

PG&E Letter DCL-2003-510
Mr. Briggs
February 28, 2003
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If Yes is marked (complete a-g):

a) Parameter(s) in Violation:

**b) Section(s) of WDR/NPDES
Violated:**

c) Reported Value(s)

**d) WDR/NPDES
Limit/Condition:**

e) Dates of Violation(s)
(reference page of report/data
sheet):

f) Explanation of Cause(s):
(attach additional information as
needed)

(If "YES", see overview section of attached report)

g) Corrective Action(s):
(attach additional information as
needed)

(If "YES", see overview section of attached report)

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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 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 any questions, please contact Drew Squyres at (805) 545 - 4439.

Sincerely,

A handwritten signature in black ink, appearing to read "James R. Becker", is written over a solid horizontal line. The signature is stylized with large loops and a long horizontal stroke at the end.

Name: James R. Becker
Title: Vice President - Diablo Canyon Operations and Station Director

Enclosure

2003510/RDH/kmo

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cc: Michael Thomas, CCRWQCB
895 Aerovista, Suite 101
San Luis Obispo, CA 93401-7906

Debra Johnston
California Department of Fish and Game
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Regional Administrator, Region 9
U. S. Environmental Protection Agency
75 Hawthorne Street
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Attention: Carey Houk (W-5-3)

Resident Inspector, David Proulx
U.S. Nuclear Regulatory Commission
Diablo Canyon Power Plant 104/5/538-544

Regional Administrator
U.S. Nuclear Regulatory Commission
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U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555-0001

Enclosure

ENCLOSURE

**ANNUAL SUMMARY REPORT ON
DISCHARGE MONITORING
AT THE
DIABLO CANYON POWER PLANT
(NPDES NO. CA0003751)**

2002

**2002 Annual Summary Report on Discharge Monitoring
at the
Diablo Canyon Power Plant**

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2002 Annual Summary Report on Discharge Monitoring
at the
Diablo Canyon Power Plant

OVERVIEW

- A. This annual summary report follows the format used in quarterly monitoring reports. Analytical results below the respective Reporting Limit are plotted as "zero" value in accordance with ELAP guidance. During 2002, discharges occurred from all discharge paths except 001I, 001K, and 017.
- B. California Ocean Plan Table B substances that were not analyzed for have not been added to the discharge stream. The substances listed in Table B in the 1990 Ocean Plan were each analyzed for and reported in the permit renewal application for Diablo Canyon Power Plant (DCPP) submitted in October 1994. There have been no changes in the activities conducted at the plant that would have significantly affected the results previously reported in the above referenced document.

SUMMARY OF MONITORING PROGRAM

A. Monitoring of Plant Influent and Effluent

1. Monitoring Data

- a. Appendix 1 provides a list of the discharge path names for ease of reference. Appendix 2 contains monitoring data in tabular form. Appendix 3 contains monitoring data in graphical form.
- b. Annual oil and grease analyses were performed in December on Stormwater/Yard Drain Discharges 005, 008, 009, 013, and 015; and in September on 016. All results were less than 3 mg/l. No discharges occurred from 017 during 2002.
- c. In October, Discharge 001D (Liquid Radioactive Waste Treatment System) annual grab sample for lithium, boron and hydrazine was collected and analyzed. The results were non-detect [ND (0.100) mg/l], 426 mg/l, and non-detect [ND (0.050) mg/l], respectively.

2. Facility Operating and Maintenance Manual

Pacific Gas and Electric Company (PG&E) maintains a multiple volume Plant Manual (manual) at DCPP that contains procedures used for operation and maintenance activities at the plant, including those activities that relate to wastewater handling, treatment, sampling, analysis and discharge.

Plant procedures are prepared and reviewed by DCPP Staff and approved by DCPP Management. DCPP conducts biennial internal audits that review NPDES Plant procedures contained in the manual. Ongoing reviews of Plant procedures are conducted to assure that the manual remains valid, current, and complete for the facility.

3. Laboratories Used to Monitor Compliance

- a. PG&E Chemistry Laboratory, DCPP, Avila Beach, California
- b. Aquatic Bioassay Consultants, Ventura, California
- c. FGL Environmental, Santa Paula, California
- d. PG&E, Technical and Environmental Services, Geotechnical Laboratory, San Ramon, California

- e. Creek Environmental, San Luis Obispo, California
- f. Columbia Analytical Services, Kelso, Washington

4. Review of Compliance Record and Corrective Actions

a. Circulating Water Pump Chlorination/Acti-Brom Monitoring

The 2002 quarterly NPDES reports discuss the times when monitoring for chlorination cycles were interrupted. These are listed below with a brief description of the cause and corrective action.

When these monitoring interruptions occurred, engineering evaluations (approved by the CCRWQCB 1/13/94; PG&E Letter No. DCL-94-002) were performed. Detailed descriptions of these evaluations are included in the quarterly reports. The evaluations conclude that discharge chlorine limits were not exceeded in 2002.

Date	Chlorination Cycle Monitoring Interrupted	Cause	Corrective Action
5/10/02	Unit 2 0900 hrs injection cycle not monitored.	Monitor developed low flow	Proper flow reestablished to normal.
7/15/02	Unit 1 monitor no reading	Sample line clogged with gooseneck barnacles	Unclogged line and reestablished proper flow.
12/3/02	Unit 2 1300 hrs injection cycle not monitored	Electrical supply line severed	Electrical supply reestablished

b. Drains of Closed Cooling Water Systems

PG&E received concurrence from the CCRWQCB in response to a letter dated July 19, 1995 (PG&E Letter DCL-95-156), for the use of biocides glutaraldehyde and isothiazoline to control microbiological growth and corrosion in DCP's closed cooling water systems. Any drainage from these systems is discharged at a flowrate such that the chronic toxicity level is below the "No Observable Effect Concentration" (NOEC) at NPDES Discharge 001. The volumes of cooling water drained in 2002 from the component cooling water (CCW), intake cooling water (ICW), and service cooling water (SCW) systems are presented below. The glutaraldehyde and isothiazoline concentrations presented in the table below are system concentrations, not concentrations discharged.

Date	System	Volume (gal)	Glutaraldehyde (mg/l)	Isothiazoline (mg/l)	Reason & Comment
1/18/02	Unit 2 SCW	240	18	0	Routine maintenance.
2/19/02	Unit 1 ICW	3200	81	9	Routine maintenance.
3/14/02	Unit 2 SCW	33000	0	2	Routine maintenance.

7/12/02	Unit 1 SCW	33000	0	0	Routine maintenance
7/18/02	Unit CCW	180600	58	0	Routine maintenance
12/24- 31/02	Unit 1 ICW	1248	0	5	Routine maintenance

- c. PG&E injected sulfur hexafluoride (SF₆) into DCCP's condensers to detect saltwater leaks on one occasion, while the unit was operating (circulating cooling flow through the condenser), during 2002. CCRWQCB's Sorrel Marks concurred during conversations held in May 1996, that periodic use of SF₆ would not increase DCCP's probability of exceeding NPDES permit limitations.

Date	Number of Injections	Duration (sec)	Injection Rate of SF6 (Standard Cubic Feet per Minute)
9/20/02	4	30	10

- d. February

On 2/19/02, a courtesy call was placed to RWQCB staff regarding a minor break in a sewer line after treatment prior to discharge into the circulating cooling water. A small volume (estimated to be 630 gallons) of treated waste from the break seeped to the surface of the ground in the vicinity of the break. There was no discharge to water. The break was repaired on 2/19/02 RWQCB staff agreed this was not a violation and requested that a brief summary be included in the quarterly report.

- e. April

On 4/17/02, plant environmental staff became aware that the sample "hold times" for mercury had exceeded the specified hold times. For flowpaths 001D, 001F, 001H, and 001L, which are sub-flows that discharge into the main circulating water flowpath 001, the permit calls for quarterly composite sampling. Samples are collected in an effort to provide representative sampling over an entire quarter, which is longer than the 28-day hold time. All sample results were non-detect for mercury.

In addition to the quarterly sampling, the plant also performs annual sampling of the 001 Outfall. These annual samples are grab samples that have consistently met the hold time specifications. Results for mercury at the 001 Outfall have been consistently non-detect even at significantly lower levels of detection.

DCCP is refining established methods for sampling and analysis in order minimize the potential for future analyses to exceed hold times. During a phone conversation with Michael Thomas of RWQCB staff on 4/17/02, Michael advised that the annual samples indicated the plant was in compliance and that the check box for Violation in the cover letter should not be checked. He asked that a statement summarizing the conversation and the sampling issue be included in the quarterly report.

- f. October

A hydraulic fluid spill into the intake cove occurred on October 18, 2002. A hydraulic line fitting failed on the kelp harvester. The harvester operators had checked the harvester prior to operation and all systems appeared fine. The operator immediately shut down the hydraulic system, paddled back to the dock, enclosed the harvester within the bottomliner to contain any hydraulic fluid that might run off, and deployed absorbent pads on the harvester and on the water surface within the bottomliner. The kelp harvester operator estimated that the sheen on

the ocean surface was about 5 ft by 5 ft. It is estimated that 4 to 6 ounces of hydraulic fluid reached the ocean surface. The sheen had dispersed within 30 minutes. The harvester has been removed from the water for the rest of the storm season and for annual maintenance.

g. November

Industrial rain water discharge points were sampled on November 5, 2002, during the first sufficient rain of the season. However, those samples were not valid because they were not properly acidified for analysis. Valid samples were taken during the next adequate rain in December and are reported in the December DSMR forms.

On November 15, 2002, analysis resulted in a high Total Suspended Solids (TSS) value of 220mg/liter for a sample from the Seawater Reverse Osmosis System Blowdown (discharge 001P). The sample was taken on November 13, 2002. The daily maximum in the NPDES permit is 100 mg/liter. The RWQCB was notified on November 15, 2002. Another sample was taken on November 15, 2002, and daily samples were initiated on November 18, 2002, to characterize the actual TSS of the waste stream. The increased daily sampling was terminated on November 28, 2002, with permission from RWQCB staff to return to normal sampling frequency. All sample data is reported in the November DSMR forms. The average of all values, including the high November 13, 2002, value, is 27 mg/liter.

The basic cause of this event appears to be ocean intake water containing very high levels of solids (silt and sand) from consistent very high swells three days prior to the sample. On November 11, 2002, the RO system differential pressure on the filters was 5.6. On November 12, 2002, it had climbed to 15.2 (abnormally high), indicating that the intake ocean water was already at high TSS levels and that the high levels were not the result of plant operation. The differential pressure was above 15 on November 13, 2002 when manual backflushing was initiated and the sample was taken

h. December

On December 25, 2002, it was discovered that ASW continuous chlorination had been injecting into the wrong two ASW forebays, the forebays without operating ASW pumps, for about 9 hours. Operations had changed from 1-1 and 2-1 ASW pumps to the 1-2 and 2-2 ASW pumps, but had not changed injections to the forebays with operating pumps. ASW injections were immediately shut down. This incident was originally reported as a spill in exceedence of the RQ for chlorine. However, upon investigation, it was determined that the chlorine from the idle ASW forebays would be drawn into the operating ASW pumps and the adjacent circulating water pumps and, therefore, go through the plant system as designed. However, for 150 minutes during that 9 hour period the screenwash pumps drew water from the idle forebays with a low, unknown concentration of chlorine. Some of the screenwash water would ultimately be released via discharge point 003 and screenwash overflows (proposed discharge points 020 and 021). It is possible that this screenwash water may have had a higher concentration of chlorine than normal, but it is unlikely that levels were near permit limitations since the vast majority of the chlorinated water would have been drawn through the normal plant intake system and most of the remaining chlorine would have dissipated in the screenwash process. Observations on December 26, 2002, at proposed discharge points 020 and 021 showed no signs of algal bleaching or other harmful chlorine effects. Chlorine levels at discharge 003 and screenwash overflows were likely well below permit limitations

B. Monitoring of Receiving Water

1. Ecological Studies at Diablo Canyon

Marine ecological monitoring was continued during 2002 under the Receiving Water Monitoring Program (RWMP) as requested in a letter from the Central Coast Regional Water Quality Control Board (CCRWQCB) dated December 9, 1998, and as detailed in a letter from PG&E dated January 8, 1999 (DCL-99-503). This program includes tasks from the Ecological Monitoring Program (EMP) with additional stations and increased sampling frequencies. This program replaces the EMP and the Thermal Effects Monitoring Program (TEMP). Several one-year-only tasks outlined in the above letters were completed in 1999 and were again not requested to be performed in 2002. Results of 2001 RWMP data were submitted to the CCRWQCB on April 30, 2002. Results for July 1995 through June 2002 were analyzed in a report submitted to the CCRWQCB on November 8, 2002. A table in Appendix 4 summarizes requirements and completed tasks for 2002.

2. In Situ Bioassay

Results of the Mussel Watch Program are reported to the CCRWQCB directly from the California Department of Fish and Game in their periodic report for this program.

C. Acti-Brom Treatment Program

During 2002, DCPD continued its integrated Acti-Brom and "foul release coating" strategy to control macrofouling in the Circulating Water System (CWS). Acti-Brom is a sodium bromide solution with an added biocidal dispersant that is used, in combination with sodium hypochlorite, to control settlement and growth of biofouling organisms. The program consists of six daily 20-minute injections (at four hour intervals) of a 1:1 molar ratio blend of Acti-Brom and sodium hypochlorite to all four of DCPD's intake conduits. Each injection attempts to achieve a target concentration of 200 parts per billion (ppb) Total Residual Oxidant (TRO) when measured at the inlet waterbox of the condenser. Discharge TRO, measured at the plant outfall, remained below NPDES limitations and typically are between approximately 20 ppb to 60 ppb. In conjunction with the Acti-Brom treatment, untreated portions of the CWS were previously painted with a non-toxic "foul release coating" to help prevent attachment of fouling organisms.

Simultaneous hypochlorite and Acti-Brom treatment of both Unit 1 conduits continued six times daily throughout most of 2002, with the following interruptions. From late January to late April Unit 1 received microfouling injections (sodium hypochlorite only, no Acti-Brom). All injections were terminated in late April for 1R11 refueling outage. Six times daily simultaneous sodium hypochlorite and Acti-Brom treatment were restarted when the circulating water pumps were returned to service near the end of May. This treatment schedule continued through the end of October with a brief interruption in early June and in October due to mechanical work in the plant. Injections for both Unit 1 conduits were off from October 29 to December 5 while the turbine rotor on Unit 1's generator was replaced. Another brief interruption occurred in mid-December for condenser cleaning due to storm debris.

Simultaneous hypochlorite and Acti-Brom treatment of Unit 2 conduits continued six times daily through most of 2002 with a few interruptions. The injection schedule was stopped in January for the 2-2 tunnel cleaning, in February due to a unit manual shutdown, and in June for the 2-1 tunnel cleaning and 2-2 condenser waterbox work. Conduit 2-1 received microfouling injections (sodium hypochlorite only, no Acti-Brom) from early November through the end of 2002 in preparation for the 2R11 refueling outage (scheduled for February 2003). There were brief interruptions in the injection schedules for both Unit 2 conduits in early November and mid-December due to storm waves.

APPENDIX 1

DIABLO CANYON POWER PLANT

NPDES DISCHARGE POINTS	
DISCHARGE NUMBER	DESCRIPTION
001	Once-Through Cooling Water
001 A	Firewater Systems
001 B	Auxiliary Salt Water Cooling System
001 C	Discharge Deleted
001 D	Liquid Radioactive Waste Treatment System
001 E	Service Cooling Water System
001 F	Turbine Building Sump
001 G	Make-Up Water System Waste Effluent
001 H	Condensate Demineralizer Regenerant
001 I	Seawater Evaporator Blowdown
001 J	Condensate Pumps Discharge Header Overboard
001 K	Condenser Tube Sheet Leak Detection Dump Tank Overboard
001 L	Steam Generator Blowdown
001 M	Wastewater Holding and Treatment System
001 N	Sanitary Wastewater Treatment System
001 P	Seawater Reverse Osmosis System Blowdown
002	Intake Structure Building Floor Drains
003	Intake Screen Wash
004	Bio Lab and Storm Water Runoff
005, 008, 009, 013, 014, 015	Yard Storm Drains
006, 007, 010, 011, 012	Storm Water Runoff
016	Bio Lab Seawater Supply Pump Valve Drain
017	Seawater Reverse Osmosis System Blowdown Drain

APPENDIX 2

TABULAR SUMMARIES OF INFLUENT AND EFFLUENT MONITORING

**2002 Annual Summary Report on Discharge Monitoring
at the
Diablo Canyon Power Plant**

DISCHARGE 001

Month	TEMPERATURE (DEG F)						FLOW (MGD)				
	INFLUENT			EFFLUENT			DELTA T		high	low	avg
	high	low	avg	high	low	avg	high	avg			
JAN	55.7	52.0	54.0	74.8	71.6	73.4	20.4	19.4	2486	1862	2390
FEB	54.9	52.3	53.4	74.0	67.1	72.1	19.5	18.7	2486	1862	2436
MAR	55.5	49.7	52.5	74.8	69.6	72.0	19.9	19.5	2486	2486	2486
APR	53.2	49.8	51.2	73.4	69.0	71.1	20.2	19.9	2486	1279	2381
MAY	52.4	48.7	49.8	70.9	66.3	68.6	20.3	18.8	2486	1279	1491
JUN	54.6	49.5	51.1	74.8	66.3	70.6	20.7	19.5	2486	1874	2386
JUL	55.8	50.9	54.1	74.9	70.1	73.3	20.1	19.2	2486	2486	2486
AUG	54.3	50.7	52.9	73.8	64.6	71.8	20.0	19.0	2486	2486	2486
SEP	55.5	51.4	53.3	74.5	70.6	72.6	20.0	19.3	2486	2486	2486
OCT	56.5	54.5	55.3	76.2	66.6	72.4	19.7	17.0	2486	1279	2395
NOV	57.7	54.4	55.7	76.5	58.3	72.8	19.3	17.1	1279	396	1229
DEC	58.7	56.2	57.6	77.8	65.4	74.5	19.2	16.9	2486	1279	2185
limit:	-	-	-	-	-	-	22	-	2760	-	-

The INFLUENT and EFFLUENT "high" and "low" values correspond to the highest and lowest daily average value for that month. The INFLUENT high and low does not necessarily correspond to the same day as the high and low for the EFFLUENT for that month. The "avg" for INFLUENT and EFFLUENT is the average for the entire month. The Monthly Delta T "high" is the highest Delta T for a day of the month based on daily average INFLUENT and EFFLUENT values. The "Avg" is calculated from INF and EFF monthly avg values.

DISCHARGE 001

Month	TOTAL RESIDUAL CHLORINE (daily max. ug/l)			TOTAL CHLORINE USED (lbs/day)		
	high	low	avg	high	low	avg
JAN	88	20	39	706	346	509
FEB	50	24	36	422	146	345
MAR	50	15	35	446	264	332
APR	62	20	39	504	216	381
MAY	62	23	40	461	180	253
JUN	75	<10	34	554	353	474
JUL	43	<10	24	778	490	661
AUG	62	22	34	677	547	605
SEP	37	<10	20	691	518	615
OCT	62	10	27	902	259	715
NOV	48	<10	22	274	0	246
DEC	57	<20	34	576	245	457

Note that the residual chlorine limits in Permit CA0003751, Order 90-09 is a daily max of 200 ug/l and includes a time-based limit (per the Ocean Plan) which depends on the length of the respective chlorination cycle.

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DISCHARGE 001

METALS (monthly avg. ug/l)

Month	CHROMIUM		COPPER		NICKEL		*ZINC	
	Influent	Effluent	Influent	Effluent	Influent	Effluent	Influent	Effluent
JAN	ND(10)							
FEB	ND(10)							
MAR	ND(10)							
APR	ND(10)							
MAY	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	10	ND(10)
JUN	ND(10)							
JUL	ND(10)							
AUG	ND(10)							
SEP	ND(10)							
OCT	ND(10)							
NOV	ND(10)							
DEC	ND(10)							
6-month median limit:	10	-	10	-	30	-	70	

* Note: Influent zinc has been historically higher than effluent concentrations. To date the reason is not known.

**DISCHARGE 001
VARIOUS ANNUAL ANALYSES
(ug/l)**

Parameter	Influent	Effluent	6-Mo. Med. Effluent Limit
Arsenic	1.3	1.1	30
Cadmium	0.06	ND(0.05)	10
Cyanide	ND(10)	ND(10)	30
Lead	0.12	ND(0.02)	10
Mercury	0.0045	0.0046	0.2
Silver	0.03	ND(0.02)	2.9
Titanium	-	ND(10)	none
*Phenolic Cmpds (non-chlorinated)	ND(11.82)	ND(11.82)	150
**Phenolic Cmpds (chlorinated)	ND(3.36)	ND(3.36)	10
***PCB's	ND(1.52)	ND(1.59)	none

*Reporting limit [ND (11.82)] shown is the sum of individual Reporting Limit's for 6 target compounds.

**Reporting limit [ND (3.36)] shown is the sum of individual Reporting Limit's for 5 target compounds.

***Reporting limits [ND(1.52) and ND(1.59)] shown are each the sum of individual Reporting Limit's for 7 target compounds.

**DISCHARGE 001
AMMONIA (as N) (ug/l)**

Month	Influent	Effluent
JAN	ND(200)	ND(200)
FEB		
MAR		
APR	ND(200)	ND(200)
MAY		
JUN		
JUL		
AUG	ND(200)	ND(200)
SEP		
OCT	ND(200)	ND(200)
NOV		
DEC		
6-month median limit:	3060	

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MONTHLY pH (averages)

Discharge: Month	001		002	003	004	001P
	Influent	Effluent				
JAN	8.0	8.0	8.0	8.0	8.0	7.8
FEB	8.0	8.0	8.0	8.0	8.0	7.8
MAR	8.0	8.0	8.0	8.0	8.0	8.0
APR	7.9	7.9	8.0	7.9	7.9	7.8
MAY	7.8	7.9	7.9	7.8	7.9	7.9
JUN	7.9	7.9	8.0	7.9	8.0	7.9
JUL	7.9	7.9	8.0	8.0	8.1	7.9
AUG	7.9	7.9	7.9	7.9	7.9	7.7
SEP	7.9	7.9	7.9	7.9	7.9	7.8
OCT	8.1	8.0	7.9	8.0	7.9	7.8
NOV	8.0	8.0	7.9	7.9	8.0	7.7
DEC	8.0	8.0	8.0	8.0	8.0	7.8

DISCHARGE 001F

Month	GREASE & OIL (mg/l)		SUSPENDED SOLIDS (mg/l)	
	high	avg	high	avg
JAN	<3	<3	ND(5)	ND(5)
FEB	<3	<3	ND(5)	ND(5)
MAR	<3	<3	ND(5)	ND(5)
APR	<3	<3	ND(5)	ND(5)
MAY	<3	<3	8	8
JUN	<3	<3	ND(5)	ND(5)
JUL	<3	<3	ND(5)	ND(5)
AUG	<3	<3	ND(5)	ND(5)
SEP	<3	<3	ND(5)	ND(5)
OCT	<3	<3	ND(5)	ND(5)
NOV	<3	<3	ND(5)	ND(5)
DEC	<3	<3	ND(5)	ND(5)
limit:	20	15	100	30

Note: "high" limits based upon Daily Maximum limits. "avg" limits based upon Monthly Average Limits.

**DISCHARGE 001N
(Monthly Summary of Weekly Data)**

Month	GREASE & OIL (mg/l)			SUSPENDED SOLIDS (mg/l)			SETTLABLE SOLIDS (ml/l)		
	high	low	avg	high	low	avg	high	low	avg
JAN	16	ND(5)	<5	16	7	10	ND(0.1)	ND(0.1)	ND(0.1)
FEB	5	ND(5)	<5	9	ND(5)	6	ND(0.1)	ND(0.1)	ND(0.1)
MAR	6	ND(5)	<5	15	5	10	ND(0.1)	ND(0.1)	ND(0.1)
APR	7	ND(5)	<5	31	ND(5)	12	ND(0.1)	ND(0.1)	ND(0.1)
MAY	6	ND(5)	<5	17	9	13	ND(0.1)	ND(0.1)	ND(0.1)
JUN	ND(5)	ND(5)	ND(5)	29	7	17	ND(0.1)	ND(0.1)	ND(0.1)
JUL	10	ND(5)	<5	20	ND(5)	14	ND(0.1)	ND(0.1)	ND(0.1)
AUG	7	ND(5)	<5	8	ND(5)	6	ND(0.1)	ND(0.1)	ND(0.1)
SEP	6	ND(5)	<5	11	7	8	ND(0.1)	ND(0.1)	ND(0.1)
OCT	6	ND(5)	<5	14	ND(5)	6	ND(0.1)	ND(0.1)	ND(0.1)
NOV	6	ND(5)	<5	20	ND(5)	12	ND(0.1)	ND(0.1)	ND(0.1)
DEC	ND(5)	ND(5)	ND(5)	38	5	16	ND(0.1)	ND(0.1)	ND(0.1)
limit:	20	-	15	-	-	60	3.0	-	1.0

Note: "high" limits based upon Daily Maximum limits. "avg" limits based upon Monthly Average limits.

**2002 Annual Summary Report on Discharge Monitoring
at the
Diablo Canyon Power Plant**

DISCHARGE 001D, H, L, F, METALS (avg. ug/l)

Month	001D				001 H				001L				001F			
	Ag	Cd	Cr	Cu	Ag	Cd	Cr	Cu	Ag	Cd	Cr	Cu	Ag	Cd	Cr	Cu
JAN	ND(10)	ND(5)	ND(10)	20	ND(10)	ND(5)	20	60	ND(10)	ND(5)	ND(10)	ND(10)	ND(10)	ND(5)	ND(10)	ND(10)
FEB																
MAR																
APR	ND(10)	ND(5)	ND(10)	20	ND(10)	ND(5)	20	40	<10	ND(5)	ND(10)	<10	ND(10)	ND(5)	ND(10)	ND(10)
MAY	ND(10)	ND(5)	ND(10)	ND(10)	ND(10)	ND(50)	<100	30	ND(10)	ND(5)	ND(10)	150	ND(10)	ND(50)	ND(100)	30
JUN																
JUL	ND(10)	ND(10)	ND(10)	<10	ND(10)	ND(10)	20	100	ND(10)	ND(10)	ND(10)	10	ND(10)	ND(10)	ND(10)	20
AUG																
SEP																
OCT	ND(10)	ND(5)	ND(10)	20	ND(10)	ND(5)	30	60	30	ND(5)	ND(10)	ND(10)	70	ND(5)	ND(10)	20
NOV																
DEC																

limit: none

Note: 001D, 001H and 001L analyses performed on quarterly composites. 001F analyses performed quarterly on a composite of weekly samples.

DISCHARGE 001D, H, L, F, METALS (avg. ug/l)

Month	001D				001 H				001L				001F			
	Hg	Ni	Pb	Zn	Hg	Ni	Pb	Zn	Hg	Ni	Pb	Zn	Hg	Ni	Pb	Zn
JAN	ND(0.2)	20	30	450	ND(0.2)	20	ND(100)	70	ND(0.2)	ND(10)	40	60	ND(0.2)	ND(10)	30	80
FEB																
MAR																
APR	ND(0.2)	20	ND(10)	220	ND(0.2)	30	ND(200)	60	ND(0.2)	ND(10)	ND(10)	<20	ND(0.2)	ND(10)	ND(10)	40
MAY	ND(0.2)	ND(10)	10	110	<0.2	20	ND(200)	<200	ND(0.2)	ND(10)	ND(10)	ND(20)	ND(0.2)	30	ND(10)	ND(200)
JUN																
JUL	ND(0.2)	10	<10	300	ND(0.2)	20	ND(10)	60	ND(0.2)	ND(10)	ND(10)	<20	ND(0.2)	ND(10)	ND(10)	30
AUG																
SEP																
OCT	ND(0.2)	10	ND(10)	500	ND(0.2)	30	ND(100)	90	ND(0.2)	ND(10)	ND(10)	90	ND(0.2)	ND(10)	ND(10)	80
NOV																
DEC																

limit: none

Note: 001D, 001H and 001L analyses performed on quarterly composites. 001F analyses performed quarterly on a composite of weekly samples.

**2002 Annual Summary Report on Discharge Monitoring
at the
Diablo Canyon Power Plant**

**MONTHLY TOTAL SUSPENDED SOLIDS
Averages (mg/l)**

Month	001D*	001G	001H	001I	001J	001K	001L	001M	001P	002	003
JAN	<5	ND(5)	7				ND(5)	5	22	ND(5)	23
FEB	14	ND(5)	ND(5)		ND(5)		ND(5)		5	ND(5)	ND(5)
MAR	<5	ND(5)	ND(5)				ND(5)	19	ND(5)	ND(5)	ND(5)
APR	12	ND(5)	9		ND(5)		ND(5)		ND(5)	ND(5)	ND(5)
MAY	16	ND(5)	8		ND(5)		ND(5)		ND(5)	ND(5)	10
JUN	< 5	ND(5)	ND(5)		ND(5)		ND(5)	10	10	5	23
JUL	13	ND(5)	ND(5)				ND(5)		5	ND(5)	5
AUG	9	ND(5)	ND(5)				ND(5)	<5	ND(5)	15	6
SEP	12	ND(5)	ND(5)				ND(5)		ND(5)	ND(5)	ND(5)
OCT	<5	ND(5)	ND(5)		ND(5)		ND(5)	10	< 5	ND(5)	ND(5)
NOV	8	ND(5)	ND(5)		ND(5)		ND(5)	ND(5)	27	ND(5)	7
DEC	5	ND(5)	ND(5)		ND(5)		6		ND(5)	ND(5)	6
Limit:	30	30	30	30	30	30	30	30	30	30	-

* Discharges from 001D are batched. Monthly averages are flow weighted.

Note: No discharges occurred from 001I and 001K during 2002.

Blank spots for other discharge points indicate that no discharge occurred during that particular month.

**QUARTERLY GREASE & OIL
Averages by Month (mg/l)**

Month	001D*	001G	001H	001I	001J	001K	001L	001M	001P	002	003	004
JAN	3	<3	<3				<3	<3	<3	<3	<3	<3
FEB					<3							
MAR	<3							<3				
APR	<3	<3	<3		<3		<3		<3	<3	<3	<3
MAY												
JUN								<3				
JUL	3	<3	<3				<3		<3	<3	<3	<3
AUG	6							<3				
SEP	<3											
OCT	<3	<3	<3		<3		<3	<3	<3	<3	<3	<3
NOV	10				<3			<3				
DEC												
Limit:	15	15	15	15	15	15	15	15	15	15	15	15

* Discharges from 001D are batched. Monthly averages are flow weighted.

Note: No discharges occurred from 001I and 001K during 2002.

**2002 Annual Summary Report on Discharge Monitoring
at the
Diablo Canyon Power Plant**

**QUARTERLY ACUTE AND CHRONIC TOXICITY TESTING
(toxicity units, tu_a and tu_c)**

Month	ACUTE		*CHRONIC
	Test Result	6-Month Median	Test Result
JAN	0.00	0.00	1.0
FEB			
MAR			
APR	0.00	0.00	1.0
MAY			
JUN			
JUL			
AUG	0.00	0.00	1.0
SEP			
OCT	0.00	0.00	1.0
NOV			
DEC			
6-month median limit:		0.26	5.1

* It should be noted that this parameter is monitored for the State Ocean Plan instead of the NPDES permit. A value of 1.0 indicates no chronic toxicity.

**DISCHARGE 001N
ANNUAL ANALYSES**

Sludge Parameter	Result	Limit
Percent Moisture	99%	None
Total Kjeldahl Nitrogen	800 mg/kg	None
Ammonia (N)	85 mg/kg	None
Nitrate (N)	ND(1) mg/kg	None
Total Phosphorus	240 mg/kg	None
pH	7.0	None
Oil and Grease	110 mg/kg	None
Boron	ND(3) mg/kg	None
Cadmium	ND(0.3) mg/kg	*10 X STLC
Copper	4 mg/kg	10 X STLC
Chromium	ND(0.5) mg/kg	10 X STLC
Lead	ND(1) mg/kg	10 X STLC
Nickel	ND(0.5) mg/kg	10 X STLC
Mercury	ND(0.04) mg/kg	10 X STLC
Zinc	10 mg/kg	10 X STLC
Volume	0.77 tons	None

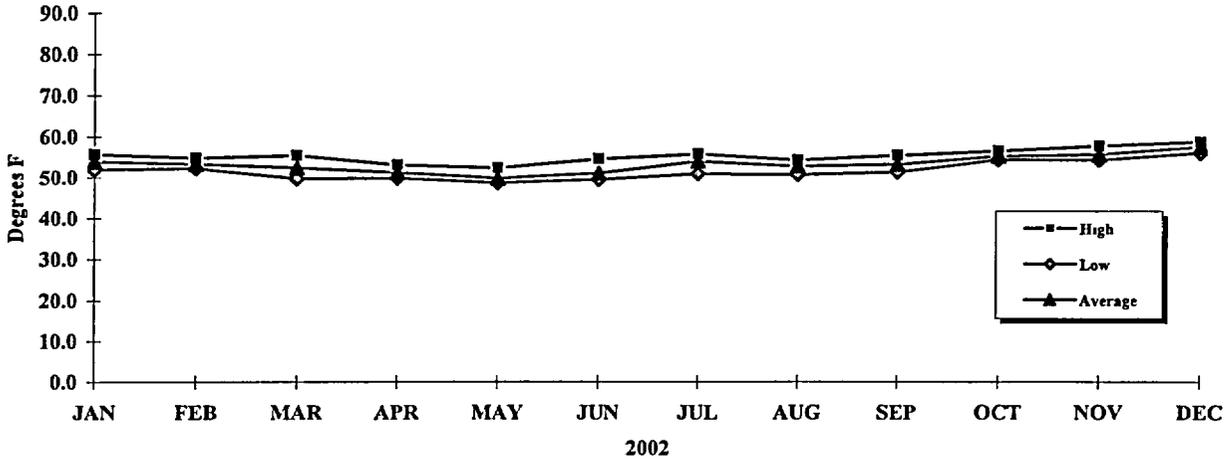
Note: Annual samples were collected in October
* STLC = Soluble Threshold Limit Concentration

APPENDIX 3

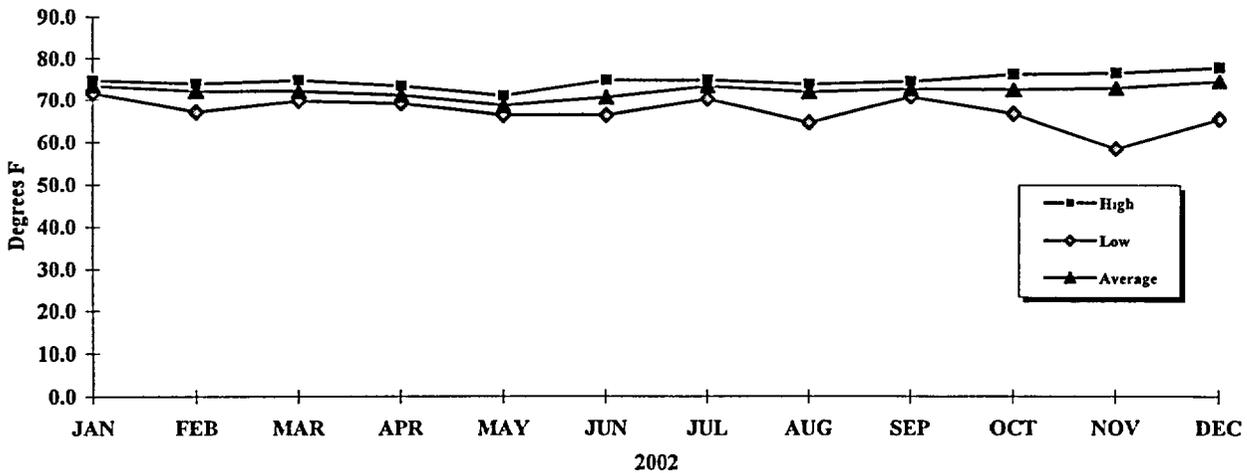
GRAPHICAL SUMMARIES OF INFLUENT AND EFFLUENT MONITORING

**2002 Annual Summary Report on Discharge Monitoring
at the
Diablo Canyon Power Plant**

DISCHARGE 001 INFLUENT
Temperature (°F)

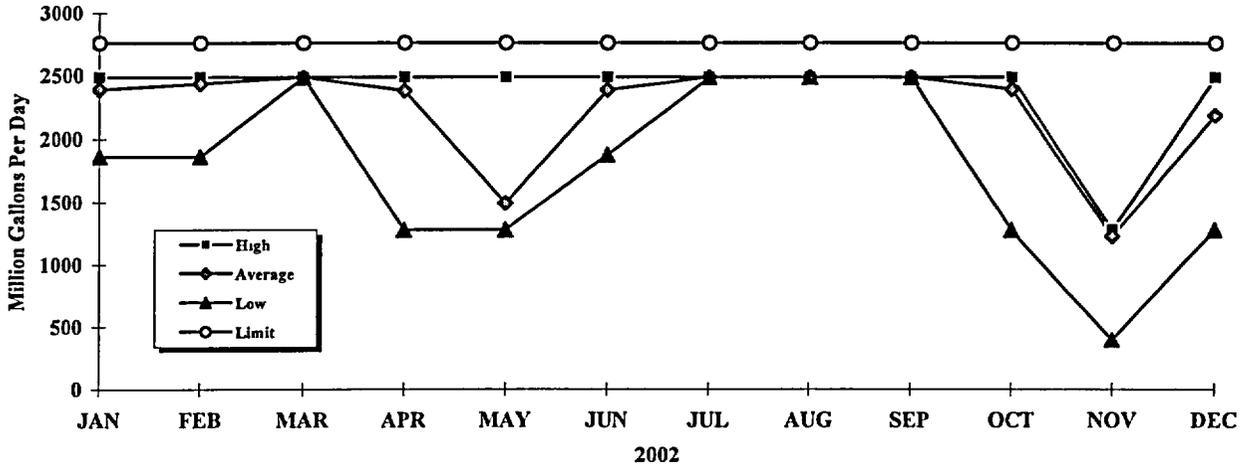


DISCHARGE 001 EFFLUENT
Temperature (°F)

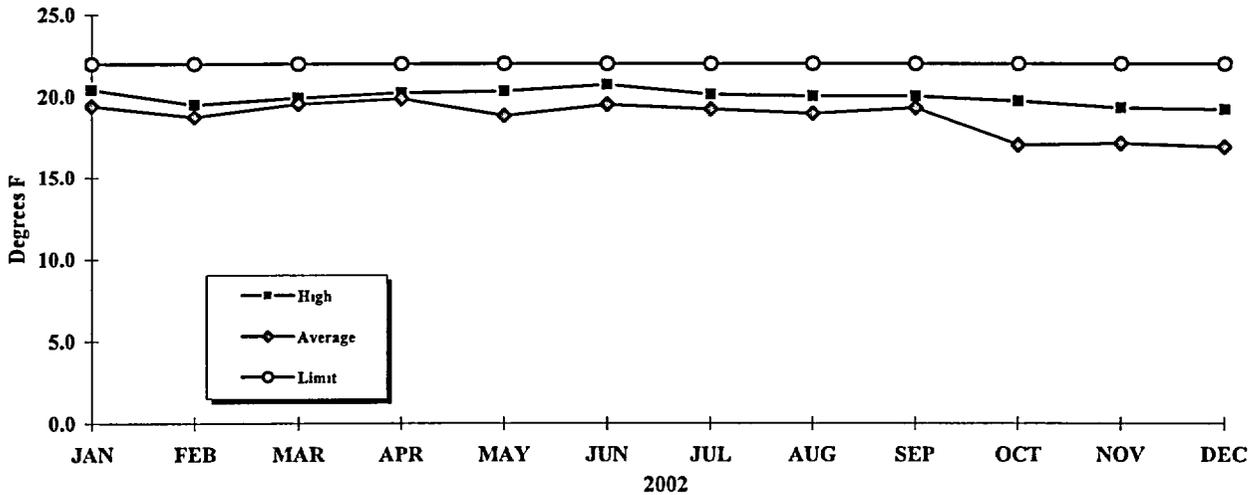


**2002 Annual Summary Report on Discharge Monitoring
at the
Diablo Canyon Power Plant**

DISCHARGE 001 EFFLUENT
Flow (MGD)

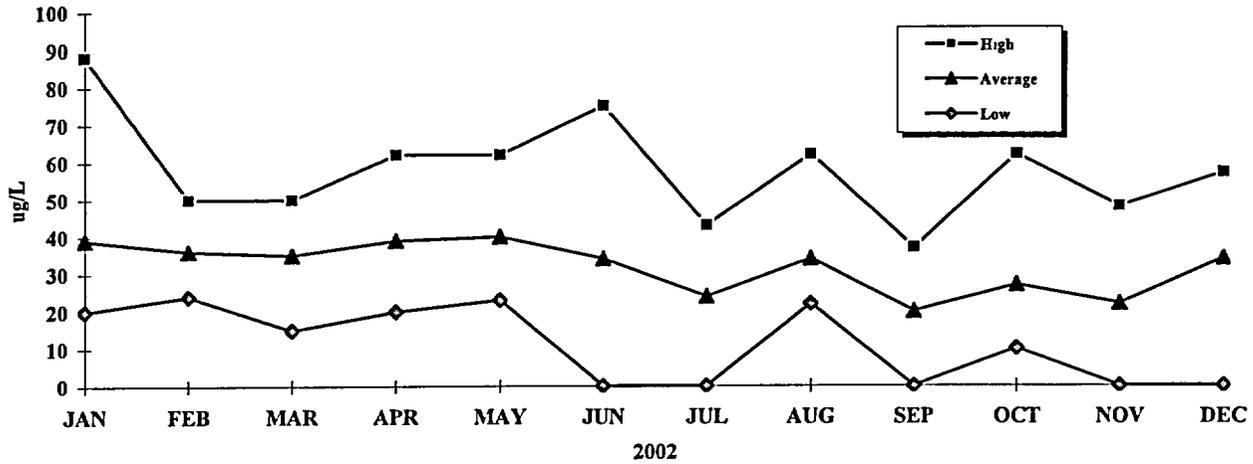


DISCHARGE 001 EFFLUENT
Monthly Delta T (°F)



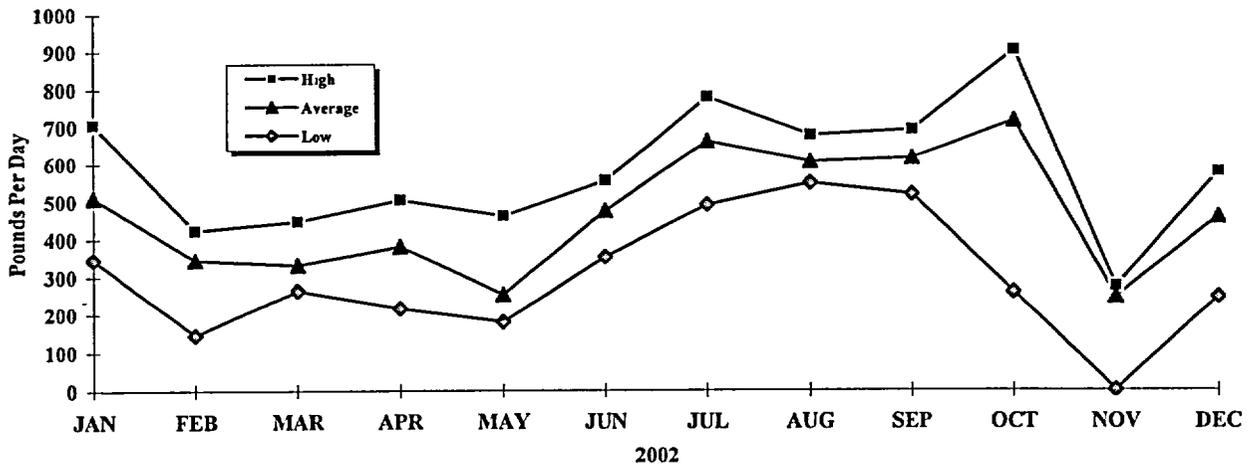
2002 Annual Summary Report on Discharge Monitoring at the Diablo Canyon Power Plant

DISCHARGE 001
Total Chlorine Residual



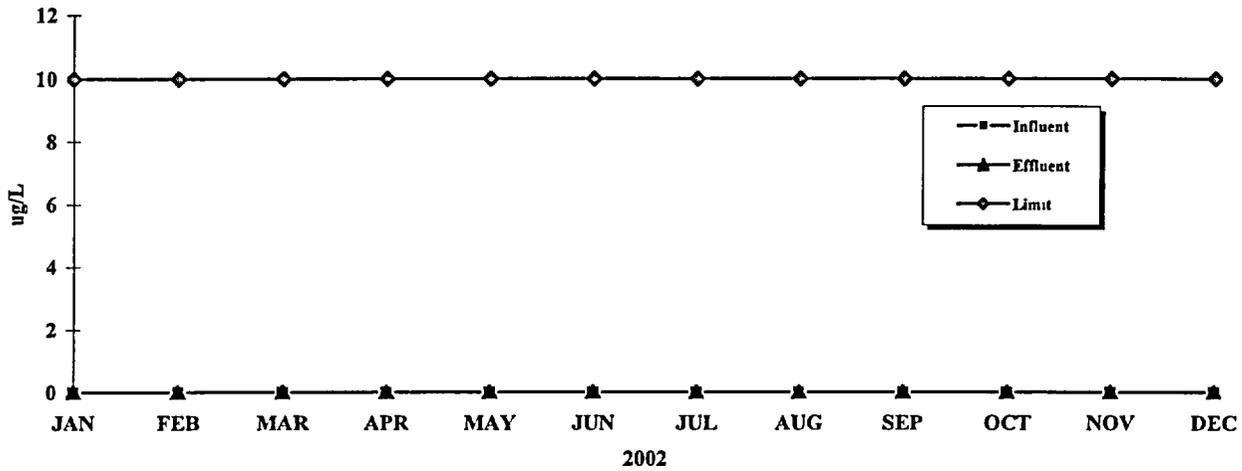
Note: Values plotted at zero were below the reporting limit.

DISCHARGE 001
Total Chlorine Used



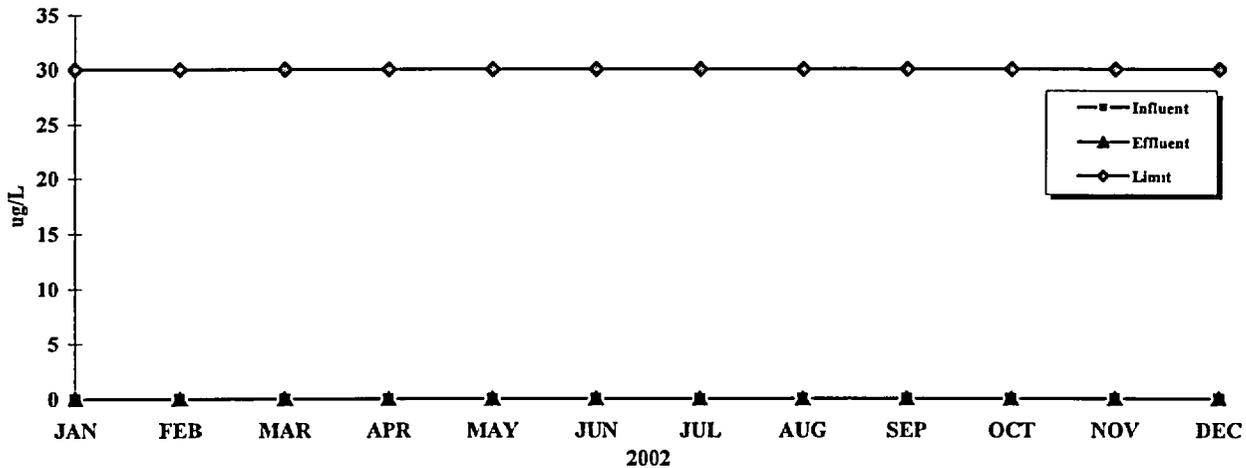
**2002 Annual Summary Report on Discharge Monitoring
at the
Diablo Canyon Power Plant**

DISCHARGE 001
Copper (monthly average)



Note: The analyte was not detected at or above the reporting limit for values plotted at zero.
The 6-month median limit is plotted on this chart.

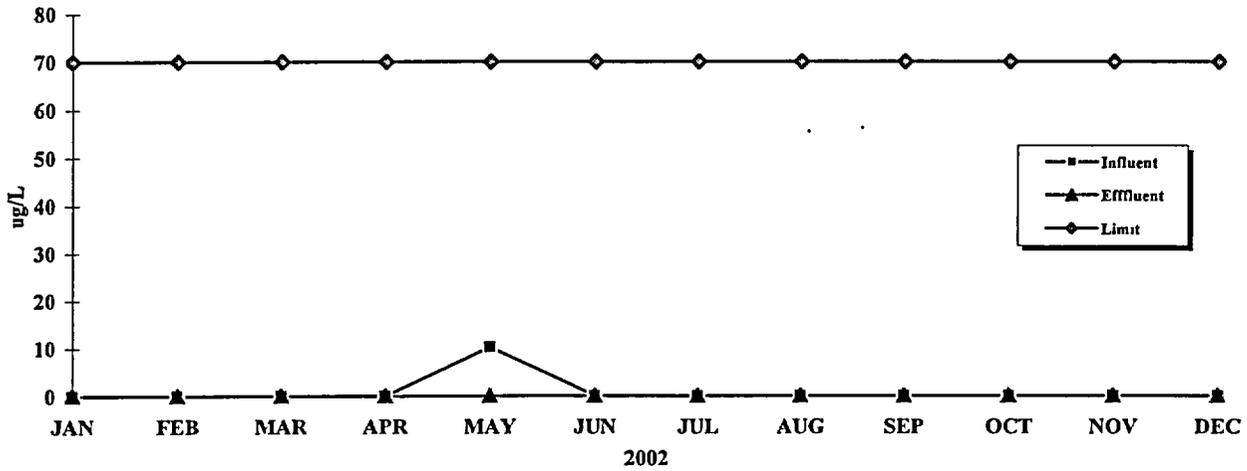
DISCHARGE 001
Nickel (monthly average)



Note: The analyte was not detected at or above the reporting limit for values plotted at zero.
The 6-month median limit is plotted on this chart.

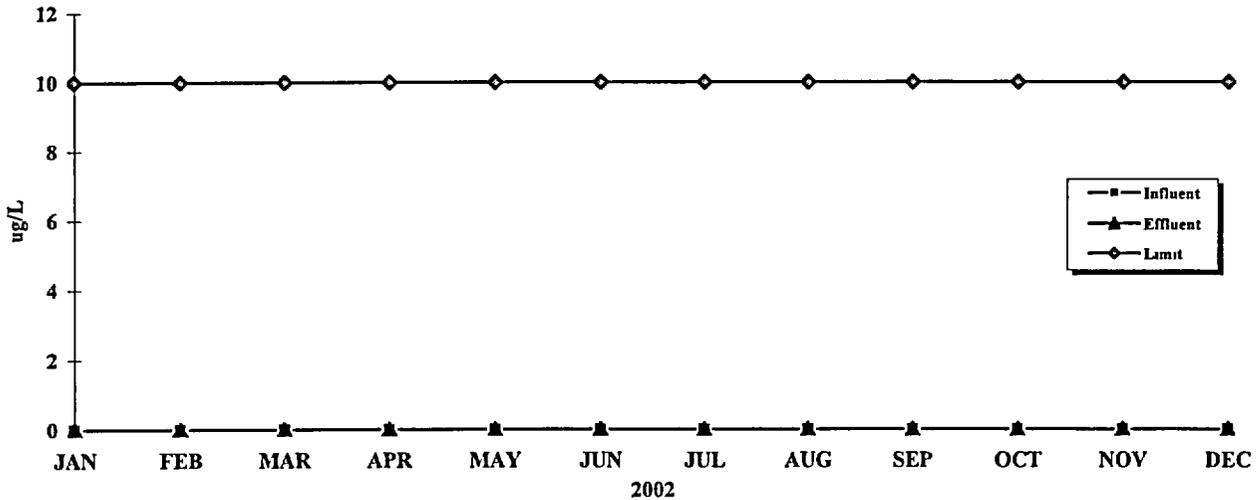
**2002 Annual Summary Report on Discharge Monitoring
at the
Diablo Canyon Power Plant**

DISCHARGE 001
Zinc (monthly average)



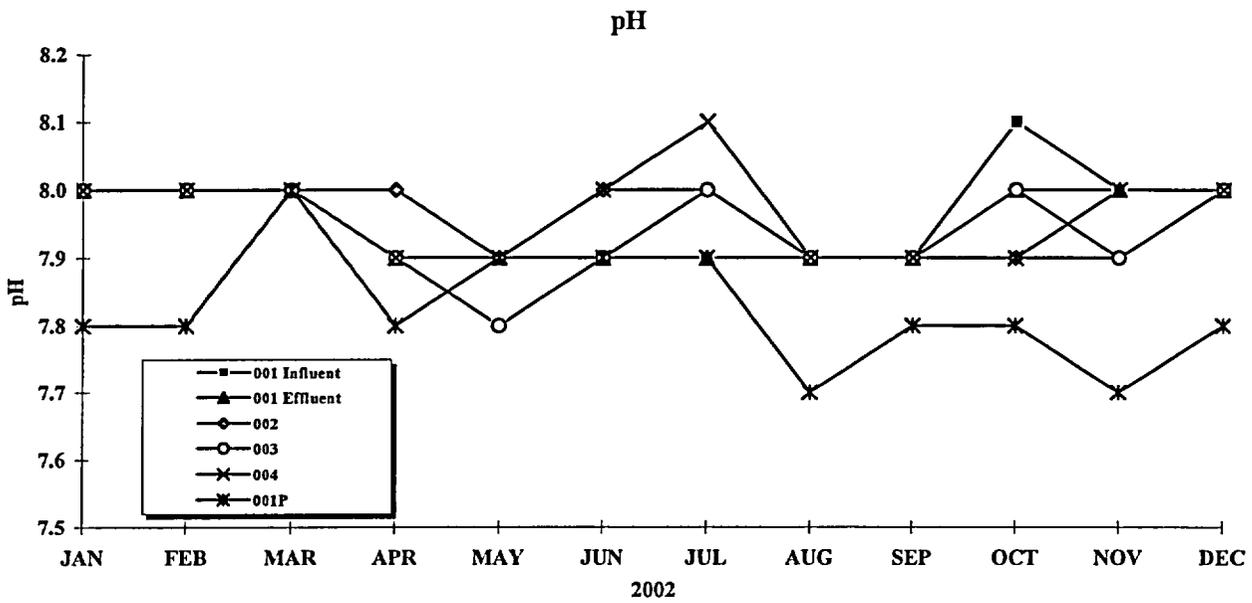
Note: The analyte was not detected at or above the reporting limit for values plotted at zero.
The 6-month median limit is plotted on this chart.

DISCHARGE 001
Chromium (monthly average)

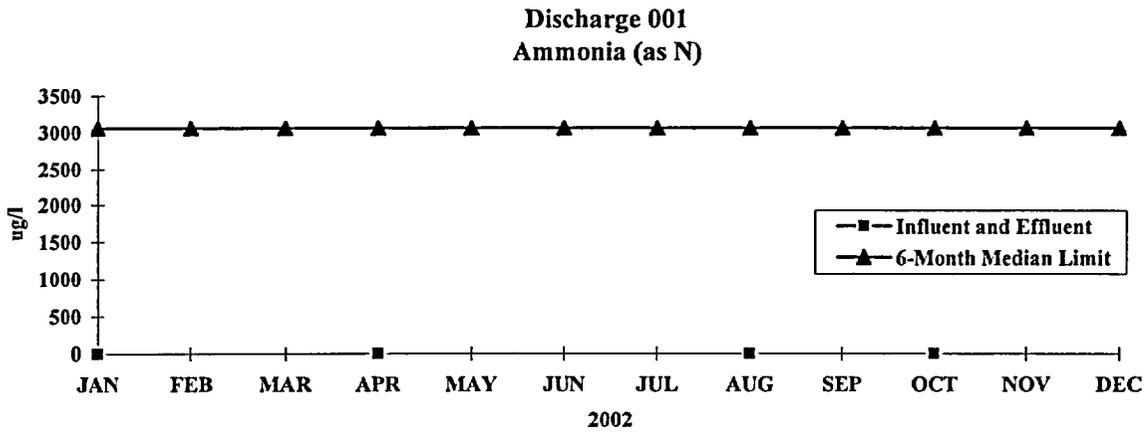


Note: The analyte was not detected at or above the reporting limit for values plotted at zero.
The 6-month median limit is plotted on this chart.

2002 Annual Summary Report on Discharge Monitoring at the Diablo Canyon Power Plant



Note: Several data points on this chart overlap.

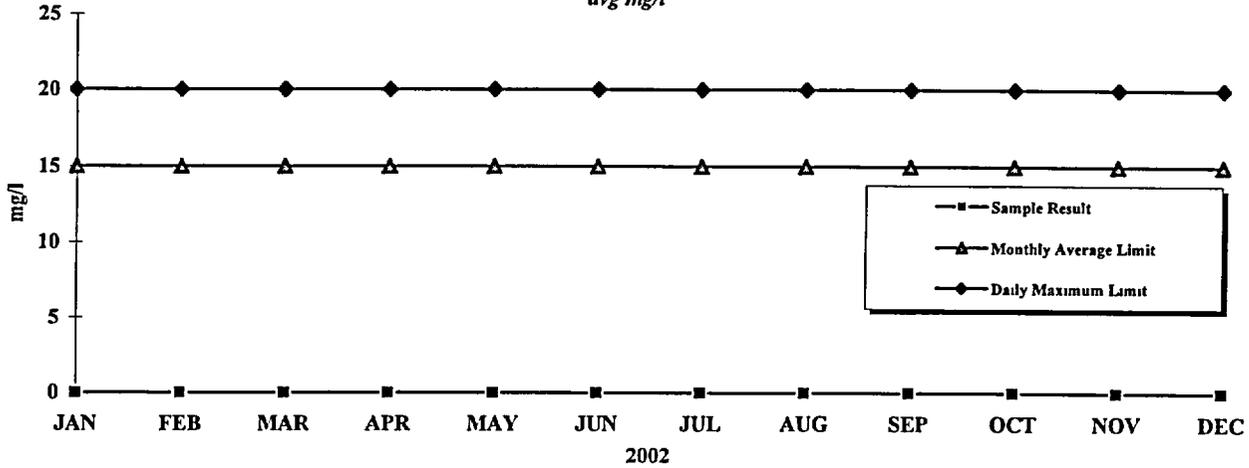


Note: The analyte was not detected at or above the reporting limit for values plotted at zero.

**2002 Annual Summary Report on Discharge Monitoring
at the
Diablo Canyon Power Plant**

DISCHARGE 001F

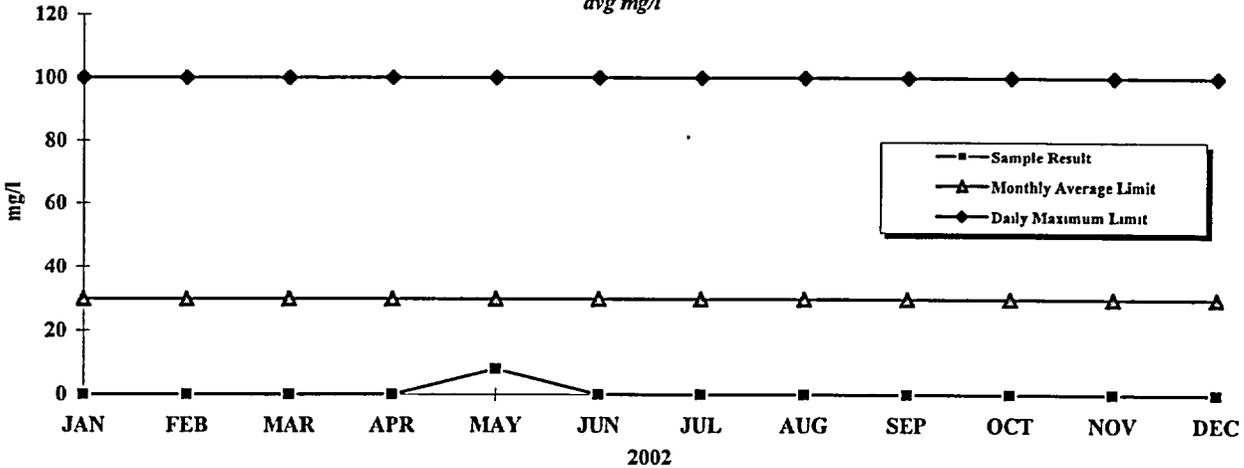
*Oil & Grease
avg mg/l*



Note: Values plotted at zero were below the reporting limit.

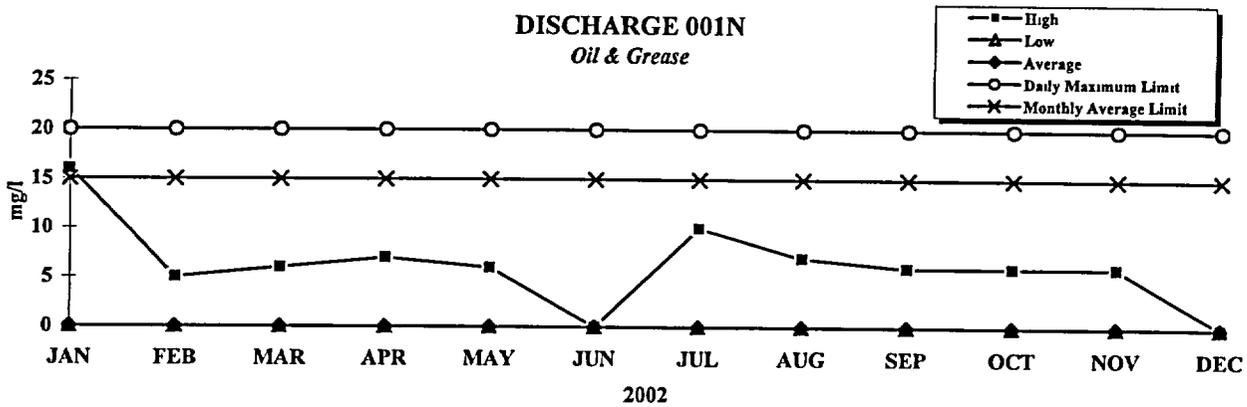
DISCHARGE 001F

*Suspended Solids
avg mg/l*

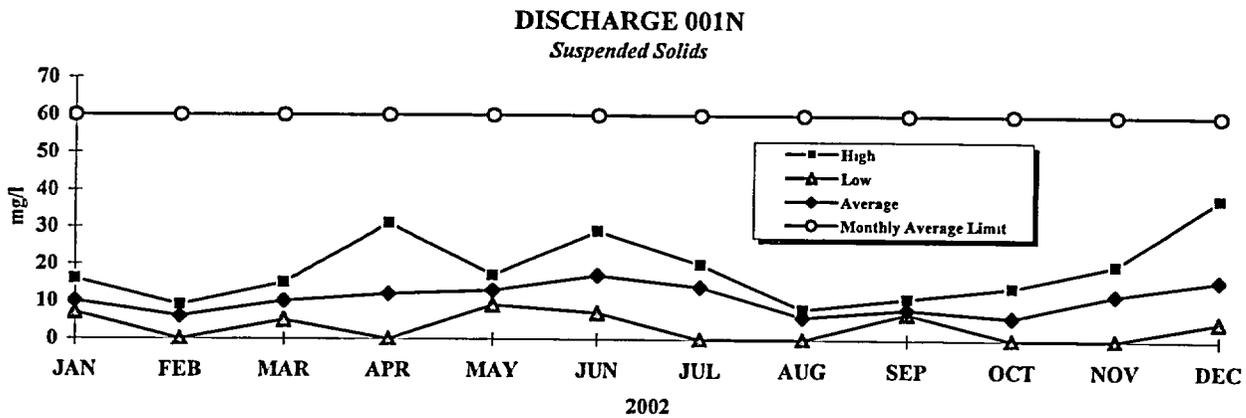


Note: The analyte was not detected at or above the reporting limit for values plotted at zero. When sample values were above the detection limit, the maximum values are plotted (May).

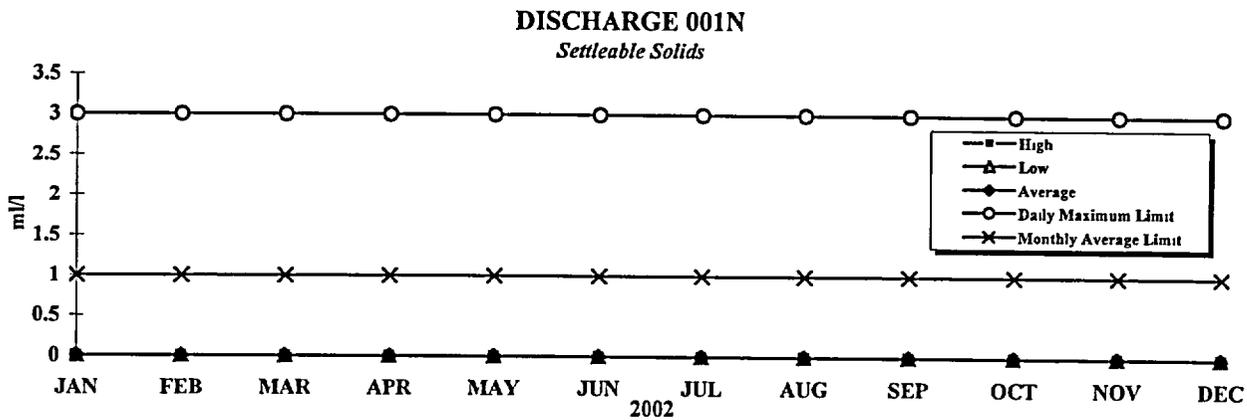
2002 Annual Summary Report on Discharge Monitoring at the Diablo Canyon Power Plant



Note: Values plotted at zero were below the reporting limit.
Low and average values overlap at twelve points on this plot.



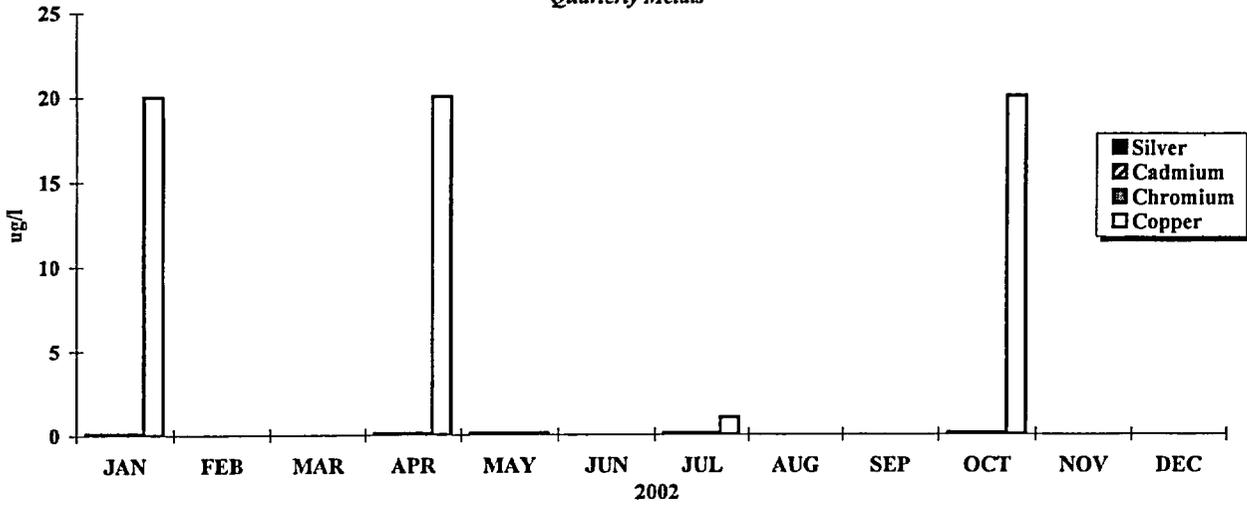
Note: Values plotted at zero were below the reporting limit.



Note: Values plotted at zero were below the reporting limit.

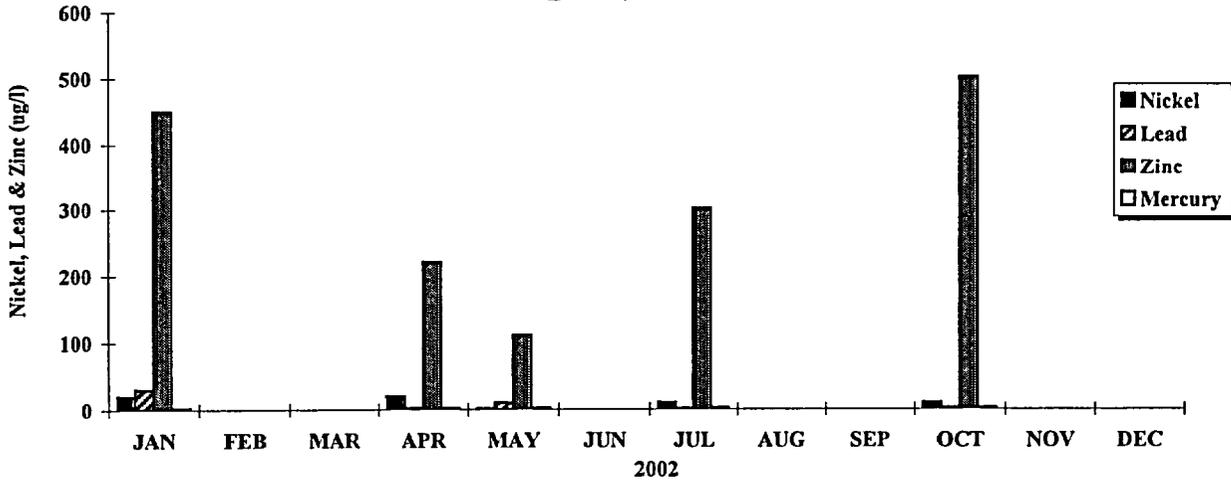
**2002 Annual Summary Report on Discharge Monitoring
at the
Diablo Canyon Power Plant**

DISCHARGE 001D
Quarterly Metals



Note: The analyte was not detected at or above the reporting limit for values plotted at zero.

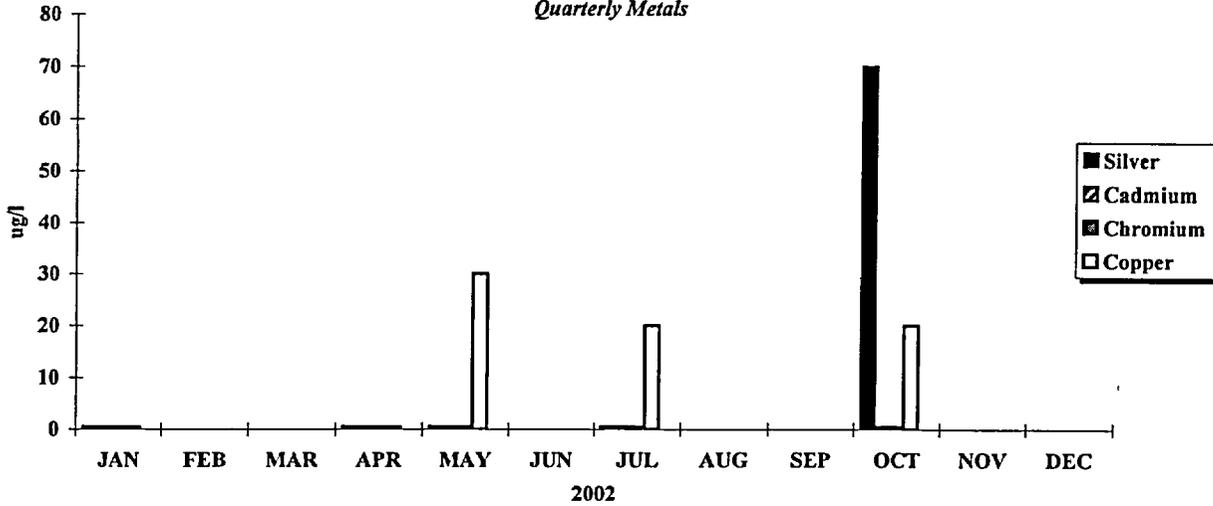
DISCHARGE 001D
Quarterly Metals



Note: The analyte was not detected at or above the reporting limit for values plotted at zero.

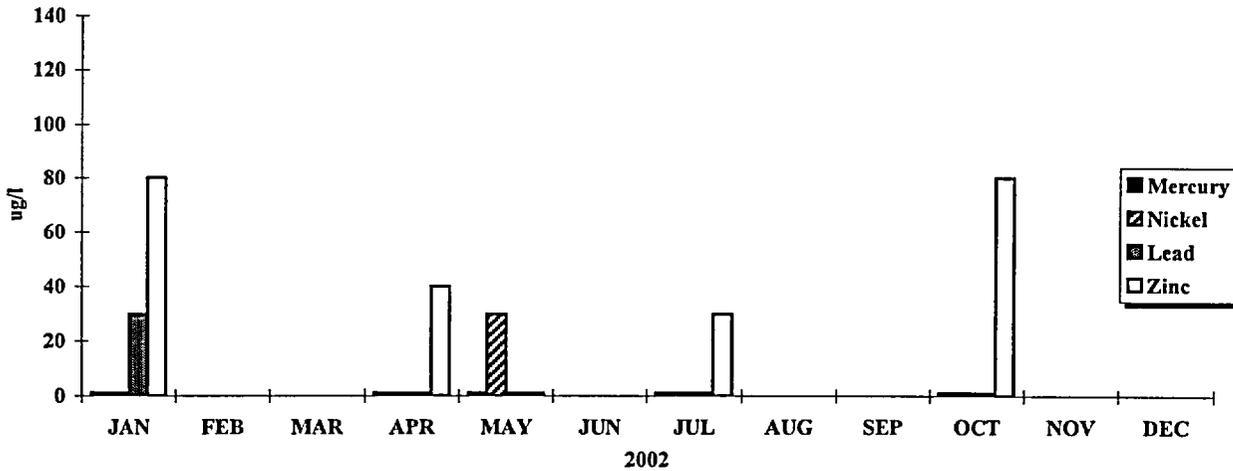
**2002 Annual Summary Report on Discharge Monitoring
at the
Diablo Canyon Power Plant**

DISCHARGE 001F
Quarterly Metals



Note: The analyte was not detected at or above the reporting limit for values plotted at zero.

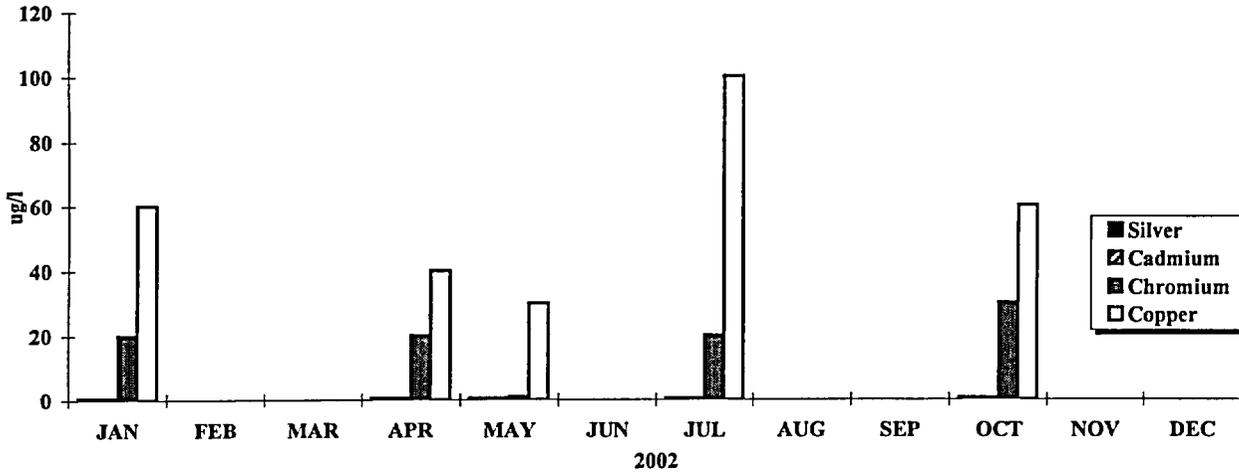
DISCHARGE 001F
Quarterly Metals



Note: The analyte was not detected at or above the reporting limit for values plotted at zero.

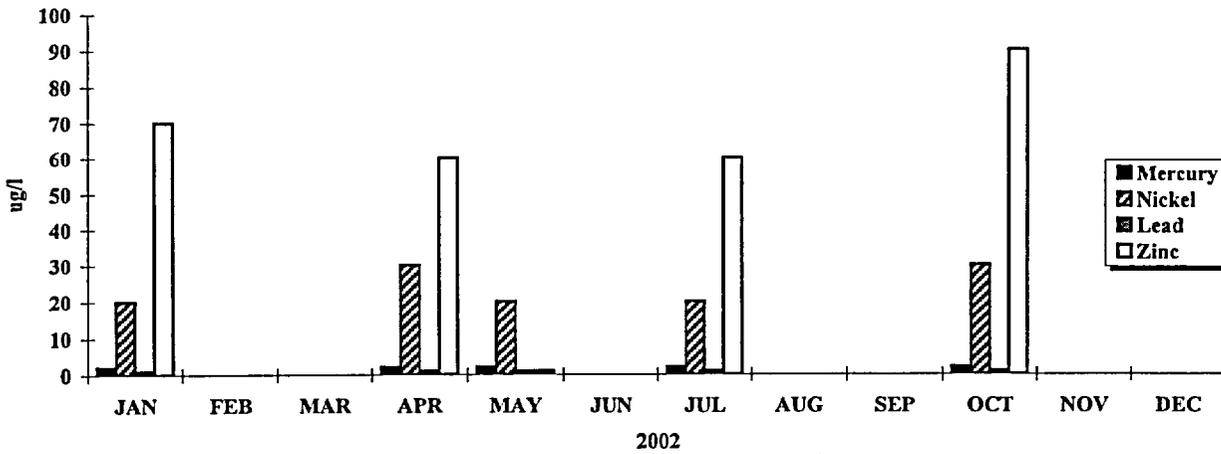
**2002 Annual Summary Report on Discharge Monitoring
at the
Diablo Canyon Power Plant**

DISCHARGE 001H
Quarterly Metals



Note: The analyte was not detected at or above the reporting limit for values plotted at zero.

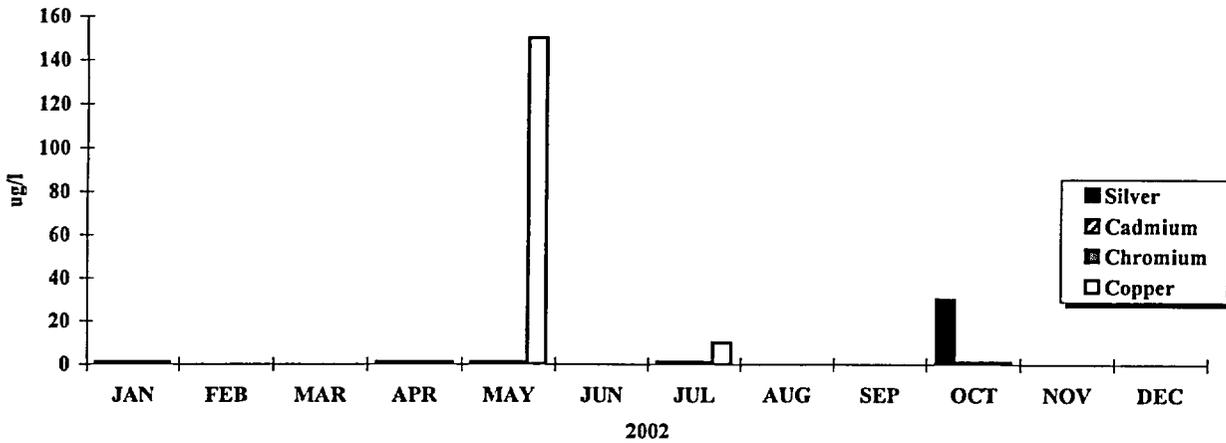
DISCHARGE 001H
Quarterly Metals



Note: The analyte was not detected at or above the reporting limit for values plotted at zero.

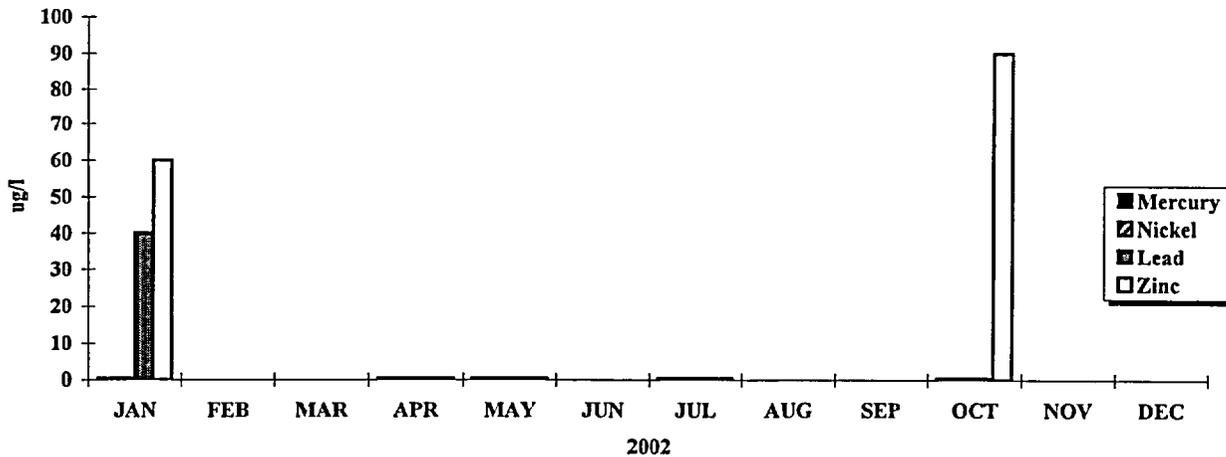
**2002 Annual Summary Report on Discharge Monitoring
at the
Diablo Canyon Power Plant**

DISCHARGE 001L
Quarterly Metals



Note: The analyte was not detected at or above the reporting limit for values plotted at zero.

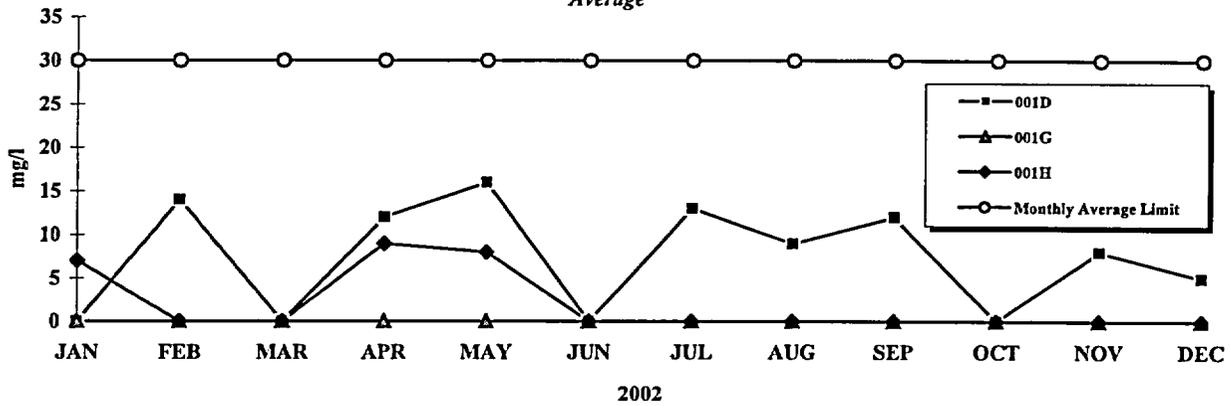
DISCHARGE 001L
Quarterly Metals



Note: The analyte was not detected at or above the reporting limit for values plotted at zero.

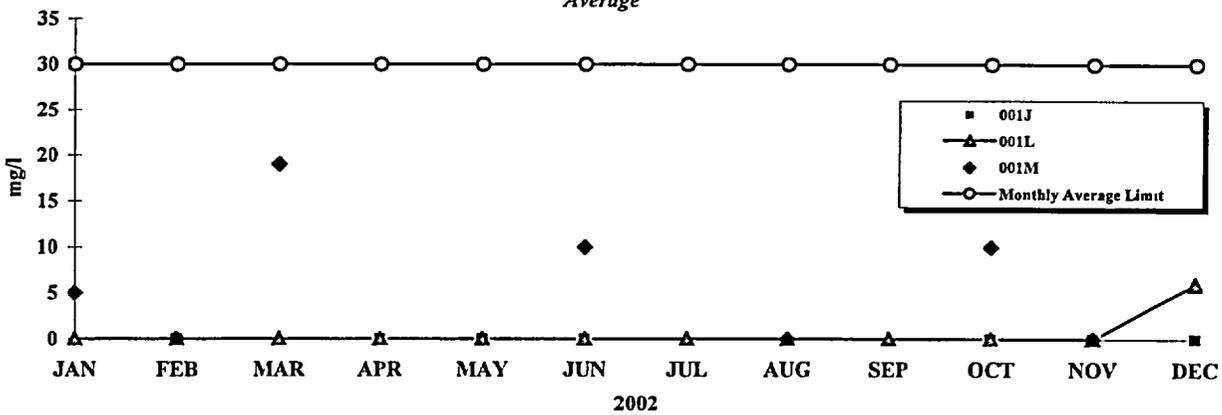
2002 Annual Summary Report on Discharge Monitoring at the Diablo Canyon Power Plant

MONTHLY TOTAL SUSPENDED SOLIDS
Average



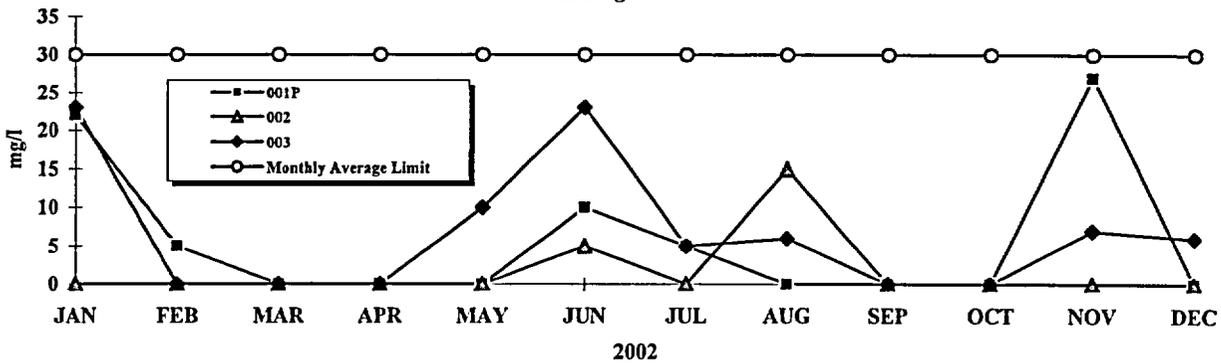
Note: Values plotted at zero were below the reporting limit.

MONTHLY TOTAL SUSPENDED SOLIDS
Average



Note: Points on charts may overlap. Values plotted at zero were below the reporting limit.

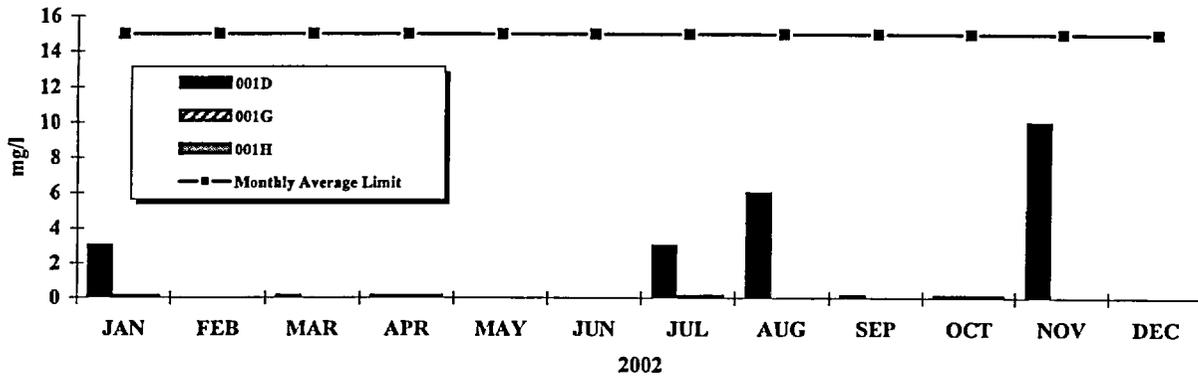
MONTHLY TOTAL SUSPENDED SOLIDS
Average



Note: Points on charts may overlap. Values plotted at zero were below the reporting limit.

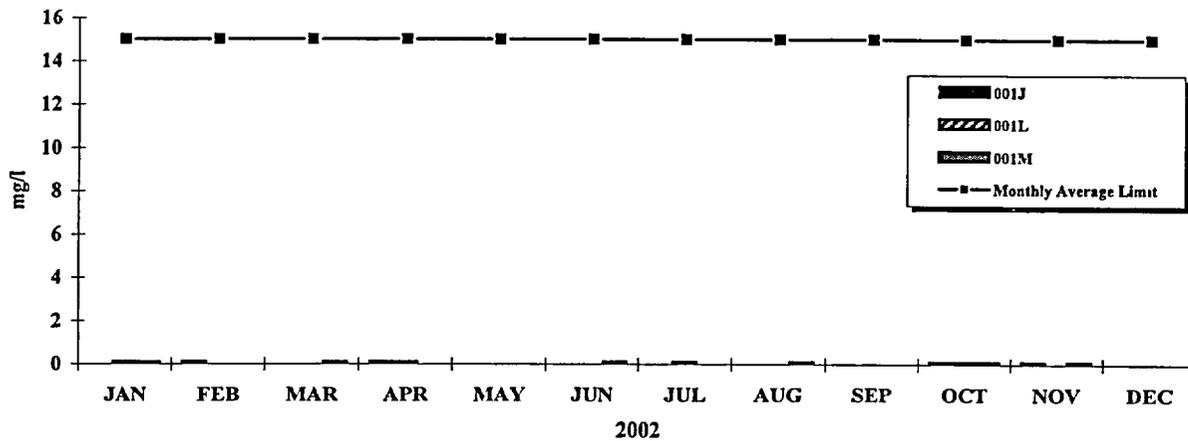
2002 Annual Summary Report on Discharge Monitoring at the Diablo Canyon Power Plant

QUARTERLY OIL & GREASE *Average*



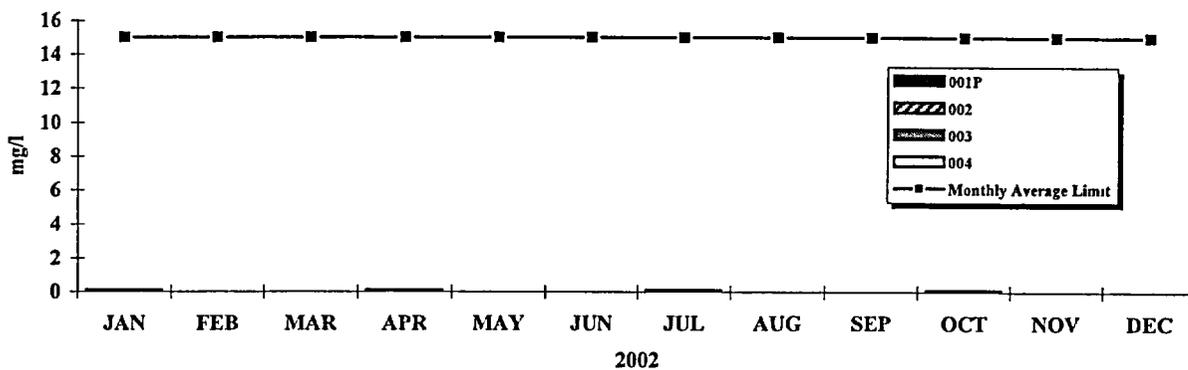
Note: Values plotted at zero were below the reporting limit.

QUARTERLY OIL & GREASE *Average*



Note: Values plotted at zero were below the reporting limit.

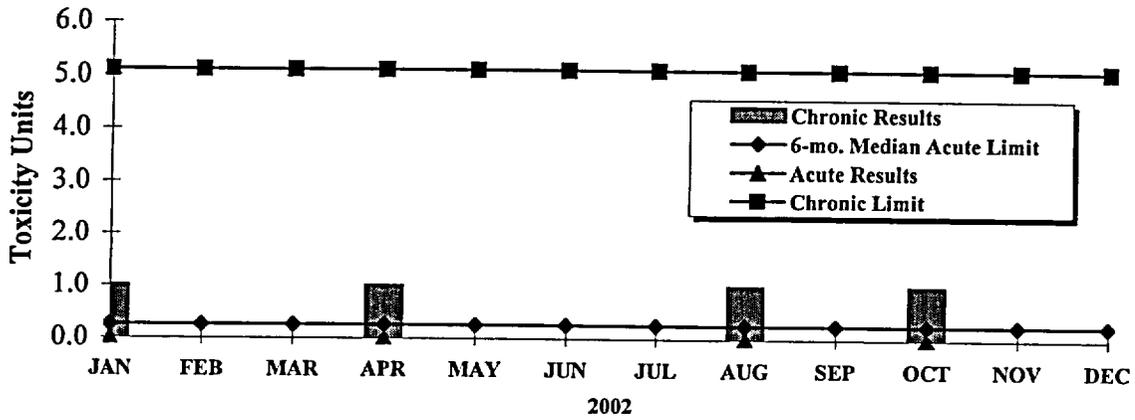
QUARTERLY OIL & GREASE *Average*



Note: Values plotted at zero were below the reporting limit.

2002 Annual Summary Report on Discharge Monitoring
at the
Diablo Canyon Power Plant

ACUTE AND CHRONIC TOXICITY



APPENDIX 4

SUMMARY OF RWMP MONITORING FOR 2002

Study	RWMP Stations/ Surveys per Year	1st Survey Completion Stations/ Dates	2nd Survey Completion Stations/ Dates	3rd Survey Completion Stations/ Dates	4th Survey Completion Stations/ Dates
Horizontal Band Transects	14 / 4x	Feb 8	May 29	Jul 24	Dec 4
Vertical Band Transects	5 / 4x	Feb 12	May 1	Jul 27	Dec 31
Benthic Stations	8 / 4x	Mar 27	Jun 20	Aug 23	Dec 26
Fish Observation Transects	12 / 4x	Apr 3	Jul 15	Sep 23	Jan 16 / 03
Bull Kelp Census	* / 1x				Oct
Temperature Monitoring	24 / **	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec

* Diablo Cove census

** Temperature measured throughout the year at 20 minute intervals (14 intertidal and 10 subtidal stations).

ENCLOSURE 2

ERRATA 2002 NPDES DISCHARGE MONITORING REPORTS FOR DIABLO CANYON POWER PLANT

The following correction to previously submitted information was included in the third quarter NPDES report PG&E DCL-2002-569, dated October 17, 2002.

ERRATA: Paragraph 1 of the "Overview" section of the quarterly reports for the first quarter of 2001 through the second quarter of 2002 contained a typographical error. The item "001E" was moved from the sentence listing "discharges occurred" to "no discharges occurred". Flowpath 001E, Service Cooling Water, is a continuously flowing heat exchanger pathway that branches off and then recombines with 001, Once Through Cooling Water. There are no chemicals added to this flowpath, there are no monitoring or reporting requirements, and there are no discharge limitations.

The second quarter 2002 Discharge Self Monitoring Report (DSMR) data forms contained a typographical error. The forms were dated 2001 rather than 2002.

The attached monitoring report page should replace that page contained in the fourth quarter NPDES report PG&E DCL-2003-505, dated January 17, 2003, for October monitoring data.

ERRATA: Effluent 001 PCB's "Monthly Avg", "Monthly High", and Monthly Low" should have been noted as ND (1.59) rather than ND (1.52).

CALIFORNIA REGIONAL WATER QUALITY
CONTROL BOARD
CENTRAL COAST REGION
81 HIGUERA
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: (A) 4

FACILITY I.D.	YEAR / MO / DAY		YEAR / MO / DAY		STATE CODE	NPDES PERMIT #	
3 402003001	BEGINNING	02 / 10 / 01	ENDING	02 / 10 / 31	06	CA0003751	
STATION ANALYSIS UNITS SMPL TYPE FREQ	EFFLUENT 009 OIL & GREASE mg/1 GRAB OCTOBER	EFFLUENT 013 OIL & GREASE mg/1 GRAB OCTOBER	EFFLUENT 015 OIL & GREASE mg/1 GRAB OCTOBER	EFFLUENT 016 OIL & GREASE mg/1 GRAB OCTOBER	EFFLUENT 017 OIL & GREASE mg/1 GRAB OCTOBER	INFLUENT PCB'S ug/1 GRAB OCTOBER	EFFLUENT 001 PCB'S ug/1 GRAB OCTOBER
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24						** ND(1 52)	** ND(1 59)
25							
26							
27							
28							
29							
30							
31							
MONTHLY AVG	Note (1)	Note (1)	Note (1)	Note (2)	NO	** ND(1 52)	** ND(1 59)
MONTHLY HIGH					DISCHARGE	ND(1 52)	ND(1 59)
MONTHLY LOW						ND(1 52)	ND(1 59)
TIMES EXCEEDED	MO AVG 15=0	NO LIMIT	NO LIMIT				
TIMES EXCEEDED	DMAX 20=0						
TIMES EXCEEDED							

REMARKS * NUMBER OF SAMPLES TAKEN DURING THE DAY
 ** REPORTING LIMIT SHOWN IS SUM OF RL'S FOR 7 UNDETECTED ANALYTES
 Note (1) SAMPLED & REPORTED IN DECEMBER OF 2002
 Note (2) SAMPLED & REPORTED IN SEPTEMBER OF 2002

PRINCIPAL EXECUTIVE OFFICER
GREGORY M RUEGER

SIGNATURE OF AUTHORIZED AGENT	DATE
<i>Drew Squires</i>	1/17/2003