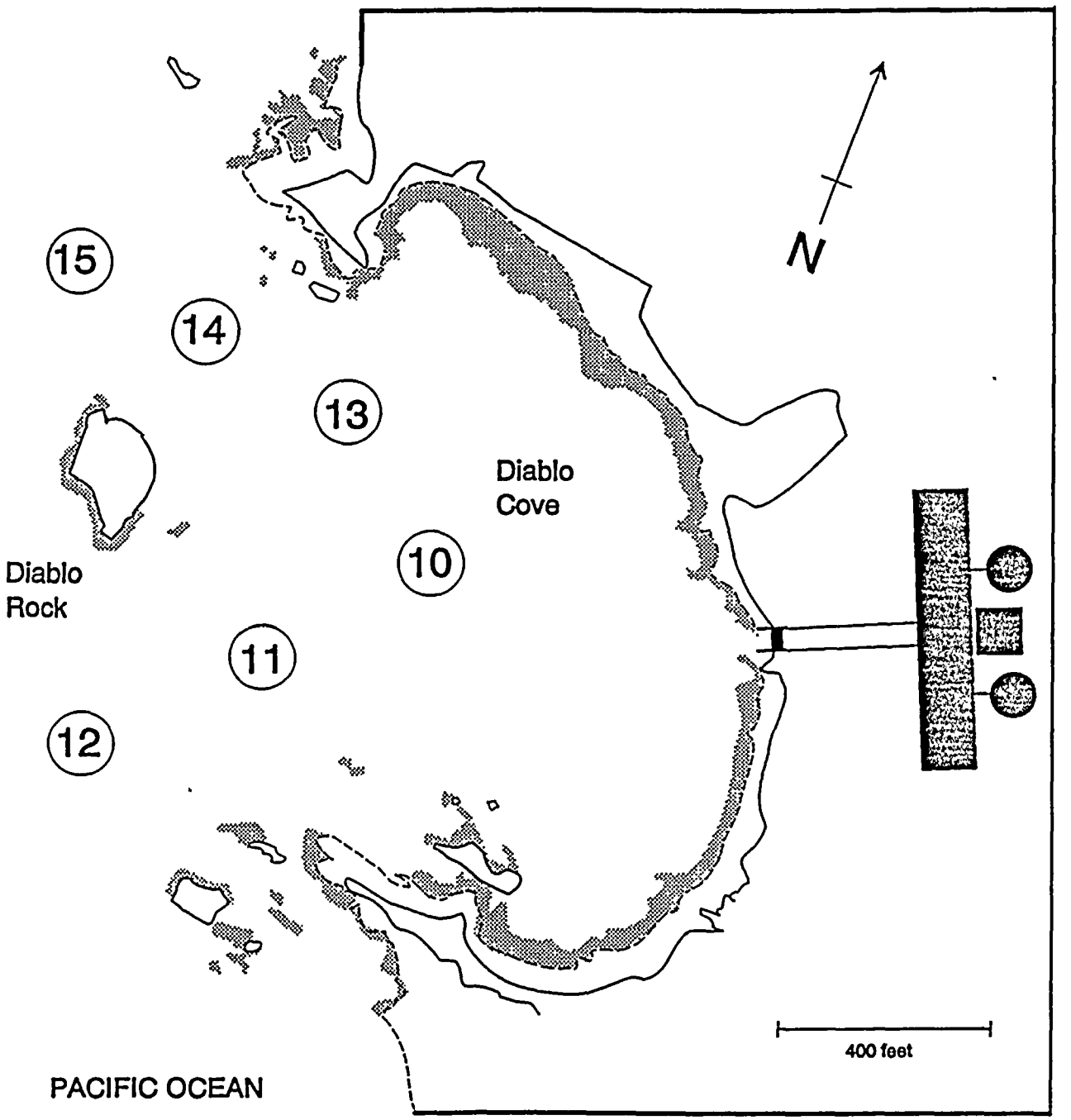


Figure 1: Stratified Temperature, Disolved Oxygen and pH Stations

TABLE 1

DIABLO CANYON POWER PLANT
OCEANOGRAPHIC STATIONS
VERTICAL TEMPERATURE PROFILES

JUNE 29, 1992

STATION 10		STATION 11		STATION 12	
DEPTH(m)	TEMP(F)	DEPTH(m)	TEMP(F)	DEPTH(m)	TEMP(F)
0.0	68.2	0.0	67.2	0.0	64.8
1.0	68.2	1.0	65.0	1.0	64.4
2.0	67.0	2.0	64.0	2.0	63.2
3.0	63.0	3.0	63.4	3.0	61.1
4.0	60.9	4.0	60.9	4.0	54.7
5.0	59.6	5.0	59.5	5.0	53.3
6.0	57.1	6.0	53.0	6.0	53.1
7.0	52.9	7.0	52.9	7.0	
8.0	52.8	8.0	52.8	8.0	53.1
9.0	52.9	9.0	52.8	9.0	
		10.0	52.8	10.0	53.0
				11.0	
				12.0	52.9
				13.0	
				14.0	52.8
				15.0	
				16.0	52.6

STATION 13		STATION 14		STATION 15	
DEPTH(m)	TEMP(F)	DEPTH(m)	TEMP(F)	DEPTH(m)	TEMP(F)
0.0	63.7	0.0	62.7	0.0	62.7
1.0	63.6	1.0	62.6	1.0	62.1
2.0	62.9	2.0	61.9	2.0	58.9
3.0	60.9	3.0	60.4	3.0	57.0
4.0	57.7	4.0	54.0	4.0	53.8
5.0	57.4	5.0	53.8	5.0	53.3
6.0	55.0	6.0	53.8	6.0	53.1
7.0	54.4			7.0	53.0
				8.0	53.0

APPENDIX 8

Dissolved Oxygen and pH of Receiving Waters

June 29, 1992

DIABLO CANYON POWER PLANT
RECEIVING WATER
DISSOLVED OXYGEN DETERMINATIONS
and Ph MEASUREMENTS

June 29, 1992

On June 29, 1992 seawater samples were collected at six stations in Diablo Cove to determine dissolved oxygen concentrations and pH (Figure 1). Swell was from the northwest at a height of about 2-3 feet. There was light wind during the sampling. Air temperature was approximately 65-70 degrees Fahrenheit.

At each station, surface, mid-depth, and bottom water samples were collected using a hydrocast array of sampling bottles. Samples that were to be later analyzed for dissolved oxygen were preserved with magnesium sulfate and alkaline-azide immediately after collection. Analysis of the samples was conducted at the onsite oceanographic laboratory. Dissolved oxygen concentrations were determined using a modified Winkler titration method, with an accuracy of +0.1 ppm. A pH meter with an accuracy of ±0.1 units is used to measure pH levels.

Dissolved oxygen values (Table 1) ranged from a high of 8.0 ppm at three depths mid-depth locations to a low of 6.7 at the surface of Station 12. Measured pH values (Table 2) were relatively uniform throughout the water column at all stations, varying between 7.8 and 8.0.

TABLE 1

DIABLO CANYON POWER PLANT
RECEIVING WATER
DISSOLVED OXYGEN DETERMINATIONS

June 29, 1992

Station	Surface	Mid-depth	Bottom
10	7.7	7.8	7.6
11	8.0	8.0	7.8
12	6.7	7.6	7.1
13	7.8	7.7	7.8
14	7.7	7.9	8.0
15	7.8	7.9	7.7

TABLE 2

DIABLO CANYON POWER PLANT
RECEIVING WATER
pH MEASUREMENTS

June 29, 1992

Station	Surface	Mid-depth	Bottom
10	7.8	7.8	7.8
11	7.9	7.9	7.9
12	7.9	7.9	7.9
13	7.9	7.9	7.9
14	7.9	7.9	8.0
15	7.9	7.9	7.9