SAN DIEGO GAS & ELECTRIC'S RESPONSE TO DEPARTMENT OF TOXIC SUBSTANCES CONTROL COMMENTS SOUTH BAY POWER PLANT FACILITY CHULA VISTA, CALIFORNIA

by

Haley & Aldrich, Inc.
San Diego, California
And
IRIS Environmental

for

San Diego Gas & Electric
San Diego, California

File No. 29719-001
February 2004

HALEY & ALDRICH

UNDERGROUND
ENGINEERING &
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25 February 2004
File No. 29197-000

Ms. Violeta Mislang
California Environmental Protection Agency
Department of Toxic Substances Control
State Regulatory Program Division
5796 Corporate Avenue
Cypress, CA 90630

Subject: Response to DTSC Comments
South Bay Power Plant
Chula Vista, California

Dear Ms. Mislang:

Haley & Aldrich, Inc., on behalf of San Diego Gas & Electric (SDG&E), is pleased to provide response to the Department of Toxic Substances Control (DTSC) comments dated 11 February 2003. This document also contains response to DTSC comments related to the subject site provided to SDG&E by the current owner/operator (Port of San Diego / Duke Energy) related to their decommissioning and remediation efforts at the North Tank Farm portion of the facility. Port/Duke responses are included in the text portion of the document at appropriate locations, with a complete copy included in Appendix D.

Please contact me at 619.285.7106 or Barbara Montgomery of SDG&E at 858.547.3330 if you have any questions regarding this document.

Sincerely yours,
HALEY & ALDRICH, INC.

Mehdi Miremadi
Vice President and Program Manager

cc: Barbara Montgomery (SDG&E), David Barrett (SDG&E), Bob Howard (Latham & Watkins), Todd Sostek (SDG&E), Bill Hays (Port of San Diego), Kathy Woodard (Duke Energy)

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SECTION 1

1.0 INTRODUCTION

This document presents response to comments received from different divisions of the Department of Toxics Substances Control (DTSC) related to the South Bay Power Plant Facility (SBPP), in Chula Vista, California. This document also includes response from Duke Energy/Port of San Diego (Duke/Port) related to their decommissioning and soil remediation efforts at the North Tank Farm. Their responses are incorporated both in the text at appropriate locations and also as a separate document in Appendix D. The response to comments is organized into five sections, as described below:

- Section 1.0 Introduction
- Section 2.0 Response to State Regulatory Program 's Division (SRPD) comments
- Section 3.0 Response to Geological Services Unit's comments
- Section 4.0 Response to Human and Ecological Risk 's Division (HERD) 27 February 2002 comments
- Section 5.0 Response to HERD's April 30, 2002 comments
- Figures
  - Figure A- Location of Target Interim Remediation Areas and SWMUs
  - Figure B- Site Plan with Petroleum Hydrocarbon Concentrations in Soil
  - Figure C- Site Plan with Petroleum Hydrocarbon Concentrations in Groundwater
  - Figure D- Site Plan with VOC Concentrations in Groundwater
  - Figure E- Former First Generation Surface Impoundment Area with Metals and TEH Concentrations
- Appendixes
  - Appendix A – Soil Analytical Data
  - Appendix B – Groundwater Analytical Data
  - Appendix C – Background Data Evaluation
  - Appendix D – Duke Energy/Port of San Diego Response to DTSC Comments

In addition to the above-mentioned figures and tables, additional tables, figures, and selected sections of other reports are provided throughout this document to further clarify the response to specific comments.

During the Phase II investigation activities at the site, a significant amount of soil and groundwater data was generated and documented in a number of reports prepared by Fluor Daniel GTI (FDGTI) from 1998 to 2001 and submitted by San Diego Gas & Electric (SDG&E) to DTSC for review to implement a cleanup, in advance of operational closure of the facility by the new owner and operator (date unknown), of five areas. To assist DTSC in reviewing our response to comments provided by DTSC and to clarify and summarize results of previous investigations, Haley & Aldrich, Inc. and IRIS Environmental, on behalf of SDG&E, conducted a comprehensive review of previous investigation reports and work plans. Discussions were also held among DTSC, SDG&E, Duke Energy (Duke) and the Port of San Diego (Port) during a number of meetings and site visits to better define the scope of

DTSC' s comments and approaches in responding to those comments. As such, we have organized our responses to be consistent with DTSC's review comments dated February 1, 2003. The following items presented below in the remainder of this Introduction will assist the reviewers in understanding important site issues prior to reviewing the detailed response to DTSC's comments.

Definition of Facility:

The South Bay Power Plant (SBPP) facility is a 150-acre property located on 990 Bay Boulevard. in Chula Vista, California (see Figure A). During the 8 April 8 2003 site visit, DTSC agreed that the following facilities/properties are not part of the SBPP and thus the scope of this project:

- The National City Tank Farm (NCT), located 4.3 miles north of the SBPP
- The 10-inch fuel pipeline that formerly transferred oil from the NCT to SBPP
- The former LNG site, a legally separate parcel that is located offsite and adjacent to the southern boundary of SBPP, and
- The auto junkyard, located offsite to the east of the SBPP across Bay Blvd., which is not owned by SDG&E, the Port, or Duke.

Site Owners / Operators:

SDG&E owned and operated the SBPP site until 1999 when it was sold to the Port of San Diego (Port). The Port leased the site to Duke Energy in 1999, which has operated the plant for the last four years.

Governing Port-SDG&E Asset Sale Agreement and Scope of Existing Project:

On 22 April 1999, SDG&E divested its South Bay Power Plant (SBPP) as required by California law, conveying various assets, including the NCT site lease, and donating certain real property to the San Diego Unified Port District (Port). Concurrently, the Port leased the South Bay Plant and NCT site to Duke Energy South Bay, LLC (Duke Energy). The process of addressing and allocation of environmental liabilities at the NCT site and South Bay Plant are governed by the Port-SDG&E "Asset Sale Agreement (South Bay Plant)," dated 11 December 1998 (hereinafter ASA). Under the ASA, SDG&E agreed to remediate five areas in advance of any future decommissioning and site closure. Accordingly, this project is the first of a multi-phase project that will be undertaken for completion of facility assessment and remediation for the SBPP closure.

The ASA allocates environmental cleanup obligations at SBPP between SDG&E and the Port, given the fact that in 1998-99 various areas underneath and in proximity to the operational SBPP infrastructure could neither be reasonably accessed nor remediated until facility decommissioning and demolition. The allocation of South Bay environmental liabilities between the Port and SDG&E is well defined by the ASA, and depicted by a diagram incorporated into the 1998 ASA, informally called the five project area diagram.

Under the terms of the ASA, in 2001, SDG&E approached the County of San Diego Department of Environmental Health (DEH) to oversee the assessment and remediation of the five areas of SBPP that SDG&E was obliged contractually under the ASA to address in the aftermath of the sale of the operational Port-Duke plant. On 9 July 2001, DTSC advised DEH that DTSC retained jurisdiction of SBPP as a tiered-permitting facility.

To be clear, the voluntary SDG&E project before DTSC was not initiated by the former plant owner as a fence-to-fence RCRA assessment and remediation associated with facility closure. SDG&E has no existing property in SBPP. In SDG&E's view, the purpose of the current SBPP project is to assess and cleanup, as contractually required, five discrete and accessible areas of SBPP, understanding that that a traditional DTSC fence-to-fence site closure process would coincide with the decommissioning of the SBPP at the appropriate time, minus the five areas SDG&E would have addressed before facility decommissioning.

Database Development:

Following collection and compilation of hard copies of previous site soil, groundwater, and soil gas data, it was decided that development of a site-wide database will enhance access to the data for, data interpretation, and will facilitate conducting future risk assessment revisions. As such, selected previous consulting firms and laboratories were contacted to obtain an electronic version of the site data. The goal was to obtain from the labs as much of the analytic data in electronic form as possible, thereby minimizing the need to hand enter laboratory results into the database. Following a significant effort, an electronic version of a portion of the data was obtained. To complete the database, Haley & Aldrich then entered the rest of the data from hard copy versions into the database. In addition to the Phase II report, data from the following SBPP historical environmental documents were entered into the database, as appropriate:

- Phase I Environmental Site Assessment, FDGTI, 1998
- Supplemental Environmental Site Assessment, Ninyo & Moore, 1998
- Remedial Action Work Plan, Fuel Hydrocarbons and Metals, IT, 2001
- Investigation and Proposed Remediation of Dissolved VOC's, IT, 2001
- Groundwater Monitoring, Former UST Site, Haley & Aldrich, 2001

For quality assurance purposes, different Haley & Aldrich staff then cross-checked the data in the database against the hard copies, including all of the hand-entered data. In addition, IRIS Environmental conducted a second round of cross checking of select portions of the database during the preparation of their response. The final database was then tied to a Geographic Information System (GIS) program to provide the ability to generate site figures directly from the database. This database has been used to prepare the response to DTSC's comments. Appendices A and B have a copy of the database which is attached and will be referred to throughout this document. Please refer to the database tables in Appendix A and B for analytical data.

North Tank Farm Decommissioning

Following purchase of the SBPP facility, Port and its lessee, Duke, demolished the four North Tank Farm ASTs from October 1999 through October 2000. Demolition included removing the tanks, piping, concrete rings, and removing a concrete lined pump pit. This was followed by removal of 21, 600 cubic yards of impacted soil beneath the ASTs in April and May of 2001. The demolition and soil removal activities were documented in a report prepared by Duke Engineering & Services dated 28 August 2001 which was submitted to DTSC. The Port/ Duke provided the response to DTSC comments related to the North Tank Farm decommissioning and soil remediation (Appendix D).

List of Additional Reports Provided by Port of San Diego

The following documents were provided by the Port of San Diego and Duke Energy to SDG&E during the preparation of response to DTSC comments. A complete copy of each document is also provided to DTSC as part of this submittal. Selected sections of these reports are included as part of the response to specific comments:

- Results for Sampling and Analysis of Sediments Collected Adjacent to the SDG&E South Bay Power Plant, Dated October 1998, Prepared by MEC Analytical Systems, Inc. for Port of San Diego
- Supplemental Environmental Site Assessment South Bay Power Plant, Dated November 11, 1998, Prepared by Ninyo & Moore for Port of San Diego
- Final Report for the North Tank Farm Soil Characterization Activities South Bay Power Plant, Duke Engineering & Services, March 20, 2001
- Final Work Plan for the North Tank Farm Soil Excavation and Temporary Storage Activities South Bay Power Plant, Duke Engineering & Services, April 7, 2001
- Report of Excavation and Temporary Storage Activities for the North Tank Farm at the South Bay Power Plant, Duke Engineering & Services, August 28, 2001
- Response to DTSC Comment Regarding Excavation of Hydrocarbon Impacted Soil from the North Tank Farm Area in May 2001, Kelly Tilford, RG, February 15, 2004 (See Appendix D)
- Response to DTSC Comments, Duke Energy North America, February 19, 2004 (see Appendix D)

Selection and Analysis of Background Data

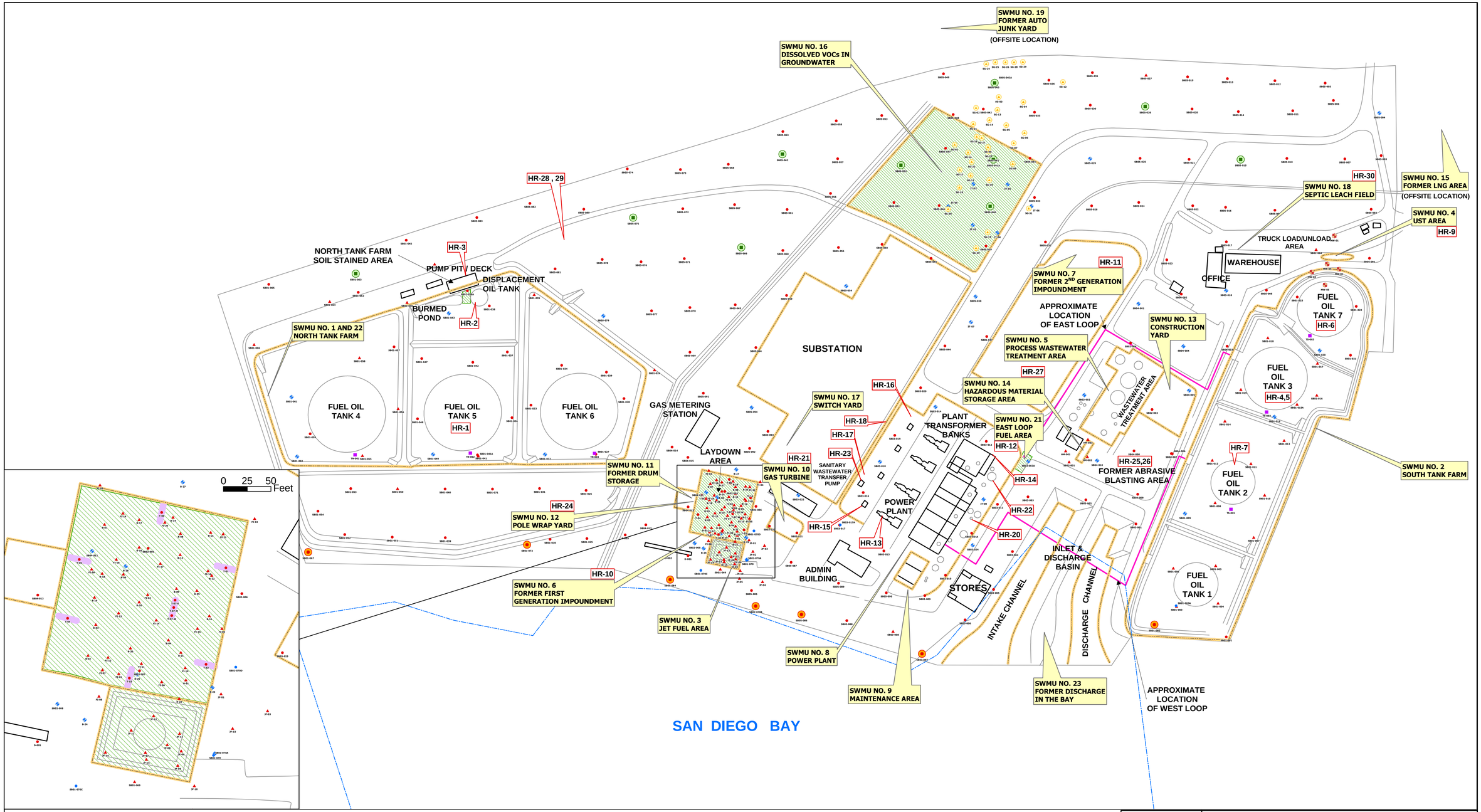
In response to DTSC's comments and concern over the appropriateness of the originally selected background data set, the entire background data set for metals in soils at the SBPP Site was rigorously re-evaluated. The purpose of the re-evaluation was to more fully establish the technical basis and rationale for development of a background dataset for metals in soils. The background dataset will then be used, in subsequent phases of the risk assessment, to determine whether the metals in soils at the Site are present at levels that exceed naturally occurring background concentrations. The re-evaluation was a three-step process involving the selection of a geographic area containing potential background sample locations and samples, an evaluation of the geologic and historic information contained in previous site investigation reports, and a statistical evaluation of the chemical constituents present in the background data set.

The proposed background data set is 30% smaller than that previously utilized by Fluor Daniel GTI (1998b), however we believe the data points included are more likely to be representative of true background concentrations. The likelihood of multiple data populations being present within the background data set was evaluated utilizing a geologic, graphical, and statistical analysis tools. In sum, we believe that the proposed background data set within Area 5, consisting of 140 samples, is representative of a single population of native sedimentary deposits. This background data set, and the corresponding summary statistics, will be used to assess whether metals detected onsite are present at levels that exceed the naturally occurring background concentrations. The details of the background dataset development are presented in Appendix C.

Follow Up Actions and Deliverables

Based on our review of site information and responses provided in this document, we believe that the following presents a summary and the order of what needs to be accomplished to obtain interim closure on the five areas SDG&E committed to resolve in advance of facility decommissioning:

1. Prepare a supplemental Phase II Investigation Work Plan
2. Implement the Supplemental Phase II field work
3. Prepare the Supplemental Phase II Investigation report
4. Prepare a revised risk assessment report that will include the supplemental investigation results
5. Prepare a revised Remedial Action Work Plan that will include a focused corrective action evaluation
6. Implement interim remediation activities
7. Prepare closure report



LEGEND

- Background Groundwater Sample
- Compliance Groundwater Sample
- Soil Boring 0'-5.5'
- Soil Boring 6'-15'
- SoilBoring 1.5'-16'
- 2" Monitoring Well (Permanent)
- Previously Drilled Monitoing Well (Permanent)
- Groundwater Sample (Temporary Well)
- Soil Gas Boring
- SWMU Boundary
- Target Interim Remediation Area
- Exploration Trench Location
- SWMU NO. 3 JET FUEL AREA — SWMU Number and Description
- HR-1 — Potential Historic Release Location

N

All Locations and Dimensions Approximate

0 150 300 600 Feet

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SOUTH BAY POWER PLANT

FIGURE A

LOCATION OF TARGET INTERIM REMEDIATION AREAS AND SMWUS

SCALE AS SHOWN

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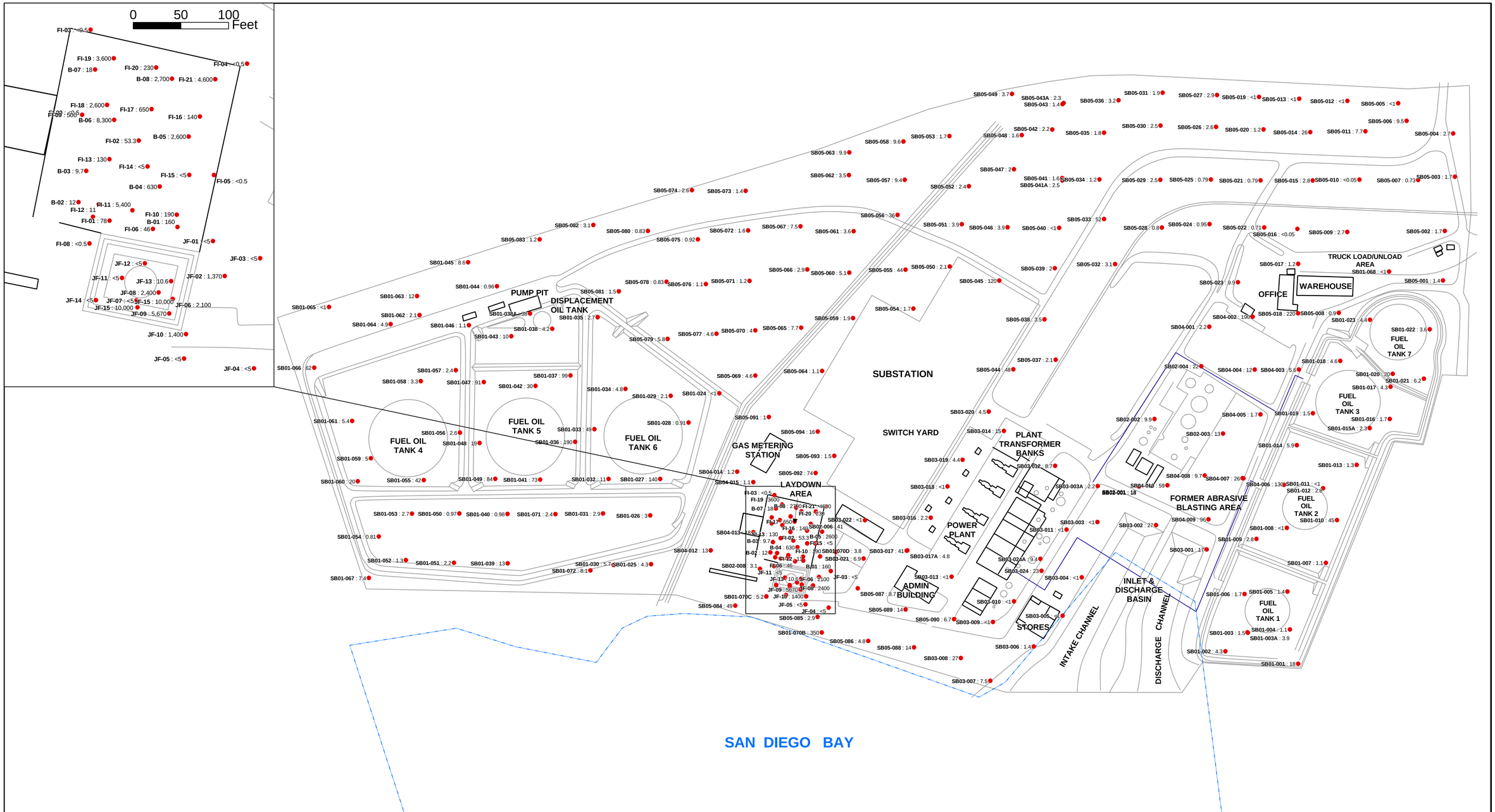
29197-001



LEGEND

- Sample Location with Max TEH/TPH Concentration (ug/Kg)

NOTE :
TEH : TOTAL EXTRACTABLE HYDROCARBONS
TPH : TOTAL PETROLEUM HYDROCARBONS
ug/Kg : MICROGRAMS PER KILOGRAM
< 5 : LESS THAN REPORTING LIMIT
ANAYTE CONSIDERED AS **TPH** OR **TEH** IN DIFFERENT SAMPLING EVENTS
REPORTING LIMIT VARIES IN DIFFERENT SAMPLING EVENTS

N

All Locations and Dimensions Approximate

0 150 300 600 Feet

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FIGURE B

SITE PLAN WITH PETROLEUM HYDROCARBON CONCENTRATIONS IN SOIL

SCALE AS SHOWN

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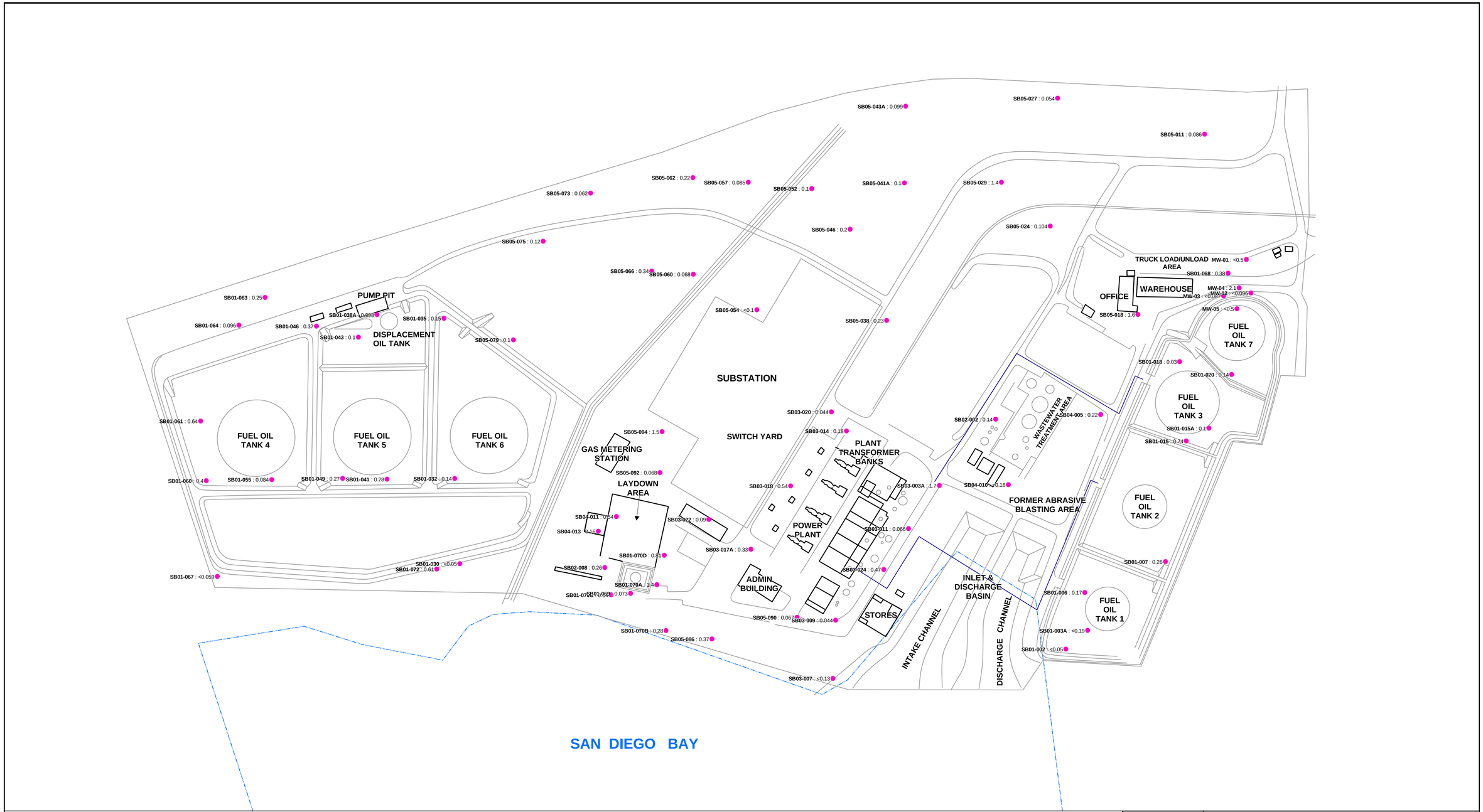

LEGEND

• Sample Location with Max TEH/TPH Concentration (mg/L)

NOTE :
TEH : TOTAL EXTRACTABLE HYDROCARBONS
TPH : TOTAL PETROLEUM HYDROCARBONS
mg/L : MILLIGRAMS PER LITER
< 5 : LESS THAN REPORTING LIMIT
ANAYTE CONSIDERED AS **TPH** OR **TEH** IN DIFFERENT SAMPLING EVENTS
REPORTING LIMIT VARIES IN DIFFERENT SAMPLING EVENTS

N

All Locations and Dimensions Approximate

0 150 300 600 Feet

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SOUTH BAY POWER PLANT

FIGURE C

SITE PLAN WITH PETROLEUM HYDROCARBON CONCENTRATIONS IN GROUNDWATER

SCALE AS SHOWN

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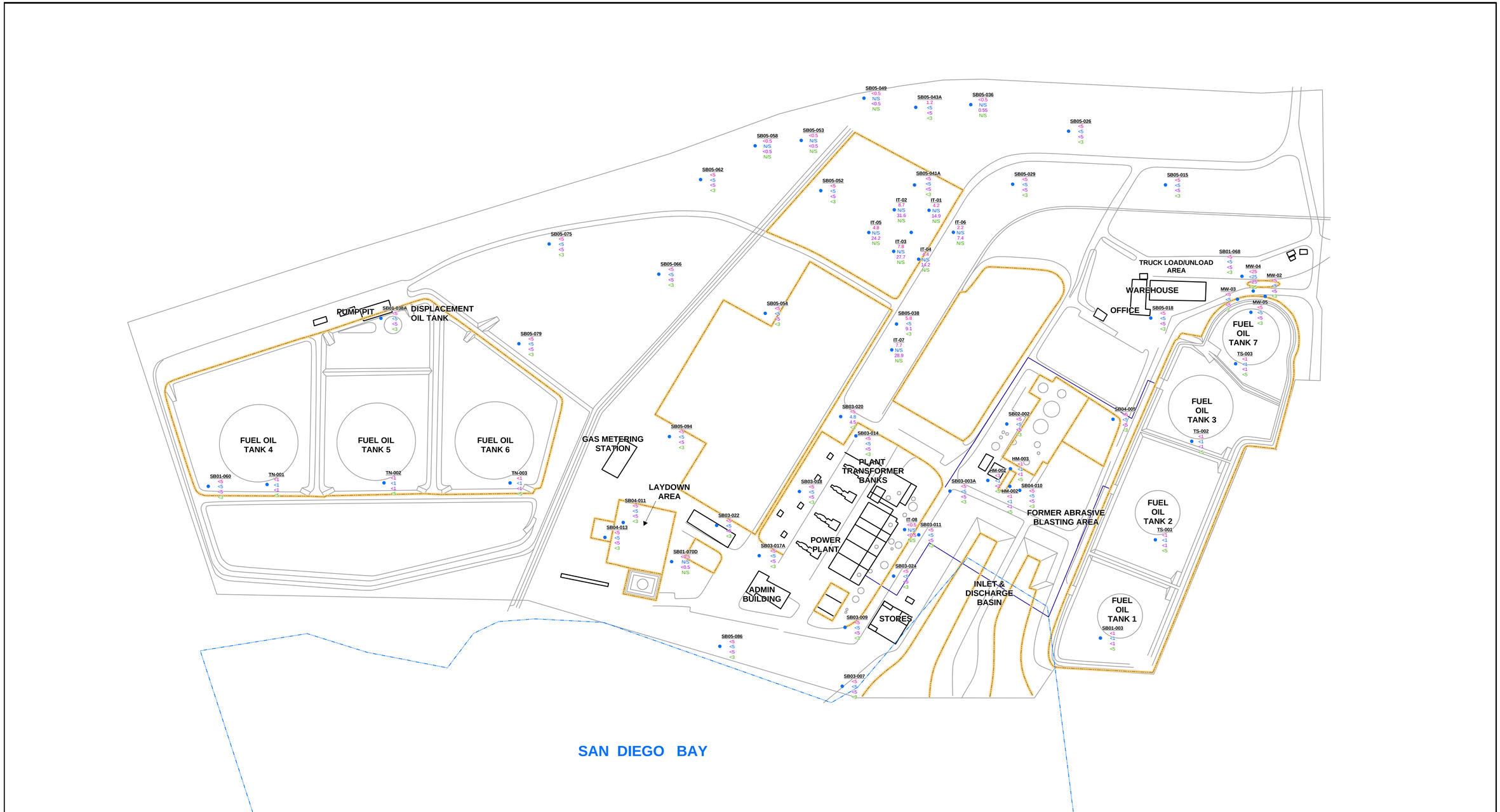

LEGEND

- • SAMPLE LOCATION WITH ID
- <5 CIS-1,2-DICHLOROETHENE (UG/L)
- <5 TETRACHLOROETHENE (UG/L)
- <5 TRICHLOROETHENE (UG/L)
- <5 VINYL CHLORIDE (UG/L)

NOTE :
VOC : VOLATILE ORGANIC COMPOUND
ug/l : MICROGRAMS PER LITER
< 5 : LESS THAN REPORTING LIMIT
REPORTING LIMIT VARIES IN DIFFERENT SAMPLING EVENTS

N

All Locations and Dimensions Approximate

0 150 300 600 Feet

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SOUTH BAY POWER PLANT

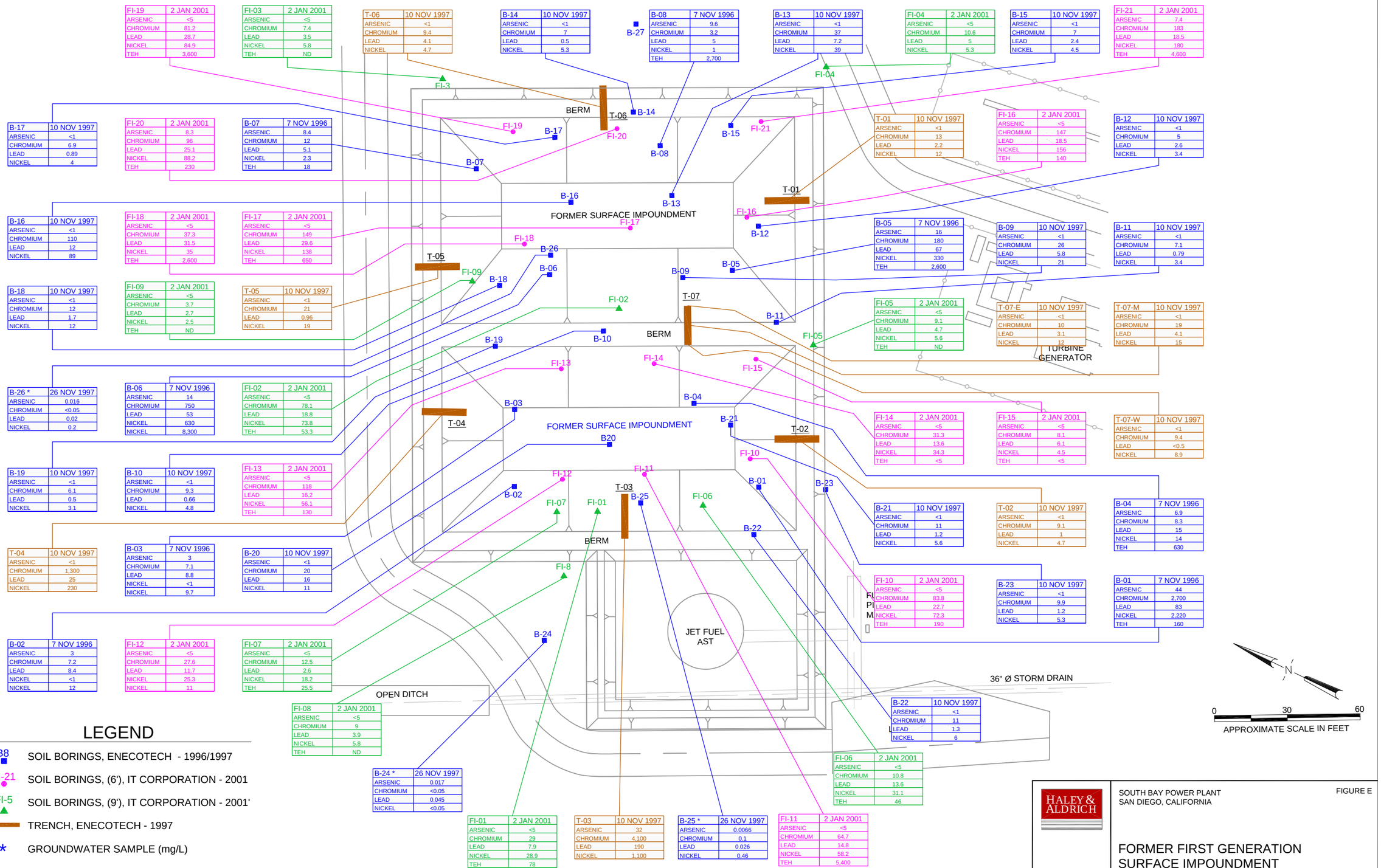
FIGURE D

SITE PLAN WITH VOC CONCENTRATIONS IN GROUNDWATER

SCALE AS SHOWN

FEBRUARY 2004

29197-001



FI-19	2 JAN 2001
ARSENIC	<5
CHROMIUM	81.2
LEAD	28.7
NICKEL	84.9
TEH	3,600

FI-03	2 JAN 2001
ARSENIC	<5
CHROMIUM	7.4
LEAD	3.5
NICKEL	5.8
TEH	ND

T-06	10 NOV 1997
ARSENIC	<1
CHROMIUM	9.4
LEAD	4.1
NICKEL	4.7

B-14	10 NOV 1997
ARSENIC	<1
CHROMIUM	7
LEAD	0.5
NICKEL	5.3

B-08	7 NOV 1996
ARSENIC	9.6
CHROMIUM	3.2
LEAD	5
NICKEL	1
TEH	2,700

B-13	10 NOV 1997
ARSENIC	<1
CHROMIUM	37
LEAD	7.2
NICKEL	39

FI-04	2 JAN 2001
ARSENIC	<5
CHROMIUM	10.6
LEAD	5
NICKEL	5.3

B-15	10 NOV 1997
ARSENIC	<1
CHROMIUM	7
LEAD	2.4
NICKEL	4.5

FI-21	2 JAN 2001
ARSENIC	7.4
CHROMIUM	183
LEAD	18.5
NICKEL	180
TEH	4,600

B-17	10 NOV 1997
ARSENIC	<1
CHROMIUM	6.9
LEAD	0.89
NICKEL	4

FI-20	2 JAN 2001
ARSENIC	8.3
CHROMIUM	96
LEAD	25.1
NICKEL	88.2
TEH	230

B-07	7 NOV 1996
ARSENIC	8.4
CHROMIUM	12
LEAD	5.1
NICKEL	2.3
TEH	18

T-01	10 NOV 1997
ARSENIC	<1
CHROMIUM	13
LEAD	2.2
NICKEL	12

FI-16	2 JAN 2001
ARSENIC	<5
CHROMIUM	147
LEAD	18.5
NICKEL	156
TEH	140

B-12	10 NOV 1997
ARSENIC	<1
CHROMIUM	5
LEAD	2.6
NICKEL	3.4

B-16	10 NOV 1997
ARSENIC	<1
CHROMIUM	110
LEAD	12
NICKEL	89

FI-18	2 JAN 2001
ARSENIC	<5
CHROMIUM	37.3
LEAD	31.5
NICKEL	35
TEH	2,600

FI-17	2 JAN 2001
ARSENIC	<5
CHROMIUM	149
LEAD	29.6
NICKEL	138
TEH	650

B-05	7 NOV 1996
ARSENIC	16
CHROMIUM	180
LEAD	67
NICKEL	330
TEH	2,600

B-09	10 NOV 1997
ARSENIC	<1
CHROMIUM	26
LEAD	5.8
NICKEL	21

B-11	10 NOV 1997
ARSENIC	<1
CHROMIUM	7.1
LEAD	0.79
NICKEL	3.4

B-18	10 NOV 1997
ARSENIC	<1
CHROMIUM	12
LEAD	1.7
NICKEL	12

FI-09	2 JAN 2001
ARSENIC	<5
CHROMIUM	3.7
LEAD	2.7
NICKEL	2.5
TEH	ND

T-05	10 NOV 1997
ARSENIC	<1
CHROMIUM	21
LEAD	0.96
NICKEL	19

FI-05	2 JAN 2001
ARSENIC	<5
CHROMIUM	9.1
LEAD	4.7
NICKEL	5.6
TEH	ND

T-07-E	10 NOV 1997
ARSENIC	<1
CHROMIUM	10
LEAD	3.1
NICKEL	12

T-07-M	10 NOV 1997
ARSENIC	<1
CHROMIUM	19
LEAD	4.1
NICKEL	15

B-26 *	26 NOV 1997
ARSENIC	0.016
CHROMIUM	<0.05
LEAD	0.02
NICKEL	0.2

B-06	7 NOV 1996
ARSENIC	14
CHROMIUM	750
LEAD	53
NICKEL	630
NICKEL	8,300

FI-02	2 JAN 2001
ARSENIC	<5
CHROMIUM	78.1
LEAD	18.8
NICKEL	73.8
TEH	53.3

FI-14	2 JAN 2001
ARSENIC	<5
CHROMIUM	31.3
LEAD	13.6
NICKEL	34.3
TEH	<5

FI-15	2 JAN 2001
ARSENIC	<5
CHROMIUM	8.1
LEAD	6.1
NICKEL	4.5
TEH	<5

T-07-W	10 NOV 1997
ARSENIC	<1
CHROMIUM	9.4
LEAD	<0.5
NICKEL	8.9

B-19	10 NOV 1997
ARSENIC	<1
CHROMIUM	6.1
LEAD	0.5
NICKEL	3.1

B-10	10 NOV 1997
ARSENIC	<1
CHROMIUM	9.3
LEAD	0.66
NICKEL	4.8

FI-13	2 JAN 2001
ARSENIC	<5
CHROMIUM	118
LEAD	16.2
NICKEL	56.1
TEH	130

B-21	10 NOV 1997
ARSENIC	<1
CHROMIUM	11
LEAD	1.2
NICKEL	5.6

T-02	10 NOV 1997
ARSENIC	<1
CHROMIUM	9.1
LEAD	1
NICKEL	4.7

B-04	7 NOV 1996
ARSENIC	6.9
CHROMIUM	8.3
LEAD	15
NICKEL	14
TEH	630

T-04	10 NOV 1997
ARSENIC	<1
CHROMIUM	1,300
LEAD	25
NICKEL	230

B-03	7 NOV 1996
ARSENIC	3
CHROMIUM	7.1
LEAD	8.8
NICKEL	<1
NICKEL	9.7

B-20	10 NOV 1997
ARSENIC	<1
CHROMIUM	20
LEAD	16
NICKEL	11

FI-10	2 JAN 2001
ARSENIC	<5
CHROMIUM	83.8
LEAD	22.7
NICKEL	72.3
TEH	190

B-23	10 NOV 1997
ARSENIC	<1
CHROMIUM	9.9
LEAD	1.2
NICKEL	5.3

B-01	7 NOV 1996
ARSENIC	44
CHROMIUM	2,700
LEAD	83
NICKEL	2,220
TEH	160

B-02	7 NOV 1996
ARSENIC	3
CHROMIUM	7.2
LEAD	8.4
NICKEL	<1
NICKEL	12

FI-12	2 JAN 2001
ARSENIC	<5
CHROMIUM	27.6
LEAD	11.7
NICKEL	25.3
NICKEL	11

FI-07	2 JAN 2001
ARSENIC	<5
CHROMIUM	12.5
LEAD	2.6
NICKEL	18.2
TEH	25.5

B-22	10 NOV 1997
ARSENIC	<1
CHROMIUM	11
LEAD	1.3
NICKEL	6

FI-08	2 JAN 2001
ARSENIC	<5
CHROMIUM	9
LEAD	3.9
NICKEL	5.8
TEH	ND

FI-06	2 JAN 2001
ARSENIC	<5
CHROMIUM	10.8
LEAD	13.6
NICKEL	31.1
TEH	46

B-24 *	26 NOV 1997
ARSENIC	0.017
CHROMIUM	<0.05
LEAD	0.045
NICKEL	<0.05

FI-01	2 JAN 2001
ARSENIC	<5
CHROMIUM	29
LEAD	7.9
NICKEL	28.9
TEH	78

T-03	10 NOV 1997
ARSENIC	32
CHROMIUM	4,100
LEAD	190
NICKEL	1,100

B-25 *	26 NOV 1997
ARSENIC	0.0066
CHROMIUM	0.1
LEAD	0.026
NICKEL	0.46

FI-11	2 JAN 2001
ARSENIC	<5
CHROMIUM	64.7
LEAD	14.8
NICKEL	58.2
TEH	5,400

LEGEND

- B8 — SOIL BORINGS, ENECOTECH - 1996/1997
- FI-21 — SOIL BORINGS, (6'), IT CORPORATION - 2001
- FI-5 — SOIL BORINGS, (9'), IT CORPORATION - 2001'
- TRENCH, ENECOTECH - 1997
- * — GROUNDWATER SAMPLE (mg/L)

NOTE: ALL CONCENTRATIONS IN mg/kG AND REPRESENT MAXIMUM CONCENTRATIONS DETECTED IN EACH SOIL BORING

29197B01

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SOUTH BAY POWER PLANT
SAN DIEGO, CALIFORNIA

FIGURE E

FORMER FIRST GENERATION SURFACE IMPOUNDMENT

SCALE: AS SHOWN

FEBRUARY 2004

SECTION 2

2.0 RESPONSE TO STATE REGULATORY PROGRAM DIVISION (SRPD) COMMENTS

GENERAL COMMENTS:

Based on the review of the work plans and reports submitted, DTSC found the following general comments:

Report Tables –DTSC found that the tables contained in Fluor Daniel's Phase II Environmental Site Assessment Report (Phase II Report) have limited data information. The Tables only reported the number of samples that were analyzed, number of detections above and below reporting limit, maximum concentrations analyzed, and location of maximum concentration detected. The tables also include the calculated values for the normal arithmetic mean, standard deviation and 95% Upper Confidence Limit (UCL), however it does not include the data used in calculating these values. Although the tables are usable, DTSC found it difficult to verify the accuracy of the values, specifically the statistical data, due to unknown sources of data that were used in calculating the values presented. DTSC suggests that future tables include analysis data of all samples collected and analyzed, including the detection or reporting limit that were used. DTSC prefers that tables are specific to each area of investigation.

Response: A copy of the project database including all soil gas, soil, and groundwater quality data is attached to this document in appendices A and B. The data is organized by environmental media and types of laboratory analysis performed.

Background Concentrations in Soils – The Phase II assessment indicates that all soil samples taken from investigation Area 5 were classified as background data for metals in the South Bay Power Plant (SBPP) and the National City Terminal (NCT). Samples SB5-082 and SB5-083 were excluded on the basis that the localized area in which they were drilled might have been impacted by metal-related activities.

DTSC disagree with the facility's determination of designating data collected in area 5 as background. Based on DTSC's review, it was found that the highest concentration of Mercury in soil, 2.4 mg/kg (10x above STLC), and groundwater at 1.5 ug/l (0.002 MCL) were detected in area 5, at sampling locations SB5-005, and SB5-052, respectively. Volatile organic compounds (VOCs) in groundwater were also detected in the east central portion of the site, in area 5. It should be noted that background samples should be collected at or near the site but not in areas likely to be influenced by contamination and or facility operations. Therefore, only those data gathered at locations not influenced by contamination and or facility operations should be classified as background.

In addition, sampling locations of soil and groundwater selected for background purposes should be listed in a table for easy identification and verification. DTSC suggests that background samples be re-evaluated.

The NCT site is located 4 miles away from the South Bay Power Plant, and is not a contiguous property to the site. DTSC suggests that background data for the NCT site should be collected at or near the NCT property.

Response: As indicated in the introduction part of this document, in response to DTSC's comments and concern over the appropriateness of the originally selected background data set, the entire background data set for metals in soils at the SDG&E South Bay Power Plant (SBPP) Site was rigorously re-evaluated (see Appendix C). The purpose of the re-evaluation was to more fully establish the technical basis and rationale for development of a background dataset for metals in soils. The background dataset will then be used, in subsequent phases of the risk assessment, to determine whether the metals in soils at the Site are present at levels that exceed naturally occurring background concentrations. The re-evaluation was a three-step process involving the selection of a geographic area containing potential background sample locations and samples, an evaluation of the geologic and historic information contained in previous site investigation reports, and a statistical evaluation of the chemical constituents present in the background data set.

The proposed background data set is 30% smaller than that previously utilized by Fluor Daniel GTI (1998), however we believe the data points included are more likely to be representative of true background concentrations. The likelihood of multiple data populations being present within the background data set was evaluated utilizing a geologic, graphical, and statistical analysis tools. In sum, we believe that the proposed background data set within Area 5, consisting of 140 samples, is representative of a single population of native sedimentary deposits. This background data set, and the corresponding summary statistics, will be used to assess whether metals detected onsite are present at levels that exceed the naturally occurring background concentrations. Please refer to Appendix C for a detailed discussion of the development of the background dataset.

Background concentrations in Groundwater – The Phase II Report indicates that the eleven groundwater well locations from the eastern part of the property were considered background. Table 3-3 identified SB1-061 as a background well. However, it also identified that SB1-061 detected Antimony at 36 ug/l exceeding MCL level of 6 ug/l. SB1-061 is located near Fuel Oil Tank #6 in the North Tank Farm, which is currently being investigated. As discussed above, background samples should be collected at areas not likely to be influenced by contamination, and should be upgradient from the suspected contamination. DTSC suggests to correct the data used for background eliminating those that were collected in areas that are being investigated.

Response: As noted, DTSC suggests "correcting the data used for background eliminating those that were collected in areas that are being investigated." In response to this comment, the eleven wells that were originally included as background locations for metals in groundwater have been re-evaluated to exclude those wells where metal concentrations in groundwater may have been impacted by facility operations. The original background wells excluded are locations SB01-043 and SB01-061 which are located within the North Tank Farm area. Consistent with the soil metal background data set for the Site (discussed below in the response to General Comment #4), all wells located within background Area 5 are included in the groundwater metal background data set, as the data from these wells are believed to be representative of the concentrations of metals flowing onto the Site, un-impacted by any potential facility operations (groundwater flow is reportedly from the east to the west, towards San Diego Bay). The wells with metals groundwater data within background Area 5 that are included in the groundwater metal background data set include the following locations: SB05-015, SB05-029, SB05-040, SB05-041, SB05-043A, SB05-052, SB05-062, SB05-066, and SB05-075. Additionally, well location SB01-063 was included in the metal groundwater background data set. This well is located along the eastern boundaries of the Site, just outside of the eastern fencing, and is up-gradient of the North Tank Farm area. Therefore, the data in this well is considered representative of the

concentrations of metals flowing onto the Site, un-impacted by any potential facility operations. A summary table of metals data for these background well locations is provided in Appendix C.

Identification of Chemicals of Potential Concern (COPC) – The Phase II Assessment Report indicates that other than metal, soil concentrations lower than PRGs are eliminated as a COPC. DTSC does not agree with the elimination process for PRGs are screening tools only, and are not clean up levels. All organic chemicals must be evaluated through risk assessment, and all metals above background must be carried through as COPCs.

Response: Comment acknowledged. As provided in the response to HERD's April 20, 2002 Specific Comment A, Region IX PRGs will not be used for identifying and selecting COPCs. All organic chemicals detected at least once in any media and any inorganic chemicals exceeding locally occurring natural background concentrations will be carried through the revised risk assessment.

DTSC also found that names for the Areas of Concerns (AOCs) or Solid Waste Management Units (SWMUs), or areas being investigated are not consistent from one report to another.

Response: Because the previous reports were prepared at different times and for different purposes and by different parties, naming conventions used are not consistent. As presented in this document, all future reports will use the SWMUs numbering convention as indicated in DTSC's review comments document dated 11 February 2003.

Map

The latest map DTSC received for the South Bay Power Plant is an electronic copy of Figure 4 dated August 8, 2002. DTSC found the map very useful, however the map only identifies the general areas of investigation, and did not identify the locations of some of the Solid Waste Management Units (SMWUs). DTSC suggests that all other SMWUs listed below be identified in the map.

Response: A map identifying the locations of the SWMUs is attached (see Figure A in the Introduction Section).

SPECIFIC COMMENTS

SWMU #1, MAP LOCATION 1A, NORTH TANK FARM, NORTHERN PORTION OF SBPP

DTSC Comment (a): ASTs Pipelines and Pump Deck - Table 1-1 of the Phase II of the Environmental Site Assessment Report (Phase II ESA Report) dated July, 1998 indicates that hydrocarbon losses from the four Aboveground Storage Tanks (ASTs), pipe lines and pump deck. DTSC did not find any discussion regarding the investigation conducted near or underneath the former ASTs, pipelines and Pump Deck. DTSC suggests that investigations conducted in these areas be submitted to DTSC for review. If no investigation was conducted, then additional investigation is required.

Response: The following historical releases have been reported in the Phase I report for the North Tank Farm area based on employee interviews:

- Heater unit, AST #5, 15 to 20 gallons of fuel oil, unknown date
- Periodic minor leaks from Displacement Oil AST heat exchanger
- Periodic fuel oil release from the pump pit

The Phase I report did not include any evidence and documentation of releases from the fuel ASTs themselves (see page 29 Section 3.4.1 of the Phase I report). The reference in the Phase II report Table 1-1 identifies "potential releases" not actual known releases. Duke/Port demolished the North Tank Farm ASTs and associated piping and excavated petroleum hydrocarbon impacted soils beneath the ASTs in 2000/2001. Duke submitted to DTSC the August 2001 report which documents the above activities. Response to DTSC comments related to the subject Duke reports and North Tank Farm decommissioning and remediation activities were provided by Port/Duke and is included in the text of this document and in Appendix D.

During the 1998 Phase II investigation a total of 27 soil borings were drilled within the North Tank Farm area and surrounding the three ASTs and adjacent to the former pump deck and displacement oil tank (see Figure A) and two soil samples were collected at each boring location. In addition, groundwater samples were collected from five locations. Total petroleum hydrocarbon (TPH) concentrations in soil were generally low and below 100 mg/kg with the exception of two soil samples with TPH concentrations of 140 and 190 mg/kg. These two samples were also analyzed for polyaromatic hydrocarbons (PAHs). PAHs were not detected in the samples. This information indicates that elevated TPH concentrations indicative of significant releases of petroleum hydrocarbons in areas surrounding the ASTs were not detected.

During the 1998 Phase II investigation, one soil boring (SB01-38A) was drilled adjacent to the former pump pit/pump deck both of which refer to the same structure (see figure A). TPH concentrations of 4.2 and 38 mg/kg were detected in the surface soil samples. TPH was not detected in the deeper soil sample collected at a depth of 4.5 to 5 feet below the ground surface (bgs).

Bermed pond is located near the former pump pit/deck (see figure A). Sampling of the bermed pond area was not conducted during previous site investigations. We recommend that soil sampling be conducted within the bermed pond area.

It must be noted that an area of surface soil staining was identified in the North Tank Farm area near the pump pit/deck and bermed pond area in the August 2001 Remedial Action Work Plan (RAW). As indicated in the RAW, this surface stain area is one of the five target interim remediation areas described earlier. During the proposed sampling of the bermed pond area, additional sampling will be conducted to further confirm and locate the nearby stained soil area.

Duke/Port Response to DTSC Comments:

Duke/Port response to DTSC comments related to their decommissioning and remediation effort at North Tank Farm was provided to SDG&E and is presented below:

All of the ASTs and associated piping in the North Tank Farm and the Pump Deck were decommissioned by Duke Energy South Bay LLC (Duke) by end of May 2001. Three reports attached for your reference were compiled by Duke Engineering and Service (DE&S) to document remedial activities associated with the North Tank Farm demolition project.

- Final Report for the North Tank Farm Soil Characterization Activities South Bay Power Plant, March 20, 2001, herein after referred to as the *Characterization Report*.
  - Purpose: Document soil sampling and analytical characterization of potentially contaminated soils beneath North Tank Farm tank foundations.
  - Scope: Investigated soil lithology and analyzed 62 soil samples collected from tank foundation soils beneath Fuel Oil Tanks 4, 5 and 6 and the Displacement Oil (DO) Tank. A wide array of potential constituents of concern (COCs) was selected for chemical analysis based on contamination sources in the area, soil descriptions, and field observations.
  - Agency: San Diego Regional Water Quality Control Board (SDRWQCB)

- Final Work Plan for the North Tank Farm Soil Excavation and Temporary Storage Activities, South Bay Power Plant, April 7, 2001, herein after referred to as the *Work Plan*.
  - Purpose: Provided a plan for excavation and relocation of petroleum contaminated non-hazardous industrial soils for potential on-site remediation.
  - Scope: Remove and relocate petroleum contaminated soil from beneath Fuel Oil Tanks 4, 5 and 6 and the DO Tank for potential on-site remediation. The plan only applied to the former tank footprints (structural fill). The estimated vertical extent of each excavation and the primary COCs (diesel-range petroleum hydrocarbons) were based on results presented in the *"Final Report for the North Tank Farm Soil Characterization Activities South Bay Power Plant, March 20, 2001"*.
  - Agency: SDRWQCB

- Report of Excavation and Temporary Storage Activities for the North Tank Farm at the South Bay Power Plant, August 2001, herein after referred to as the *Final Report*.
  - Purpose: Document actual remediation activities conducted in accordance with the *Work Plan*
  - Agency: SDRWQCB

Together, these three reports document the scope and extent of remediation activities performed in the North Tank Farm by Duke pursuant to an agreement between Duke and the Port of San Diego. All

petroleum hydrocarbon impacted soils beneath the footprint of each AST was excavated during decommissioning of the ASTs in 2000/2001. Results of confirmation are presented in the *Final Report*.

All ancillary equipment including pipelines was removed during decommissioning. Soil sampling beneath the pipelines was not part of the scope of work presented in the *Work Plan*; therefore, investigative sampling under the pipelines was not conducted. Even so, any petroleum impacted soils beneath the pipelines encountered during the excavation phase would have been noted and removed. There was no visible staining noted or observed under the pipelines.

During the SDG&E 1998 Phase II investigation, five soil borings were advanced adjacent to or near the pipe runs. Soil samples were collected at 0 to 1, 2.5 to 3.5 and 5 to 6 feet below ground surface (bgs), which the depth and number of samples vary upon location (Figure A: SB01-029, SB01-034, SB01-042, SB01-057 and SB01-058). The highest Total Petroleum Hydrocarbon, diesel range (TPHd) concentration detected was 30 mg/kg in the SB01-042, 0 to1-foot sample. The corresponding 3-3.5-foot sample at this location contained 1.9 mg/kg TPHd. All other locations were 4.8 mg/kg or less. These are relatively low concentrations, below the 1000 mg/kg cleanup level proposed in the *Work Plan*.

The pump deck directly northeast of the DO tank was constructed with a reinforced concrete foundation. When the pump deck was removed, there was no visual evidence of contamination within the footprint of the foundation. For this reason, confirmation sampling was not considered. To provide analytical verification that clean soils remain in place, Duke will define a sample grid and collect soil samples for chemical analysis in accordance with the *Work Plan*. As presented in the *Characterization Report*, the constituent of concern defining the vertical extent of excavation conducted in the North Tank Farm was total petroleum hydrocarbons in the diesel range (TPHd) analyzed using EPA Method 8015M. Because the DTSC believes the composite sampling protocol followed by Duke was inappropriate for properly characterizing other potential contaminates of concern [see DTSCs Specific Comments, Other Areas/Comments (a)] each sample will be analyzed for semi-volatile organic compounds (SVOCs) following EPA Method 8270C, total recoverable metals (CAM 17 metals) and selectively analyzed for volatile organic compounds (VOCs) following EPA Method 8260 in addition to TPHd. The analytical results will be forwarded to the DTSC as an addendum to the *Final Report*.

DTSC Comment (b): ***Pump Pit and Berm Pond - Table 1-1 of the Phase II ESA Report indicates that a potential impact to soil and groundwater from spills at the pump pit and berm pond. Also, Table 3-1of the Phase I Environmental Site Assessment, Volume I, Book I –Text, Figures and Tables (Phase I ESA) identified a periodic release of fuel oil discharged from the pump pit to east side of Aboveground Storage Tank (AST) #5. DTSC did not find any discussion regarding the investigation conducted in this area. DTSC suggests that a discussion of the investigation activities conducted in this area be submitted to DTSC for review. Additional investigation is required if no investigation was conducted***

Response: Table 1-1 of the Phase II report referred to 'potential releases" not actual known releases from the pump pit. During SDG&E 1998 Phase II investigation, soil boring SB01-38A was advanced adjacent to the Pump Pit. Two soil samples were collected at 0.5 to 1 and 4.5 to 5 feet below the ground surface (bgs). Total extractable Hydrocarbons (TEH) were 13 mg/kg in the 0 to 1-foot sample and non-detect in the deeper sample. These relatively low petroleum hydrocarbon concentrations are not indicative of significant releases at this sample location.

The bermed pond is located near the former pump pit/deck (see figure A). Sampling of the bermed pond area was not conducted during previous site investigations. We recommend that soil sampling be conducted within the bermed pond area.

Finally, the North Tank Farm pump pit, interchangeably referenced as the pump deck, was a concrete structure which was removed during decommissioning of the North Tank Farm ASTs by Port/Duke. Please refer to the last paragraph of the response for DTSC Comment (a) above, as the Port/Duke has recommended that additional soil sampling be conducted within the pump pit/deck footprint.

As part of decommissioning, encountered impacted soil was excavated and transported offsite. Confirmation samples were collected by Duke following soil excavation. Port/Duke provided the response to the specific comments related to their removal and remediation of the Pump Pit included in the text of this document and Appendix D.

DTSC Comment (c): ***Displacement Oil AST and Heat Exchanger - Table 1-1 of the Phase II ESA Report indicates that a potential impact from spills at the displacement oil AST and heat exchanger exist in these areas. Section 3.2.4 of the Excavation Report indicates that water was encountered during excavation at the Displacement Oil Tank area, and excavation was terminated at 8 feet depth. Only one confirmatory soil sample was collected from the tank center because groundwater was encountered. Previous analysis of soil samples taken from this location indicates that 4,600 mg/kg TPH was detected at 7.5 depth. DTSC suggests that further lateral and vertical delineation of contamination is required in these areas.***

Response: During SDG&E's 1998 Phase II investigation, soil boring SB01-38 was advanced near the Displacement Oil AST and heat exchanger. Two soil samples were collected at 0 to 1 and 5 to 5.5 feet bgs. TEH was detected at a concentration of 4.2 mg/kg in the shallow sample and was not detected in the deeper sample. These relatively low petroleum hydrocarbon concentrations were not indicative of a release at this sample location which represents the adjacent area west of the Displacement Oil AST. Additional soil sampling will be conducted in the immediate area of the former pump pit/deck and heat exchanger to confirm the lateral extent of petroleum hydrocarbon impact.

Furthermore, the North Tank Farm Displacement Oil Tank was removed during decommissioning of the North Tank Farm ASTs by Duke Energy. As part of decommissioning, encountered impacted soil was excavated and transported offsite. Confirmation samples were collected by Duke following soil excavation. Information related to tank decommissioning and impacted soil excavation is presented in Duke Energy's August 28, 2001 report submitted to DTSC. Port/Duke provided the response to the specific comments related to their removal and remediation of the Displacement Oil Tank included in the text of this document and in Appendix D and presented below.

Duke/Port Response to DTSC Comments:

Duke/Port responses related to their decommissioning and remediation efforts at the displacement Oil Tank was provided to SDG&E and is presented below:

As discussed previously, the DO Tank was removed during decommissioning of the North Tank Farm ASTs by Duke along with the Fuel Oil Tanks 4, 5 and 6. All petroleum hydrocarbon impacted soils

beneath the footprint of the DO Tank was excavated during decommissioning. Results of confirmation are presented in the *Final Report*.

Presented in the *Characterization Report* are the results of a preliminary analytical characterization study for soils beneath each tank. A vertical gradient of potential contaminants of concern was determined to develop the excavation *Work Plan*. Based on this report, TPH was detected at 4,600 mg/kg in the 7.5-feet bgs sample collected from the center of the tank footprint. The TPH concentration significantly decreased to 11 mg/kg in the 10.5-feet sample. Therefore, the *Work Plan* conservatively set the excavation depth for the entire footprint down to 8 feet bgs. Duke was actually able to remove more soil down to 9 feet bgs, where groundwater was encountered. TPHd measured in the reconnaissance sample collected at this depth was none detected (< 10 mg/kg), which is consistent with the TPHd concentration measured at 10.5 feet (11 mg/kg) during the preliminary soil characterization phase.

Both qualitative and quantitative field screening methods were used in conjunction with analyzing soil samples from pre-determined fixed locations to detect petroleum contaminated soils near the clean up level, including visual observations for stained or discolored soil, olfactory senses for odors and field monitoring with a photo-ionization detector (PID). There were no instances or observations of residual contamination noted using these screening methods when excavation activities ceased. Because field screening did not indicate the presence of elevated TPHd and groundwater was encountered, only one sample was collected for confirmation.

DTSC Comment (d): ***Tank #5* - *Photograph #28 of the Excavation Report indicates that water with an apparent sheen was encountered in the ring area of Tank #5, however groundwater sampling was not addressed. DTSC suggests that ground water sampling be conducted in this area.***

Response: Tank #5 was removed during decommissioning of the North Tank Farm ASTs by Duke Energy. As part of decommissioning, impacted soil was excavated and transported offsite. Confirmation samples were collected by Duke following soil excavation. Information related to tank decommissioning and impacted soil excavation is presented in Duke's August 28, 2001 report submitted to DTSC. The Port and/or Duke provided the response related to their removal and remediation of the Tank #5 area.

Duke/Port Response to DTSC Comments:

Duke/Port responses related to their decommissioning and remediation efforts at Tank 5 was provided to SDG&E and presented below:

Fuel Oil Tank 5 was removed during decommissioning of the North Tank Farm ASTs by Duke along with the Fuel Oil Tanks 4 and 6 and the DO Tank. All petroleum hydrocarbon impacted soils beneath the footprint of the Tank 5 was excavated during decommissioning. Results of confirmation are presented in the *Final Report*.

After initially excavating a planned 3-foot lift across the entire tank footprint, screening samples were collected to determine the depth of localized contamination that appeared to be prevalent in the tanks perimeter "ring" at several locations. Based on the results, excavation of soil continued until contamination was no longer detected in all locally identified contaminated areas. The depth of

excavation ranged from approximately 3.5 feet to 7.5 feet below original surface (bos). All hydrocarbon impacted soil above the established 1000 mg/kg cleanup level was removed. Refer to Table 2 and Figure 8 of the *Final Report* for final verification sampling results.

The oily sheen observed within the footprint of Tank 5 was only noted to support the fact that additional excavation was required to address staining in the perimeter "ring" area of the tank (refer to section 3.2.2, page 10 through 12 of the *Final Report*). Condensation from the "ring" sediments formed a small puddle of water in a tire track left by the loader. The picture was included in the *Final Report* to demonstrate the use of visual means to conduct additional excavation. The water was not groundwater. The sheen was observed at 3-foot bos and soil was excavated down to 7.5-feet bos in this area, where clean soil was encountered.

DTSC Comment (e): ***Sampling location SB!-060 - During the Phase II investigation, it was found that 20 ug/l Lead (MCL =15 ug/l) was detected in sampling location SB1-060, which is located in the North Tank Farm. Additional sampling is required to verify the presence of metals in this area.***

Response: In the absence of known release and/or potential sources of contamination, we believe that all of the soil and groundwater data in specific areas of the site need to be considered as a whole, instead of only one sample point, to identify and assess environmental issues within that area. If there are no known releases and soil sampling across the area indicates no or minimal soil impact, then detection of one constituent in the groundwater, at low levels, is not considered sufficient to warrant additional sampling.

Boring SB01-060 is located in the northwestern corner of the former North Tank Farm AST #4 bermed area. During the SDG&E Phase II investigation, a total of 7 soil borings were drilled within this bermed area (see Figure A). At each boring location, two soil samples (one near the surface and one from a depth of approximately 5 feet) were collected. In addition, groundwater samples were collected at two of the soil borings (SB01-61 and SB01-60). The concentration of lead in the near surface samples ranged from 4.2 to 13 mg/kg and in the deeper samples ranged from 1.4 to 22 mg/kg. These detected concentrations are orders of magnitude below the California Modified Residential Preliminary Remediation Goals (PRGs) of 150 mg/kg and are not indicative of significant releases of lead into the subsurface soil. Lead was detected in the two groundwater samples in the range of 8.4 to 20 ug/l within the bermed area. The concentration of lead in groundwater in Boring SB01-67, located approximately 300 feet downgradient of Boring SB01-60, was 11 ug/l indicating no downgradient groundwater quality impacts. Based on all of the above soil and groundwater characterization information in the area in question, no further characterization related to the occurrence of lead is considered to be necessary at this location.

Other Areas/Comments:

a. Section 2.2.1 of the Report indicates that three composite samples were collected from each tank location for metals analysis. Each sample was comprised of equal parts of soil from the same depth interval of the five sampled locations from within each tank footprints. The report indicates that overall, metal concentrations are within the typical concentrations found in native soil. Also, three composite soil samples were collected and analyzed for SVOCs. DTSC does not agree with the composite sampling methodology due to dilution factor and escape of VOCs and SVOCs. DTSC

suggests that additional discrete soil samples be collected for metals, VOCs and SVOC analysis following the US EPA SW-846.

Response: Response to the above comments related to the North Tank Farm decommissioning and soil excavation was provided to SDG&E by Duke/Port and is presented below.

After decommission of the ASTs, DE&S completed soil sampling and analytical characterization of potentially contaminated soil beneath the footprint of each tank. A wide array of potential contaminates or classes of contaminates were targeted for chemical screening and analysis based on potential sources from past operations and field observations. The soils were analyzed for total recoverable metals (CAM 17), polychlorinated biphenyls (PCBs), TPHd and SVOCs. Samples for PCB and TPHd analysis were direct, where samples for SVOCs and metals were a composite three individual samples. The analytical results narrowed the excavation confirmation analysis to TPHd, as the other constituents of concern were either below detection limits or within background range.

To provide analytical verification that clean soils remain in place, Duke will define a sample grid and collect soil samples for additional chemical analysis in accordance with the *Work Plan*. Discrete soil samples will be collected and analyzed for VOCs following EPA Method 8260, SVOCs following EPA Method 8270C and total recoverable metals (CAM 17 metals). Analytical results with soil sample locations will be forwarded to the DTSC as an addendum to the *Final Report*.

b. Table 2, Excavation Report – DTSC suggests that SDG&E clarify if analysis results for sampling location T5-AE7a with concentration of < 10 mg/kg TPH is a confirmatory sample for T5-AE7 with 3,500 mg/kg. In addition, sampling locations T5-AE1 through T5-AE7a can not be located in the figure section of the Excavation Report. DTSC suggests that a map be provided for review.

Response: Response to the above comment related to the North Tank Farm decommissioning and soil excavation was provided to SDG&E by Duke/Port and is presented below.

Excavation activities and associated confirmation sampling for this location was discussed in the *Final Report* (see pages 10 through 12 and Table 2). Enclosed in Appendix D, please find a letter dated February 15, 2004 written by the Project Geologist, Kelly Tilford, who designed and implemented the *Work Plan* and provided oversight for all field activities. This letter is provided as a supplement to the Final report and should address this comment.

Specific to DTSCs comment, T5-AE7a was a confirmation sample pulled after additional excavation was conducted at the same horizontal location as T5-AE7, which contained TPHd in excess of the 1000 mg/kg TPH clean-up level. Attached to the enclosed letter are field notes and a field diagram for the area in question.

DTSC found that soil sampling was focused beneath and inside the former locations of tank perimeter areas, and no sampling was conducted near and outside the perimeter of the tanks. Groundwater was encountered during the excavation activities however, no groundwater sampling was conducted. Therefore, DTSC suggests that additional investigation be conducted to include analysis for metals, pH, VOCs, SVOCs and TPH in soil and groundwater in the North Tank Farm.

Response: During the 1998 Phase II investigation, 23 soil borings were advanced near and surrounding the ASTs in this area (see Figure A) and two soil samples were collected at each boring location. In addition, ifve groundwater samples were collected both upgradient and downgradient of the ASTs. Soil and groundwater samples were analyzed for TPH/THE, metals, and selected samples were analyzed for PAHs. In our opinion, the number and distribution of the sample locations and type of laboratory analysis were adequate to identify significant releases and impacts adjacent and outside of the ASTs. The sampling beneath / inside of the ASTs referred to above in DTSCs comment was conducted later by Port/Duke during their AST decommissioning effort and is in addition to the 1998 Phase II investigation activities. Together, they provide substantial subsurface soil and groundwater information in the North Tank Farm area. Response to specific comments related to the North tank farm decommissioning and soil excavation were provided by Port/Duke and is included in the text of this document and Appendix D.

SWMU#2, Map Location 1b, South Tank Farm, Southern Boundary of SBPP

DTSC Comment: ***Table 1-1 of Phase II Environmental Assessment, Volume 2, Book 1, Text, Figures and Tables (Phase II ESA), dated July 1998 by Fluor Daniel GTI identified that releases of Fuel Oil # 6 occurred in tanks 1, 2 and 3 located in the South Tank Farm. Also, it was noted that potential hydrocarbon losses from the four ASTs, pipe lines and pump decks exists, including truck unloading station for tank #7. The following releases were:***

a. Tank #1 -The Tiered Permitting (TP) Data Sheet also identified that the release of approximately 10 barrels (bbls) of No. 6 Fuel Oil prior to 1989 occurred from the tank bottom of Tank #1. The approximate area of the release was 30 feet in diameter. Fuel oil release was recovered, the tank bottom was repaired, and impacted soil was disposed offsite. However, no sampling data was submitted.

Response: Because of the physical and chemical properties of Fuel Oil No. 6, once released into the ambient environment, it would tend to solidify and becomes immobile. As such, its removal during soil excavation activities can effectively be conducted based on visual observations and without confirmation soil sampling. Furthermore, impacted soil beneath the ASTs, if any, will be addressed during future decommissioning of the ASTs. During the 1998 Phase II investigation six soil borings were drilled adjacent and downgradient of the Tank 1. Multiple soil samples were collected at each boring locations and groundwater samples were collected at two location, one adjacent and one downgradient of the tank (see Figure A). Trace levels of petroleum hydrocarbons (0.52 to 3.9 mg/kg) were decetd in the soil samples. Concentrations of metals were in the range of background. PAHs were not detected in the sample with the highest TPH concentration. Furthermore, TPH, metals and PCBs were not detected in the two groundwater samples. Available information is not indicative of significant releases of hydrocarbons near Tank 1.

b. Tank #2 - Table 1-1 of the Phase II ESA Report indicates the loss of 15 barrels for No.6 fuel oil in 1983 on the east side base of Tank #2. The TP Data Sheet also identified that the release of approximately 15 barrels of No. 6 Fuel Oil prior to 1988 occurred from the tank bottom of Tank #2. The approximate area of the release was 35 feet in diameter. Fuel oil release was recovered, the tank bottom was repaired, and impacted soil was disposed offsite. However, no sampling data was submitted.

Response: Because of the physical and chemical properties of Fuel Oil No. 6, once released into the ambient environment, it would tend to solidify and becomes immobile. As such, its removal during soil excavation activities can effectively be conducted based on visual observations and without confirmation soil sampling. Furthermore, impacted soil beneath the ASTs, if any, will be addressed by Port/Duke during future decommissioning of the ASTs. During the 1998 Phase II investigation seven soil borings were drilled adjacent and downgradient of tank 2. Multiple soil samples were collected at each soil boring (see Figure A). Trace levels of TEH (0.57 to 3.1 mg/kg) were detected in six of the soil borings and TEH of 41 mg/kg in the remaining boring. Concentrations of metals were in the range of background. Available information is not indicative of significant releases of hydrocarbons near Tank 2.

c. Tank #3 -The TP Data Sheet also identified that the release of approximately 15 barrels of No. 6 Fuel Oil occurred from the tank bottom of Tank #3. The approximate area of the release was 35

feet in diameter. Fuel oil release was recovered, the tank bottom was repaired, and impacted soil was disposed offsite. However, no sampling data was submitted.

Response: Because of the physical and chemical properties of Fuel Oil No. 6, once released into the ambient environment, it would tend to solidify and becomes immobile. As such, its removal during soil excavation activities can effectively be conducted based on visual observations and without confirmation soil sampling. Furthermore impacted soil beneath the ASTs, if any, will be addressed by Port/Duke during future decommissioning of the ASTs. During the 1998 Phase II investigation six soil borings were drilled adjacent and downgradient of Tank 3. Trace concentration of THP in the range of 1.1 mg/kg to 4.6 mg/kg were detected in the soil samples. Metals were detected in soil samples in the range of background. BTEX compounds were not detected in the groundwater sample located downgradient of the tank. Available information is not indicative of significant releases of hydrocarbons near Tank 3.

During the Phase II ESA, soil sampling investigation was conducted around tanks 1, 2 and 3, however, confirmatory soil sampling underneath the tanks, the pump lines and the pump deck were not conducted. Section 6.1 of the Phase II ESA Report also indicates that areas under the tanks and pipings for the North Tank Farm and sub-area 1b of the South Tank Farm remain a potential environmental condition to be addresses at decommissioning. DTSC suggests that additional investigation be conducted in these areas to determine metals, hydrocarbons, SVOCs, and VOCs.

Response: Response to comments related to sampling beneath the tanks, pump deck, and pipe runs in the North Tank Farm area were provided to SDG&E by Duke/Port and included in the text of this document (see response to SWMU #1 on page 10) and Appendix D.

Fuel Oil Tanks 1 and 2 in the South Tank Farm area are still in operation. Fuel Oil Tanks 3 and 7 have been partially demolished, with the concrete foundations still in place. Remedial investigation directly under the tanks will be conducted when they are fully decommissioned.

d. <u>Unloading station for Tank #7</u> - Table 1-1 of the Phase II ESA Report identified that a potential exists of hydrocarbon losses at truck unloading station for Tank #7. DTSC did not find any specific investigation conducted at pipe lines and the truck unloading station for Tank #7. Also, truck unloading station is not identified in the map. Any investigation conducted in this area should be submitted to DTSC for review, otherwise additional investigation is required.

Response: The location of the Truck Unloading Station is shown on Figure A. The Unloading Station is located directly east of AST #7. During the SDG&E Phase II investigation, a soil boring (SB1-068) was advanced at this location. Petroleum hydrocarbon-related compounds were not detected and metal concentrations were within background levels established for the site.

e. ***<u>SB1-022</u> - Table 3-6 of the Phase II ESA Report indicates that Cadmium concentration of 8.7 mg/kg (1.7 mg/kg PRG) was detected in sampling location SB1-022 at 4.5 feet deep. Sampling locations SB1-022 is located in the vicinity of Tank #7. DTSC suggests that additional investigation be conducted in the vicinity of boring location SB1-022.***

Response: During SDG&E Phase II investigation, two soil samples were collected at boring SB1-022 location from depths of 0.5 to 1 foot and 4 to 5 feet bgs. TEH was not detected in the samples. Visual observations during drilling / sampling did not indicate any odors and / or staining supported by PID readings of zero during sampling. Consequently, no evidence of petroleum hydrocarbon releases from AST #7 was identified at this boring location. Cadmium was not detected in the shallow soil sample but was detected at 8.7 mg/kg in the deeper sample. Absence of detectable concentration of cadmium in the shallow soil sample indicates that the presence of cadmium in the deeper sample is not related to surface releases related to site operation. The detected 8.7 mg/kg is slightly below the Cal/EPA-modified residential PRG of 9 mg/kg[1]. Cadmium was not detected in a downgradient groundwater sample (SB1-020) located approximately 150 feet from SB1-022 indicating no downgradient cadmium groundwater impact. Based on the above discussion, it is our opinion that no further action related to cadmium is necessary at this location.

f. ***Monitoring Wells (MW) 2, 3, 4, and 5 are located east of Tank #7. In March 1998, 460 ug/l of Benzene, 38 ug/l Ehtylbezene, 26 ug/l Toluene and 11ug/l Methyl-ter-butyl ether were detected in Monitoring Well (MW) #4. Monitoring Well #3 also detected 40 ug/l (MCL= 6 ug/l) Antimony. Due to the presence of these contaminants, DTSC suggests that additional sampling for metals and VOCs be conducted in these wells.***

Response: Prior to 1987, SDG&E operated a vehicle fueling station at the South Bay Power Plant that included two 500-gallon USTs (one gasoline and one diesel). The USTs were located in the general area southeast of the electric generating plant and approximately 50 feet east of AST No. 7. The USTs were removed and replaced by double-walled, fiberglass-clad steel USTs in September 1987, at a new location about 40 feet south of the original location. These newer USTs were subsequently removed several years later (Ogden 2000).

At the request of SDG&E and following removal of the original USTs in 1987, Woodward Clyde Consultants (Woodward Clyde) performed a soil and groundwater investigation beneath the UST site to assess the extent of potential petroleum hydrocarbon impacts. During the period of October through December 1987, Woodward Clyde performed nineteen hand-auger borings and six hollow-stem auger borings to evaluate the extent of impacts to soil and groundwater. Five of the drilled borings were converted to groundwater monitor wells MW-1 through MW-5. Free-phase hydrocarbon (free product) sheen was reportedly observed on groundwater in some downgradient soil borings. A fate and transport analysis by Woodward Clyde, dated May 1988, concluded that residual petroleum hydrocarbons remaining at the site did not pose a significant threat to San Diego Bay. Based on this investigation, the DEH did not require further action for the UST site (DEH case number T0442-H13939-001) and issued site closure on September 30, 1988.

The San Diego Unified Port District purchased the property and power plant from SDG&E on April 22, 1999. As part of the real estate transfer and sale of the power plant, Fluor Daniel GTI (FDGTI) conducted a comprehensive due diligence site-wide assessment for the entire plant property in 1998. During this assessment, a benzene concentration of 460 micrograms per liter (μg/l) was reported in a

[1] Note: The current residential Region IX PRG for cadmium is 37 mg/kg, and is based on noncancer health effects. Under the assumption that cadmium is a carcinogen via inhalation exposure only, and using Cal/EPA residential assumptions regarding the carcinogenic potency of cadmium and the level of dust that might be present in the air (i.e., 50 ug/m^3), the Cal/EPA-modified PRG for cadmium would be approximately 9 mg/kg (cancer endpoint).

groundwater sample collected from monitor well MW-4, which was located immediately west of the original UST area. Benzene was not detected in the other four monitor wells located in the immediate vicinity. FDGTI recommended that the site be remediated to meet the established site groundwater cleanup level of 400 μg/l for benzene.

Ogden Environmental conducted UST site remediation activities in 1999. Approximately 1,180 cubic yards of impacted soil was excavated and 19,300 gallons of groundwater were removed and disposed of offsite. Prior to backfilling the excavation, approximately 1,000 pounds of Oxygen Release Compound (ORC) was placed at and below the groundwater level within the excavation backfill in an effort to enhance biodegradation and minimize any potential future impacts to groundwater quality.

SDG&E performed post-remediation groundwater monitoring of wells MW-1, MW-4a, and MW-5 on three occasions in the period from February 2000 through April 2000. Most recent monitoring of these wells was performed on three more occasions in the period from November 2000 through April 2001.

Post remediation benzene concentrations in 2001 ranged from <5 to 53 μg/l and were significantly less than the concentration of 460 μg/l reported by FDGTI in 1998. Toluene concentrations were indicated fluctuating from non-detectable levels to values similarly detected in 1998 for well MW-4. Concentrations of ethylbenzene ranged from <5 to 18 μg/l and were consistently less than the 38 μg/l concentration reported in 1998 for well MW-4. Concentrations of xylenes were indicated to fluctuate from <15 μg/l up to 95 μg/l. MTBE was not detected in any groundwater samples collected from well MW-4a during the period.

Based on the results of a period of approximately sixteen months of groundwater monitoring at the South Bay UST site following remediation, concentrations of residual petroleum hydrocarbons continued to be significantly reduced. Concentrations of benzene were detected generally one order of magnitude below established clean up levels for the site indicated in the IT 2001 RAW. Natural attenuation parameters strongly indicate that biodegradation continues to occur within the remediated area and is effectively attenuating any residual hydrocarbons remaining in groundwater, as indicated by the absence of petroleum hydrocarbons in the downgradient monitoring well. Seasonal groundwater level fluctuations do not appear to have a significant impact on concentrations of petroleum hydrocarbons in groundwater. The above information indicated that the site has been adequately mitigated and no further actions are necessary. Based on these conclusions, SDG&E requested that DEH consider issuing site closure. Mr. Nasser Sionit, the DEH project manager, agreed with the above conclusions and was in the process of writing the closure letter when DTSC intervened and took the oversight role of the project and requested that the DEH stop oversight work and not issue the pending closure letter.

In summary, the former UST site has been adequately characterized, remediated, and is at the end of post remediation groundwater monitoring phase. We recommend one round of sampling from the existing monitoring well MW-4A located immediately downgradient of the former USTs in this area to assess the current groundwater quality conditions to support the tank closure request. The groundwater sample will be analyzed for VOCs, as requested by DTSC. No other site characterization activities are necessary at this time.

In regards to 40 ug/l of antimony detected in monitoring well MW-3, the detected concentration was below the laboratory reporting limit of 60 ug/l. Antimony was below the detection limit of 6 mg/kg in

both soil samples collected from soil boring SB1-068 located in this general area. No spills or releases have been reported near MW-3 location. We do not recommend additional sampling for metals in this area.

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SUBSURFACE INVESTIGATION
SAN DIEGO GAS AND ELECTRIC
SOUTH BAY POWER PLANS
CHULA VISTA, CALIFORNIA

Prepared for:

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SUBSURFACE INVESTIGATION
SAN DIEGO GAS AND ELECTRIC
SOUTH BAY POWER PLANT
CHULA VISTA, CALIFORNIA

1.0 INTRODUCTION

This report presents the results of our subsurface investigation at the San Diego Gas and Electric Company (SDG&E) South Bay Power Plant located at 990 Bay Boulevard in Chula Vista, California. The purpose of our investigation was to characterize the presence and extent of hydrocarbons in soil and groundwater adjacent to two former underground tanks at the subject site. Our scope of services included hand augering and soil sampling of 19 borings, drilling and soil sampling of six borings, installation of groundwater monitoring wells in five of the six borings, well development and sampling of the five groundwater monitoring wells, laboratory analyses of soil and groundwater samples, surveying elevations of the well-casings and well water-level measurements. Our services were performed in accordance our work plan submitted to SDG&E, dated October 1, 1987, and our Purchase Order Agreement with SDG&E (No. B-8606-11408).

2.0 SITE DESCRIPTI0N

The SDG&E South Bay Power Plant is located along the eastern shore of south San Diego Bay, near the western terminus of "L" Street, at 990 Bay Boulevard in Chula Vista, California. The plant location and project site are shown on Figure 1. Based on the "Comprehensive Water Quality Control Plan for the San Diego Basin" (RWQCB, 1975, and amendments through 1984), the power plant site is located within the Lower Sweetwater Hydrographic Subunit. Groundwater within this subunit has been designated to have existing and potential beneficial uses.

We understand that two underground fuel storage tanks, both located east of the above-ground fuel-oil tanks as shown on Figure 2, were precision tested. We understand that one tank which contained gasoline (Tank No. 1602) failed the precision test, while the second tank which contained diesel passed. The two tanks were subsequently removed on September 11, 1987. Following removal of the tanks, we understand that ponded free

product was observed in the open excavation by SDG&E at about seven to eight feet below the ground surface.

3.0 FIELD INVESTIGATION

Field work was performed at the South Bay Power Plant site by Woodward-Clyde Consultants (WCC) at various times between October 21 and December 22, 1987. The field work included hand augering of soil borings, drilling of soil borings, soil sampling, monitoring well installation, well development, groundwater sampling, and surveying of well locations. The field work was performed in accordance with a health and safety plan prepared for this investigation. Prior to beginning drilling at the site, facility plans were reviewed and the proposed boring locations were checked by SDG&E personnel and by a commercial utility locating service. County and State well permits were also obtained, copies of which are provided in Appendix A.

3.1 Soil Borings

In order to evaluate the extent of hydrocarbon contamination, twenty-five soil borings were placed in the vicinity of the former underground tanks on several separate occasions between October 21 and December 14, 1987. A hand auger was used to complete nineteen of the soil borings (B-1 through B-19); a drill rig was used to complete six of the soil borings (B-20 and MW-1 through MW-5). Groundwater monitoring wells were installed in five of these borings (MW-1 through MW-5). The boring and well locations are shown on Figure 2 and a description of the field procedures is included in Appendix A.

The hand-augered borings were generally advanced to the depth of first observed groundwater, whereas the borings drilled for monitoring wells were advanced to depths of approximately 20 feet. The soils from the borings were visually logged in the field and soil samples were collected at approximately one-foot intervals down to the water table for field headspace analysis using an organic vapor meter (OVM) with a flame-ionization or photo-ionization detector . Soil samples were retained from Borings B-18 through B-20 and from MW-1 through MW-5 for possible laboratory analysis, and were transported under chain-of-custody procedures to Analytical Technologies, Inc. (ATI), a State-certified analytical

laboratory. The soil conditions and OVM readings for the first seventeen hand-auger borings, completed as part of the initial site survey, are summarized on Table 4. The soil conditions and OVM readings for Borings B-18 through B-20 and MW-1 through MW-5. are shown on boring logs which are included in Appendix A. Soil cuttings from Borings B-1 through B-17 were placed back into the open boreholes. Borings B-18 through B-20 were backfilled with a sand/bentonite mixture. Monitoring wells were installed in Borings MW-1 through MW-5. Excess soil cuttings were placed in the open tank excavation.

3.2 Monitoring Well Installation

Five groundwater monitoring wells were installed at the site on November 4 and 5, 1987 (MW-1 through MW-4), and on December 14, 1987 (MW-5), to depths of approximately 20 feet. The well locations are shown on Figure 2. The wells were drilled, sampled, and installed according to the procedures described in Appendix A. Copies of the well logs and well permits are also contained in Appendix A.

3.3 Well Development and Groundwater Sampling

Monitoring wells MW-1 through MW-4 were developed on November 13, 1987, and were purged and sampled on December 1, 1987. Monitoring well MW-5 was developed, purged, and sampled on December 22, 1987. Prior to development, the wells were checked for the presence of free product using either a clear bailer or a steel tape coated with hydrocarbon-sensitive paste. Prior to sampling, three to five well-casing volumes of groundwater were purged from each well using a submersible bladder pump. Prior to the collection of groundwater samples, field measurements of electrical conductivity and pH of the purged groundwater were taken and are indicated on Table 3. Groundwater samples were collected using a stainless-steel bailer, transferred to laboratory-supplied containers, and transported under chain-of-custody procedures to ATI. Groundwater pumped during development and sampling was directed into the open tank excavation. Sampling procedures are described in Appendix A.

3.4 Groundwater Elevation Measurement

Groundwater levels were measured in Wells MW-1 through MW-4 on November 13, November 16 and December 1, 1987. The groundwater level in Well MW-5 was measured on December 22, 1987. The groundwater levels in all five wells were again measured on January 7, 1988. Measurements were made relative to the top of the well casing using either an electric water-level sounding probe or a steel tape coated with water-sensitive paste. Well-casing elevations were surveyed by WCC and are relative to an elevation of 13.03 feet mean sea level for a nearby monitoring well (also MW-2) installed as part of a previous WCC investigation (Hydrogeologic Assessment Report, South Bay Power Plant, Chula Vista, California, 1986). The groundwater elevation measurements are summarized on Table 1. A potentiometric surface map, based on the January 1988 groundwater levels and showing the inferred direction of groundwater flow, is shown on Figure 2.

4.0 LABORATORY ANALYSES

4.1 Soil Analyses

One soil sample was selected from each of the five monitoring well borings (MW-1 through MW-5), as well as from Borings B-18 and B-20, for analysis of fuel hydrocarbons using a modified version of EPA Method 8015. Samples were selected for analysis on the basis of elevated OVM readings and/or proximity to the water table. The results of these analyses are summarized on Table 2 and the laboratory data sheets are provided in Appendix B.

4.2 Groundwater Analyses

Groundwater samples from each of the five monitoring wells at the site were analyzed for fuel hydrocarbons using a modified version of EPA Method 8015. The results of these analyses are summarized on Table 3, and the laboratory data sheets are provided in Appendix B.

5.0 SOIL AND GROUNDWATER CONDITIONS

Based upon information gathered from the soil borings, the site is underlain by about 1 to 3 feet of fill soils generally consisting of brown silty and clayey sand and sandy clay. The area between the berm and the above-ground fuel oil tank is about 2 feet higher in elevation than the area around the former location of the underground tanks. Within the bermed area, the fill soils are about five to seven feet thick, and are underlain by a one- to two-foot clay layer.

The fill soils are underlain by about five to eight feet of alluvial deposits generally consisting of brown clayey and silty sand with some sandy clay. The Bay Point Formation was encountered beneath the alluvial deposits. The upper portion of the Bay Point Formation generally consisted of brown to red-brown and olive sandy clay; silty to clayey sand interbeds were encountered in the lower portions (below about 17 feet) of some borings.

The first seventeen hand-auger borings were located to estimate the limits of hydrocarbon contamination in the vicinity of the former underground tanks. Based upon soil OVM headspace analyses and observations of soil staining and odors, the following borings appeared to be beyond the limits of hydrocarbon contamination: B-4, B-6, B-13, B-15, B-16, and B-17 (see Table 4). We also understand that no apparent hydrocarbon contamination was encountered by SDG&E personnel during excavation at the location of the new underground tanks (see Figure 2). The hand-auger borings placed inside the area defined by the above borings generally had elevated soil OVM readings and other indications of hydrocarbons, such as staining and hydrocarbon odors.

Based upon the information gained from the initial hand-auger borings, monitoring wells MW-1, MW-2, and MW-3 were placed beyond the apparent limits of hydrocarbon contamination. Monitoring well MW-4 was placed so as to be somewhat centrally located within the apparent contaminated area, and in the probable downgradient groundwater flow direction from the former location of the tanks.

Laboratory analyses detected no fuel hydrocarbons in soil samples collected from near the groundwater surface in MW-1 and MW-3. Laboratory analyses also detected no fuel hydrocarbons in soil samples collected from MW-2 and MW-4 at depths of 5 and 4.5 feet, respectively, within approximately two feet of the groundwater surface.

Groundwater was generally encountered between about six and seven feet below the ground surface in the borings advanced during this investigation. Groundwater elevations measured in the monitoring wells (see Table 1 and Figure 2) indicated a westerly to northwesterly groundwater gradient.

Borings B-18 and B-19 were placed in the area inside of the above-ground tank berm based on the potential that hydrocarbon contamination had migrated in a westerly direction beneath this area. Laboratory analysis of a soil sample collected adjacent to the groundwater surface in B-18 detected fuel hydrocarbons at a concentration of 470 milligrams per kilogram (mg/kg) in the C6 to C12 hydrocarbon range. Hydrocarbons in this range are typically associated with a gasoline product.

Because of the presence of fuel hydrocarbons in soils beneath the bermed area, an additional monitoring well (MW-5) was installed downgradient of the former tank locations, based on groundwater levels measured in Wells MW-1 through MW-4 on November 16, 1987. Laboratory analysis of a soil sample collected adjacent to the groundwater surface in MW-5 detected no fuel hydrocarbons. An additional soil boring (B-20) was drilled the same day as MW-5 within the bermed area. Laboratory analysis of a soil sample collected adjacent to the groundwater surface in B-20 detected no fuel hydrocarbons.

Free petroleum product was not detected on the groundwater surface in the five monitoring wells. Laboratory analyses of groundwater samples detected fuel hydrocarbons in MW-4 at a concentration of 32 milligrams per liter (mg/l) in the C6 to C12 hydrocarbon range. An analysis of a duplicate groundwater sample from MW-4 indicated a fuel hydrocarbon concentration of 30 mg/l. Fuel hydrocarbons were not detected in the groundwater samples analyzed from the other four monitoring wells (MW-1, MW-2, MW-3, and MW-5).

Field measurements of the electrical conductivity of groundwater ranged from approximately 4,600 to 6,500 µmhos/cm, which is approximately 3,200 to 4,600 mg/l total dissolved solids. Groundwater with total dissolved solids in this range is considered brackish.

6.0 CONCLUSIONS

Based upon field observations and the results of soil and groundwater laboratory analyses, fuel hydrocarbons present in the soil and groundwater near the former underground tanks appear to be within an area defined by MW-1, MW-2, MW-3, MW-5, and B-20. Based upon the westerly to northwesterly direction of groundwater flow inferred from groundwater levels measured in the five monitoring wells at the site, hydrocarbons appear to have migrated beneath the above-ground fuel oil tank. Groundwater with a concentration of 32 mg/l fuel hydrocarbons was present in the vicinity of Well MW-4, and soil with 470 mg/kg of fuel hydrocarbons was present at B-18. No other detectable levels of hydrocarbons were present in soil or groundwater samples analyzed by the laboratory. Based upon discussions with ATI personnel, the C6 to C12 hydrocarbon range for the soil and groundwater samples with detectable fuel hydrocarbons indicates the presence of a gasoline product.

7.0 UNCERTAINTY AND LIMITATIONS

Geochemistry, hydrogeology, and the geotechnical sciences are characterized by uncertainty. The behavior of subsurface contaminants is a complex phenomenon and our conclusions are based upon limited sampling and analyses. The professional services provided and the judgements rendered on this project meet current professional standards and do not carry any other guarantee.

TABLE 1

GROUNDWATER ELEVATION MEASUREMENTS

Well No.	Approximate Ground Surface Elevation (feet, MSL)	Top of Well Casing Elevation (feet, MSL)	Date of Measurement	Depth to Groundwater from Top of Casing (feet)	Groundwater Elevation (feet, MSL)
MW-1	12.97	12.97	11-13-87	6.36	6.61
			11-16-87	6.37	6.60
			12-01-87	6.44	6.53
			01-07-88	6.43	6.54
MW-2	12.88	12.71	11-13-87	6.20	6.51
			11-16-87	6.20	6.51
			12-01-87	6.26	6.45
			01-07-88	6.21	6.50
MW-3	12.80	12.51	11-13-87	6.04	6.47
			11-16-87	6.05	6.46
			12-01-87	6.07	6.44
			01-07-88	6.06	6.45
MW-4	12.60	12.39	11-13-87	5.86	6.53
			11-16-87	5.87	6.52
			12-01-87	5.93	6.46
			01-07-88	5.91	6.48
MW-5	14.43	15.41	12-22-87	9.00	6.41
			01-07-88	9.03	6.38

TABLE 2

SOIL SAMPLE LABORATORY ANALYSES

Boring No.	Sample I.D.	Depth (feet)	OVA Reading[a] (ppm)	Fuel Hydrocarbons[b] (mg/kg)	Hydrocarbon Range
MW-1	SB-1-3	6.75	0	<5	-
MW-2	SB-2-2	5	210	<5	-
MW-3	SB-3-3	6.5	1	<5	-
MW-4	SB-4-2	4.5	480	<5	-
	Duplicate	4.5	480	<5	-
MW-5	SB-5-3	7	9	<5	-
B-18	A-3	7.5	>1000	470	C6-C12
B-20	SB-6-3	7	60	<5	-

[a] OVA reading in parts-per-million of methane equivalents.
[b] Modified EPA Method 8015

TABLE 3

GROUNDWATER SAMPLE LABORATORY ANALYSES

Well No.	Sample I.D.	pH[a]	Electrical Conductivity[a] (µmhos/cm)	Fuel Hydrocarbons[b] (mg/l)	Hydrocarbon Range
MW-1	SBT-MW1-1	8.59	6500	<1	-
MW-2	SBT-MW2-1	9.62	5820	<1	-
MW-3	SBT-MW3-1	9.37	5020	<1	-
MW-4	SBT-MW4-1	9.40	5750	32	C6-C12
	Duplicate	9.40	5750	30	C6-C12
Field Blank	SBT-MW0-1	-	-	<1	-
MW-5	SDG&E 12-5V	7.55	4660	<1	-

[a] Field measurements made by WCC
[b] Modified EPA Method 8015

TABLE 4

RESULTS OF HAND-AUGER SITE SURVEY
OCTOBER 21 AND 28, 1987

Boring No.	Date of Augering	Saturation Depth (feet)	Sample Depth (feet)	Soil Type	OVM Reading (ppm)	Notes
B-1	10-21-87	NE	3.5	Brown clayey sand	5	
			4.3	Brown clayey sand	120	HC odors
			4.5	Brown clayey sand	130	
B-2	10-21-87	NE	0.8	Brown sandy clay	0	
			1.4	Brown sandy clay	5	
			1.6	Brown sandy clay	7	
			2.3	Brown sandy clay	16	
			3.2	Brown sandy clay	30	
			4.2	Brown sandy clay	60	
			4.8	Dark-gray sandy clay	70	HC odors
			6.0	Drak-gray sandy clay	125	
B-3	10-21-87	6.0	1.1	Brown sandy clay	0	
			2.3	Brown sandy clay	20	
			3.5	Brown sandy clay	35	
			4.4	Light-brown silty sand	-	
			4.7	Light-brown silty sand	50	HC odors
			5.7	Black sandy clay	-	
			6.0	Black sandy clay	35	HC odors
			6.4	Black sandy clay	20	HC odors
			7.5	Dark-gray clay	-	
			7.8	Black silty sand	60	HC odors

TABLE 4 (cont.)

Boring No.	Date of Augering	Saturation Depth (feet)	Sample Depth (feet)	Soil Type	OVM Reading (ppm)	Notes
B-4	10-21-87	6.0	1.0	Brown clayey sand	0	
			1.3	Brown clay	-	
			2.3	Brown clayey silt	1	
			3.4	Brown clayey sand	3	
			4.6	Brown clayey sand	12	
			5.3	Brown clayey sand	5	
			6.0	Dark-gray clayey sand	13	
			7.0	Dark-brown clay	1	
B-5	10-21-87	6.3	1.6	Light-brown sandy silt	0	
			2.0	Brown silty clay	-	
			3.0	Brown sandy clay	20	
			4.1	Brown sandy clay	60	
			4.6	Gray-brown sandy clay	70	
			5.9	Gray-brown sandy clay	120	
			6.3	Gray-brown sandy clay	120	
			6.7	Gray-black sandy clay	160	HC odors
B-6	10-21-87	5.8	1.2	Brown silty sand	0	
			2.2	Brown silty clay	2	
			3.5	Brown sandy clay	2	
			4.6	Brown clayey sand	5	
			5.8	Brown to light-gray clayey sand	9	
			6.8	Brown sandy clay	1	
B-7	10-21-87	6.0	1.1	Light-brown silty clay	0	
			2.4	Light-brown silty clay	14	
			3.6	Light-brown silty clay	35	

TABLE 4 (cont.)

Boring No.	Date of Augering	Saturation Depth (feet)	Sample Depth (feet)	Soil Type	OVM Reading (ppm)	Notes
			4.6	Light-brown silty clay	70	
			6.0	Gray sand	50	HC odors
B-8	10-21-87	NE	1.2	Dark-gray sandy clay	150	HC odors
			2.3	Dark-gray sandy clay	170	HC odors
			3.4	Dark-gray sandy clay	170	HC odors
			4.4	Dark-gray sandy clay	170	HC odors
B-9	10-28-87	NE	0.7	Brown sandy clay	0	
			1.4	Black sandy clay	60	
			2.5	Dark-gray sandy clay	150	
			3.3	Dark-gray sandy clay	180	
			4.5	Dark-gray sandy clay	200	
			4.8	Light-gray sand	110	
B-10	10-28-87	6.7	0.5	Brown sand	0	
			0.7	Black clay	-	
			0.8	Black clay	-	
			1.0	Dark-gray sandy clay	25	
			1.9	Dark-gray sandy clay	125	
			2.8	Dark-gray sandy clay	160	
			3.9	Dark-gray sandy clay	150	
			5.3	Light-gray sand	150	Sheen observed
			6.2	Dark-gray sand	125	on water in soil
			6.7	Dark-gray sandy clay	170	between 6.7 and 7.3 feet.

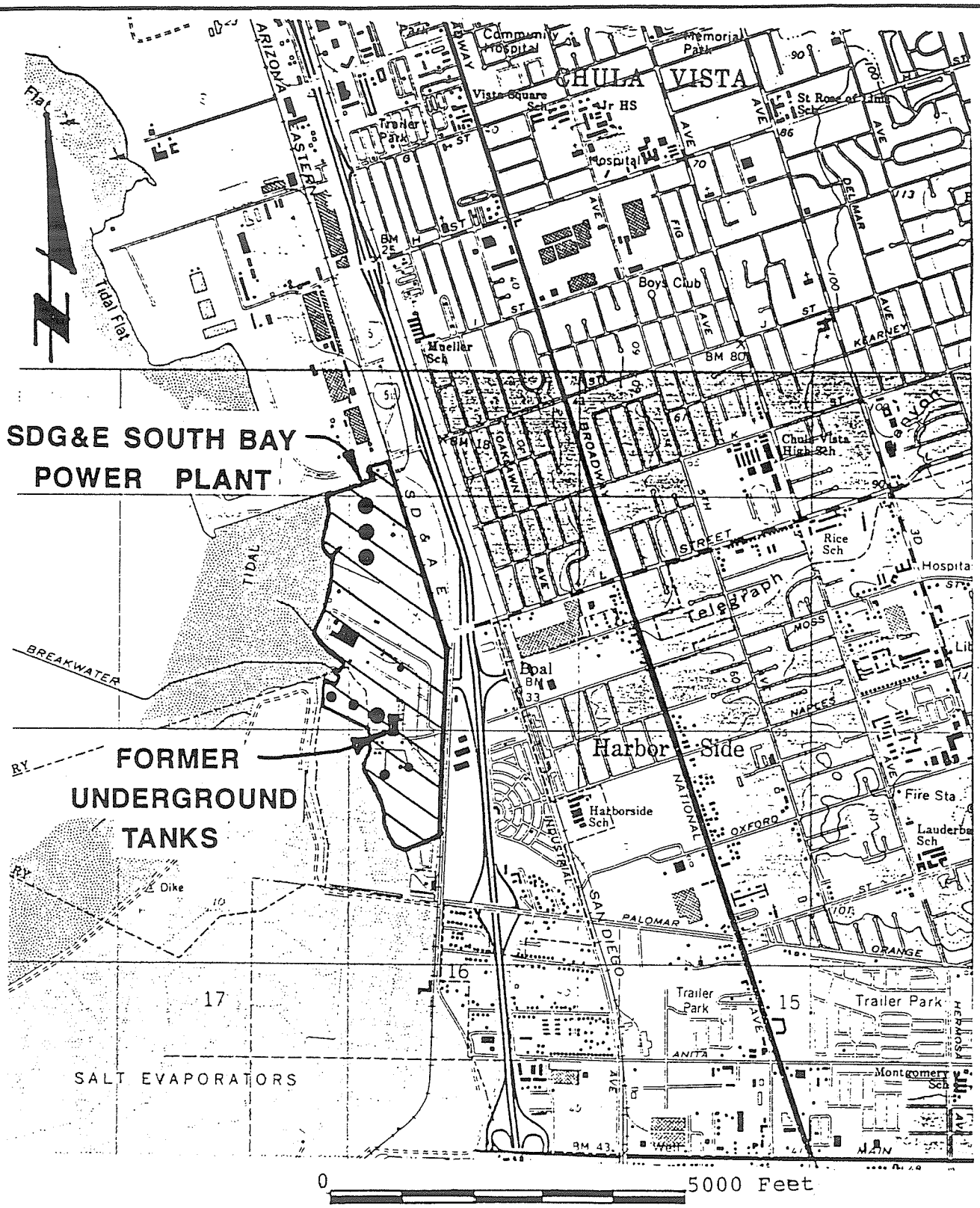
TABLE 4 (cont.)

Boring No.	Date of Augering	Saturation Depth (feet)	Sample Depth (feet)	Soil Type	OVM Reading (ppm)	Notes
B-11	10-28-87	6.3	0.7	Brown sandy clay	0	
			1.6	Brown & black sandy clay	124	
			2.9	Dark-gray sandy clay	150	
			4.2	Dark-gray sandy clay	149	
			4.4	Brown sandy clay	52	
			4.8	Gray sandy clay	170	
			5.3	Olive-gray sand	160	
			6.3	Dark-gray sand	132	
			6.9	Brown sandy clay	-	
			7.8	Brown sandy clay	16	
B-12	10-28-87	5.8	0.8	Brown, sandy clay	0	
			1.6	Dark-gray sandy clay	10	
			3.3	Dark-gray sandy clay	55	
			4.3	Brown sandy clay	60	
			5.3	Brown sandy clay	60	
			5.8	Dark-gray sandy clay	50	Sheen observed on water in soil between 5.8 and 8.1 feet.
			6.3	Dark-gray sandy clay	70	
			6.7	Dark-gray sandy silt	75	
B-13	10-28-87	6.3	1.1	Brown sandy clay	0	
			2.2	Brown sandy clay	0	
			3.0	Brown sandy & clayey silt	-	
			3.3	Brown sandy & clayey silt	0	
			4.5	Brown sandy & clayey silt	0	
			5.8	Brown sandy & clayey silt	0	
			6.8	Brown sandy & clayey silt	0	

TABLE 4 (concluded)

Boring No.	Date of Augering	Saturation Depth (feet)	Sample Depth (feet)	Soil Type	OVM Reading (ppm)	Notes
B-14	10-28-87	6.5	0.8	Brown sandy clay	0	
			1.8	Brown sandy clay	0	
			2.8	Brown sandy clay	8	
			3.4	Dark-gray sandy clay	9	
			4.6	Dark-gray sandy silt	35	
			5.6	Dark-gray sandy silt	30	
			6.5	Dark-gray sandy silt	3	
B-15	10-28-87	7.1	0.8	Brown clayey sand	0	
			1.3	Brown sandy clay	-	
			2.0	Brown sandy clay	0	
			3.0	Brown sandy clay	1	
			4.5	Brown sandy silt	6	
			5.8	Brown sandy silt	3	
			7.1	Brown sandy silt	0	
B-16	10-28-87	5.0(?)	1.1	Brown sandy clay	0	
			2.2	Brown sandy clay	0	
			3.2	Brown clayey sand	0	
			4.5	Brown clayey sand	2	
			5.5	Brown clayey sand	3	
			6.3	Brown sandy & silty clay	0	
			6.8	Brown sandy & silty clay	0	
B-17	10-28-87	6.3	-	Brown clayey sand, sandy clay, and sandy silt	-	

- = No OVM reading available
NE = Groundwater not encountered
HC = Hydrocarbon

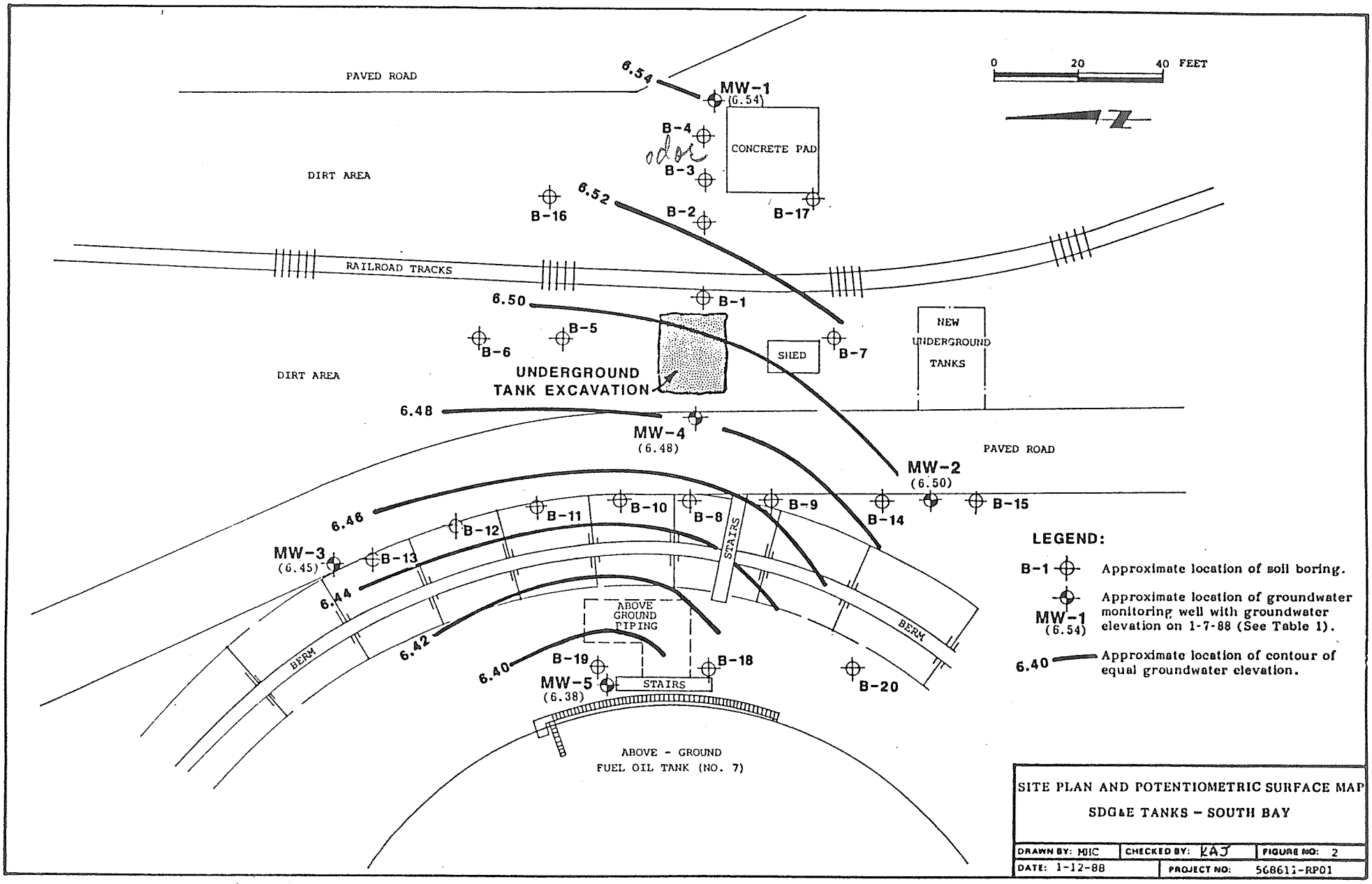


Source:
U.S.G.S National City and Imperial Beach 7.5 Minute Topographic Maps.

SITE PLAN
SDG&E TANKS - SOUTH BAY

DRAWN BY: MHC	CHECKED BY: KAJ	PROJECT NO: 568611-RP01	DATE: 1-12-88	FIGURE NO: 1

WOODWARD-CLYDE CONSULTANTS



SITE PLAN AND POTENTIOMETRIC SURFACE MAP

SDG&E TANKS - SOUTH BAY

DRAWN BY: MJC	CHECKED BY: KAJ	FIGURE NO: 2
DATE: 1-12-88	PROJECT NO: 568611-RP01	

WOODWARD-CLYDE CONSULTANTS

Removal of Underground Storage Tanks (USTs) at South Bay Power Plant

Chula Vista, California

Prepared for :

Sempra Energy
101 Ash Street
San Diego, California 92101

Prepared by:

Ogden Environmental and Energy Services Co., Inc.
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Project No. 321320000

January 2000

OGDEN

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REMOVAL OF
UNDERGROUND STORAGE TANKS (USTs)

South Bay Power Plant
990 Bay Boulevard
Chula Vista, California

This report has been prepared by the staff of Ogden Environmental and Energy Services Co., Inc. under the professional supervision of the undersigned California Registered Civil Engineer whose seal and signature appears hereon.

The findings, recommendations, specifications, or professional opinions are presented within the limits prescribed by the client, after being prepared in accordance with generally accepted professional engineering and geologic practice. There is no other warranty, either expressed or implied.

REGISTERED PROFESSIONAL ENGINEER
RICHARD M. FARSON
47269
EXPIRES 12/31/03
CIVIL
STATE OF CALIFORNIA

Richard M. Farson
Registered Civil Engineer #47269

Mehdi Miremadi
Vice President and General Manager

1.0 INTRODUCTION

This report on the removal of two underground storage tanks (USTs), dispensers, and associated piping, at the South Bay Power Plant, at 990 Bay Boulevard, Chula Vista, California was prepared by Ogden Environmental & Energy Services Company, Inc. (Ogden) at the request of Sempra Energy to:

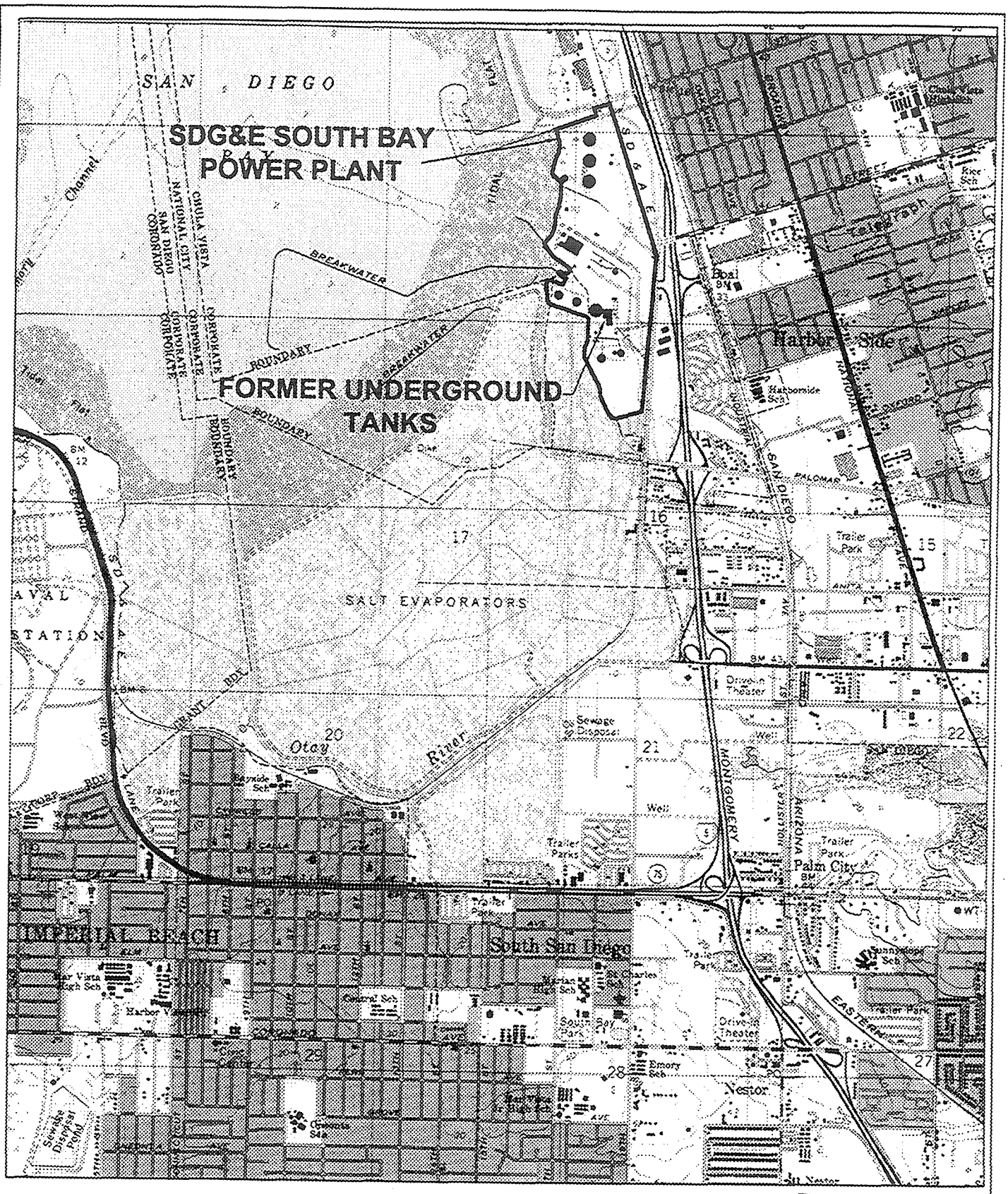
- Describe the site and subsurface conditions
- Summarize field activities associated with the UST removals
- Summarize post removal soil sampling activities and laboratory analyses

1.1 SITE LOCATION AND DESCRIPTION

San Diego Gas & Electric (now part of Sempra Energy) operated a vehicle fueling station which consisted of the following former gasoline and diesel distribution systems:

- One 550-gallon, Joor Plasteel, double-walled, fiberglass-clad steel, gasoline UST.
- One 550-gallon, Joor Plasteel, double-walled, fiberglass-clad steel, diesel UST.
- Aboveground vacuum piping which transferred fuel from the USTs to the dispensing island.
- Aboveground vent pipes.
- One gasoline dispenser and one diesel dispenser mounted on a concrete island.
- Two fiberglass vaults attached to the tops of the tanks.
- An approximately 135 square-foot, 6-inch thick, concrete slab covering the USTs.

The South Bay Power Plant is approximately 7 miles south of downtown San Diego and two miles southwest of downtown Chula Vista. The subject site, (APN # 617-011-08), is an approximately 150-acre electrical generating station and is bounded by Bay Boulevard and Interstate 5 on the east, San Diego Bay on the west, Marina Parkway on the north, and Palomar Street on the south (see Site Vicinity Map, Figure 1). Surrounding site uses include industrial developments to the east and north, a salt mill to the south, and the eastern shore of San Diego Bay to the west. The UST removal area is approximately 80 feet southeast of Fuel Tank No. 7 (see Site Location Map, Figure 2) and generally southeast of the electrical generating plant. San Diego Bay is approximately 1,300 feet west of the site.



SOURCE: USGS 7.5' quadrangle, Imperial Beach, California 1967 (Photorevised 1975).

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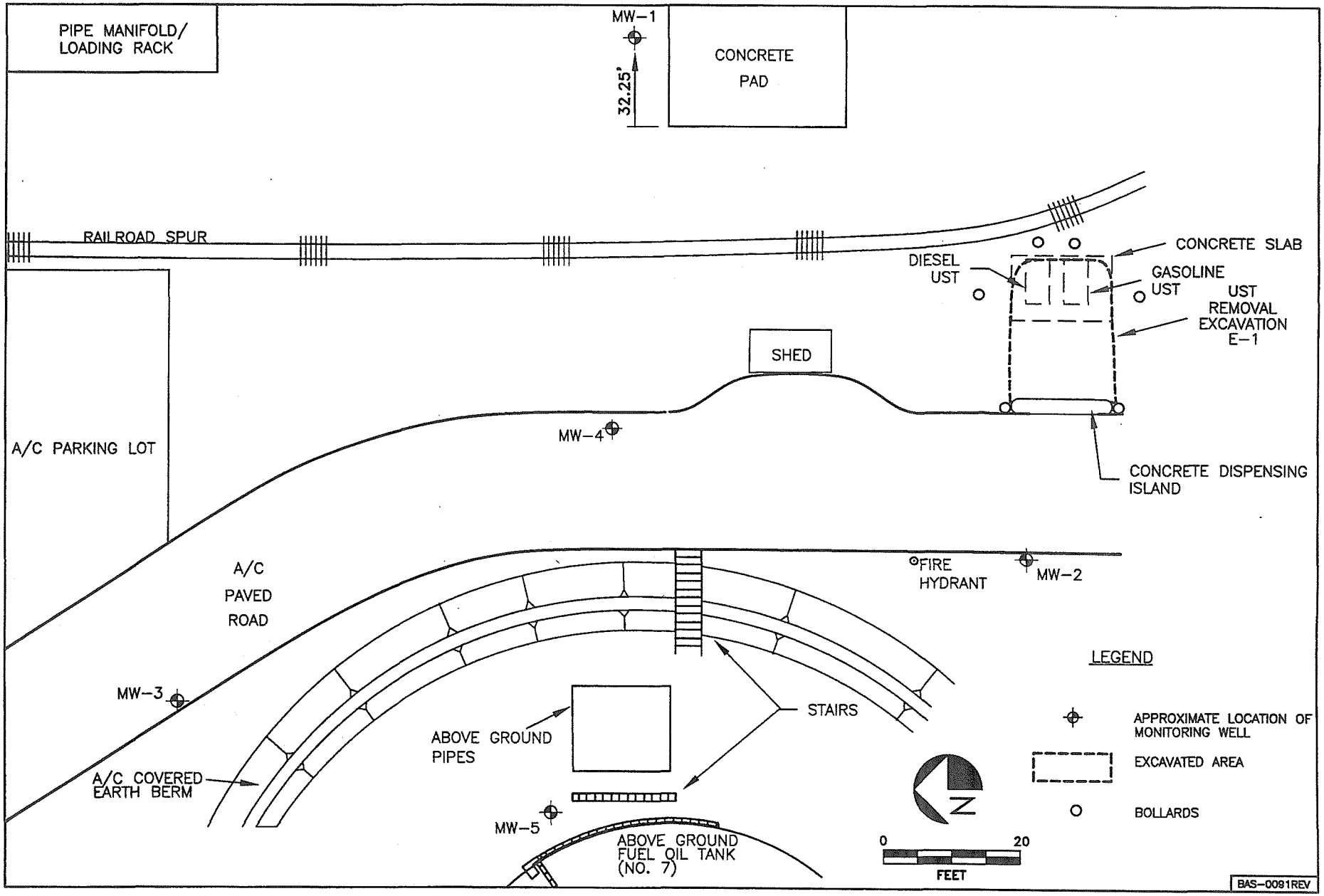
SITE VICINITY MAP
SOUTH BAY POWER PLANT
CHULA VISTA, CA

FIGURE

1



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SITE LOCATION MAP
SOUTH BAY POWER PLANT
CHULA VISTA, CA

FIGURE
2

The project site is underlain by artificial fill, and Pleistoscene Marine Deposits including the Bay Point Formation (CDMG, 1962). According to information from the Regional Water Quality Control Board (RWQCB), San Diego Region, the groundwater underlying the site is in the Telegraph Hydrologic Sub Area (Hydrologic Unit Basin) of the Sweetwater Hydrologic Unit, and has existing beneficial uses for agricultural and potential beneficial uses for municipal and industrial purposes (RWQCB, 1984).

1.2 Site History and Background

Ogden understands that the Port of San Diego purchased the property and the power plant from San Diego Gas & Electric (SDG&E) on April 22, 1999. Duke Energy currently operates the plant. The vehicle fueling station, which was operated by SDG&E, is no longer in use. Based on a soil and groundwater investigation by Woodward Clyde Consultants (Woodward Clyde), dated May 1988 (WCC, 1988), the two 550-gallon double-walled USTs, used for the vehicle fueling station, were installed in September 1987 to replace two former USTs. The two former tanks were approximately 40 feet to the north of the current vehicle fueling station. The existing double-walled USTs have been in temporary closure status and were to be removed by December 20, 1999.

1.3 Previous Site Characterization

Between October and December 1987, Woodward Clyde performed 19 hand-auger borings and 6 hollow stem auger borings to evaluate the extent of potential soil and groundwater contamination following removal of the two former USTs. Five of the drilled borings were converted to groundwater monitoring wells (MW-1 through MW-5). Figure 2 shows the location of the nearby monitoring wells. The results of the previous laboratory analyses of the soil and groundwater samples are included in the referenced report.

2.0 SITE CONDITIONS

2.1 Geology

Based on soils encountered during UST removal activities, the subject site is underlain by approximately 1 to 2 feet of artificial fill consisting of yellowish-brown sands with

gravel, and Pleistoscene Marine Deposits consisting 2 to 4 feet of dark brown clay, interbedded with brown silty sands.

2.2 Hydrogeology

Groundwater was not encountered during excavation of the UST removal area, which extended to approximately ten feet below ground surface (bgs). Local topography is relatively level with a slight westerly to northwesterly downward slope toward San Diego Bay. According to the findings of previous investigations, groundwater in the project area was encountered at a depth of 6 to 7 feet bgs with a westerly to northwesterly gradient (WCC, 1988).

3.0 UST REMOVAL AND SOIL EXCAVATION

3.1 Objective

As part of disassembly of the vehicle fueling station, the following activities were performed:

- Removal of fuel dispensers, associated piping, vaults, and concrete slab.
- Excavation of soils overlying and surrounding the USTs.
- Stockpiling excavated soil for possible future use.
- Removal of two existing double-walled, fiberglass-clad steel USTs.
- Verification soil sampling under the USTs and dispenser island excavation areas.
- Laboratory analyses of selected soil samples.
- Backfill of tank removal area with clean on-site soils and clean imported material.

3.2 Field Activities Prior to UST Removal

Prior to UST removals on December 6, 1999, the existing USTs and underground utilities were located and marked. The two fuel dispensers and vent stacks were removed from the island and the concrete slab covering the USTs was demolished and removed. Associated piping and vaults were disconnected from the USTs. The dispensers, vaults, associated piping, and concrete were hauled off-site by Fred North Construction Co., Inc.

The soil covering and surrounding the USTs was excavated (E-1) using a backhoe down to approximately 8 feet bgs. Excavated soils did not display any discoloration or odor and were subsequently stockpiled nearby for possible reuse.

The two USTs had previously been emptied of fuel, and were cleaned, and degassed with a vacuum truck and dry ice insertion. Approximately 200 gallons of rinsate was pumped by Triad Marine & Industrial into a 2,500-gallon vacuum truck, combined with other liquid wastes, and transported to a licensed disposal/recycling facility (Crosby & Overton) in Long Beach, California. The uniform hazardous waste manifest certificate for the rinsate is included in Appendix A.

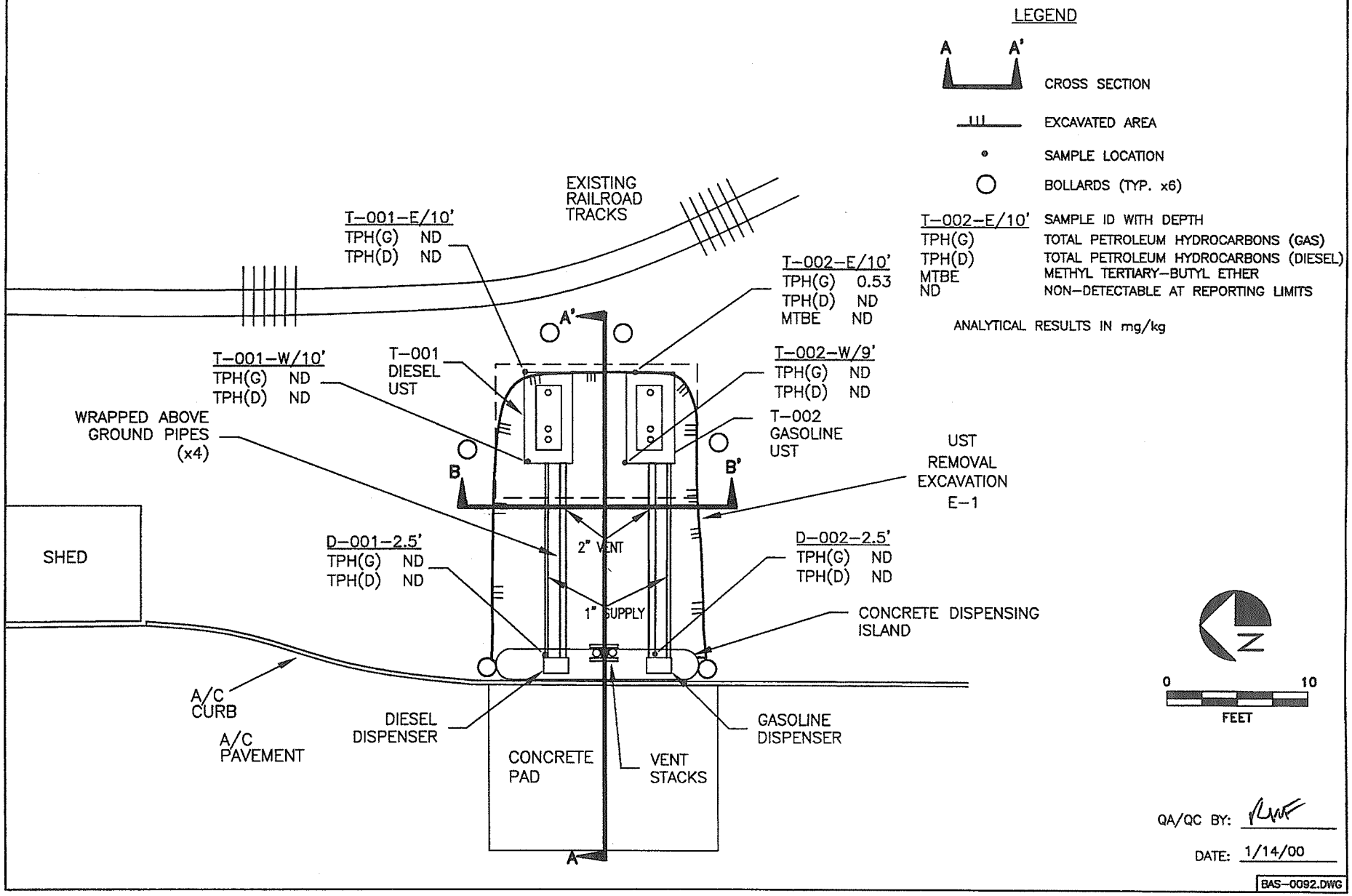
3.3 Observations during UST Removal

On December 7, 1999, the gasoline and diesel USTs were removed by Fred North Construction Co., Inc. Both USTs measured approximately 6 feet in length and 4 feet in diameter. The UST removal was witnessed by representatives of Sempra Energy, the City of Chula Vista Fire Department, the County of San Diego Department of Environmental Health (DEH), Site Assessment and Mitigation (SA/M) Division, and the Port of San Diego. Based on visual observations, the USTs appeared to be intact with no holes, pits, or corrosion. No odors or discoloration were observed in soils beneath the USTs. Photographs of the field activities are maintained in Ogden's project files. The USTs were transported to Pacific Steel in National City, California for recycling. Copies of the SA/M Division's Underground Storage Tank System Closure Report (UTR), UST Destruction Certificate, and DEH and Chula Vista Fire Department Tank Removal Permits are in Appendices B, C, and D, respectively.

3.4 Soil Sampling

Soil sampling associated with the UST removals was conducted under the oversight of the SA/M representative, Mr. Richard Henson. The sampling locations were determined by the SA/M representative and are shown on the UST Excavation Plan (Figure 3).

Soil sampling from the bottom of the UST excavations and beneath the dispenser island was conducted in accordance with the sampling protocol outlined in the SA/M Manual guidelines. Soil samples were collected from a backhoe bucket. A relatively coherent



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UST EXCAVATION PLAN
SOUTH BAY POWER PLANT
CHULA VISTA, CA

FIGURE

3

and undisturbed portion of soil within the bucket was selected and a small hand shovel was driven into the soil. The soil was then deposited into a glass jar until there was no head space in the jar. The jars were covered with Teflon-lined threaded lids.

Samples were labeled, sealed with evidence tape, documented in the chain-of-custody record, and placed in a cooler with ice prior to laboratory analysis. Selected samples were delivered to a state-certified laboratory for laboratory analysis.

Prior to use, sampling equipment was thoroughly cleaned to avoid cross-contamination. Sampling equipment was brush-scrubbed in a non-phosphorous detergent and potable water solution and rinsed twice in clean potable water.

3.5 Chain-of-Custody Protocol

Chain-of-custody protocol was followed for all soil samples selected for laboratory analysis. The chain-of-custody form(s) accompanied the samples from the job site to the laboratory, providing a continuous record of possession prior to analysis. Chain-of-custody forms are included in Appendix E.

3.6 Laboratory Analysis

Selected soil samples were analyzed by Calscience Environmental Laboratories, Inc. (CEL) of Garden Grove, California, using the following methods:

- Total Petroleum Hydrocarbons in the diesel range (TPHd), by Modified EPA Method 8015.

- Total Petroleum Hydrocarbons in the gasoline range (TPHg), by Modified EPA Method 8015.

- Methyl-tert-Butyl Ether (MTBE), by EPA Method 8260B on the sample with the highest concentration of TPH.

3.7 BACKFILL/SITE RESTORATION

Subsequent to UST removal and soil sampling, E-1 was backfilled with excavated soils, placed in 8- to 12-inch lifts to approximately 2 feet below original grade. The upper two feet was backfilled with imported clean yellow, medium-grained, moist, sand. Compactive effort was achieved using a pin-wheel roller attached to the backhoe.

The concrete dispenser island was left in place. Embedded fuel supply and vent lines were cut off at the concrete surface and filled with grout.

4.0 FINDINGS

The results of the laboratory analyses for the soil samples are summarized in Table 1 and are presented in Figures 3 and 4. TPHg concentrations were less than the reporting limits of 0.5 mg/kg, except sample T-002-E/10', where 0.53 mg/kg TPHg was detected. TPHd and MTBE concentrations were less than the reporting limits of 5.0 mg/kg and 5.0 micrograms per kilograms (μg/kg) respectively, in all samples analyzed. The Certified Analytical Reports from CEL for the soil samples are included in Appendix F.

5.0 CONCLUSIONS

Based on the results of the laboratory analyses of collected soil samples and field observations during UST removals:

- A trace TPHg concentration of 0.53 mg/kg was reported at slightly above the detection limit at the east end of the gasoline UST excavation at approximately 10 feet bgs (T-002-E/10'). This TPHg concentration is three to four orders of magnitude below the commonly applied regulatory levels in San Diego County (100 to 1,000 mg/kg TPH) for soil remediation.

- TPHg concentrations were not detected above the reporting limit at the other sampled locations.

- TPHd concentrations were not detected above the reporting limit at sampled locations.

Table 1

SUMMARY OF LABORATORY ANALYSES OF SOIL SAMPLES

Sample ID	Sampling Date	Depth of Sample[1]	MTBE[2] (µg/kg)	TPHg[3] (mg/kg)	TPHd[4] (mg/kg)	Lab	Ref.
T-001-E/10'	12/7/99	10	–	<0.5	<5.0	CEL	(A)
T-001-W/10'	12/7/99	10	–	<0.5	<5.0	CEL	(A)
T-002-W/9'	12/7/99	9	–	<0.5	<5.0	CEL	(A)
T-002-E/10'	12/7/99	10	<5.0	0.53	<5.0	CEL	(A)
D-001-2.5'	12/7/99	2.5	–	<0.5	<5.0	CEL	(A)
D-002-2.5'	12/7/99	2.5	–	<0.5	<5.0	CEL	(A)

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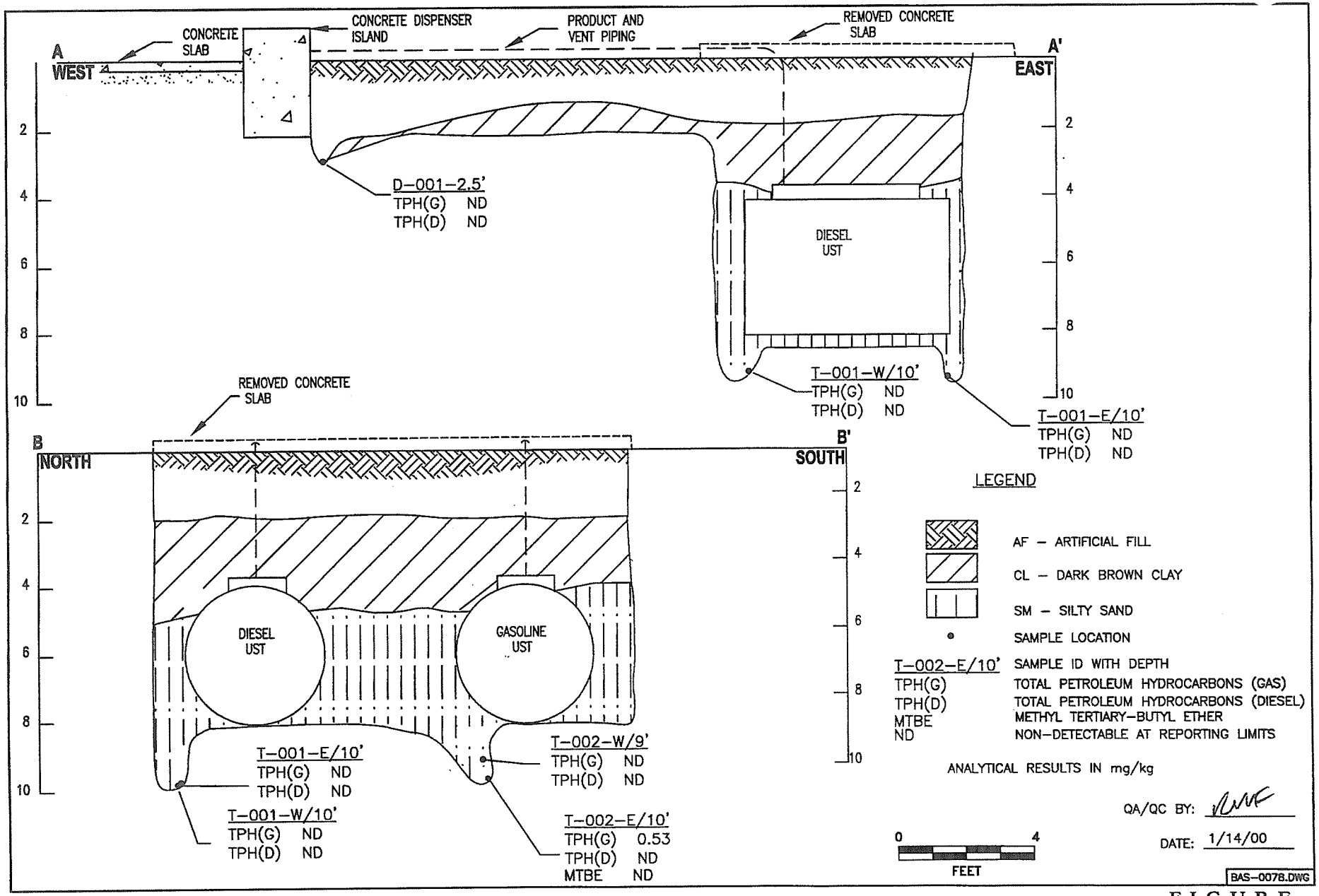
Date: 1/14/00

Abbreviations:
CEL = Calscience Environmental Laboratories, Inc.
D = Dispenser
E = East
MTBE = Methyl-tert-Butyl Ether
T = Tank
TPHd = Total Petroleum Hydrocarbons as diesel
TPHg = Total Petroleum Hydrocarbons as gasoline
W = West

Symbols:
– = Not applicable, analyzed or available
<5.0 = Less than reporting limits

Footnotes:
(1) Depth of sample measured as feet below ground surface.
(2) Analyzed by EPA Method 8260B.
(3) Analyzed as gasoline by Modified EPA Method 8015.
(4) Analyzed as diesel by Modified EPA Method 8015.
(A) Certified Analytical Reports in Appendix F.



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UST EXCAVATION CROSS SECTIONS
SOUTH BAY POWER PLANT
CHULA VISTA, CA

FIGURE

4

- MTBE concentrations were not detected above the reporting limit at sampled locations.

- No odors or soil discoloration were observed during UST removal activities.

- The USTs, product piping, and dispenser equipment were generally intact with no evidence of ruptures or leaks at the time of removal.

Based on the above findings, we request that the SA/M Division issue closure for the subject USTs.

6.0 LIMITATIONS

The findings, observations, conclusions, and recommendations of this report are limited by the technical requirements specified in the contract between Ogden Environmental and Energy Services Co., Inc. (Ogden) and Sempra Energy for the subject property. The findings, observations, conclusions, and recommendations presented herein, unless otherwise stated, are based solely on the information obtained and presented herein.

All findings, observations, conclusions, and recommendations stated in this report are based on facts; circumstances; applicable federal, state and local laws, rules, and regulations; and generally accepted national standards for such services in existence at the time that the report was prepared. Topics not explicitly discussed within this report should not be assumed to have been investigated or tested. This service does not guarantee current compliance with federal, state, or local laws, rules, or regulations.

This report is prepared for the sole use and benefit of the Client. Reliance upon this report by any third party shall be (1) at such third party's sole risk, (2) strictly limited to the terms and conditions of the contract between Ogden and Sempra Energy and the limitations set forth above and in other sections of this report, and (3) conditioned upon such third party executing Ogden's secondary client agreement and making payment to Ogden as consideration for such reliance.

7.0 REFERENCES

CDMG. 1962. *Geologic Map of California, San Diego-El Centro Sheet*. California Division of Mines and Geology, Sacramento, California.

RWQCB. 1984. Region 9 Groundwater and Basin Map, Regional Water Quality Control Board, San Diego Region, San Diego, California. December 30.

WCC. 1988. *Subsurface Investigation, San Diego Gas and Electric South Bay Power Plant, Chula Vista,* California, Woodward Clyde Consultants. May.

Site Remediation at Former Underground Storage Tank Location South Bay Power Plant

Chula Vista, California

Prepared for :

Sempra Energy
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San Diego, California 92101

Prepared by:

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Project No. 321320000

March 2000

OGDEN

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1.0 INTRODUCTION

This report of site remediation activities associated with a former underground storage tank (UST) area at the South Bay Power Plant, 990 Bay Boulevard, Chula Vista, California, has been prepared by Ogden Environmental and Energy Services Co., Inc. (Ogden) at the request of Sempra Energy (Sempra) to:

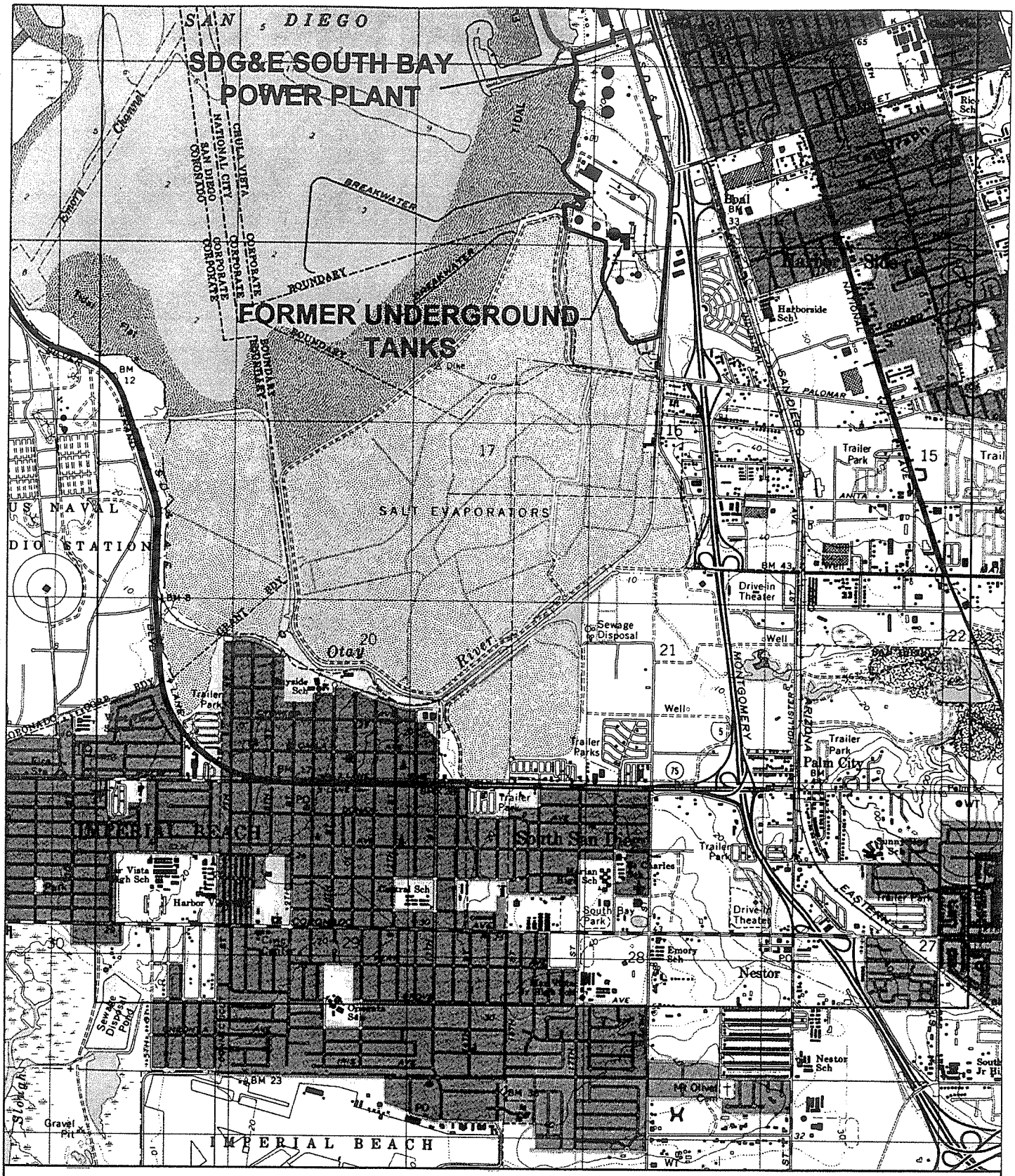
- describe the site and subsurface conditions
- summarize the remediation activities
- summarize soil sampling activities and laboratory analyses
- summarize post-remediation conditions

The site remediation activities were performed in accordance with *Work Plan, Soil and Groundwater Remediation, Former Underground Storage Tank Location, South Bay Power Plant, Chula Vista, California* (the Workplan) (Ogden 1999), which was approved by Mr. Nasser Sionit of the County of San Diego Department of Environmental Health (DEH), Site Assessment and Mitigation (SA/M) Division, as part of their Voluntary Assistance Program (VAP). The VAP number for the site is H13939-002.

1.1 SITE LOCATION AND DESCRIPTION

The South Bay Power Plant is approximately 7 miles south of downtown San Diego and 2 miles southwest of downtown Chula Vista. The subject site (APN # 617-011-08) is an approximately 150-acre electrical generating station and is bounded by Bay Boulevard and Interstate 5 on the east, San Diego Bay on the west, Marina Parkway on the north, and Palomar Street on the south (see Site Vicinity Map, Figure 1). Surrounding site uses include industrial developments to the east and north, a salt processing plant to the south, and the eastern shore of San Diego Bay, approximately 1,300 feet to the west (FDGTI 1998).

Prior to 1987, San Diego Gas & Electric (SDG&E) (now part of Sempra Energy) operated a vehicle fueling station at the South Bay Power Plant, which included two 500-gallon USTs (one gasoline and one diesel). The USTs were approximately 50 feet east of aboveground Fuel Tank No. 7 (see Site Plan, Figure 2) and generally southeast of the electrical generating plant.



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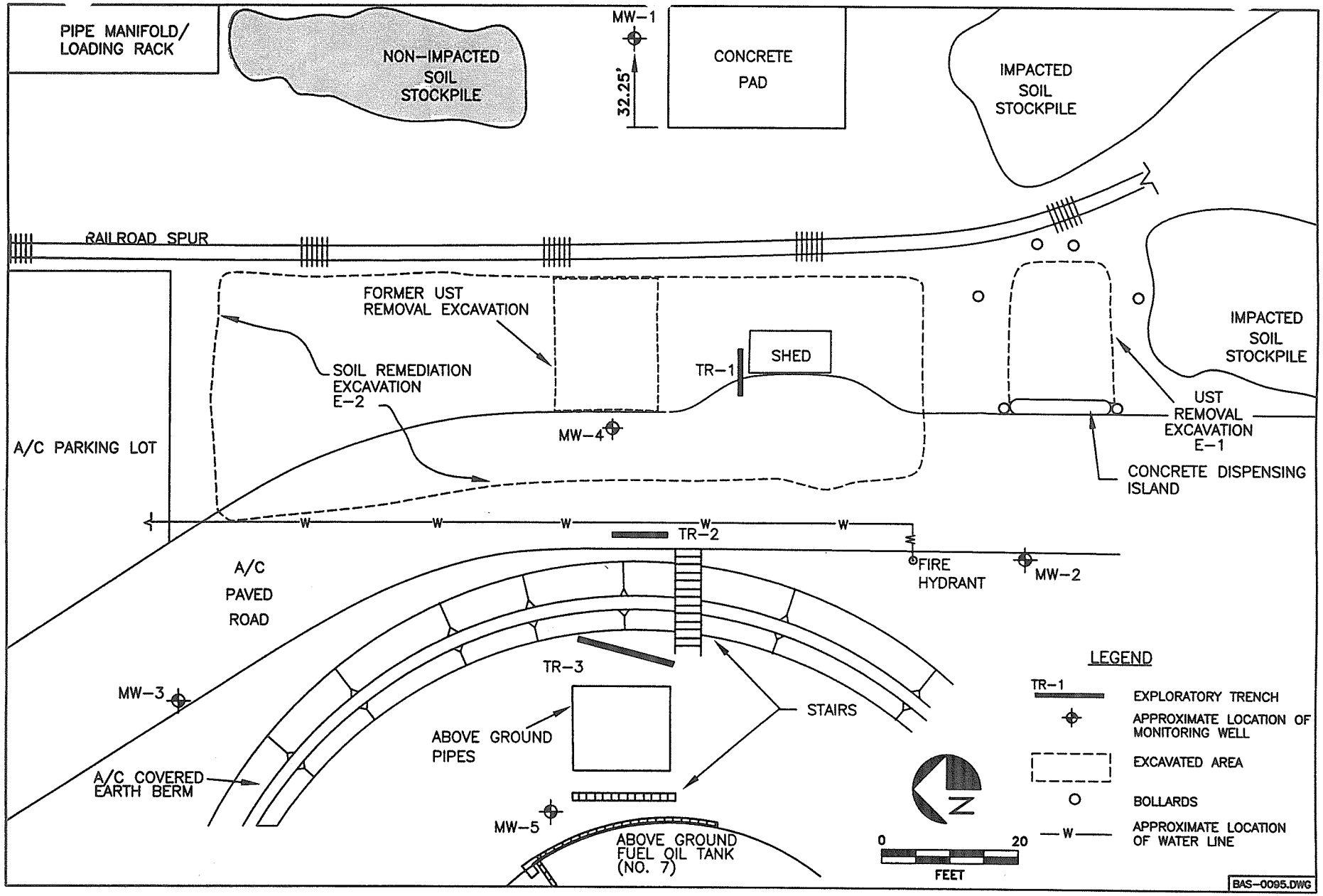
Site Vicinity Map
South Bay Power Plant
Chula Vista, CA

FIGURE
1



OGDEN

Site Plan
South Bay Power Plant
Chula Vista, CA

FIGURE
2

1.2 BACKGROUND

Ogden understands that the Port of San Diego purchased the property and power plant from SDG&E on April 22, 1999. Duke Energy South Bay LLC currently operates the plant. The USTs that were used to store fuel for the former vehicle fueling station were removed and replaced with two double-walled, fiberglass-clad steel USTs in September 1987. These new double-walled USTs, which were installed 40 feet south of the former USTs, have also been removed (Ogden 2000).

At the request of SDG&E following removal of the former USTs, Woodward Clyde Consultants (Woodward Clyde) performed a soil and groundwater investigation in the former UST removal area to assess the extent of potential petroleum hydrocarbon impacts (WCC 1988). Between October and December 1987, Woodward Clyde performed 19 hand-auger borings and 6 hollow-stem auger borings to evaluate the extent of soil and groundwater impacts. Five of the drilled borings were converted to groundwater monitoring wells (MW-1 through MW-5) as shown on Figure 2. Hydrocarbon odors were reportedly detected in soil samples collected from hand-auger borings upgradient, downgradient, as well as south and north of the former UST excavation. Free-phase hydrocarbon (free product) sheen was reportedly observed on groundwater in some of the downgradient soil borings (WCC 1988). Ogden understands that a fate and transport analysis by Woodward Clyde, dated May 1988, concluded that residual petroleum hydrocarbons remaining at the site did not pose a significant threat to San Diego Bay. Based on this investigation, the DEH did not require further action for the former UST site (DEH case number T0442-H13939-001) and issued site closure on September 30, 1988.

As part of the real estate transfer and sale of the power plant, Fluor Daniel GTI (FDGTI) conducted a comprehensive due diligence site assessment for the entire power plant property in 1998. As part of this assessment, a benzene concentration of 460 micrograms per liter (μg/L) was reported in a groundwater sample collected from MW-4, immediately west of the former UST area (FDGTI 1998). Benzene was not detected in the other four monitoring wells in the general vicinity of the former UST area. FDGTI recommended that the site be remediated to meet the established site groundwater cleanup level of 400 μg/L for benzene.

1.3 Project Objectives

The primary objectives of site remediation are to:

- excavate and remove petroleum hydrocarbon-impacted soils
- enhance natural biodegradation of petroleum hydrocarbons in the impacted area by adding oxygen release compound (ORC) to the excavation prior to backfilling
- conduct post-remediation groundwater monitoring to demonstrate that natural attenuation is occurring and that concentrations of benzene in groundwater do not exceed the 400 μg/L cleanup level
- obtain site closure from DEH through their VAP

2.0 BASELINE SITE CONDITIONS

2.1 Geology

Based on previous site investigations, the project site is underlain by artificial fill and Pleistocene marine deposits, including the Bay Point Formation (Ogden 1999). Based on soils encountered during excavation activities, the former UST area is underlain by artificial fill consisting of approximately 1 to 3 feet of dark brown clay and yellowish brown, medium-grained sands. Pleistoscene marine deposits, encountered below the artificial fill to the total depth excavated (12.5 feet), consisted of grayish brown, medium-grained silty sands interbedded with yellowish brown, medium to fine-grained sands and dark brown clays.

2.2 Hydrogeology

Local topography is relatively level with a slight westerly to northwesterly downward slope toward San Diego Bay. According to the findings of previous investigations, groundwater in the project area was encountered in monitoring wells at a depth of 6 to 7 feet below ground surface (bgs) with a westerly to northwesterly gradient (WCC 1988). During field activities described herein, groundwater seeps were initially encountered in the excavation sidewalls at approximately 6 to 8 feet bgs and in the excavation bottom at

approximately 12.5 feet bgs. Over time, groundwater in the excavation rose to approximately 8 feet bgs.

According to information from the Regional Water Quality Control Board (RWQCB), San Diego Region, the groundwater underlying the site is in the Telegraph Sub-Area of the Sweetwater Hydrologic Unit, and has existing beneficial use for agricultural purposes and potential beneficial uses for municipal and industrial purposes (RWQCB 1984).

2.3 Remediation Goals

The U.S. Environmental Protection Agency (EPA) has published residential and industrial preliminary remediation goals (PRGs) for chemical concentrations in soil (EPA 1999). The PRGs are risk-based values that can be used for planning or screening purposes. For fuel hydrocarbon constituents, the PRGs are:

Constituent	Residential Soil	Industrial Soil
benzene	0.67 mg/kg	1.5 mg/kg
toluene	520 mg/kg	520 mg/kg
ethylbenzene	230 mg/kg	230 mg/kg
xylenes	210 mg/kg	210 mg/kg

mg/kg = milligrams per kilogram

The RWQCB has established an *Interim Guidance on Required Cleanup at Low-Risk Fuel Contaminated Sites* dated April 1, 1996. The guideline includes a number of criteria for "low risk groundwater cases" including:

- Groundwater has been impacted, the leak has been stopped, and ongoing sources including free product have been removed or remediated to the extent practicable.
- The site has been adequately characterized.
- The dissolved hydrocarbon plume is not migrating.
- No water wells, deeper drinking water aquifers, surface water, or other sensitive receptors are likely to be impacted.

- The site presents no significant risk to human health.

- The site presents no significant risk to the environment.

The guideline states that sites that are located within the service area of the San Diego County Water Authority (CWA) and that do not overlie sensitive aquifers can request RWQCB to consider natural attenuation combined with long-term groundwater monitoring as a site mitigation strategy.

For areas within 1,000 feet of a marine surface water, the guideline also established the following chemical-specific groundwater cleanup goals:

Constituent	Groundwater Concentration
benzene	400 µg/L
toluene	3,700 µg/L
ethylbenzene	430 µg/L
xylenes	10,000 µg/L
naphthalene	2,350 µg/L
polynuclear aromatics (PNAs)	300 µg/L

3.0 SITE REMEDIATION

3.1 SCOPE OF WORK

In an attempt to meet the project objectives and mitigate soil and groundwater impact at the site, the following activities were performed in accordance with the workplan (Ogden 1999) and the direction of Mr. Jerry Brull, Senior Environmental Specialist for Sempra:

- destruction of existing groundwater monitoring well MW-4

- removal of any aboveground structures overlying the impacted soil area

- removal of the former UST excavation backfill

- additional excavation of impacted soils extending beyond the former UST excavation backfill

- segregating and stockpiling excavated soil for possible reuse or disposal
- soil sampling and laboratory analyses during excavation activities including confirmation sampling of the final limits of the excavation
- removal of impacted groundwater with a vacuum truck and submersible pumps
- application of ORC to the backfill materials at the groundwater table in the excavation
- backfill of the excavation with clean on-site soils and clean imported material
- reinstallation of monitoring well MW-4 (MW-4a)

3.2 Monitoring Well MW-4 Destruction

All underground pipe and utility lines in and around the designated work area were located and marked on December 3, 1999 prior to MW-4 destruction and excavation. On December 6, 1999, the following activities were performed by Tri-County Drilling, Inc. during removal of MW-4 under SA/M Division Permit No. W98627 (Appendix A):

- A drill rig was used to overdrill and pull out the 21-foot-long, 4-inch-diameter, Schedule 40 polyvinyl chloride (PVC), 0.020-inch slotted-screen and well casing, and well vault box.
- The bentonite and filter pack from the well was removed and placed in a 55-gallon steel drum that was labeled and stored in accordance with SA/M Manual guidelines.
- Approximately 75 pounds of bentonite grout and 150 pounds of bentonite chips were used to fill and seal the well boring, via the tremie method, from approximately 21 to 2 feet bgs.
- In addition, approximately 60 pounds of Redicrete and 25 pounds of Rapidset were used as the concrete seal to cap the well boring from approximately 2 to 0 feet bgs.

- The well casing sections were placed in a 55-gallon drum and hauled off-site by Tri-County Drilling, Inc.

- The site was cleaned and restored to pre-removal conditions.

- No soil or groundwater samples were collected.

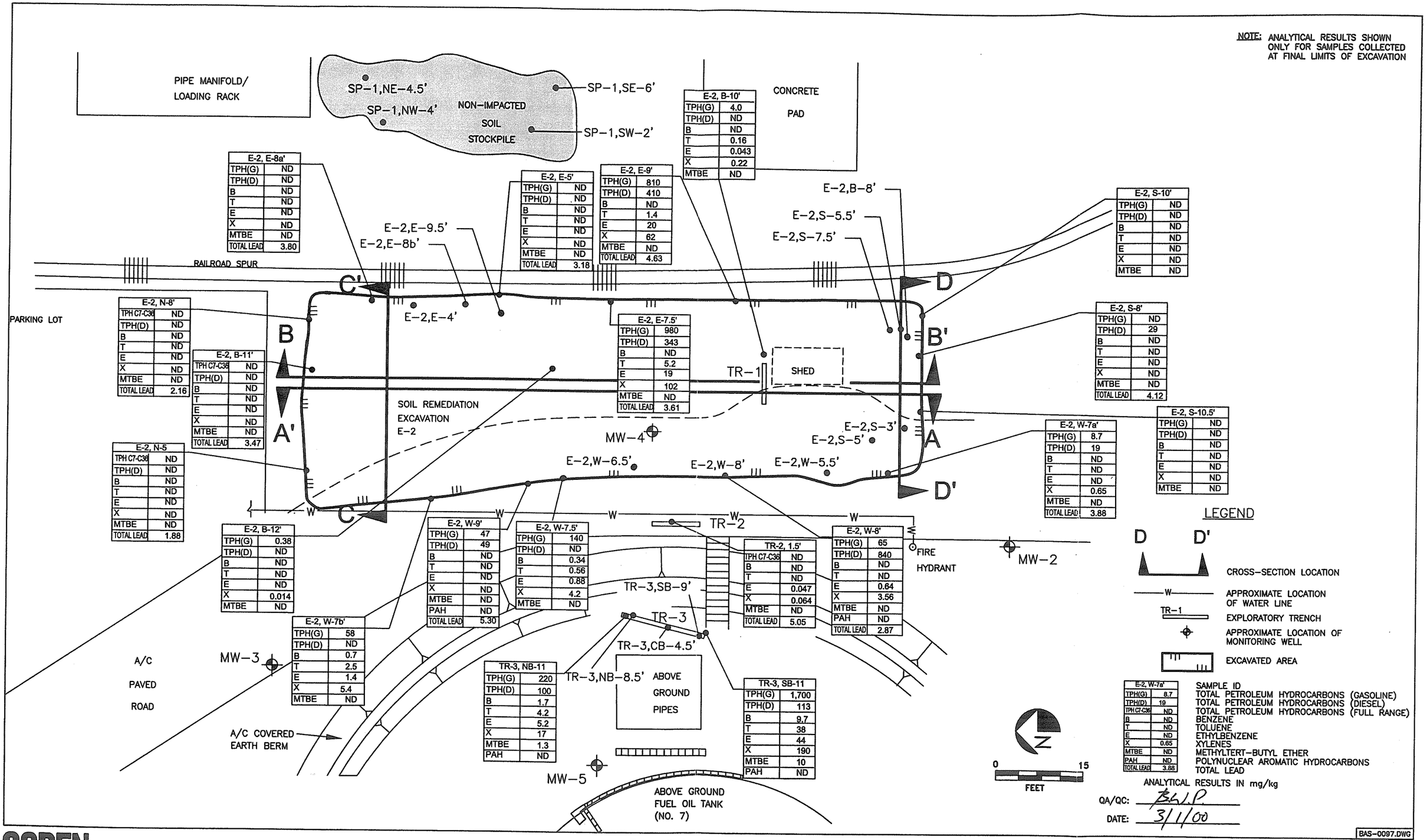
3.3 Soil Excavation

On December 8, 1999, initial excavation of the former UST backfill area (20 feet by 20 feet by 8 feet deep) was performed by Fred North Construction Co., Inc. On December 9 through December 16, 1999, the excavation (E-2) was extended beyond the former UST backfill area because of observed hydrocarbon impacts in the surrounding soils. The limits of excavation E-2 and the results of confirmation soil sampling are shown in Figure 3.

Using visual observations, flame ionization detector (FID) readings, and on-site mobile laboratory analyses, approximately 1,300 cubic yards of clean cover soils and underlying petroleum hydrocarbon-impacted soils were identified, removed, and stockpiled nearby. The resulting excavation was approximately 104 feet long by 30 feet wide and ranged from approximately 10 feet (north and south portions) to 12.5 feet deep (center portion). The extent of excavation E-2 was limited by aboveground and belowground structures such as a subsurface waterline and aboveground tank containment berm to the west, and a railroad spur track to the east. On December 15, 1999, during a site visit by Mr. Nasser Sionit of the SA/M Division, it was agreed that further excavation to the east and west was not practical. No limiting physical obstructions were encountered to the north and south, or in the bottom of the excavation.

During excavation activities, an approximately 12-foot by 8-foot, wood-framed, corrugated steel shed, located 18 feet south of the former UST backfill area, was dismantled and removed to allow excavation toward the south. Dead electrical and telephone lines servicing the shed were exposed and removed from the excavation and terminated in a vault box after backfill activities.

NOTE: ANALYTICAL RESULTS SHOWN ONLY FOR SAMPLES COLLECTED AT FINAL LIMITS OF EXCAVATION



E-2, E-8a'	
TPH(G)	ND
TPH(D)	ND
B	ND
T	ND
E	ND
X	ND
MTBE	ND
TOTAL LEAD	3.80

E-2, E-5'	
TPH(G)	ND
TPH(D)	ND
B	ND
T	ND
E	ND
X	ND
MTBE	ND
TOTAL LEAD	3.18

E-2, E-9'	
TPH(G)	810
TPH(D)	410
B	ND
T	1.4
E	20
X	62
MTBE	ND
TOTAL LEAD	4.63

E-2, B-10'	
TPH(G)	4.0
TPH(D)	ND
B	ND
T	0.16
E	0.043
X	0.22
MTBE	ND

E-2, S-10'	
TPH(G)	ND
TPH(D)	ND
B	ND
T	ND
E	ND
X	ND
MTBE	ND

E-2, N-8'	
TPH C7-C36	ND
TPH(D)	ND
B	ND
T	ND
E	ND
X	ND
MTBE	ND
TOTAL LEAD	2.16

E-2, B-11'	
TPH C7-C36	ND
TPH(D)	ND
B	ND
T	ND
E	ND
X	ND
MTBE	ND
TOTAL LEAD	3.47

E-2, E-7.5'	
TPH(G)	980
TPH(D)	343
B	ND
T	5.2
E	19
X	102
MTBE	ND
TOTAL LEAD	3.61

E-2, S-8'	
TPH(G)	ND
TPH(D)	29
B	ND
T	ND
E	ND
X	ND
MTBE	ND
TOTAL LEAD	4.12

E-2, S-10.5'	
TPH(G)	ND
TPH(D)	ND
B	ND
T	ND
E	ND
X	ND
MTBE	ND

E-2, W-7a'	
TPH(G)	8.7
TPH(D)	19
B	ND
T	ND
E	ND
X	0.65
MTBE	ND
TOTAL LEAD	3.88

E-2, N-5	
TPH C7-C36	ND
TPH(D)	ND
B	ND
T	ND
E	ND
X	ND
MTBE	ND
TOTAL LEAD	1.88

E-2, B-12'	
TPH(G)	0.38
TPH(D)	ND
B	ND
T	ND
E	ND
X	0.014
MTBE	ND

E-2, W-9'	
TPH(G)	47
TPH(D)	49
B	ND
T	ND
E	ND
X	ND
MTBE	ND
PAH	ND
TOTAL LEAD	5.30

E-2, W-7.5'	
TPH(G)	140
TPH(D)	ND
B	0.34
T	0.56
E	0.88
X	4.2
MTBE	ND

TR-2, 1.5'	
TPH C7-C36	ND
B	ND
T	ND
E	0.047
X	0.064
MTBE	ND
TOTAL LEAD	5.05

E-2, W-8'	
TPH(G)	65
TPH(D)	840
B	ND
T	ND
E	0.64
X	3.56
MTBE	ND
PAH	ND
TOTAL LEAD	2.87

E-2, W-7b'	
TPH(G)	58
TPH(D)	ND
B	0.7
T	2.5
E	1.4
X	5.4
MTBE	ND

TR-3, NB-11	
TPH(G)	220
TPH(D)	100
B	1.7
T	4.2
E	5.2
X	17
MTBE	1.3
PAH	ND

TR-3, SB-11	
TPH(G)	1,700
TPH(D)	113
B	9.7
T	38
E	44
X	190
MTBE	10
PAH	ND

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Remediation Excavation Plan
South Bay Power Plant
Chula Vista, CA

FIGURE 3

3.4 Observations During Excavation

During initial soil excavation, odors and soil discoloration were observed from approximately 5.5 feet to 9 feet bgs on all sidewalls. Indications of hydrocarbon impact were absent at the final northern and southern limits of excavation E-2, as described above.

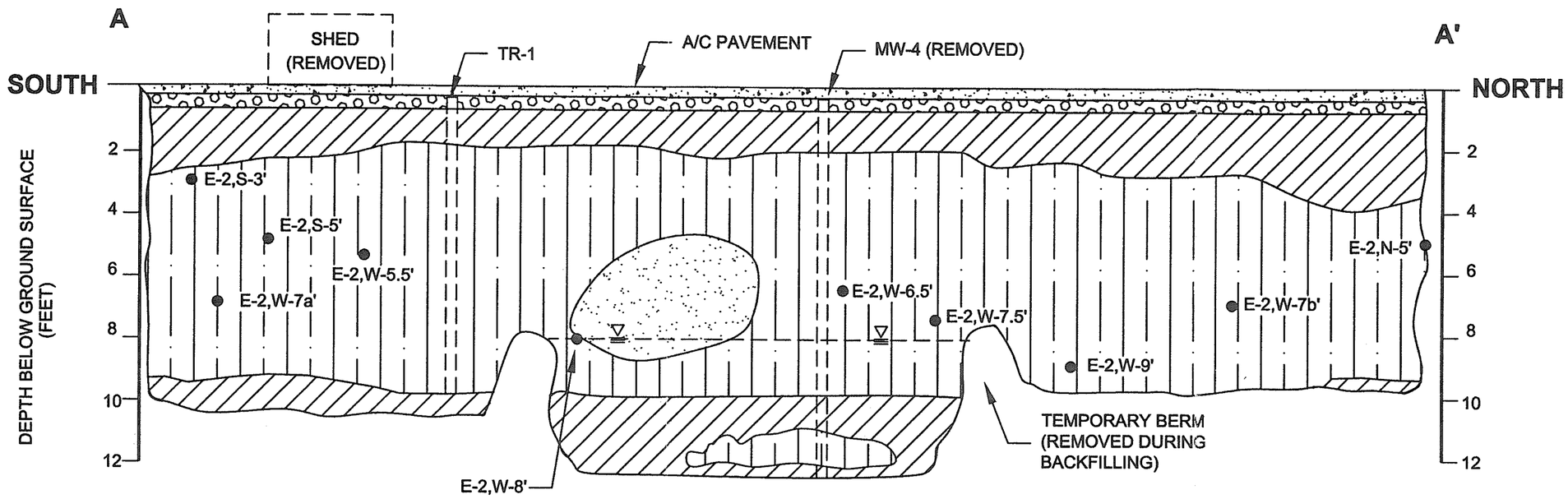
Groundwater seepage from an exposed sand channel was visible at the west wall of excavation E-2 at depths ranging from approximately 6 to 8 feet bgs. Dark brown clay on the bottom of the central portion of excavation E-2 displayed no seepage from approximately 10 to 12 feet bgs. However, groundwater was observed seeping from the light brown silty sandy material encountered below the clay. Overnight, groundwater in the central portion of excavation E-2 rose to approximately 8 feet bgs. Cross sections of excavation E-2 are presented in Figures 4 through 6.

3.5 Soil Management

Excavated soils were separated into three stockpiles, one for visually clean soil and two for stained soils. The stained soil stockpiles were placed on heavy plastic sheeting east and south of the excavation and covered with plastic sheeting at the end of each day to minimize hydrocarbon volatilization and wind displacement. Stockpile locations are shown in Figure 2. Approximately 1,180 cubic yards of impacted soils were left in covered stockpiles on site for characterization and disposal by Sempra. Based on laboratory analyses of confirmation soil samples (SP-1 through SP-4), approximately 130 cubic yards of the visually clean soil stockpile were used as excavation and trench backfill.

3.6 Groundwater Management

SDG&E laboratory representatives collected samples of the standing groundwater in excavation E-2 for laboratory analysis prior to removal of groundwater. Approximately 2,300 gallons of groundwater were pumped by Triad Marine and Industrial Services, Inc. into a vacuum truck and transported to a licensed disposal/recycling facility (Crosby & Overton) in Long Beach, California. The uniform hazardous waste manifest certificate for the groundwater is included in Appendix B.



LEGEND

- ROAD BASE
- SW,SP - LIGHT BROWN, MEDIUM TO FINE SAND
- CL - DARK BROWN CLAY
- SM - SILTY SAND
- E-2,S-5' ● SAMPLE LOCATION
- ▽ OBSERVED STATIC GROUNDWATER ELEVATION

SCALE: 0 10 FEET

VERTICAL EXAGGERATION = 4x

SEE FIGURE 3 FOR LOCATION OF CROSS-SECTION

CRS-0082.DWG

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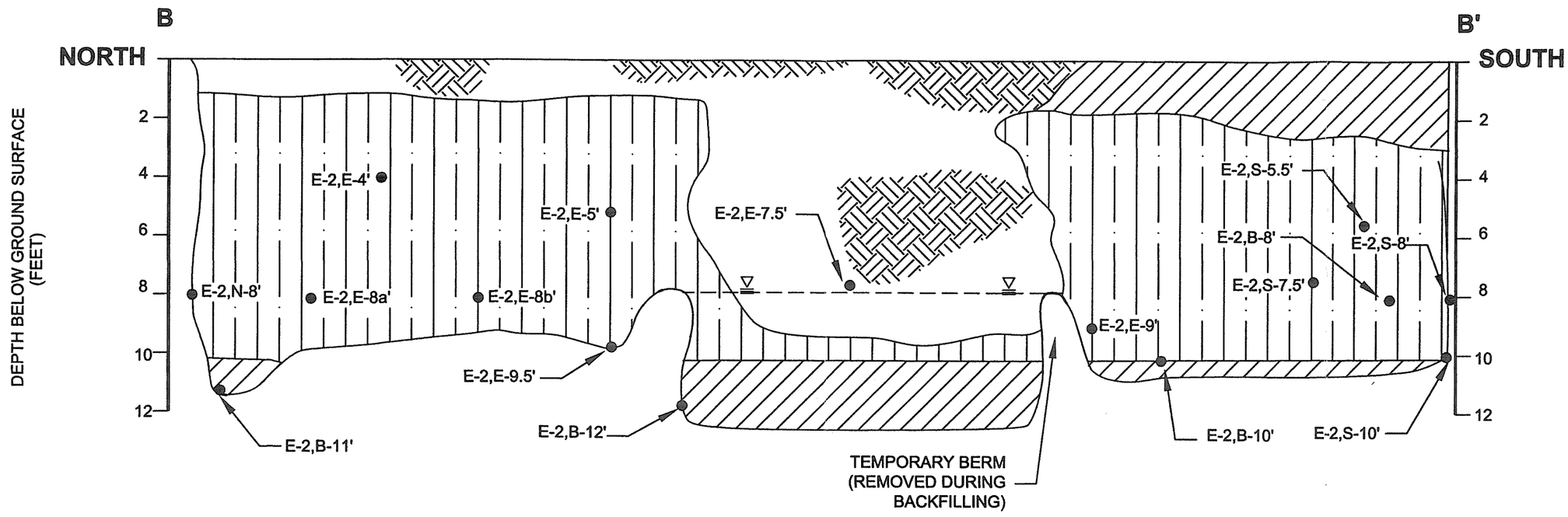
Cross Section A - A'
South Bay Power Plant
Chula Vista, CA

FIGURE 4



LEGEND

- CL - DARK BROWN CLAY
- SM - SILTY SAND
- AF - ARTIFICIAL FILL
- E-2,B-11' ● SAMPLE LOCATION
- ▽ OBSERVED STATIC GROUNDWATER ELEVATION

SCALE: 0 10 FEET

VERTICAL EXAGGERATION = 4x

SEE FIGURE 3 FOR LOCATION OF CROSS-SECTION

CRS-0081.DWG

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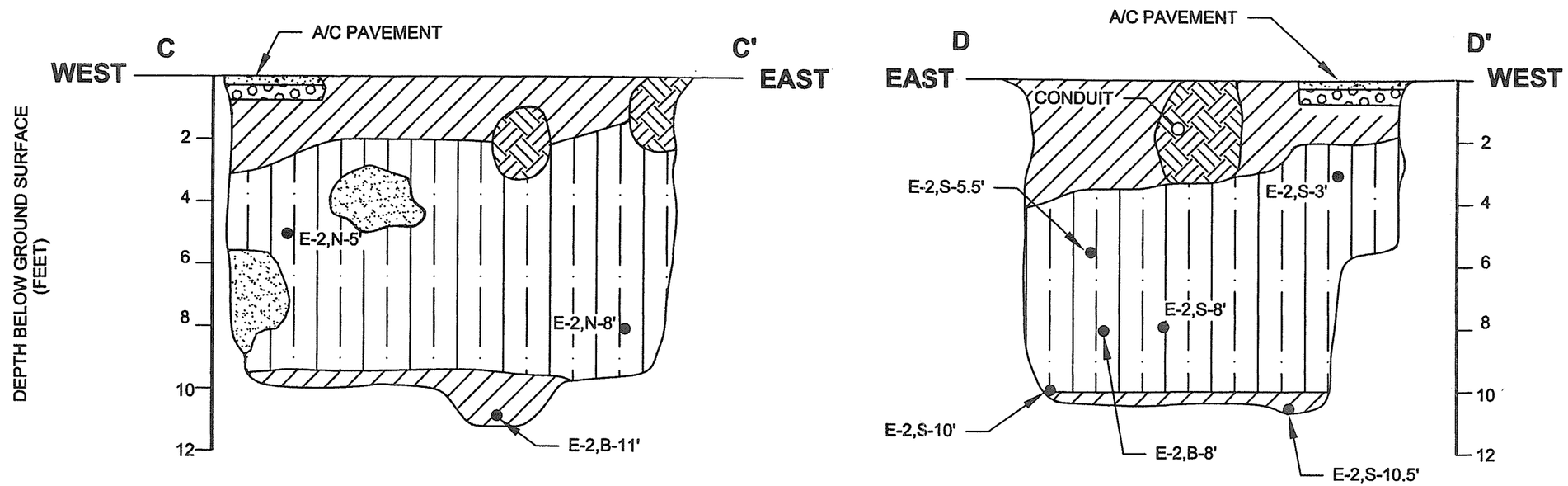
Cross Section B - B'
South Bay Power Plant
Chula Vista, CA

FIGURE 5



LEGEND

- CL - DARK BROWN CLAY
- SM - SILTY SAND
- AF - ARTIFICAL FILL
- ROAD BASE
- SW,SP LIGHT BROWN MEDIUM TO FINE SAND
- E-2,N-8' SAMPLE LOCATION

SCALE: 0 10 FEET

VERTICAL EXAGGERATION = 4x

SEE FIGURE 3 FOR LOCATION OF CROSS-SECTION

CRS-0083.DWG

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Cross Sections C - C' and D - D'
South Bay Power Plant
Chula Vista, CA

FIGURE 6

Subsequent to vacuum truck removal, approximately 17,000 gallons of additional collected groundwater were pumped from excavation E-2 to a 21,000-gallon temporary storage tank. Sempra will characterize and dispose of the additional groundwater.

3.7 Exploratory Trenches

Three exploratory trenches were excavated using a backhoe on December 9 and 20, 1999 to determine the extent of hydrocarbon-impacted soils and aid in directing the progress of the remediation excavation. Two trenches (TR-1 & TR-2), both approximately 8 feet deep, were excavated immediately south and west of excavation E-2, and a third trench (TR-3) was excavated inside the containment berm between Fuel Tank No. 7 and the containment berm (Figure 3). One soil sample from TR-2 and five soil samples at various depths from TR-3 were collected for laboratory analysis. The ground surface at TR-3 is approximately 2 feet higher in elevation than at excavation E-2 and the other trenches. Following soil sampling, TR-2 and TR-3 were backfilled with clean imported sand and compacted. The area of TR-1 was ultimately within the limits of E-2 and was completely excavated.

3.8 Soil Sampling

A total of 37 soil samples were collected from the excavation bottom, sidewalls, and trenches (Figure 3). Soil samples were retrieved by the excavator or backhoe bucket in locations identified by Ogden. A relatively coherent and undisturbed portion of soil within the bucket was selected and a small hand shovel was driven into the soil. The soil was then carefully deposited into a glass jar until there was no head space in the jar. The jars were covered with Teflon-lined threaded lids. Samples were labeled, sealed with tape, documented in the chain-of-custody record, and placed in a cooler with ice prior to laboratory analysis. Selected samples were analyzed by state-certified mobile and fixed laboratories.

Prior to use, sampling equipment was thoroughly cleaned to avoid cross-contamination. Sampling equipment was brush-scrubbed in a nonphosphorous detergent and potable water solution and rinsed twice in clean potable water between each sampling event.

3.9 CHAIN-OF-CUSTODY PROTOCOL

Chain-of-custody protocol was followed for all soil samples selected for laboratory analysis. The chain-of-custody form(s) accompanied the samples from the job site to the laboratory, providing a continuous record of possession prior to analysis. Chain-of-custody forms are included in Appendix C.

3.10 LABORATORY ANALYSIS

Selected soil samples were analyzed by Calscience Environmental Laboratories, Inc. (CEL) at their fixed laboratory facility in Garden Grove, California, using the following methods:

- Total petroleum hydrocarbons with full carbon chain (TPH, C_7-C_{36}), by Modified EPA Method 8015M.
- Benzene, toluene, ethylbenzene, and xylenes (BTEX) and methyl tert-butyl ether (MTBE), by EPA Method 8260B
- Total lead, by EPA Method 6010B
- Volatile organic compounds (VOCs), by EPA Method 8260B

Other selected soil samples were analyzed by Sierra Laboratories, Inc. (Sierra) at their fixed laboratory facility in Laguna Hills, California, and at their on-site mobile laboratory using the following methods:

- Total petroleum hydrocarbons as gasoline (TPHg), by EPA Method 8015
- Total petroleum hydrocarbons as diesel (TPHd), by EPA Method 8015B
- TPH, C_7-C_{36}, by Modified EPA Method 8015M
- BTEX and MTBE, by EPA Method 8020
- Total lead, by EPA Method 6010B

- Polynuclear aromatics hydrocarbons (PAHs), by EPA Method 8270C
- VOCs, by EPA Method 8260B

The certified analytical reports for the soil samples from both laboratories are in Appendix D.

3.11 Oxygen Release Compound Application

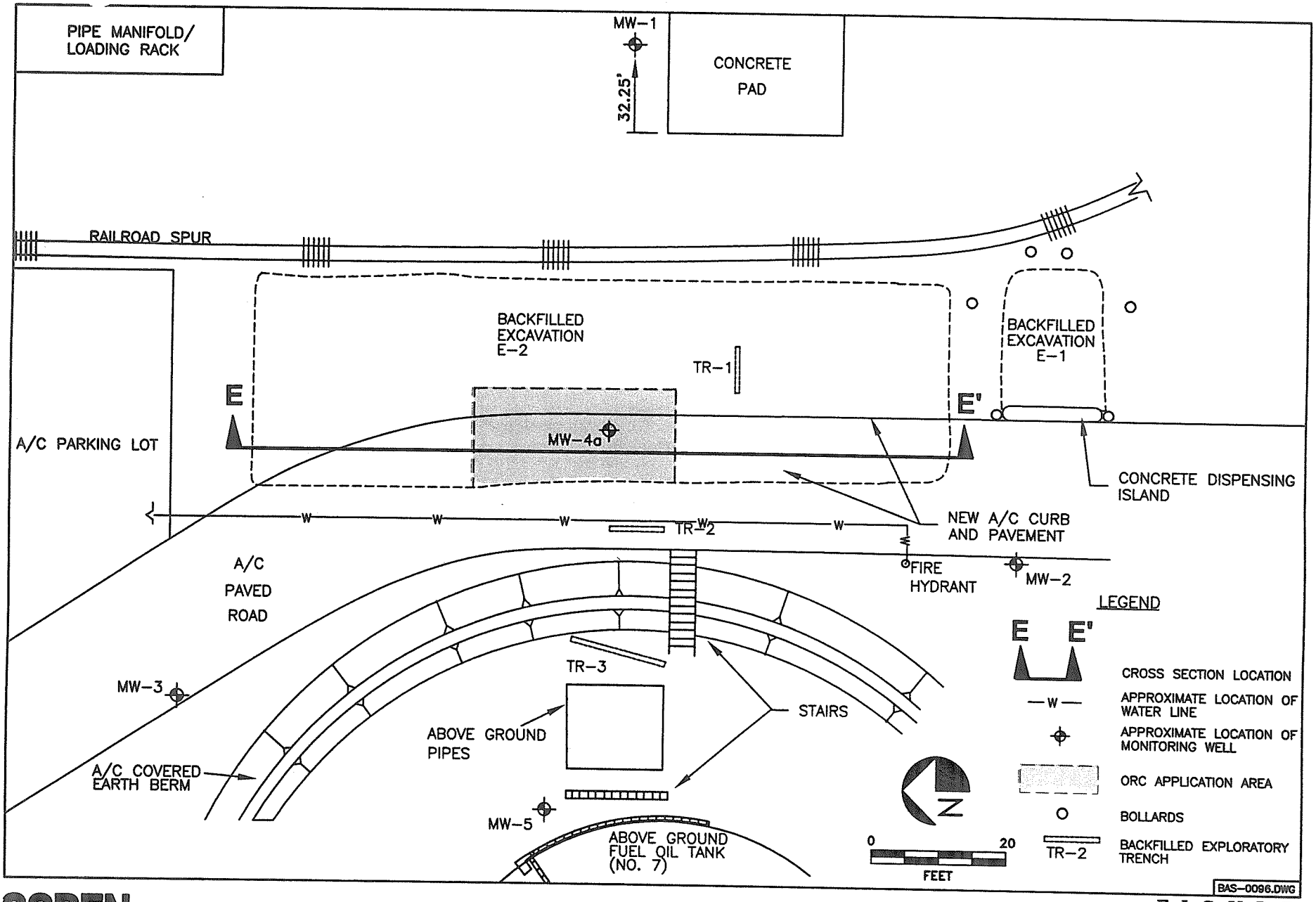
ORC is a patented formulation of magnesium peroxide powder that releases oxygen at a slow, controlled rate when hydrated. The compound provides a passive, long-term source of oxygen with no toxic residue or by-products. The use of ORC has been demonstrated to enhance the biodegradation of hydrocarbons in soil and groundwater. ORC was placed at and below the observed groundwater elevation in the excavation prior to backfilling.

The quantity of ORC required is generally between 0.1 percent and 1.0 percent by weight of the soil or backfill matrix. The area of ORC application was approximately 30 feet by 15 feet by 1 foot deep in the western portion of excavation E-2 (see Figure 7). For application to the crushed aggregate backfill (approximately 450 cubic feet with a unit weight of approximately 150 pounds per cubic foot), 1,000 pounds of ORC was provided, resulting in an approximate 1.5 percent by weight application rate.

On December 17, 1999, excavation E-2 was cleaned of slough and backfilled with ¾-inch aggregate to a depth of approximately 9.5 feet bgs using the track-mounted excavator. A handheld drill mixer was used to mix an approximately 55 percent solids slurry of ORC and water in the excavator bucket. Approximately half of the ORC was spread on the aggregate backfill in the west-central portion of excavation E-2 at 9.5 feet bgs. An additional 1-foot lift of aggregate was placed, and the remaining half of the ORC was spread at a depth of 8.5 feet bgs (see Figures 7 and 8).

3.12 Backfill and Asphalt Pavement

Excavation E-2 was backfilled on December 17 through 23, 1999 with ¾-inch crushed aggregate from the base (approximately 10 to 12.5 feet bgs) to approximately 7.5 feet bgs



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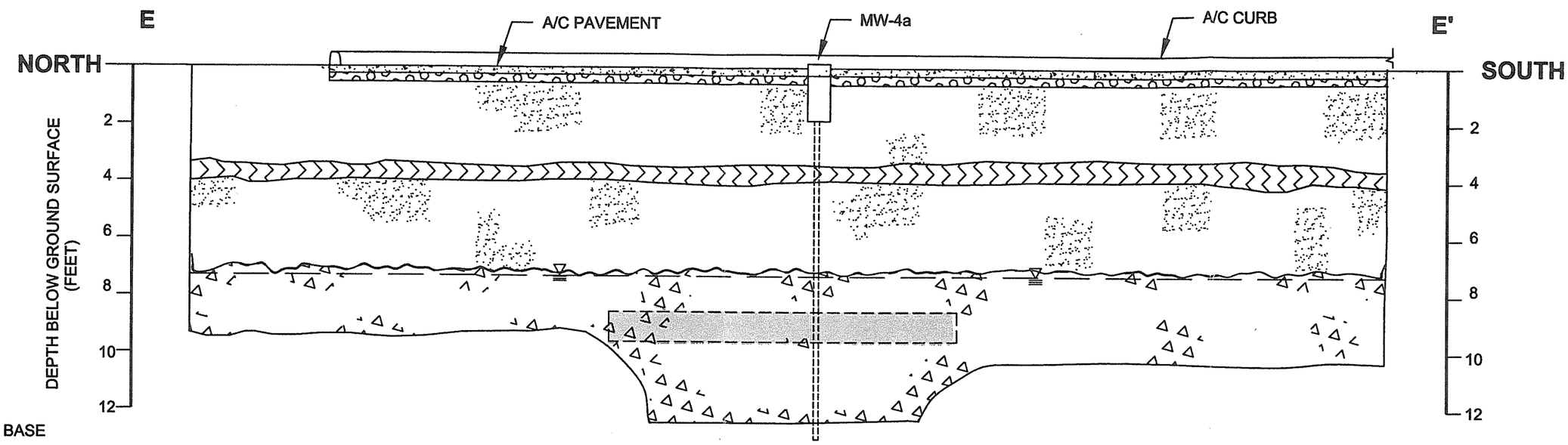
Post-Backfill Site Plan
South Bay Power Plant
Chula Vista, CA

FIGURE
7



LEGEND

- ROAD BASE
- IMPORTED CLEAN SAND
- NON-IMPACTED ON-SITE SOILS
- 3/4" AGGREGATE
- FILTER FABRIC
- ORC APPLICATION AREA
- OBSERVED STATIC GROUNDWATER ELEVATION

SCALE: 0 10 FEET

VERTICAL EXAGGERATION = 4x
SEE FIGURE 7 FOR LOCATION OF CROSS-SECTION

CRS-0084.DWG

OGDEN

Cross Section E - E'
South Bay Power Plant
Chula Vista, CA

FIGURE
8

and imported clean sand and nonimpacted on-site soils from approximately 7.5 feet bgs to the original ground surface (see Figure 8). The crushed aggregate was placed in 1- to 1½-foot lifts and compacted with the excavator bucket. A geomembrane fabric was placed over the crushed aggregate. Imported clean sand and nonimpacted on-site soils were moisture-conditioned and placed above the aggregate and fabric in 6- to 12-inch lifts. Compactive effort was achieved using a wheel loader.

On December 23, 1999 and January 3, 2000, the demolished portion of the road on the west side of E-2 was replaced with approximately 8 inches of aggregate base and 4 inches of asphalt/concrete (A/C) pavement. An A/C curb was placed on the eastern edge of the road.

3.13 Monitoring Well MW-4a Installation

On January 10, 2000, MW-4a was installed under SAM Permit No. W98673 at approximately the original location of MW-4 (see Figure 7). The following activities were performed by Tri-County Drilling, Inc. during well re-installation activities:

- A CME 75 high-torque drill rig with a hollow-stem auger was used to drill a 10-inch-diameter by 20.5-foot-deep boring.
- 4-inch-diameter Schedule 40 PVC 0.020-inch slotted well screen was installed in the boring from approximately 20 to 5 feet bgs.
- 4-inch-diameter Schedule 40 PVC casing was installed from approximately 5 feet bgs to the surface.
- A filter pack of Lonestar #3 sand was installed in the annular space via the hollow-stem auger from the total boring depth to approximately 4 feet bgs.
- Enviroplug medium bentonite chips were installed from approximately 4 to 2 feet bgs as a seal.
- The well was completed at the surface with Redicrete concrete grout, a locking well cap, and an 8-inch-diameter well vault with a traffic-rated lid.

- No soil samples were collected from the boring.

The Well Installation Permit is presented in Appendix E. The boring log and well completion details are presented in Appendix F. Soil cuttings from the boring were stored in 55-gallon drums pending characterization and disposal by Sempra.

On January 10, 2000, MW-4a was developed using a surge block, bailing, and downhole electric pump. A cumulative 175 gallons of groundwater was removed until water quality parameters (pH, conductivity, turbidity, and temperature) stabilized. Well development water was stored in 55-gallon drums pending characterization and disposal by Sempra. The well development log is included in Appendix F.

4.0 ASSESSMENT OF CURRENT CONDITIONS

4.1 SOIL

The results of the laboratory analyses of the soil samples are summarized in Table 1 and presented in Figure 3. As indicated in prior sections of this report, approximately 1,180 cubic yards of petroleum hydrocarbon-impacted soils were excavated and removed from the site. Based on the results of the laboratory analyses, maximum concentrations of petroleum hydrocarbons in samples from soils left in-place were reported as follows:

- North and South Sidewalls. The absence of physical barriers allowed impacted soils in the northern and southern portions of the excavation to be adequately and successfully removed (see Figure 3). TPH, BTEX, and MTBE were not detected in the north sidewall confirmation soil samples. At the south wall, only TPHd was detected in one of the three confirmation samples at relatively low levels (29 mg/kg). BTEX was not detected in the three confirmation samples from the south wall.

- East Sidewall. Of the four confirmation samples collected along the eastern sidewall, maximum TPHg and TPHd concentrations were 980 mg/kg and 410 mg/kg, respectively. Benzene and MTBE were not detected in the four confirmation samples collected from the eastern sidewall, and detected concentrations of toluene, ethylbenzene, and xylenes were one to two orders of magnitude below the EPA PRGs of 520 mg/kg, 230 mg/kg, and 210 mg/kg, respectively.

TA . 1

Summary of Soil Sample Analyses

South Bay Power Plant
Project # 32132000

Boring Excavation ID	Sample No.	Date Sampled	Depth of Sample (feet)	TPH Gasoline (1) (mg/kg)	TPH Diesel (2) (mg/kg)	TPH C7-C36 8015M with Carbon Chain (3) (mg/kg)	Benzene (4) (mg/kg)	Toluene (4) (mg/kg)	Ethyl Benzene (4) (mg/kg)	Total Xylenes (4) (mg/kg)	MTBE (4) (mg/kg)	Total Lead (5) (mg/kg)	PAH (6) (mg/kg)	VOC's (4) (mg/kg)	Lab Name	CARs
Trench 2 (TR-2)	TR-2 ,1.5'- West Trench	12/19/1999	1.5	-	-	< 5	< 0.01	< 0.01	0.047	0.064	< 0.01	5.05	-	(7)	CEL	(A)
Excavation (E2)	E-2 N-5'	12/14/1999	5	-	-	< 5	<0.005	<0.005	<0.005	<0.005	<0.005	1.88	-	-	CEL	(A)
	E-2 N-8'	12/14/1999	8	-	-	< 5	<0.005	<0.005	<0.005	<0.005	<0.005	2.16	-	-	CEL	(A)
	E-2 B-11'	12/14/1999	11	-	-	< 5	<0.005	<0.005	<0.005	<0.005	<0.005	3.47	-	-	CEL	(A)
	E-2 W-7b'	12/14/1999	7	58	< 5	-	0.70	2.5	1.4	5.4	<0.005	-	-	-	SIERRA	(A)
	E-2 W-6.5'	12/14/1999	6.5	100	< 5	-	0.50	1.4	0.85	3.6	<0.005	-	-	-	SIERRA	(A)
	E-2 S-5'	12/14/1999	5	43	< 5	-	0.28	0.52	0.11	1.4	<0.005	-	-	-	SIERRA	(A)
	E-2 S-7.5'	12/14/1999	7.5	760	< 5	-	3.0	5.3	4.4	32	<0.005	-	-	-	SIERRA	(A)
	E-2 B-10'	12/14/1999	10	4.0	< 5	-	< 0.003	0.16	0.043	0.22	< 0.005	-	-	-	SIERRA	(A)
	E-2 S-3'	12/15/1999	3	0.49	< 5	-	< 0.003	0.012	< 0.003	0.021	< 0.005	-	-	-	SIERRA	(A)
	E-2 S-5.5'	12/15/1999	5.5	1.0	< 5	-	0.0083	0.013	< 0.003	0.015	< 0.005	-	-	-	SIERRA	(A)
	E-2 B-8'	12/15/1999	8	0.59	< 5	-	0.0058	0.012	< 0.003	0.013	< 0.005	-	-	-	SIERRA	(A)
	E-2 S-10.5'	12/15/1999	10.5	< 0.05	< 5	-	< 0.003	< 0.003	< 0.003	< 0.003	< 0.005	-	-	-	SIERRA	(A)
	E-2 S-10'	12/15/1999	10	< 0.05	< 5	-	< 0.003	< 0.003	< 0.003	< 0.003	< 0.005	-	-	-	SIERRA	(A)
	E-2 E-4'	12/15/1999	4	0.14	< 5	-	< 0.003	< 0.003	< 0.003	< 0.003	< 0.005	-	-	-	SIERRA	(A)
	E-2 E-8b'	12/15/1999	8	390	< 5	-	0.39	0.23	0.27	0.59	< 0.005	-	-	-	SIERRA	(A)
	E-2 B-12'	12/15/1999	12	0.38	< 5	-	< 0.003	< 0.003	< 0.003	0.014	< 0.005	-	-	-	SIERRA	(A)
	E-2 W-7.5'	12/15/1999	7.5	140	< 5	-	0.34	0.56	0.88	4.2	< 0.005	-	-	-	SIERRA	(A)
	E-2 W-5.5'	12/15/1999	5.5	4.2	< 5	-	0.068	0.095	0.0574	0.26	< 0.005	-	-	-	SIERRA	(A)
	E-2 E-9.5'	12/15/1999	9.5	0.069	< 5	-	< 0.003	< 0.003	< 0.003	< 0.003	< 0.005	-	-	-	SIERRA	(A)
	E-2 E-8a'	12/16/1999	8	< 0.05	< 5	-	<0.005	<0.005	<0.005	<0.005	<0.005	3.80	-	-	SIERRA	(A)
	E-2 W-9'	12/16/1999	9	47	49	-	<0.005	<0.005	<0.005	<0.005	<0.005	5.30	< 0.5	-	SIERRA	(A)
	E-2 E-5'	12/16/1999	5	< 0.05	< 5	-	<0.005	<0.005	<0.005	<0.005	<0.005	3.18	-	-	SIERRA	(A)
	E-2 E-7.5'	12/16/1999	7.5	980	343	-	<0.005	5.2	19	102	<0.005	3.61	-	-	SIERRA	(A)

TAB 1

Summary of Soil Sample Analyses

South Bay Power Plant
Project # 32132000

Boring Excavation ID	Sample No.	Date Sampled	Depth of Sample (feet)	TPH Gasoline (1) (mg/kg)	TPH Diesel (2) (mg/kg)	TPH C7-C36 8015M with Carbon Chain (3) (mg/kg)	Benzene (4) (mg/kg)	Toluene (4) (mg/kg)	Ethyl Benzene (4) (mg/kg)	Total Xylenes (4) (mg/kg)	MTBE (4) (mg/kg)	Total Lead (5) (mg/kg)	PAH (6) (mg/kg)	VOC's (4) (mg/kg)	Lab Name	CARs
	E-2 E-9'	12/16/1999	9	810	410	-	<0.005	1.4	20	62	<0.005	4.63	-	-	SIERRA	(A)
	E-2 S-8'	12/16/1999	8	< 0.05	29	-	<0.005	<0.005	<0.005	<0.005	<0.005	4.12	-	-	SIERRA	(A)
	E-2 W-7a'	12/16/1999	7	8.7	19	-	<0.005	<0.005	<0.005	0.65	<0.005	3.88	-	-	SIERRA	(A)
	E-2 W-8'	12/16/1999	8	65	840	-	<0.005	<0.005	0.64	3.56	<0.005	2.87	< 0.5	-	SIERRA	(A)
Stockpiles (SP-1)	SP-1 NE-4.5	12/17/1999	4.5	0.26	<5	-	< 0.003	< 0.003	< 0.003	< 0.003	-	-	-	-	SIERRA	(A)
	SP-1 SE-6	12/17/1999	6	6.0	<5	-	< 0.003	0.051	0.0058	0.11	-	-	-	-	SIERRA	(A)
	SP-1 SW-2	12/17/1999	2	0.097	<5	-	< 0.003	< 0.003	< 0.003	< 0.003	-	-	-	-	SIERRA	(A)
	SP-1 NW-4	12/17/1999	4	0.78	<5	-	< 0.003	0.011	< 0.003	0.035	-	-	-	-	SIERRA	(A)
TRENCH 3 (TR-3)	TR-3 CB-4.5	12/21/1999	4.5	0.58	< 5	-	0.035	0.010	0.017	0.012	-	-	-	-	SIERRA	(A)
	TR-3 NB-8.5	12/21/1999	8.5	< 0.05	< 5	-	0.0046	<0.003	< 0.003	<0.003	-	-	-	-	SIERRA	(A)
	TR-3 NB-11	12/21/1999	11	220	100	-	1.7	4.2	5.2	17	1.3	-	<0.5	-	SIERRA	(A)
	TR-3 SB-9	12/21/1999	9	1.2	< 5	-	0.016	0.0077	0.010	0.014	-	-	-	-	SIERRA	(A)
	TR-3 SB-11	12/21/1999	11	1700	113	-	9.7	38	44	190	10	-	<0.5	-	SIERRA	(A)

QA / QC: BWP
DATE: 3/1/00

Abbreviatons:
CARs =Certified Analytical Reports
CEL = Calscience Environmental Laboratories
E = East
E2 = Excavation 2
MTBE = Methyl tert-butyl ether
N = North
ND = Not Detected at the Instrument Detection limit or the laboratory reportable limits in parenthesis
PAH = Polynuclear Aromatic Hydrocarbons
S = South
SP = Stockpile
TR = Trench
TPH = Total Petroleum Hydrocarbons
VOC = Volatile Organic Compounds
W = West

Symbols:
- = Data not applicable or available

Footnotes:
(1) Analyzed using EPA Method 8015 Gasoline Range (C4-C12)
(2) Analyzed using EPA Method 8015B Diesel Range (C10-C24)
(3) Analyzed using EPA Method 8015M
(4) Analyzed using EPA Method 8260B
(5) Analyzed using EPA Method 6010B TTLC (lead)
(6) Analyzed using EPA Method 8270C
(7) VOC Analyses results :
Acetone = 0.13
n-Propyl benzene = 0.015
1 3, 5-Trimethylbenzene = 0.020
1 2, 4-Trimethylbenzene = 0.052

- West Sidewall. Along the west excavation sidewall, TPHg was detected up to 140 mg/kg and TPHd was detected up to 840 mg/kg. MTBE was not detected in the west wall confirmation soil samples. Benzene was detected up to 0.70 mg/kg, which is approximately the residential PRG concentration of 0.67 mg/kg. Toluene, ethylbenzene, and xylenes concentrations were one to two orders of magnitude below their respective PRGs.

- Area West of the Excavation. Excavation to the west extended as far as possible and was stopped to avoid jeopardizing the integrity of a waterline and the containment berm for the aboveground fuel tank.

  A sample collected from trench TR-2, excavated west of the waterline (Figure 3), did not have detectable concentrations of TPH, benzene, toluene, or MTBE. Ethylbenzene and xylenes were detected at levels three to four orders of magnitude below the residential PRGs.

  Inside the containment berm, two samples collected from trench TR-3 indicated the presence of TPHg (up to 1,700 mg/kg), TPHd (up to 113 mg/kg), benzene (up to 9.7 mg/kg), MTBE (up to 10 mg/kg), toluene (up to 38 mg/kg), ethylbenzene (up to 44 mg/kg), and xylenes (up to 190 mg/kg). PAHs were not detected in the trench samples.

Based on the results of the laboratory analyses and physical location of the sampling points, it is estimated that approximately 221 pounds of petroleum hydrocarbons as TPH and approximately 1.5 pounds of benzene remain in an approximately 6-foot-thick layer of soil at a depth of approximately 3 to 9 feet bgs, extending from the western limits of E-2 to Fuel Tank No. 7. No soil samples were collected beyond the eastern limits of E-2, as this is the upgradient groundwater flow direction and is adjacent to the existing railroad tracks.

4.2 GROUNDWATER

The groundwater level measured during soil excavation was approximately 9 to 9.5 feet bgs. Following installation of monitoring well MW-4a, the groundwater level measured in the well was approximately 7.3 feet bgs. Post-remediation groundwater monitoring will be performed periodically at monitoring well locations MW-1 to MW-5.

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 CONCLUSIONS

Based on observations during field activities, the results of the laboratory analyses of soil samples and previous reports are as follows:

- Two 500-gallon gasoline and diesel USTs were removed from the subject site in September 1987.

- Although the subject site was granted case closure in 1988, Sempra has undertaken the remediation of residual petroleum hydrocarbon-impacted soil and groundwater in the former UST removal area under the SA/M Division's VAP.

- Approximately 1,300 cubic yards of clean cover soils and underlying petroleum hydrocarbon-impacted soils were identified, removed, and stockpiled at the site.

- Approximately 19,300 gallons of groundwater were pumped out of the excavation for off-site disposal.

- Approximately 1,000 pounds of ORC was placed at and below the groundwater level in the excavation backfill in an effort to enhance biodegradation and minimize any potential future impacts on groundwater quality.

- During a site visit by Mr. Nasser Sionit of the SA/M Division, it was agreed that further excavation to the east and west was not practical.

- The samples collected from soils left in-place in the excavation bottom and sidewalls contained maximum TPHg concentrations equal to or less than 980 mg/kg.

- A soil sample (TR-3, SB-11) collected from the trench (TR-3) between Fuel Tank No. 7 and the containment berm contained a TPHg concentration of 1,700 mg/kg. TR-3 is in the estimated downgradient groundwater flow direction from E-2.

- Concentrations of benzene detected in confirmation soil samples were at or below residential PRGs.

- Concentrations of toluene, ethylbenzene, and xylenes detected in confirmation soil samples were one to three orders of magnitude below the residential PRGs.

- MTBE was not detected in excavation confirmation soil samples.

- The maximum concentration of total lead in soil samples (5.05 mg/kg) is consistent with naturally occurring lead concentrations of 9 to 31 mg/kg in western U.S. soils.

- It is estimated that approximately 221 pounds of petroleum hydrocarbons as TPH and approximately 1.5 pounds of benzene could remain in subsurface soils between E-2 and Fuel Tank No. 7. Access to these soils is limited by the presence of subsurface utilities, the tank containment berm, and an aboveground piping manifold.

- It does not appear that the remaining residual hydrocarbons left in place have had a significant impact on groundwater quality as is evident by the absence of hydrocarbons in the downgradient monitoring well MW-5.

5.2 Recommendations

Based on the current site conditions and the above conclusions, Ogden recommends the following:

- Groundwater monitoring wells downgradient of the excavation should be gauged and sampled periodically to assess the effectiveness of site remediation and to assess and verify natural attenuation.

- Residual impacted soils may be remediated in-place or removed following planned decommissioning of Fuel Tank No. 7, if necessary, based on the results of long-term groundwater monitoring.

- Potential worker exposure issues related to in-place hydrocarbon-impacted soils should be addressed in accordance with California Environmental Protection Agency (Cal-EPA) and Occupational Safety and Health Administration (OSHA) guidelines prior to demolition of Fuel Tank No. 7 and associated structures.

6.0 LIMITATIONS

The findings, observations, conclusions, and recommendations of this report are limited by the technical requirements specified in the contract between Ogden Environmental and Energy Services Co., Inc. (Ogden) and Sempra Energy for the subject property. The findings, observations, conclusions, and recommendations presented herein, unless otherwise stated, are based solely on the information obtained and presented herein.

All findings, observations, conclusions, and recommendations stated in this report are based on facts; circumstances; applicable federal, state and local laws, rules, and regulations; and generally accepted national standards for such services in existence at the time that the report was prepared. Topics not explicitly discussed within this report should not be assumed to have been investigated or tested. This service does not guarantee current compliance with federal, state, or local laws, rules, or regulations.

This report is prepared for the sole use and benefit of the Client. Reliance upon this report by any third party shall be (1) at such third party's sole risk, (2) strictly limited to the terms and conditions of the contract between Ogden and Sempra Energy and the limitations set forth above and in other sections of this report, and (3) conditioned upon such third party executing Ogden's secondary client agreement and making payment to Ogden as consideration for such reliance.

7.0 REFERENCES

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REPORT ON
GROUNDWATER MONITORING
SOUTH BAY POWER PLANT
FORMER UST SITE
990 BAY BOULEVARD
CHULA VISTA, CALIFORNIA

by

Haley & Aldrich, Inc.
San Diego, California

for

Sempra Energy
San Diego, California

File No. 27764-000
July 2001

HALEY & ALDRICH

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10 July 2001
File No. 27764-000

Department of Environmental Health
Hazardous Materials Management Division
1255 Imperial Avenue, Third Floor
San Diego, California 92138

Attention: Mr. Nasser Sionit

Subject: Groundwater Monitoring Report
South Bay Power Plant Former UST Site
Chula Vista, California
DEH Case No. T0442-H13939-001
VAP No. H13939-002

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Dear Mr. Sionit:

Haley & Aldrich, Inc., on behalf of San Diego Gas & Electric (SDG&E), is pleased to submit this report summarizing the results of three rounds of groundwater monitoring (November 2000, and January and April 2001) performed at the site of the former underground storage tank (UST) at the South Bay Power Plant located in Chula Vista, California. This report includes post-remediation groundwater quality data and groundwater elevation data collected during the period February 2000 through April 2001.

INTRODUCTION

This report has been prepared to assess the effectiveness of soil and groundwater remediation activities and progress of natural attenuation of residual petroleum hydrocarbons beneath the former UST area at the South Bay Power Plant, located at 990 Bay Boulevard, Chula Vista, California.

Following the completion of UST site remediation activities in December 1999, the County of San Diego Department of Environmental Health (DEH) requested quarterly groundwater monitoring of three monitoring wells (MW-1, MW-4a, and MW-5) for a period of one year. Since this time, groundwater monitoring has been performed at each of these wells on six separate occasions as part of the DEH Voluntary Assistance Program (VAP). The VAP number for the site is H13939-002.

The South Bay Power Plant is situated on approximately 150 acres within an industrial area located approximately 7 miles south of downtown San Diego and 2 miles southwest of downtown Chula Vista. The property (APN #617-001-08) has been utilized for electrical generation purposes and is bounded by Marina Parkway on the north, Palomar Street on the south, Bay Boulevard and Interstate 5 on the east and San Diego Bay approximately 1,300 feet west of the former UST site. Prior to 1987, SDG&E operated a vehicle fueling station at the South Bay Power Plant that included two 500-gallon USTs (one gasoline and one diesel). The USTs were located generally southeast of the electric generating plant and approximately 50 feet east of aboveground Fuel Oil Tank No. 7 (Figure 1). The USTs were removed and replaced by double-walled, fiberglass-clad steel USTs in September 1987, at a new location about 40 feet south of the original location. These newer USTs were subsequently removed several years later (Ogden 2000).

At the request of SDG&E and following removal of the original USTs in 1987, Woodward Clyde Consultants (Woodward Clyde) performed a soil and groundwater investigation beneath the UST site to assess the extent of potential petroleum hydrocarbon impacts. During the period of October through December 1987, Woodward Clyde performed nineteen hand-auger borings and six hollow-stem auger borings to evaluate the extent of impacts to soil and groundwater. Five of the drilled borings were converted to groundwater monitor wells MW-1 through MW-5, as shown on Figure 1. Hydrocarbon odors were reportedly detected in soil samples collected from hand-auger borings surrounding the original UST excavation. Free-phase hydrocarbon (free product) sheen was reportedly observed on groundwater in some downgradient soil borings. A fate and transport analysis by Woodward Clyde, dated May 1988, concluded that residual petroleum hydrocarbons remaining at the site did not pose a significant threat to San Diego Bay. Based on this investigation, the DEH did not require further action for the UST site (DEH case number T0442-H13939-001) and issued site closure on September 30, 1988.

The Unified Port District of San Diego purchased the property and power plant from SDG&E on April 22, 1999. Duke Energy South Bay LLC currently operates the plant. As part of the real estate transfer and sale of the power plant, Fluor Daniel GTI (FDGTI) conducted a comprehensive due diligence site-wide assessment for the entire plant property in 1998. During this assessment, a benzene concentration of 460 micrograms per liter (μg/l) was reported in a groundwater sample collected from monitor well MW-4, which was located immediately west of the original UST area. Benzene was not detected in the other four monitor wells located in the immediate vicinity. FDGTI recommended that the site be remediated to meet the established site groundwater cleanup level of 400 μg/l for benzene.

Ogden Environmental conducted UST site remediation activities in 1999. Approximately 1,180 cubic yards of impacted soil was excavated and 19,300 gallons of groundwater were removed and disposed of offsite. Prior to backfilling the excavation, approximately 1,000 pounds of oxygen release compound (ORC) was placed at and below the groundwater level

within the excavation backfill in an effort to enhance biodegradation and minimize any potential future impacts to groundwater quality. Monitor well MW-4 was removed prior to excavation activities and replaced with well MW-4a at approximately the same location. Removal of well MW-4 was necessary to allow excavation of impacted soils.

GROUNDWATER MONITORING

SDG&E performed post-remediation groundwater monitoring of wells MW-1, MW-4a, and MW-5 on three occasions in the period from February 2000 through April 2000. Recent monitoring of these wells was performed on three more occasions in the period from November 2000 through April 2001. Groundwater sampling was performed in accordance with the DEH SAM Manual. Depth to groundwater was measured at each well prior to sampling and groundwater samples were collected with a bailer following well purging. Groundwater samples were submitted for analytical testing to SDG&E Environmental Analysis Laboratory of Miramar and to Associated Laboratories of Orange, California. These laboratories are California state-certified. Groundwater samples were analyzed for the following petroleum hydrocarbon and natural attenuation constituents:

- BTEX and MTBE - EPA Method 8260B (Environmental Analysis Laboratory)
- TPH diesel/ TPH gasoline - EPA Method 8015 (Environmental Analysis Laboratory)
- Bicarbonate/carbonate alkalinity (Environmental Analysis Laboratory)
- Iron, manganese, nitrate, sulfate (Environmental Analysis Laboratory)
- Dissolved oxygen (Environmental Analysis Laboratory)
- Carbon dioxide, methane (Associated Laboratories)
- Oxidation-reduction potential, pH, temperature (field monitored)

The results of laboratory analyses are summarized in Table 1. Laboratory reports are presented in Appendix A.

DATA EVALUATION

TPH, BTEX, MTBE

Results of laboratory analyses for monitoring wells MW-1, MW-4, MW4a and MW-5 are summarized in Table 1. Monitoring well MW-4 was replaced by well MW-4a in 1999 due to UST site excavation and remediation activities.

TPHd, TPHg, and BTEX were not detected in groundwater samples collected from the upgradient (MW-1) and downgradient (MW-5) monitoring wells.

For the period of groundwater monitoring from November 2000 to April 2001, concentrations of TPHg detected in samples collected from monitor well MW-4a ranged from <500 up to 920 μg/l, which were orders of magnitude below the concentration of 32,000 μg/l detected initially at monitor well MW-4 in 1988. In comparison to April of 2000, TPHg concentrations decreased from 1,800 ug/l to 920 ug/l. BTEX concentrations detected in samples collected from monitor well MW-4a appeared to fluctuate in relation to changes in shallow groundwater elevations during the period. Benzene concentrations ranged from <5 to 53 μg/l and were significantly less than the concentration of 460 μg/l reported by FDGTI in 1998. Toluene concentrations were indicated fluctuating from non-detectable levels to values similarly detected in 1998 for well MW-4. Concentrations of ethylbenzene ranged from <5 to 18 μg/l and were consistently less than the 38 μg/l concentration reported in 1998 for well MW-4. Concentrations of xylenes were indicated to fluctuate from <15 μg/l up to 95 μg/l. MTBE was not detected in any groundwater samples collected from well MW-4a during the period.

Natural Attenuation Parameters

A comparison of key natural attenuation parameters for the period of groundwater monitoring from November 2000 to April 2001 is presented in Table 2.

Table 2

Comparison of Selected Natural Attenuation Parameters

Parameter	Background	In Remediated Area (MW-4a)	Downgradient	Supporting Attenuation
Dissolved Oxygen (mg/l)	4.31 to 5.91	9.21 to 19.1	2.27 to 3.08	Yes
Nitrate (mg/l)	86 to 90	<0.03 to 4	78 to 79	Yes
Sulfate (mg/l)	550 to 570	570 to 580	670 to 680	---
Alkalinity (mg/l)	<3	400 to 540	<3	Yes
pH	7.2 to 7.3	9.1 to 9.4	7.1 to 7.2	Yes
Oxidation-Reduction Potential (mV)	585 to 609	543 to 602	603 to 612	Yes

Key parameters indicate biodegradation may is occurring in groundwater. The higher concentrations of dissolved oxygen (DO) compared to background levels indicate the continued presence of the oxygen release compound that was included within excavation backfill soil during remediation. Substantially decreased DO levels downgradient of the remediated area indicates the occurrence of biodegradation. Low concentrations of nitrates within the remediated area compared to background and downgradient values also suggest that, similar to DO, nitrates may be used as electron acceptors, which indicates

biodegradation. High concentrations of alkalinity and elevated pH within the remediated area compared to background levels is another indication that biodegradation is occurring. The lower range of oxidation-reduction potential detected within the remediated area compared to background levels again suggests the occurrence of biodegradation.

In summary, the lower detected concentrations of TPH and BTEX combined with other evidence of biodegradation, as described above, strongly support the occurrence and effectiveness of natural attenuation at this site.

CONCLUSIONS

Based on the results of a period of approximately sixteen months of groundwater monitoring at the South Bay UST site following remediation, all indications are that concentrations of residual petroleum hydrocarbons continue to be significantly reduced. Concentrations of benzene were detected generally one order of magnitude below established clean up levels for the site. Natural attenuation parameters strongly indicate that biodegradation continues to occur within the remediated area and is effectively attenuating any residual hydrocarbons remaining in groundwater, as indicated by the absence of petroleum hydrocarbons in the downgradient monitor well. Seasonal groundwater level fluctuations do not appear to have a significant impact on concentrations of petroleum hydrocarbons in groundwater. The above information indicate that the site has been adequately mitigated and no further actions are necessary. Based on these conclusions, we recommend that DEH consider issuing site closure.

Please do not hesitate to contact me if you have any questions or comments.

Sincerely yours,
HALEY & ALDRICH, INC.

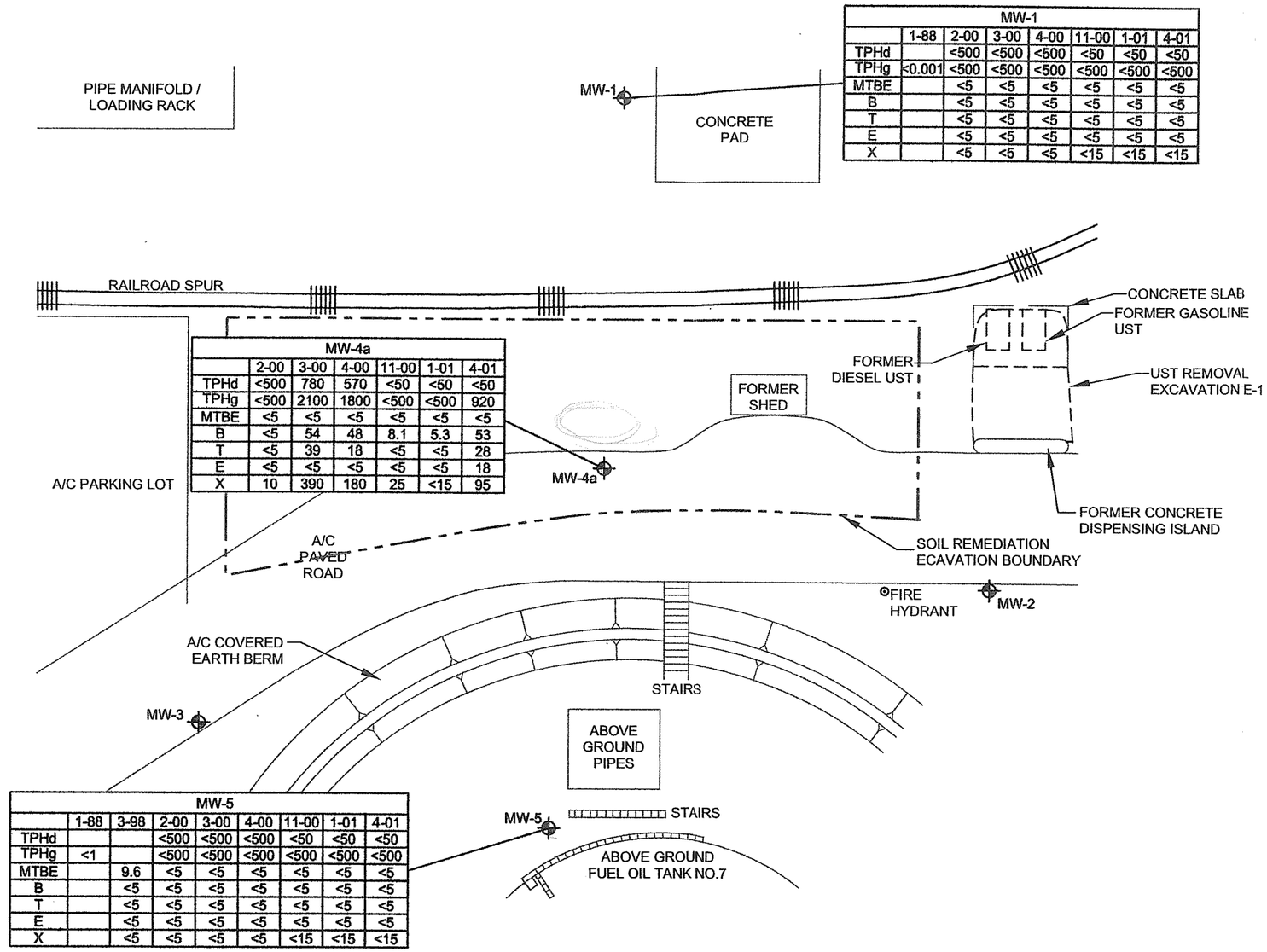
Mehdi Miremadi
Project Manager

TABLE 1
GROUNDWATER MONITORING RESULTS
SOUTH BAY POWER PLANT, FORMER UST SITE

Well Sampled	Date Sampled	Depth To Water (ft.)	Groundwater Elev. (ft.)	TPHd (ug/l)	TPHg (ug/l)	MTBE (ug/l)	Benzene (ug/l)	Toluene (ug/l)	Ethylbenzene (ug/l)	Xylenes (ug/l)	Dissolved Oxygen (mg/l)	Carbon Dioxide (mg/l)	Carbonate Alkalinity (mg/l)	Nitrate (mg/l)	Sulfate (mg/l)	Metals (mg/l)	pH	ORP (mV)
MW-1	01/07/88	6.43	6.54	---	<1000	---	---	---	---	---	---	---	---	---	---	---	8.59 (WC)	---
	02/29/00	7.42	5.55	<500	<500	<5.0	<5.0	<5.0	<5.0	<5.0	5.42	26.2	310	88	560	0.01*	7	711.2
	03/29/00	7.44	5.53	<500	<500	<5.0	<5.0	<5.0	<5.0	<5.0	4.86	7.4	<3.0	84	550	<0.01	7.1	685.4
	04/25/00	7.52	5.45	<500	<500	<5.0	<5.0	<5.0	<5.0	<5.0	5.92	8.2	<3.0	86	540	<0.01	7.1	607.2
	11/29/00	8.05	4.92	<50	<500	<5.0	<5.0	<5.0	<5.0	<15	4.31	25.8	<3	86	550	0.03*	7.3	609.0
	01/23/01	7.89	5.08	<50	<500	<5.0	<5.0	<5.0	<5.0	<15	5.91	19.5	<3	90	570	<0.01	7.3	613.0
	04/18/01	7.64	5.33	<50	<500	<5.0	<5.0	<5.0	<5.0	<15	5.06	<0.005	<3	86	560	<0.01	7.2	585.0
MW-4	01/07/88	5.91	6.48	---	32,000	---	---	---	---	---	---	---	---	---	---	---	9.4 (WC)	---
	03/31/98	---	---	---	---	11 (1)	460	26	38	<25	---	---	---	---	---	---	---	---
MW-4a	02/29/00	6.92	5.68	<500	<500	<5.0	<5.0	<5.0	<5.0	10	7.4	1.7	300	31	650	<0.01	8.7	596.7
	03/29/00	6.84	5.76	660	2100	<5.0	54	39	<5.0	390	11.95	<0.005	540	9.1	580	<0.01	9.4	509.1
	04/25/00	6.94	5.66	590	1800	<5.0	41	18	<5.0	170	11.35	34.2	530	4.7	590	<0.01	9.4	526.1
	11/29/00	7.49	4.9	<50	<500	<5.0	8.1	<5.0	<5.0	25	18.95	<0.005	460	<2	580	<0.01	9.4	548
	01/23/01	7.29	5.1	<50	<500	<5.0	5.3	<5.0	<5.0	<15	17.04	106	400	<0.03	580	<0.01	9.4	617
	04/18/01	7.02	5.37	<50	920	<5.0	53	28	18	95	9.18	<0.005	530	3.8	580	<0.01	9.1	603
MW-4a duplicate	02/29/00	---	---	<500	<500	<5.0	<5.0	<5.0	<5.0	8.6	7.69	1.3	290	34	580	<0.01	8.6	---
	03/29/00	---	---	780	2000	<5.0	52	37	<5.0	380	12.36	<0.005	540	7.9	550	<0.01	9.4	---
	04/25/00	---	---	570	1700	<5.0	48	18	<5.0	180	11.13	---	530	4.4	590	<0.01	9.4	---
	11/29/00	---	---	<50	<500	<5.0	7.8	<5.0	<5.0	25	19.1	<0.005	470	<2	580	<0.01	9.4	543
	01/23/01	---	---	<50	<500	<5.0	5.4	<5.0	<5.0	<15	17.02	147	400	<0.03	570	<0.01	9.4	619
	04/18/01	---	---	<50	750	<5.0	47	25	16	85	9.21	<0.005	540	4	580	<0.01	9.1	602
MW-5	01/07/88	9.03	6.38	---	<1000	---	---	---	---	---	---	---	---	---	---	---	7.55 (WC)	---
	03/31/98	---	---	---	---	9.6 (2)	<5.0	<5.0	<5.0	<5.0	---	---	---	---	---	---	---	---
	02/29/00	10.11	5.3	<500	<500	<5.0	<5.0	<5.0	<5.0	<5.0	1.46	25	320	82	650	<0.01	7.2	662.2
	03/29/00	10.04	5.37	<500	<500	<5.0	<5.0	<5.0	<5.0	<5.0	2.47	<0.005	<3.0	80	660	<0.01	7.2	515.7
	04/25/00	10.12	5.29	<500	<500	<5.0	<5.0	<5.0	<5.0	<5.0	2.93	9.8	<3.0	81	660	<0.01	7.2	541.3
	11/29/00	10.62	4.79	<50	<500	<5.0	<5.0	<5.0	<5.0	<15	2.27	26.6	<3.0	79	670	<0.01	7.1	612
	01/23/01	10.48	4.93	<50	<500	<5.0	<5.0	<5.0	<5.0	<15	2.46	20	<3.0	79	680	<0.01	7.2	607
	04/18/01	10.24	5.17	<50	<500	<5.0	<5.0	<5.0	<5.0	<15	3.08	<0.005	<3.0	78	670	<0.01	7.1	603

Footnotes and Explanations:

ORP	=	Oxidation Reduction Potential
(WC)	=	Field measurements made by Woodward Clyde
---	=	Data not applicable or available
<	=	Not detected at the instrument detection limit or the laboratory reportable limits
*	=	manganese
(1)	=	Analyzed by EPA Method 8020
(2)	=	Analyzed by EPA Method 8021



MW-1							
	1-88	2-00	3-00	4-00	11-00	1-01	4-01
TPHd		<500	<500	<500	<50	<50	<50
TPHg	<0.001	<500	<500	<500	<500	<500	<500
MTBE		<5	<5	<5	<5	<5	<5
B		<5	<5	<5	<5	<5	<5
T		<5	<5	<5	<5	<5	<5
E		<5	<5	<5	<5	<5	<5
X		<5	<5	<5	<15	<15	<15

MW-4a						
	2-00	3-00	4-00	11-00	1-01	4-01
TPHd	<500	780	570	<50	<50	<50
TPHg	<500	2100	1800	<500	<500	920
MTBE	<5	<5	<5	<5	<5	<5
B	<5	54	48	8.1	5.3	53
T	<5	39	18	<5	<5	28
E	<5	<5	<5	<5	<5	18
X	10	390	180	25	<15	95

MW-5								
	1-88	3-98	2-00	3-00	4-00	11-00	1-01	4-01
TPHd			<500	<500	<500	<50	<50	<50
TPHg	<1		<500	<500	<500	<500	<500	<500
MTBE		9.6	<5	<5	<5	<5	<5	<5
B		<5	<5	<5	<5	<5	<5	<5
T		<5	<5	<5	<5	<5	<5	<5
E		<5	<5	<5	<5	<5	<5	<5
X		<5	<5	<5	<5	<15	<15	<15

LEGEND

⊕	APPROXIMATE LOCATION OF MONITORING WELL	MTBE	METHYL TERT-BUTYL ETHYLENE
[ ]	EXCAVATED AREA	B	BENZENE
TPHd	TOTAL PETROLEUM HYDROCARBONS (DIESEL)	T	TOLULENE
		E	ETHYLBENZENE
		X	XYLENE
TPHg	TOTAL PETROLEUM HYDROCARBONS (GASOLINE)	NA	NOT AVAILABLE OR ANALYZED

N

0 5 10 20
FEET

REV.	ISSUE	BY	PM	DE

HALEY & ALDRICH
UNDERGROUND ENGINEERING & ENVIRONMENTAL SOLUTIONS

SOUTH BAY POWER PLANT UST SITE
CHULA VISTA, CALIFORNIA

FIGURE: 1

PETROLEUM HYDROCARBON CONCENTRATIONS IN GROUNDWATER

SCALE: AS SHOWN
PROJECT: 27764
DRAWN: SAL
REVIEWED: MXM
DATE: 28 JUNE, 2001

SWMU #3, Map Location 1c, Jet Fuel Area, Western Central Portion, Northwest of the Power Plant Units

Table 1-1 of the Phase II ESA Report identified that potential unidentified releases of hydrocarbons from the ASTs, pipelines, and the pump deck exists in this area. In addition, all ASTs were constructed with corrosion inhibiting oil, a diesel-like-product, which has the potential to impact soil or groundwater.

The Remedial Action Workplan, Fuel Hydrocarbons and Metal Impacted Areas (RA Workplan), dated August 2001 by IT Corporation identified that remediation is required in this area. The RA Workplan identified that non-aqueous phase liquid in groundwater in well SB1-070A was detected. Fuel hydrocarbons in soil were also detected in concentrations exceeding 1000mg/kg.

In February and March 2001, additional investigation was conducted in the jet fuel area. Section 2.4.2.2 of the RA Workplan indicates that the lateral extent of jet fuel contamination has been determined, and proposed to remove the LNAPL in groundwater by bailing SB1-070A, and remove impacted soil by excavation to groundwater. However, prior to conducting the proposed remedial action activities, additional investigation is required in the following sampling locations to determine the lateral and vertical extent of contamination:

a. Boring location JF-8 indicates contamination of TEH in the amount of 2,400 mg/kg. Additional data is required immediately north of this area to determine the lateral and vertical extent of contamination.

Response: Soil borings JF-11 and JF-12 are located 30 to 35 feet north and northeast of Boring JF-8 respectively (see Figure A). TEH was not detected in soil samples from JF-11 and JF-12. As such, it is our opinion that the area north of Boring JF-8 has been adequately delineated. See Appendices A and B for laboratory results.

b. TEH concentrations in Boring locations JF-9 and JF-15 exceed 1,000 mg/kg. Additional investigation is required west of these locations to determine lateral and vertical extent of TEH contamination. In addition, BTEX analysis

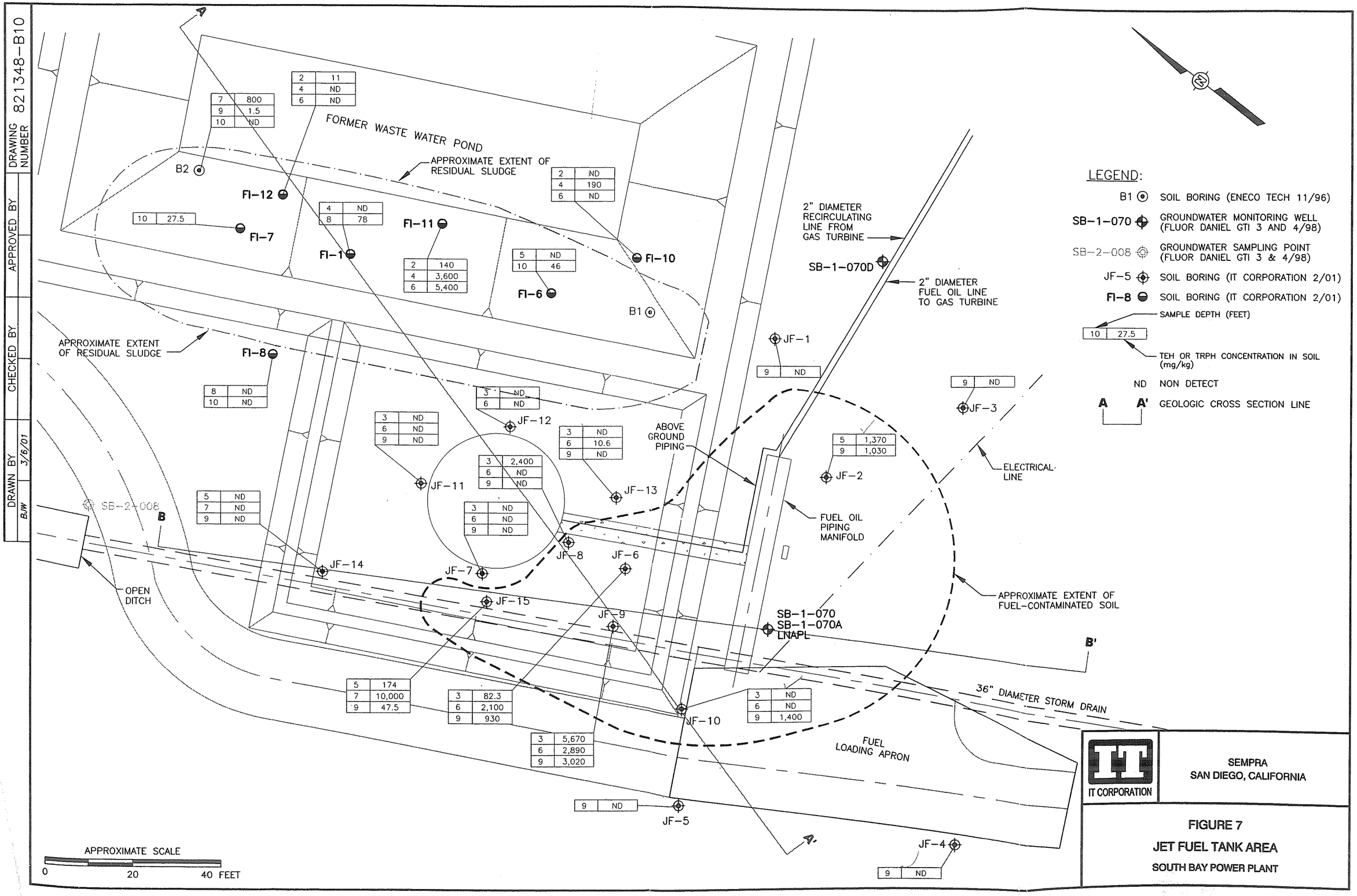
Response: In general, areas to the north and east of soil borings JF-9 and JF-15 have been adequately delineated (see Figure A). Limited information is available to the west and south of these borings. Soil boring SB1-069 was drilled west of the Jet Fuel AST and Borings JF-9 and JF-15 during SDG& Phase II investigation. Low concentrations of TEH (23 mg/kg at a depth of 0.5 to 1 foot and 2.4 mg/kg at a depth of 4.5 to 5 feet) were detected. We recommend that additional soil borings be drilled west and south of borings JF-9 and JF-15 to better define the lateral and vertical extent of TEH and BTEX impacted soil. Laboratory results are presented in Appendices A and B.

c. Sampling location JF-10 indicates 1,400 mg/kg TEH at 9 feet depth. Additional investigation southeast from JF-10 is required to determine lateral and vertical extent of TEH.

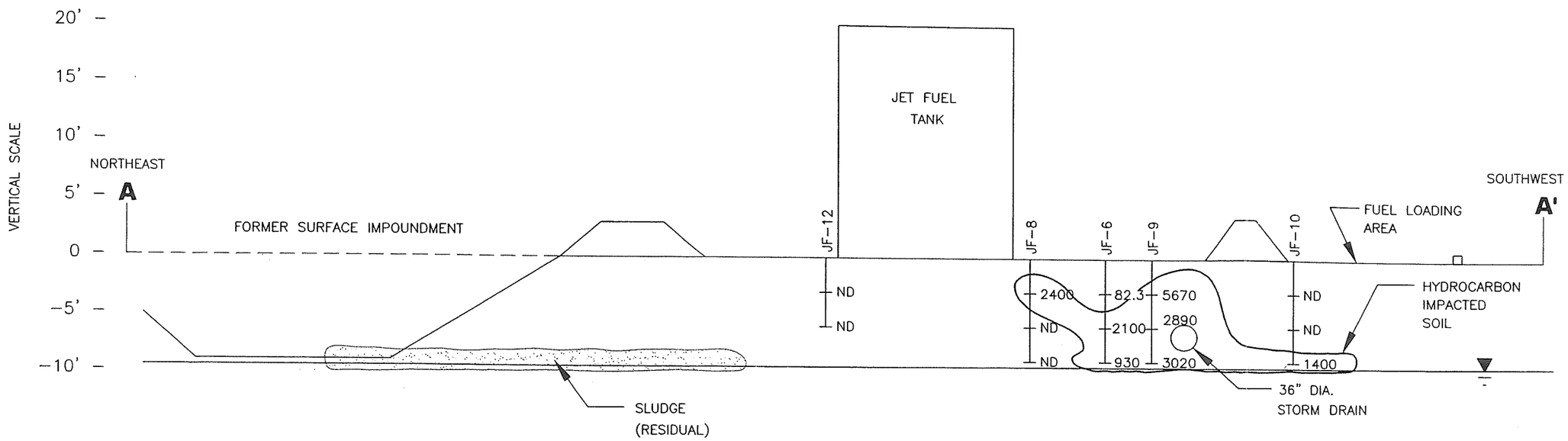
Response: Please refer to previous response.

d. Table 3-2 of Phase II ESA Report indicates that 1,300 ug/l of barium (1000 ug/l MCL) was detected in groundwater collected from boring SB1-070A in April 21, 1998. Table 3-10 also indicates that groundwater sampling analysis from SB1-070A well detected 71ug/l naphthalene. DTSC suggests that additional investigation is required to assess metals, VOCs, SVOCs in soil and groundwater in the jet fuel area.

Response: The correct reference is Table 3-12 of the Phase II investigation report. A total of 20 soil borings have been advanced at the Jet Fuel location during the past investigations. Figure A shows the location of the soil borings. Multiple soil samples were collected at each of the boring locations (total of 46 soil samples) and analyzed for TEH. A total of six groundwater samples were also collected and analyzed for TEH, BTEX, TPH, VOCs, and PAHs. LNAPL was detected in well SB1-070A located south of the Jet Fuel AST. Additional groundwater investigation and sampling will be conducted in the general area of well SB1-070A to better define the extent of LNAPL, VOCs, Metals, and SVOCs in soil and groundwater.


DRAWING NUMBER 821348-B10
APPROVED BY
CHECKED BY
DRAWN BY BJW 3/6/01
FORMER WASTE WATER POND
APPROXIMATE EXTENT OF RESIDUAL SLUDGE
APPROXIMATE EXTENT OF RESIDUAL SLUDGE
B2
FI-12
FI-7
FI-1
FI-11
FI-10
FI-6
B1
FI-8
2" DIAMETER RECIRCULATING LINE FROM GAS TURBINE
SB-1-070D
2" DIAMETER FUEL OIL LINE TO GAS TURBINE
JF-1
JF-3
JF-2
ELECTRICAL LINE
ABOVE GROUND PIPING
FUEL OIL PIPING MANIFOLD
JF-12
JF-11
JF-13
JF-8
JF-6
JF-7
JF-14
JF-15
JF-9
JF-10
JF-5
JF-4
SB-2-008
B
B'
A
A'
OPEN DITCH
SB-1-070
SB-1-070A
LNAPL
APPROXIMATE EXTENT OF FUEL-CONTAMINATED SOIL
36" DIAMETER STORM DRAIN
FUEL LOADING APRON
APPROXIMATE SCALE
0 20 40 FEET
LEGEND:
B1 SOIL BORING (ENECO TECH 11/96)
SB-1-070 GROUNDWATER MONITORING WELL (FLUOR DANIEL GTI 3 AND 4/98)
SB-2-008 GROUNDWATER SAMPLING POINT (FLUOR DANIEL GTI 3 & 4/98)
JF-5 SOIL BORING (IT CORPORATION 2/01)
FI-8 SOIL BORING (IT CORPORATION 2/01)
SAMPLE DEPTH (FEET)
10 27.5
TEH OR TRPH CONCENTRATION IN SOIL (mg/kg)
ND NON DETECT
A A' GEOLOGIC CROSS SECTION LINE
IT CORPORATION
SEMPRA
SAN DIEGO, CALIFORNIA
FIGURE 7
JET FUEL TANK AREA
SOUTH BAY POWER PLANT

DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
DM 5/11/01			821348-B18



LEGEND:

JF-8
2400 — SOIL BORING SHOWING TEH CONCENTRATION (mg/Kg)
ND
ND — ND = NOT DETECTED

GROUNDWATER SURFACE

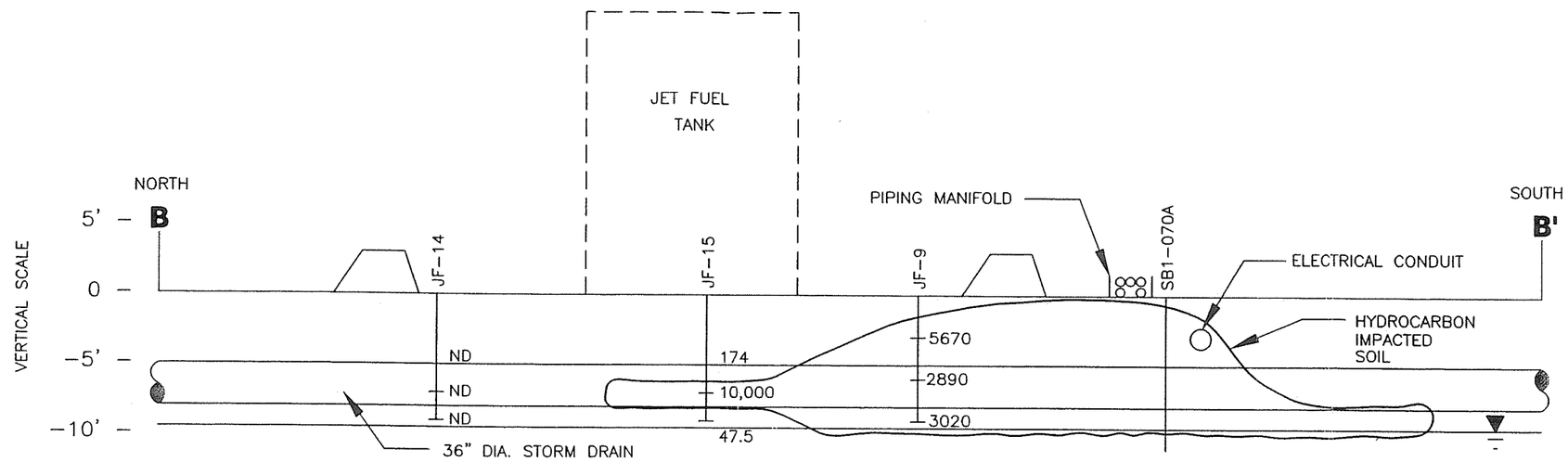
HORIZONTAL SCALE
0 20 40 FEET

IT CORPORATION

SEMPRA
SAN DIEGO, CALIFORNIA

FIGURE 8
GEOLOGIC CROSS SECTION A-A'
SOUTH BAY POWER PLANT

DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
DM 06/11/01			821348-B19



LEGEND:

JF-9
5670 SOIL BORING SHOWING TEH CONCENTRATION (mg/Kg)
2890
3020 ND = NOT DETECTED

GROUNDWATER SURFACE

HORIZONTAL SCALE
0 20 40 FEET

IT CORPORATION

SEMPRA
SAN DIEGO, CALIFORNIA

FIGURE 9
GEOLOGIC CROSS SECTION B-B'
SOUTH BAY POWER PLANT

SWMU #4, Map Location 1d, UST Area, Southern Portion of the Site

Page 2-6 of the RA Workplan indicates that on September 30,1988, the County of San Diego Department of Health Services issued a no further action concerning the gasoline release from the UST.

a. During the Phase II ESA, monitoring wells previously installed in this area were sampled. Data collected in March 1998 indicate that 460 ug/l of Benzene, 38 ug/l Ehtylbezene, 26 ug/l Toluene and 11ug/l Methyl-ter-butyl ether were detected in Monitoring Well (MW) #4. Monitoring Well #3 also detected 40 ug/l (MCL= 6 ug/l) Antimony. Both MW3 and MW4 are located close to the UST area. In 1999, the UST area was further excavated and hydrocarbon impacted soil was transported offsite. Oxygen releasing compound was added to enhance bioremediation of hydrocarbons in soil and groundwater. The Phase II ESA Report indicates that the UST site was closed by the Agency. The Phase II ESA Report did not specify the Agency that closed the UST. A copy of the closure letter from the Agency should be submitted to DTSC.

Response: The UST area was addressed as part of response to Item (f) SWMU #2. Please refer to this section of our response.

b. Table 1-1 indicates that a potential exist for unidentified hydrocarbon losses from the new USTs, pipelines and pumps although a new detection system has been installed.

Response: The subject USTs and ancillary pipeline were removed and the area remediated as described above in our response to Item (f) SWMU #2. No further remedial action is necessary and recommended.

Section 6.1 of the Phase II ESA Report indicates that benzene in groundwater exceeded the RWQCB action levels. It also stated that it is unclear if groundwater contamination is due to residual hydrocarbons in soil, or release from the current USTs. DTSC suggests that additional investigation is required prior to evaluation of remedial methods.

Response: The subject UST area has been remediated as described above in our response to Item (f) SWMU #2. During the 1998 Phase II investigation, benzene was detected at a concentration of 460 ug/l in a groundwater sample from monitoring well MW-4. This concentration was above the interim cleanup goal for groundwater within 1,000 feet of marine surface water established by the RWQCB. However, following source/soil removal and placement of the Oxygen Releasing Compound (ORC) in the excavation, the benzene concentration decreased to 53 ug/l in multiple post remediation groundwater monitoring events conducted at the site. No further remedial action is necessary or recommended. We recommend that additional groundwater monitoring of the existing well (MW-4A) located immediately downgradient of the former UST be conducted to confirm the effectiveness of the past remediation effort.

SMWU #5, Location 2a, Process Water Treatment Area

a. *ASTs and Pipelines - Table 1-1 of Phase II ESA Report indicates that a potential exists for treatment water losses from ASTs and pipelines. Potential contaminants include hydrocarbons and metals entrained in the wastewater and treatment additives like sodium dichromate. DTSC found that the Phase II ESA Report did not include a discussion regarding specific investigation made to assess this area. The Phase II ESA Report only showed that four sampling locations were placed outside the perimeter of the Process Water Treatment area, and none inside. Section 3.7.7 of the Phase I ESA Report also indicates that SB2-002, a temporary well installed in this area, detected 74 ug/l Nickel (MCL = 100 ug/l). DTSC suggests conducting additional soil and groundwater sampling in the Process Water Treatment area to assess contamination near the ASTs, pipelines. Analysis should include metals, VOCs, SVOCs, pH and TEH.*

Response: Environmental impacts direcly beneath the wastewater treatment area, if any, will be addressed in the future during facility decommissioning. The wastewater treatment area is bermed and entirely paved and contains aboveground storage tanks, piping, pumps and valves. The tanks sit on raised concrete foundations. The paving and the berm provide containment of any releases from this area and prevent impacts to subsurface soils. Previous investigations have not identified any documentation of releases at this location. Previous site visits by others and recent site visits by Haley & Aldrich do not show any visual indications of historical releases. The wastewater treatment facility and its containment appears to be in a good physical conditions and well maintained. The areas near and under the tanks and piping are not accessible for sampling. The area is part of the areas to be addressed upon facility closure. We recommend that during future facility decommissioning, monitoring of subsurface soils be conducted to confirm that previous facility operations have not impacted the subsurface soils and groundwater directly beneath the subject area.

b. Sandblasting Area - Table 1-1 also identified that a potential exists for metal impact from the sandblasting activity which occurred prior to the construction of the treatment plant. DTSC did not find a discussion how this area was investigated. Investigation conducted in this area should be submitted to DTSC for review. Sampling and analysis is required if no investigation was conducted. This area should be identified in the map.

Response: Abrasive blasting of bay water intake screens and water discharge screens were conducted (using walnut shells) on a paved area to the southeast of the wastewater treatment plant (see Figure A). The purpose of the blasting was to remove corrosion and marine growth deposited on the screens. According to SDG&E, blasting was reportedly conducted on plastic sheeting in an area contained on three sides. Blasting operations, as described above, are unlikely to have impacted the subsurface soils beneath the pavement in the area. During SDG&E Phase II investigation, two soil borings were drilled in the general area of blasting operation (SB04-008 and SB04-009). Two soil samples were collected at each of the soil boring locations at depths of 0.5 to 1 foot and 4 to 5 feet intervals. Metals were either not detected or detected at average concentrations that are generally within background. As such, we do not recommend any further characterization for the blasting area. See Appendices A and B for laboratory results.

SMWU #6, Location 2b, Former First Generation Surface Impoundment

The RA Workplan identified that the proposed remediation strategy in this area is excavation to groundwater of soils contaminated with metals. DTSC suggests that prior to conducting remediation, additional investigation is required. A report entitled "Final Report for Phase II Environmental Investigation Services (Final Report)", dated April 29, 1997 by EnecoTech Environmental Consultants indicates that previous investigation conducted in November, 1996 detected Cadmium 1.7 mg/l (Cal Modified PRG of 1.7 mg/l) in sampling location B3-11. Thallium was also detected in sampling location B3-8 and B6-9 at 6.0 and 5.6 mg/kg (PRG = 5.2), respectively. TRPH was detected in B4-11, B5-7.5, B6-9 and B8-7.5 at concentrations 630, 2600, 8300 and 2700 mg/kg, respectively. In 1997, additional site assessment was conducted in this area as discussed in the "Additional Site Assessment, Metals at Former Impoundments" (ASA Report) dated 12 March 1998 by EnecoTech Environmental Consultants. The ASA Report indicates that 15 soil borings within the limits of the former impoundments were advanced to depths up to 14 feet bgs. Four additional borings were performed to collect water samples. Analysis of soil and groundwater samples collected during the additional investigation was analyzed for arsenic, beryllium, chromium, lead, nickel and vanadium. The Additional Site Assessment (ASA) did not include analysis for cadmium and thallium that were found to have concentrations higher than PRG during Phase II assessment. In addition, VOCs and SVOCs were not analyzed during the Phase II and Additional Site Assessment investigations. With the additional sampling that was conducted, DTSC can't clearly identify if the lateral extent of contamination has been defined due to the absence of a map/figure that include all of the previous and additional sampling locations. In the absence of map/figure, DTSC found the following additional concerns:

Response: A map of former first generation impoundment showing all sample locations is attached (see Figures A and E).

a. ***Table 2, Soil Sample Analytical Data of the Additional Site Assessment Report indicates that sampling location T3-8 detected increasing concentrations of up to 32 mg/kg Arsenic (Res. PRG=0.39 mg/kg), 190 mg/kg Lead (Cal Modified PRG=150 mg/kg), 1,100 mg/kg Nickel (STLC=20 mg/kg), and 2,100 Vanadium (Res. PRG=550 mg/kg). Chromium was also detected at 1000 mg/kg (Res. PRG=210). DTSC suggests that additional soil and groundwater investigation is required in the vicinity of boring location T-3 to determine lateral and vertical extent of metal contamination. (Refer to Figure 3 of ASA Report dated March 12, 1998)***

Response: Soil sample T3-8 was collected at a depth of 8 feet bgs (slightly above the groundwater table) in sampling Trench T-3 located in the western portion of the impoundment (See Figure E) abutting the edge of the former impoundment and Jet Fuel bermed area. The same metal constituents were also detected in the shallower sample (depth of 4 feet bgs) at elevated concentrations. As indicated on Figure E, a number of other sampling locations are located in the vicinity of Trench T3 providing adequate data to delineate impacted soil. As indicated in the 2001 RAW, a large portion of the western section of the impoundment, including Trench T3 location, is targeted for remediation by excavation (see attached Figure 6). Following soil excavation, confirmation soil samples will be collected to confirm that impacted soil, both laterally and vertically, have been identified and removed. This can best be done during soil excavation activities. No further sampling is recommended for Trench T3 location at this time.

b. Sampling location T4-5 detected 1,300 mg/kg Chromium at 5 feet depth. DTSC suggests additional soil and groundwater sample near boring T4.

Response: Sampling Trench T4 abutted the northern edge of the former impoundment (see Figure E). Two soil samples were collected from the trench at 5 and 7.5 feet bgs. As indicated above, chromium was detected at a concentration of 1,300 mg/kg in the 5-feet deep soil sample. However, the deeper sample contained low concentration of chromium (6.9 mg/kg) below the PRG. As such, impacted soil has been vertically delineated. Furthermore, since the trench abuts the edge of the impoundment, no sampling is necessary to the north and adequate sampling points are located to the south of the trench (borings B2, B3, B20) to delineate lateral extent of impact south of the trench (See Figure E). No further sampling is recommended at trench T4 location.

c. Section 2.2, Analytical Methods, page 4 of the ASA Report indicates that 113 soil samples and 4 water samples were collected, however, only 49 soil samples were analyzed for certain metals. There is no discussion in the Report on whether the rest of the soil samples were put on hold for later analysis, or not analyzed at all. The Report should include a discussion on how the rest of the samples that were collected were managed.

Response: Based on our review of the sample chain of custody forms attached to the subject report (Appendices A and B, Laboratory Reports), it appears that all samples were submitted to the laboratory and selected samples were analyzed (see attached chain of custodies).

d. Table 1 of the ASA Report is using the old PRG values. Future tables should be updated with the new PRG values. An updated copy of the PRG may be obtained electronically at the US EPA Region 9 Superfund website http://www.epa.gov/region09/waste/sfund/prg/index.htm.

Response: Future tables will include the new PRGs.

e. Table 3, Water Sample/Analytical Data of the ASA Report indicates that analysis results of groundwater samples exceeding MCL were detected. Lead was detected in B24; Chromium, Lead, Nickel and Vanadium were detected in B25; and Lead and Nickel were detected in B27. DTSC suggests additional investigation in this area.

Response: In general, relatively low concentrations (slightly above MCLs) of a few metals were detected in groundwater at the location of the former impoundment. Lead was detected beneath the impoundment (Borings B25 and B26) at 20 to 26 ug/l, and at 45 ug/l downgradient of the impoundment (Boring B24) (see Figure E for location of the soil borings). However, the concentration of lead decreases to 17 ug/l at Boring SB01-070C located downgradient of Boring B24 indicating attenuation with distance. Chromium was detected in one groundwater sample beneath the impoundment at a concentration of 100 ug/l. However, chromium was not detected in the two downgradient sample locations (B24 and SB01-070C) indicating significant attenuation with distance. Concentrations of nickel in the groundwater samples from borings B-25 (460 ug/l) and B-26 (200 ug/l) were above the MCL of 100 ug/l. Nickel was not detected in groundwater samples from upgradient boring B-27 and downgradient boring B-24. There is no MCL for vanadium. The inherent low mobility of metals in the subsurface generally limits their migration to within a short distance downgradient. Based on our review of the existing groundwater information at and near the former impoundment, groundwater has not been significantly impacted by metals in the general area of the impoundment. Available data are

indicative of attenuation of metals with distance as expected due to their low water solubility and high adsorption potential onto soil. Since excavation of the remaining impacted soil within the former impoundment is planned, we recommend that any sampling be conducted following site remediation as part of post remediation confirmation sampling. No further investigation is recommended at this time.

f. Figure 6 of the Remedial Action Workplan indicates that the additional sampling conducted in the First Generation Surface Impoundment detected total Chromium at 2 to 10 feet depth. A delineation line is drawn to indicate the approximate extent of contaminated soil with TEH and total Chromium requiring removal. DTSC is not clear whether previous investigations that have detected high metal contaminations were included in this delineation.

Response: Based on our review of Figure 6 of the subject report, it appears that not all of the historical soil chemical data were used in identifying the lateral extent of impacted soil beneath the former impoundment as indicated by the dash lines on Figure 6. Haley & Aldrich has prepared a new figure (Figure E) attached herein that includes all the soil analytical results for the First Generation Surface Impoundment. Using this figure and the new PRGs for metals, the entire area beneath the impoundment appears to contain residual concentrations of metals and petroleum hydrocarbons above the PRGs and the 1,000 mg/kg TEH clean up criteria. This correction will be included in the revised Remedial Action Workplan to be prepared and submitted to DTSC at a later date.

g. Figure 7 of the Remedial Action Workplan indicates that TEH concentration at sampling location FI-11 is increasing with depth in the range of 140 to 5,400 mg/kg. DTSC suggests additional investigation in this location to determine lateral and vertical extent of TEH contamination.

Response: As indicated in Figure 8 of the subject report (attached geologic cross section), sample location F1-11 is located in an area where residual impoundment sludge is still remaining and is targeted for remediation by excavation. The excavation is expected to extend to groundwater table at a depth of approximately 10 feet bgs. Confirmation samples will be collected from the bottom of the final excavation to confirm adequate removal of impacted soils. As such, we do not recommend additional soil sampling at this time.

DTSC requires that a map showing all the previous and latest sampling locations be submitted to DTSC. DTSC found that VOCs and SVOCs were not analyzed in this area, therefore we suggest that in addition to metals, TEH, pH, VOCs and SVOCs be sampled and analyze in the First Generation Surface Impoundment area.

Response: As indicated above, Haley & Aldrich has prepared a map showing all sampling locations at the former impoundment (Figure E). Regarding analysis for VOCs and SVOCs, we believe that VOCs and SVOCs, if present, are most likely co-located with petroleum hydrocarbons and metals. As such, our recommended approach is to analyze for these compounds during soil excavation and as part of soil confirmation sampling.

EnecoTech
ENVIRONMENTAL CONSULTANTS Southwest Inc.

CHAIN OF CUSTODY RECORD

2831 Camino del Rio South, Ste. 206, San Diego, CA 92108 (619) 299-0033

PROJ. NO. 02-1298 003

PROJECT NAME: South Bay Impoundments

SAMPLERS: (Signature) [signature]

COC SD # 1859

Ship To:

EnecoTech contact :

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS 4oz Glass Jar	Total Metals *							Remarks/Bottle No.
T1-2.5	11/10/97	1346		X	Soil	1	X							* metals arsenic <2.0 mg/kg
T1-5		1347					X							Beryllium <1.0 mg/kg
T1-9		1350			✓									Chromium <1.0 mg/kg Sludge
T1-12.5		1355												lead <5.0 mg/kg
T2-4		1443												Nickel <1.0 mg/kg
T2-6T		1446					X							Vanadium <10 mg/kg
T2-8		1449					X							
T2-11		1453												
T3-4.5		1605					X							
T3-8A		1607					X							
T3-8B		1613					X							Sludge material
T3-12.5		1601												

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	11/10/97 1845	Chris McClure			
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks	

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Split Samples: ☐ Accepted ☐ Declined _____ Signature

EnecoTech
ENVIRONMENTAL CONSULTANTS Southwest Inc.

CHAIN OF CUSTODY RECORD

2831 Camino del Rio South, Ste. 206, San Diego, CA 92108 (619) 299-0033

COC SD # 1858

PROJ. NO.: 92 1298 003

PROJECT NAME: South Bay Impoundments

SAMPLERS: (Signature) [signature]

Ship To:

EnecoTech contact: John Nagel

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS 4oz glass jars	Total metals *							Remarks/Bottle No.
T4-3	11/10/97	1642		X	Soil	1								* metals arsenic <2.0 mg/kg
T4-5	↓	1634		↓	↓	↓	X							Beryllium <1.0 mg/kg
T4-7.5	↓	1630		↓	↓	↓	X							Chromium <10 mg/kg
T4-9.5	↓	1628		↓	↓	↓								Lead <5.0 mg/kg
														Nickel <1.0 mg/kg
														Vanadium <10 mg/kg

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	11/10/97 1845	[signature]			
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Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks	

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EnecoTech
ENVIRONMENTAL CONSULTANTS

To: Del Mar

CHAIN OF CUSTODY RECORD

7425 Mission Valley Road • Suite 201 • San Diego, CA 92108

PROJ. NO.: 02-1298-003

PROJECT NAME: South Bay

SAMPLERS: (Signature)

11/11/97

COC CA# 2329

Ship To:

EnecoTech contact: John Mouat

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Total Metals *							Remarks/Bottle No.
	11/11/97	9:05		X	T6-12 soil	1 (6oz)								
		9:08			T6-8.5									* metals: Arsenic
		9:10			T6-5.75		X							Beryllium
		9:10			T6-4.5		X							Chromium
		10:15			T5-13									Lead
		10:20			T5-8									Nickel
		10:27			T5-5.5		X							Vanadium
		10:35			T5-2.5		X							
		12:50			T7W-7		X							
		12:50			T7W-12									
		1255			T7W-4		X							
		12:00			T7E-12									
		1208			T7E-6		X							
		1315			T7E-8		X							
		1318			T7M-4		X							

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
	11/11/97 1200	Chris McClure			
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks	

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ENVIRONMENTAL CONSULTANTS Southwest Inc.

CHAIN OF CUSTODY RECORD

2831 Camino del Rio South, Ste. 296, San Diego, CA 92108 (619) 299-0033

COC SD # 1618

Ship To:

EnecoTech contact :

PROJ. NO.: 02-1798-003

PROJECT NAME: Southbay

SAMPLERS: (Signature)

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Total metals	Remarks/Bottle No.
BG-12A	11/12/94	8:35		X	Soil	1	X	
BG-12		750			water	1		4 oz jar liquid & soil
BG-11		743			water	2		4 oz jars " "
BG-9		742			soil	1	X	
BG-8		742			soil	1	X	
BG-7.5		740			soil	1		
BG-6		733			soil	1	X	
BG-5.5		733			soil	1		

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
	11/12/94 1770				
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks	

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D. DEC. MAR 2535 255

CHAIN OF CUSTODY RECORD

2831 Camino del Rio South, Ste. 206, San Diego, CA 92108 (619) 299-0033

PROJ. NO.: 07-1298-003
PROJECT NAME: Southbay
SAMPLERS: (Signature) [signature]

COC SD # 1616
Ship To:
EnecoTech contact:

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Total metals							Remarks/Bottle No.
B11-10	11/17/97	944		X	Soil	1	[illegible]	NO						Do not test
B11-9.5		944												
B11-9.0		944					X							
B11-8.5		939												
B11-8.0		939					[illegible]	NO						Do not test
B11-7.5		939												
B11-6		935					X							
B10-10		900					X							
B10-9.5		900												
B10-9		900												
B10-8		855					[illegible]							Do not test
B10-7.5		855					X							
B10-6		850												
B9-13A		835					X							
B9-12.5A		835												

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	11/17/97 1720	Chris Mecl[illegible]			
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks	

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CHAIN OF CUSTODY RECORD

2831 Camino del Rio South, Ste. 206, San Diego, CA 92108 (619) 299-0033

PROJ. NO.: 02-01248-003
PROJECT NAME: Southbay
SAMPLERS: (Signature) [signature]
COC SD #: 1556
Ship To:
EnecoTech contact:

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Total metals							Remarks/Bottle No.
B17-7.5	11/12/97	1218		X	soil	1	X							
B17-7.0		1218												
B17-6		1215												
B13-17		1151												
B13-9.5		1142					X							
B13-9.0		1146					X							
B13-8.5		1140					X	X						
B13-7		1135												
B13-6		1135												
B12-4		1050					X							
B12-8.5		1050												
B12-8		1048				x	~~DO NOT~~ NOW	NO						Do not test
B12-7.5		1048				x	~~DO NOT~~ NOW							Do not test
B12-6		1045					~~DO NOT~~ NOW	NO						Do not test
B11-13		1028				x								

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[signature]	11/12/97 1720	[signature]			
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks	

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D. C MHR

CHAIN OF CUSTODY RECORD

2831 Camino del Rio South, Ste. 206, San Diego, CA 92108 (619) 299-0033

PROJ. NO.: 02-1298-113
PROJECT NAME: South bay
SAMPLERS: (Signature)

COC SD # 1555
Ship To:
EnecoTech contact :

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Total Metals							Remarks/Bottle No.
B14-12	11/12/97	1505		X	soil	1								
B14-10		1500												
B14-8		1456					X							
B14-6		1452												
B19-10		1400					X							
B19-8		1357					X							
B19-6		1353												
B18-10		1337												
B18-8		1330					X							
B18-6		1328					X							
B16-9		1310					X							
B16-8		1308					X							
B16-6		1300												
B17-10		1230					X							
B17-8		1218					X							

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	11/12/97 1720	Chris Meclan			
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks	

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ENVIRONMENTAL CONSULTANTS Southwest Inc.

CHAIN OF CUSTODY RECORD

2831 Camino del Rio South, Ste. 206, San Diego, CA 92108 (619) 299-0033

COC SD # 1615

PROJ. NO.: 02-1298-003
PROJECT NAME: South Bay
SAMPLERS: (Signature)

Ship To:

EnecoTech contact:

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Oil & Metals							Remarks/Bottle No.
~~B23-12~~														
B23-6	11/12/97	7:30		X	soil	1								
B-23-8	11/12/97	735												
B23-8.5		741												
B23-9		741												
B23-9.5		741					X							
B23-10		741												
B23-11		745					X							
B23-12		743												
B27-6		815												
B27-8		828												
B27-8.5		835												
B27-9							X							
B27-9.5														
B27-10		825												

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
	11/13/97 1100	Chi MacLane			
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks	

Distribution: Original Accompanies Shipment, First Copy to Coordinator Field Files, Second Copy to Representative of Inspected Facility

Split Samples: ☐ Accepted ☐ Declined _____ Signature

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ENVIRONMENTAL CONSULTANTS Southwest Inc.

CHAIN OF CUSTODY RECORD

2831 Camino del Rio South, Ste. 206, San Diego, CA 92108 (619) 299-0033

COC SD # 1617

PROJ. NO.: 02-1798-W3
PROJECT NAME: South Bay
SAMPLERS: (Signature) [signature]

Ship To:

EnecoTech contact :

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Total Metals	Remarks/Bottle No.
B22-12	11/3/97	835		X	Soil	1	X	
B21-7.5		975						
B21-9		937						
B21-10		940					X	
B21-11		945					X	
B21-11.5		953					X	
B20-6		1010						
B20-8		1015					X	
B20-10		1020					X	
B15-6		1100						
B15-8		1105					X	
B15-10		1105						
B15-12		1110						
B15-14		1119						

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	11/3/97 1400	Chris Merlino			
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks	

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ENVIRONMENTAL CONSULTANTS Southwest Inc.

CHAIN OF CUSTODY RECORD

~~2831~~ 2535 Camino del Rio South, Ste. ~~206~~ 250, San Diego, CA 92108 (619) 299-0033

PROJ. NO. 02-1298-003

PROJECT NAME Southbay

SAMPLERS: (Signature) [signature]

COC SD # 1555

Ship To:

EnecoTech contact :

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Total Metals	STLC Metals *						Remarks/Bottle No.
B14-14	11/12/97	1505		X	SOIL	1								
B14-10		1500												* Cr, Pb, Ni, V
B14-8		1456					X							
B14-6		1452												
B19-10		1400					X							
B19-8		1357					X							
B19-6		1353												
B18-10		1337												
B18-8		1330					X							
B18-6		1328					X							
B16-9		1310					X							
B16-8		1308					X	X						
B16-6		1300												
B17-10		1230					X							
B17-8		1218					X							

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	11/12/97 17:20	Chris Meclure			
Chris Meclure	11/13/97 11:30				

Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks
		[signature]	11-13-97 11:30	

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4

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ENVIRONMENTAL CONSULTANTS Southwest Inc.

CHAIN OF CUSTODY RECORD

2831 Camino del Rio South, Ste. 206, San Diego, CA 92108 (619) 299-0033

PROJ. NO.: 12-01298-007

PROJECT NAME: Southbay

SAMPLERS: (Signature) [signature]

COC SD # 1556

Ship To:

EnecoTech contact:

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Total metals	SVE: Nitrate *	Remarks/Bottle No.
B17-7.5	11/12/97	1218		X	soil	1	X		
B17-7.0		1218							
B17-6		1215							
B13-12		1151							
B13-9.5		1142					X		
B13-9.0		1140					X	X	* Cr, Pb, Ni, V
B13-8.5		1140					X	X	
B13-7		1135							
B13-6		1135							
B12-9		1050					X		
B12-8.5		1050							
B12-8		1048							
B12-7.5		1048					NOT NOW	NO	Do not test
B12-6		1045					NOT NOW		Do not test
B11-13		1028					NOT NOW	NO	Do not test

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	11/12/97 1720	[signature]			
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	11/13/97 11:30				
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks	
		[signature]	11-13-97 1130		

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Split Samples: ☐ Accepted ☐ Declined

Signature

EnecoTech
ENVIRONMENTAL CONSULTANTS Southwest Inc.

CHAIN OF CUSTODY RECORD

~~2831~~ 2337 Camino del Rio South, Ste. ~~206~~ 2350, San Diego, CA 92108 (619) [illegible]-0033

PROJ. NO.: 02-1298-003

PROJECT NAME: Southbay

SAMPLERS: (Signature) [signature]

COC SD # 1616

Ship To:

EnecoTech contact :

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Total metals							Remarks/Bottle No.
311-10	11/12/97	944		X	Soil	1	~~[illegible]~~	NO						Do not test
311-9.5		944												
311-9.0		944					X							
311-8.5		939												
311-8.0		939					~~[illegible]~~	NO						Do not test
311-7.5		939												
311-6		935					X							
310-10		900					X							
310-9.5		900												
310-9		900												
310-8		855					~~[illegible]~~							Do not test
310-7.5		855					X							
310-6		850												
39-13A		835					X							
39-12.5A		835												

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	11/12/97 1720	Chris Meclen			
Chris Meclen	11/13/97 11:30				

Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks
		[signature]	11-13-97 1130	

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CHAIN OF CUSTODY RECORD

2831 Camino del Rio South, Ste. 200, San Diego, CA 92108 (619) 2 033

PROJ. NO.: -1798-003

PROJECT NAME: Boothbay

SAMPLERS: (Signature)

COC SD # 1618

Ship To:

EnecoTech contact :

LAB. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Total metals	Spec. Metals *	Remarks/Bottle No.
G-12A	11/12/97	8:35		X	Soil	1			
G-12		750			water	2 jar			4 oz jar liquid & soil
G-11		743			water	2 jar			4 oz jars " "
G-9		742			Soil	1	X		
G-8		742			Soil	1	X	X	* Cr, Pb, Ni, V
G-7.5		740			Soil	1			
G-6		733			Soil	1	X		
G-5.5		733			Soil	1			

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
	11/12/97 1720				
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
	11/13/97 11:30				
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks	
			11-13-97 1130		

Distribution: Original Accompanies Shipment, First Copy to Coordinator Field Files, Second Copy to Representative of Inspected Facility

Split Samples ☐ Accepted ☐ Declined Signature

EnecoTech®
ENVIRONMENTAL CONSULTANTS

CHAIN OF CUSTODY RECORD

7425 Mission Valley Road • Suite 201 • San Diego, CA 92108

COC CA# 2950

PROJ. NO. 0201298-003

PROJECT NAME: South Bay Impoundments

SAMPLERS: (Signature) John Royal John Royal

Ship To:

EnecoTech contact:

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS 1 qt amber glass	Metals Arsenic, Beryllium, total Chromium, lead, nickel	Vanadium					Remarks/Bottle No.
B24	11/26/97	1009		X	water	1	X	→					not preserved with acid.
B25	↓	1500		X	↓	1	X	→					filter sample prior to analysis
B26	↓	1130		X	↓	1	X	→					To removal all sediment.
B27	↓	1445		X	↓	1	X	→					

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
John Royal	11/28/97 900	Chris McClure			
Chris McClure	11/28/97 1:10				

Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks
		Melissa Gee	11/28 1310	

Distribution. Original Accompanies Shipment; First Copy to Coordinator Field Files. Second Copy to Representative of Inspected Facility

Split Samples: ☐ Accepted ☐ Declined

Signature

EnecoTech®
ENVIRONMENTAL CONSULTANTS

CHAIN OF CUSTODY RECORD

7425 Mission Valley Road • Suite 201 • San Diego, CA 92108

COC CA# 2950

PROJ. NO. 0201298-003

PROJECT NAME: South Bay Ingroundments

SAMPLERS: (Signature) John Royal John Royal

Ship To:

EnecoTech contact :

STAT. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS 1 qt [illegible]	2 metals Arsenic, Beryllium	Total Chromium, lead, nickel	Vanadium				Remarks/Bottle No.
B24	11/26/97	1009		X	water	1	X	→	→				not preserved with acid.
B25	↓	1500		X	↓	1	X	→	→				filter sample prior to analysis
B26	↓	1130		X	↓	1	X	→	→				To removal all sediment.
B27	↓	1445		X	↓	1	X	→	→				

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
John Royal	11/28/97 900	Chris Meeker			
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks	

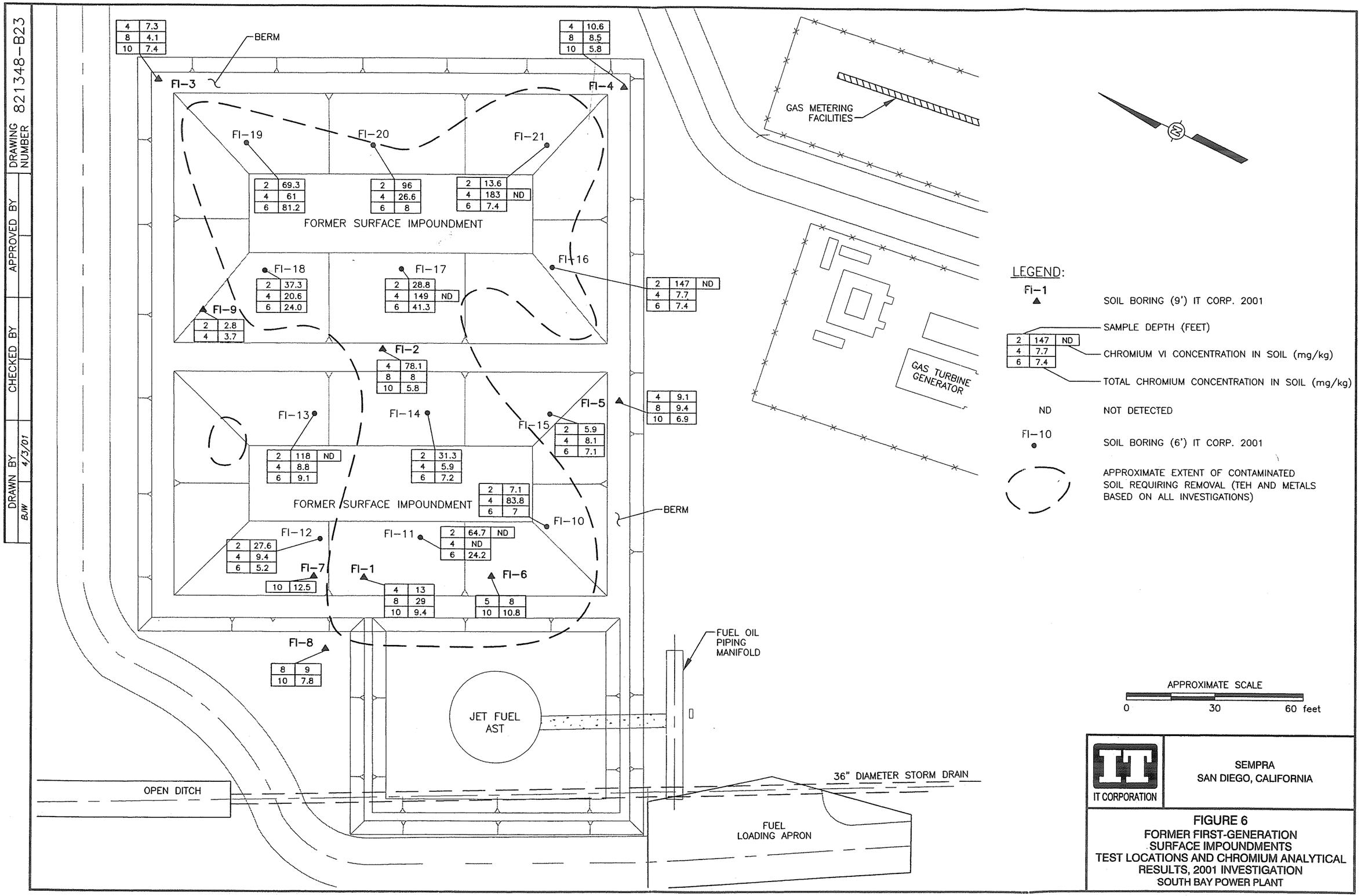
Distribution. Original Accompanies Shipment; First Copy to Coordinator Field Files; Second Copy to Representative of Inspected Facility

Split Samples: ☐ Accepted ☐ Declined _____ Signature

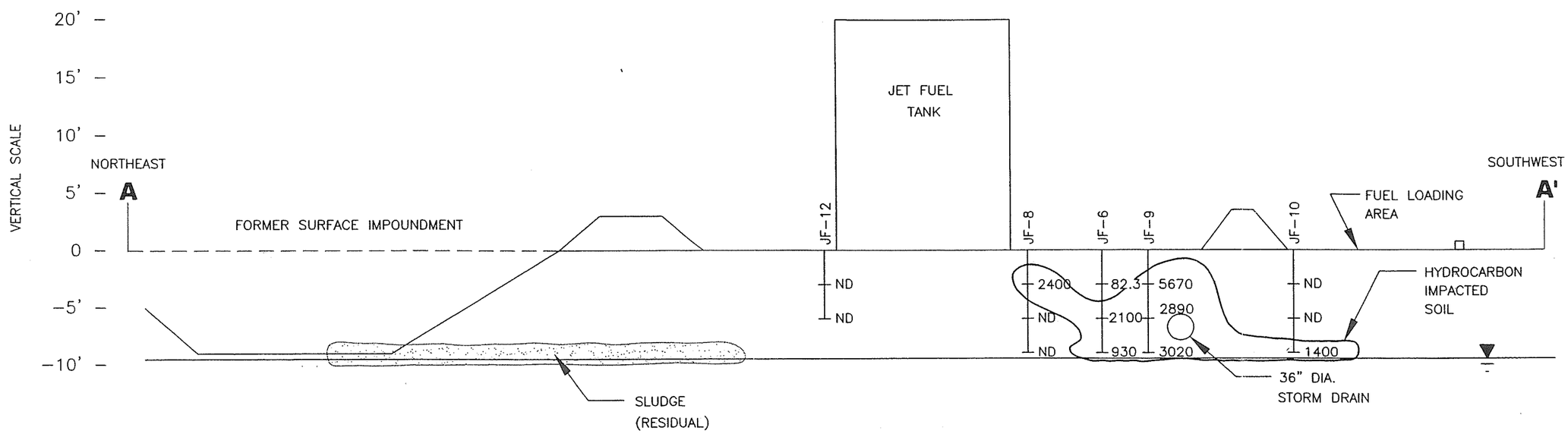
Table 3: Water Sample Analytical Data

Analytical Data Reported in mg/L						
Sample ID	Arsenic	Beryllium	Chromium	Lead	Nickel	Vanadium
B24	0.0170	<0.0500	<0.0500	**0.0450**	<0.0500	0.0550
B25	0.0066	<0.0500	**0.1000**	**0.0260**	**0.4600**	0.1500
B26	0.0160	<0.0500	<0.0500	**0.0200**	**0.2000**	0.0800
B27	0.0093	<0.0500	<0.0500	0.0130	0.0550	<0.0500
Drinking Water Standard	0.0500	0.0040	0.0500	0.0150	0.1000	NA
Lab Detection Limit	0.0050	0.0500	0.0500	0.0050	0.0500	0.0500

Bold: Exceeds Drinking Water Standards


DRAWING NUMBER 821348-B23
APPROVED BY
CHECKED BY
DRAWN BY BJW 4/3/01
BERM
FI-3
4 7.3
8 4.1
10 7.4
FI-4
4 10.6
8 8.5
10 5.8
FI-19
2 69.3
4 61
6 81.2
FI-20
2 96
4 26.6
6 8
FI-21
2 13.6
4 183 ND
6 7.4
FORMER SURFACE IMPOUNDMENT
FI-18
2 37.3
4 20.6
6 24.0
FI-17
2 28.8
4 149 ND
6 41.3
FI-16
2 147 ND
4 7.7
6 7.4
FI-9
2 2.8
4 3.7
FI-2
4 78.1
8 8
10 5.8
FI-5
4 9.1
8 9.4
10 6.9
FI-13
2 118 ND
4 8.8
6 9.1
FI-14
2 31.3
4 5.9
6 7.2
FI-15
2 5.9
4 8.1
6 7.1
FORMER SURFACE IMPOUNDMENT
2 7.1
4 83.8
6 7
FI-10
BERM
FI-12
2 27.6
4 9.4
6 5.2
FI-11
2 64.7 ND
4 ND
6 24.2
FI-7
10 12.5
FI-1
4 13
8 29
10 9.4
FI-6
5 8
10 10.8
FI-8
8 9
10 7.8
FUEL OIL PIPING MANIFOLD
JET FUEL AST
OPEN DITCH
36" DIAMETER STORM DRAIN
FUEL LOADING APRON
GAS METERING FACILITIES
GAS TURBINE GENERATOR
N
LEGEND:
FI-1
SOIL BORING (9') IT CORP. 2001
SAMPLE DEPTH (FEET)
2 147 ND
4 7.7
6 7.4
CHROMIUM VI CONCENTRATION IN SOIL (mg/kg)
TOTAL CHROMIUM CONCENTRATION IN SOIL (mg/kg)
ND
NOT DETECTED
FI-10
SOIL BORING (6') IT CORP. 2001
APPROXIMATE EXTENT OF CONTAMINATED SOIL REQUIRING REMOVAL (TEH AND METALS BASED ON ALL INVESTIGATIONS)
APPROXIMATE SCALE
0
30
60 feet
IT CORPORATION
SEMPRA
SAN DIEGO, CALIFORNIA
FIGURE 6
FORMER FIRST-GENERATION SURFACE IMPOUNDMENTS
TEST LOCATIONS AND CHROMIUM ANALYTICAL RESULTS, 2001 INVESTIGATION
SOUTH BAY POWER PLANT

DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
DM 5/11/01			821348-B18



LEGEND:

JF-8
2400 — SOIL BORING SHOWING TEH CONCENTRATION (mg/Kg)
ND
ND — ND = NOT DETECTED

GROUNDWATER SURFACE

HORIZONTAL SCALE
0 20 40 FEET

IT CORPORATION

SEMPRA
SAN DIEGO, CALIFORNIA

FIGURE 8
GEOLOGIC CROSS SECTION A-A'
SOUTH BAY POWER PLANT

SWMU #7, Map Location 2c, Former Second Generation Surface Impoundment

As discussed in Fluor Daniel's Phase I Environmental Site Assessment, Volume 1, Book 3, Appendix C (Phase I Report, Appendix C), the Regional Water Quality Control Board (RWQCB) found that San Diego Gas & Electric has fulfilled the cleanup and closure of the Former Second Generation Surface Impoundment in November 8, 1991. In a letter dated August 13, 1992, DTSC accepted the closure certification of this area. Additional investigation is not required in this area, unless there are reasons to believe that a release or potential release of contaminants occurred after 13 August 1992.

Response: No known releases related to the former Second Generation Impoundment have occurred or been reported from 13 August 1992 to 1998, when SDG&E sold the SBPP facility to the Port. The transaction closed in 1999.

SWMU #8, Map Location 3a, Power Plant Units 1-4

a. Combustion Catalyst Area - Table 1-1 of Phase II Assessment and the TP Data Sheet indicate that Nalco 1225, an aqueous calcium nitrate solution, was spilled from the Combustion Catalyst Aboveground Storage Tank in July 1986. Approximately 7 cubic yards of contaminated gravel and earth from the area was removed. A soil sample was taken and analyzed by SDG&E laboratory for soluble calcium and pH. The soil was designated as non-hazardous. DTSC suggests that a map indicating location of the combustion Catalyst Area and a copy of the Material Safety Data Sheet (MSDS) be submitted to DTSC for review.

Response: The location of the Combustion Catalyst AST is shown Figure A. The MSDS for Nalco 1225 is attached to this section.

b. East Loop Fuel Oil Pipeline -The Tiered Permit Solid Waste Management Unit Information Data Sheet (TP Data Sheet) indicates that two fuel oil releases were discovered in October 1991 and September 1994 in the East Loop area. In 1991, SDG&E's internal analysis of soil samples collected in this area detected petroleum hydrocarbons ranging from 43 to 410 mg/kg. In 1994, soil was excavated and oil was removed from water in the East Loop Return Line.

1. Figure 3-4a of Phase II Assessment Report indicates that Chloroform at 3.6 ug/l was detected in groundwater collected from SB3-003A. This groundwater well is located near the East Loop area. In addition, Table 3-10, Baseline Groundwater Results for TEH and Organics indicates that 1700 ug/l TEH was also detected in groundwater from SB3-003A on April 20, 1998. DTSC suggests that additional sampling for metals, TEH, VOCs and SVOCs be conducted in well SB3-003A.

Response: In addition to monitoring well SB03-003A, monitoring wells SB03-024A and SB03-007 are located downgradient of East Loop area (see Figure A). Although TEH was detected at 1,700 ug/l in SB03-003A, its concentration decreased in well SB03-024A (470 ug/l) and was not detected in SB03-007 further downgradient (see Figure C). We believe that the presence of TEH at SB03-003A is localized and diminishes with distance. The detected trace concentration of chloroform (3.6 ug/l) in SB03-003A was below the laboratory reporting limit and chloroform was not detected in the other two downgradient wells. No other VOCs were detected in any of the subject three monitoring wells. In summary, groundwater quality impact at East Loop area is considered to have been adequately characterized, is limited to TEH, and appears to be localized. No further characterization is necessary and recommended. See Appendices A and B for laboratory result.

2. Table 4 of Enecotech's Final Report indicates that 1,600 mg/kg of TRPH was detected in Boring B-1 (ELB -1) at 6 feet bgs. DTSC suggests that step out borings be conducted near ELB-1 to determine lateral and vertical extent of TRPH. Metals, VOCs and SVOCs should also be analyzed.

Response: The East Loop area is one of five areas targeted for remediation and interim closure by SDG&E, as discussed in the RAW. The detected 1,600 mg/kg of TRPH at a depth of 6 feet bgs is considered to be residual impact remaining following previous impacted soil excavation efforts. As indicated in Table 4, soil below this depth was not impacted (TPH was not detected in soil samples at depths of 9.5 and 11.5 feet and TRPH was detected at 1.3 to 3 mg/kg in soil boring B-1). Therefore, additional sampling is not recommended. Instead, we recommend that the excavation boundary to be extended to include this location (as recommended in the RAW) and post excavation confirmation

sampling be conducted to confirm removal of the impacted soil. Post remediation sampling and visual observations during excavation, as larger areas of the soil become exposed, are a more effective way of identifying the presence of residual impacted soil than soil borings.

3. Section 2.3, page 2-16 of the RA Workplan identified this area having fuel hydrocarbons in soil concentrations exceeding 1,000 mg/kg. Section 4.1 of the RAP Workplan indicates that the remedial action strategy in this area is to remove impacted soil by excavation, offsite treatment and disposal. However, DTSC suggests that prior to remediation, additional investigation is required to determine the lateral and vertical extent of soil and groundwater contamination in this area. Sampling analysis should also include Title 22 metals, VOCs and SVOCs

Response: Refer to the above two responses. Post remediation sampling and visual observations during excavation, as larger areas of the soil become exposed, are a more effective way of identifying the presence of residual impacted soil than soil borings.

c. Pipelines Between and above ASTs, Map Location 3a, Power -Table 1-1 of Phase II Assessment Report indicates that potential hydrocarbon losses from pipeline between the aboveground storage tanks and the power plant exist in this area.

Section 6.1 of the Phase II ESA Report indicates that sampling at the periphery of the SBPP, including the wastewater transfer sump at the northwestern edge of the Power Plant indicates that soil contamination has not occurred. However this section did not identify the sampling locations that were investigated in this area. Section 6.1 also indicates that no sampling was performed in the power plant due to inaccessibility, and that contaminants beneath the power plant and associated structures should be evaluated during decommissioning.

DTSC is also not clear with the location of the pipelines and the ASTs that should be investigated. DTSC suggests that this area be identified in the map, and a discussion of investigations conducted specific to this location should be included.

Response: Figure A shows the location of the East Loop and West Loop. The East and West Loop pipelines connected AST 1,2, and 3 of the South Tank Farm to the power plant and included fuel oil supply line, fuel oil return line, saturated steam line, condensate return line, trap return line and tracing steam line. With the exception of the East Loop release area indicated above, the results of the Phase I and II site investigations did not identify any other releases along the East and West Loop lines. As such, no further action is necessary at these locations.

d. Unpaved area southwest of the Power Plant, Dichromate Powder - Table 1-1 of the Phase II Assessment Report identified this area for investigation due to potential spills of dichromate powder during handling, or from broken containers. DTSC can not locate the specific location of this SWMU in the map, and did not find the data of investigation conducted during the Phase II assessment. A map identifying this location, and investigation results if any, should be submitted to DTSC for review.

Response: According to SDG&E, no "unpaved area" existed at the location described in Table 1-1. All ASTs were located on paved areas. Soil borings SB3- 009 and SB3-010 were drilled in the area southwest of the power plant during the Phase II investigation (see Figure A). Soil samples were

collected at depths of 0.5 to 1 and 4 to 5 feet bgs. Chromium was detected in the four samples in the range of 6.5 to 8.9 mg/kg which is considered to be in the range of naturally occurring concentrations.

e. Sump located northwest of the Plant -Table 1-1 of the Phase II Assessment Report identified that a potential exists that a release of possibly volatile organic compounds occurred in soil and groundwater from wastewaters bearing oil, metals and possibly volatile organic compounds. DTSC can not locate the specific location of this SWMU in the map, and did not find the data of investigation conducted during the Phase II assessment. A map identifying this location, and investigation results if any, should be submitted to DTSC.

Response: The subject sump is located northwest of the power plant area and designated as HR-23 on Figure A. Based on discussions with SDG&E, the sump is a concrete structure that collects rainwater. Water accumulated in the sump is tested and pumped to the oil and water separator if no sheen or product is observed. As indicated in Table 1-1, no known releases have occurred at the location of the sump. During the Phase II investigation, soil boring SB3-016 was drilled in the general area where the sump is located although not immediately adjacent to the sump. Petroleum hydrocarbons were detected at a low concentration of 1.7 mg/kg in the two collected soil samples. Concentrations of metals were in the range of background concentrations. The above information is not indicative of releases associated with the subject sump. We recommend that impacted soil beneath the sump, if any, be addressed later during facility decommissioning.

f. Plant Transformer Banks - The TP Data Sheet identified releases of various minor gasket, fitting and valve leaks in the Plant Transformer Banks. The stains in this area may have been caused by PCB oil used in the past. DTSC did not find any discussion regarding soil PCB sampling in the Phase II ESA Report. Table 5 of Enecotech's Final Report for Phase II indicates that PCB soil sampling was conducted in the South bay Power Plant, however, the table has combined both data collected from the Switchyard and the Power Plant Transformer Banks. Soil samples collected contain PCB Archlor 1254, and Archlor 1260 concentrations ranging from 0.02 and 0.63 mg/kg. DTSC also found that well SB3-018 detected the maximum concentration of 13 ug/l Thallium (MCL=2 ug/l) in this location. DTSC suggests that additional sampling is required to verify metals and PCBs in soil and groundwater in this area. In addition, data gathered for each area should be identified separately.

Response: The attached Tables 1 and 2 present a summary of previous PCB analytical data for transformer banks and oil circuit breakers (OCB) included in the PCB Investigation final report prepared by Enecotech.

A total of 13 wipe samples and 15 soil samples were collected at the transformer locations (see Table 1 and Figure 9). Wipe sample results were in the range of 0.92 to 8.3 ug/100 cm2 significantly below the 100 ug/cm2 Toxic Substances Control Act (TSCA) limit. The PCB concentration in soil samples ranged from less than 0.02 mg/kg to 0.63 mg/kg, significantly below the 25 mg/kg Toxic Substances Control Act (TSCA) Action Level. A total of four wipe samples and three soil samples were collected at the OCB locations (see Table 2 and Figure 8). Wipe sample results were in the range of 0.35 to 13 ug/100 cm2 significantly below the 100 ug/100 cm2 limit. PCBs in the soil samples were below the detection limit. As concluded in the Enecotech report, the detected low concentrations and distribution of PCBs do not warrant further site characterization or remedial action. Industrial PRGs for PCBs is

0.74 mg/kg. The PCB concentrations in all of the collected soil samples were below the industrial PRG of 0.74 mg/kg for PCBs, indicating that no remedial action is warranted.

A total of 43 groundwater samples across the site were analyzed for Thallium. Thallium was detected in only two of 43 samples (SB03-018 and SB05-038) north of the power plant at trace concentrations of 8 to 13 ug/l slightly above the detection limit. Thallium was not detected in the groundwater samples (SB03-017A) directly down gradient of SB03-018 and the further downgradient sample (SB05-086). Furthermore, Thallium was not detected in the two soil samples from boring SB03-018. This strongly suggests that Thallium is not a chemical of concern at the site. Based on this information, no further investigation related to Thallium is considered to be necessary.

Utility Chemicals

Product Bulletin

NALCO® 1225

FUEL OIL COMBUSTION CATALYST

U-1225

NALCO

Product Benefits

- Helps reduce carbon smut emissions
- Helps increase boiler efficiency
- Helps minimize carbon buildup on tube, air heater, and duct surfaces

Principal Uses

NALCO 1225 catalyzes the combustion of fuel oil and can help increase carbon burnout, improve boiler efficiency, and lower carbon emissions and fallout. Excess oxygen levels can be lowered to minimize sulfur trioxide and nitrogen oxide formation.

General Description

NALCO 1225 is a metal bearing water solution containing a sophisticated surfactant system making the chemical completely miscible in fuel oils. This helps assure maximum distribution of the actives throughout the fuel. As a low viscosity liquid, NALCO 1225 can be injected into fuel oil lines virtually anywhere between storage tank and burner without the need for expensive emulsification systems.

NALCO 1225 increases combustion efficiency, which can result in up to an 80% reduction of fallout sized (≥ 5μ) carbon particles.

NALCO 1225 also helps allow significant reductions in excess oxygen levels required for complete combustion. Lowering excess oxygen improves boiler efficiency, reduces attemperation spray requirements, reduces the formation of nitrogen oxide gases, and can lower sulfur trioxide levels.

Form	Liquid
Density (@ 75°F)	11.4 lb/gal (approx.)
Color	Clear
Odor	Sweet
Viscosity	10–12 cp
Flash Point	None
Freeze Point	−25°F
pH	1.0 (approx.)

Feeding

NALCO 1225, when applied to a system burning oil, is continuously metered to the fuel oil line. A positive displacement diaphragm pump of stainless steel or Teflon construction is appropriate for this application. Pump directly from the feed system into the oil line supplying the burners through a NAL-QUILL® injector (Nalco Part No. 4610) to assure uniform dispersion.

If the active storage tank is turned over more frequently than once every 30 days, NALCO 1225 may be fed to the tank as it is filling. A FEEDPAC® 9B chemical feeder is appropriate for this application.

(Continued on Reverse Side)

NALCO CHEMICAL COMPANY
UTILITY CHEMICALS
ONE NALCO CENTER • NAPERVILLE, ILLINOIS 60563-1024

SUBSIDIARIES IN ARGENTINA, AUSTRIA, BRAZIL, CHILE, COLOMBIA, ECUADOR, FINLAND, FRANCE, HOLLAND, HONG KONG, ITALY, JAPAN, PHILIPPINES, SAUDI ARABIA, SPAIN, SWEDEN, VENEZUELA AND WEST GERMANY • AFFILIATES IN AUSTRALIA, CANADA, MEXICO, SINGAPORE, SOUTH AFRICA, TAIWAN, UNITED KINGDOM AND THE UNITED STATES

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VI - 2.3 - 3

NALCO

Handling and Storage

Do not get in eyes, on skin, or on clothing. Wear goggles and rubber gloves when handling. Do not take internally. Avoid freezing. Avoid contact with strong bases. NALCO 1225 has a maximum recommended in-plant storage limit of six months. Store away from heat and open flame. Keep container closed when not in use.

Shipping

NALCO 1225 is available in bulk quantities or in 55-gallon non-returnable steel drums weighing approximately 627 pounds net. The product is shipped from the nearest warehouse or manufacturing facility.

Original Comb Catalyst

NALCO

MATERIAL SAFETY DATA SHEET

PRODUCT: NALCO 1225 COMBUSTION CATALYST

Emergency Telephone Number
Medical (312) 920-1510 (24 hours)

SECTION 1 PRODUCT IDENTIFICATION

TRADE NAME: NALCO 1225 COMBUSTION CATALYST
DESCRIPTION: An aqueous solution of inorganic nitrate and surfactants

NFPA 704M RATING 1 HEALTH 1 FLAMMABILITY 0 REACTIVITY 0 OTHER
0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme

SECTION 2 HAZARDOUS INGREDIENTS

Our hazard evaluation has identified the following chemical ingredient(s) as hazardous under OSHA's Hazard Communication Rule, 29 CFR 1910.1200. Consult Section 14 for the nature of the hazard(s).

INGREDIENT(S)	CAS #	APPROX.%
Ethoxylated nonylphenol	9016-45-9	1-10

SECTION 3 PRECAUTIONARY LABEL INFORMATION

CAUTION: May cause irritation to skin and eyes. Avoid contact with skin, eyes and clothing. Do not take internally.

Empty containers may contain residual product. Do not reuse container unless properly reconditioned.

SECTION 4 FIRST AID INFORMATION

EYES: Immediately flush for at least 15 minutes while holding eyelids open. Call a physician at once.
SKIN: Wash thoroughly with soap and rinse with water. Call a physician.
INGESTION: Do not induce vomiting. Give water. Call a physician.

NOTE TO PHYSICIAN: No specific antidote is known. Based on the individual reactions of the patient, the physician's judgment should be used to control symptoms and clinical condition.

CAUTION: If unconscious, having trouble breathing or in convulsions, do not induce vomiting or give water.

SECTION 5 HEALTH EFFECTS INFORMATION

PRIMARY ROUTE(S) OF EXPOSURE: Eye, Skin

EYE CONTACT: Can cause moderate to severe irritation.

NALCO CHEMICAL COMPANY ONE NALCO CENTER • NAPERVILLE, ILLINOIS 60563-1024
AREA 312-961-9500

TT 2 3 - 5

SECTION 11 SPILL AND DISPOSAL INFORMATION

IN CASE OF TRANSPORTATION ACCIDENTS, CALL THE FOLLOWING 24-HOUR TELEPHONE NUMBER (312-920-1510)

SPILL CONTROL AND RECOVERY:

Small liquid spills: Contain with absorbent material, such as saw dust, clay, soil or any commercially available absorbent. Shovel reclaimed liquid and absorbent into recovery or salvage drums for disposal. Refer to CERCLA in Section 14.

Large liquid spills: Dike to prevent further movement and reclaim into recovery or salvage drums or tank truck for disposal. Refer to CERCLA in Section 14.

DISPOSAL: If this product becomes a waste, it meets the criteria of a hazardous waste as defined under the Resources Conservation and Recovery Act (RCRA) 40 CFR 261. Hazardous Waste D002.

As a hazardous liquid waste, it must be solidified before disposal in a landfill (Hazardous Waste Treatment, Storage and Disposal facility). Can be deep-well injected in accordance with local, state and federal regulations.

SECTION 12 ENVIRONMENTAL INFORMATION

If released into the environment, see CERCLA in Section 14.

SECTION 13 TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME/HAZARD CODE - PRODUCT IS NOT REGULATED DURING TRANSPORTATION

SECTION 14 REGULATORY INFORMATION

The following regulations apply to this product.

FEDERAL REGULATIONS:

OSHA HAZARD COMMUNICATION RULE, 29 CFR 1910.1200:
Based on our hazard evaluation, the following ingredients in this product are hazardous and the reasons are shown below.

Ethoxylated nonylphenol - Eye irritant

CERCLA/SUPERFUND, 40 CFR 117, 302:

NALCO CHEMICAL COMPANY ONE NALCO CENTER • NAPERVILLE ILLINOIS 60566-1024
AREA 312-961-9500

SECTION 14 REGULATORY INFORMATION (CONTINUED)

Notification of spills of this product is not required.

TOXIC SUBSTANCES CONTROL ACT (TSCA):
The chemical ingredients in this product are on the 8(b) Inventory List (40 CFR 710).

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA), 40 CFR 261 SUBPART C & D:
If this product becomes a waste, it does meet the criteria of a hazardous waste as defined under RCRA 40 CFR 261 (consult Section 11).

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15/ formerly Sec. 307, 40 CFR 116/formerly Sec. 311:
None of the ingredients are specifically listed.

CLEAN AIR ACT, 40 CFR 60, SECTION 111, 40 CFR 61, SECTION 112:
This product does not contain ingredients covered by the Clean Air Act.

STATE REGULATIONS:

MICHIGAN CRITICAL MATERIALS:
This product does not contain ingredients listed on the Michigan Critical Materials Register.

STATE RIGHT TO KNOW LAWS:
The following states identify the ingredient(s) shown below as hazardous:

New Jersey - Calcium nitrate

SECTION 15 ADDITIONAL INFORMATION

None

SECTION 16 USER'S RESPONSIBILITY

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to ensure safe workplace operations. Please consult your local sales representative for any further information.

SECTION 17 BIBLIOGRAPHY

SEE NALCO'S MSDS SECTION DESCRIPTION

PREPARED BY: John J. Kasper, MSc., Toxicologist
DATE ISSUED: 06/09/86

NALCO CHEMICAL COMPANY ONE NALCO CENTER • NAPERVILLE, ILLINOIS 60563-1024
AREA 312-961-9500

4066

Material Safety Data Sheet

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

U.S. Department of Labor
Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072

IDENTITY (As Used on Label and List)
Calcium Nitrate Aqueous Solution - LO-1

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

Section I

Manufacturer's Name Hummel Croton, Inc.	Emergency Telephone Number 908-754-1800 telefax 908-754-1815
Address (Number, Street, City, State, and ZIP Code) 10 Harmich Road	Telephone Number for Information above, or Axxo, Inc. 404-921-3325
South Plainfield, NJ 07080	Date Prepared 2 September 1992
Vendor - Axxo, Inc., Lilburn, GA	Signature of Preparer (optional) AM Scocca

Section II — Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
NONE				

Product does not contain any hazardous substances.

Section III — Physical/Chemical Characteristics

Boiling Point	ca. 225°F	Specific Gravity (H_2O = 1)	ca. 1.3
Vapor Pressure (mm Hg.) same as for water		Melting Point	N/A
Vapor Density (AIR = 1) same as for water		Evaporation Rate (Butyl Acetate = 1) same as for water	
Solubility in Water 100%			

Appearance and Odor
Clear to slightly opaque tan, non-objectionable odor.

Section IV — Fire and Explosion Hazard Data

Flash Point (Method Used) N/A	Flammable Limits N/A	LEL N/A	UEL N/A

Extinguishing Media
N/A

Special Fire Fighting Procedures
N/A - product is a non-flammable aqueous solution.

Unusual Fire and Explosion Hazards
N/A Product is not a fire hazard, not explosive. Product in a sealed container is subject to the same conditions as would apply to water

(Reproduce locally)

Section V — Reactivity Data

Stability			Conditions to Avoid
	Unstable		NONE
	Stable	X	

Incompatibility (*Materials to Avoid*): NONE

Hazardous Decomposition or Byproducts: NONE

Hazardous Polymerization			Conditions to Avoid
	May Occur		NONE
	Will Not Occur	X	

Section VI — Health Hazard Data

Route(s) of Entry: Inhalation? no; Skin? no; Ingestion? no

Health Hazards (*Acute and Chronic*): None applicable

Carcinogenicity: NTP? NONE; IARC Monographs?; OSHA Regulated?

Signs and Symptoms of Exposure: NONE- conditions are similar to any non-hazardous water solution of an inorganic alkaline earth salt.

Medical Conditions Generally Aggravated by Exposure: NONE known

Emergency and First Aid Procedures: Flush contacted areas with water.

Section VII — Precautions for Safe Handling and Use

Steps to Be Taken in Case Material Is Released or Spilled: Wipe up spills and use floor powder drying agent.

Waste Disposal Method: Same as for any non-flammable, non-hazardous aqueous solution.

Precautions to Be Taken in Handling and Storing: Do not store where temperature approaches the boiling point. PROTECT FROM FREEZING. Bulk storage recirculation is suggested.

Other Precautions: Do not dump liquid onto highly combustible waste material in areas where the liquid is subject to evaporation and where temperatures exceed 150°F.

Section VIII — Control Measures

Respiratory Protection (*Specify Type*): If operator is exposed to vapors at 150°F, respiratory protection is suggested.

Ventilation	Local Exhaust	Special
When hot at 150°F	Normal exhaust/air is sufficient.	NONE
	Mechanical (*General*): Not needed, but acceptable	Other: NONE

Protective Gloves: Yes, coated type preferred.

Eye Protection: Yes, goggles/eye shield.

Other Protective Clothing or Equipment: Face shield, apron suggested when subject to splash conditions.

Work/Hygienic Practices: Standard procedures should be used.

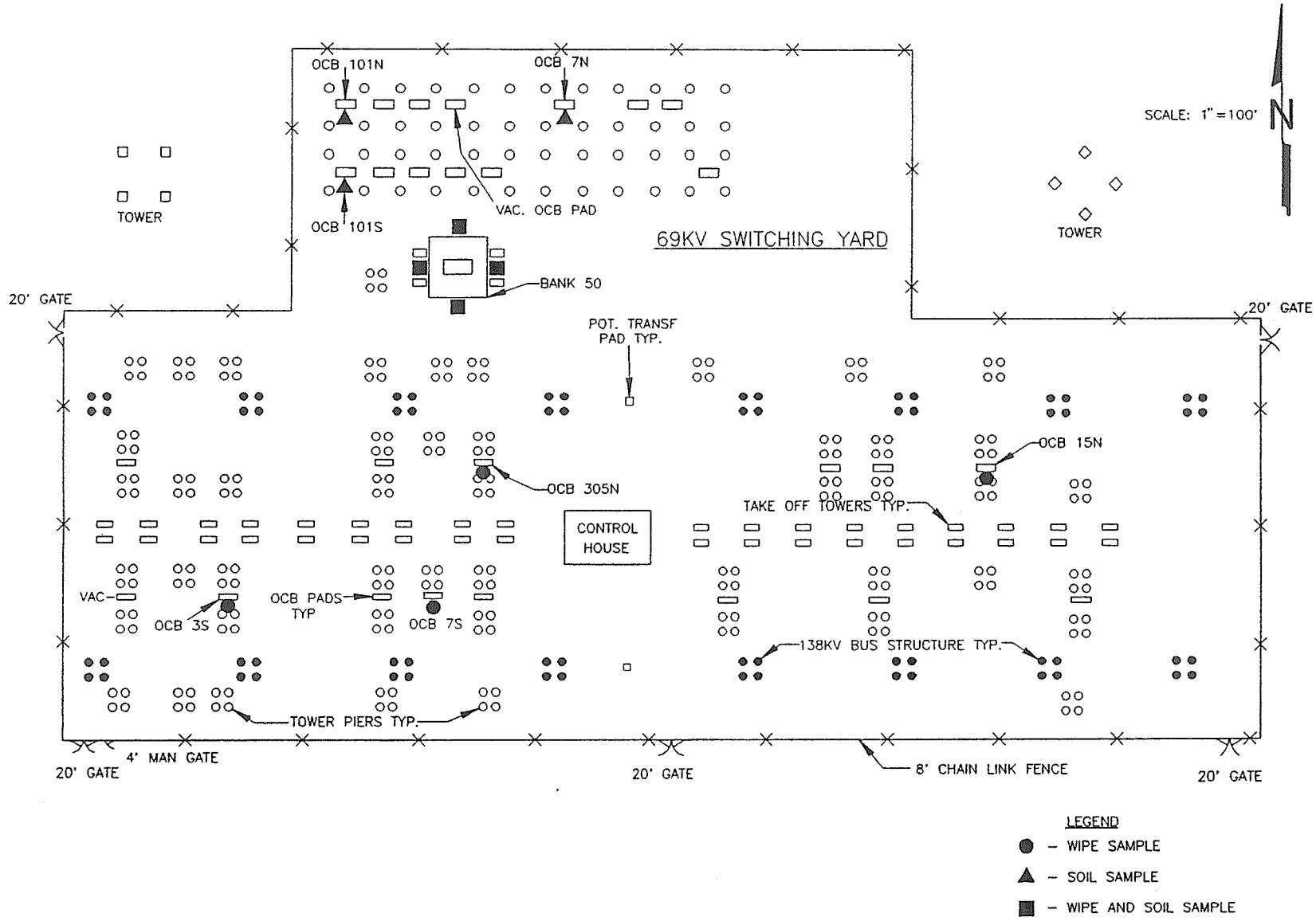
☆ U.S.G.P.O.: 1986-491-329/45775

Table 1
Enecotech PCB Wipe and Soil Samples Analytical Results South Bay Power Plant Transformer Banks

Sample No.	Sample Location	Sample Date	PCB Wipe Samples mg/100cm2	PCB Soil Samples mg/kg
Wipe Samples				
2	Bank 50-E	11/7/96	0.93	
3	Bank 50-S	11/7/96	8.3	
4	Bank 50-W	11/7/96	2.2	
5	Bank 50-N	11/7/96	1.7	
9	Bank 3- East	11/7/96	6.3	
10	Bank2-North	11/7/96	4.1	
11	Bank2-South	11/7/96	3.6	
12	Bank16-N. Vault	11/7/96	2.0	
13	Bank1-South	11/7/96	3.7	
14	Bank GI1-West	11/7/96	1.2	
15	Bank GT1-East A	11/7/96	0.92	
16	Bank GT1- East B	11/7/96	1.10	
Soil Samples				
1	Bank 3- East	11/7/96		0.58
2	Bank 3- West	11/7/92		0.37
3	Bank 2- East	11/7/96		0.51
4	Bank 2- East (Western)	11/7/96		0.19
5	Bank 2-North	11/7/96		0.08
6	Bank 2- West (North)	11/7/96		0.63
7	Bank 2- West (South)	11/7/96		0.02
8	Bank 2- South	11/7/96		0.23
9	Bank 1- East	11/7/96		0.30
10	Bank 1- South	11/7/96		0.15
11	Bank 1- West	11/7/96		0.26
12	Bank 50-West	11/7/96		0.02
13	Bank 50- South	11/7/96		0.15
14	Bank 50- East	11/7/96		<0.02
15	Bank 50- North	11/7/96		<0.02

Table 2
Enecotech PCB Wipe and Soil Samples South Bay Power Plant Oil Circuit Breakers (OCBN)

Sample No.	Sample Location	Sample Date	PCB Wipe Samples mg/100 cm2	PCB Soil Samples mg/kg
Wipe Samples				
1	OCB1015-West	11/7/96	0.63	
6	OCB305N-East	11/7/96	0.88	
7	OCB35-East	11/7/96	0.35	
8	OCB75-West	11/7/96	13	
Soil Samples				
16	OCB1015-West	11/7/96		<0.02
17	OCB101N-West	11/7/96		<0.02
18	OCB7N-East	11/7/96		<0.02



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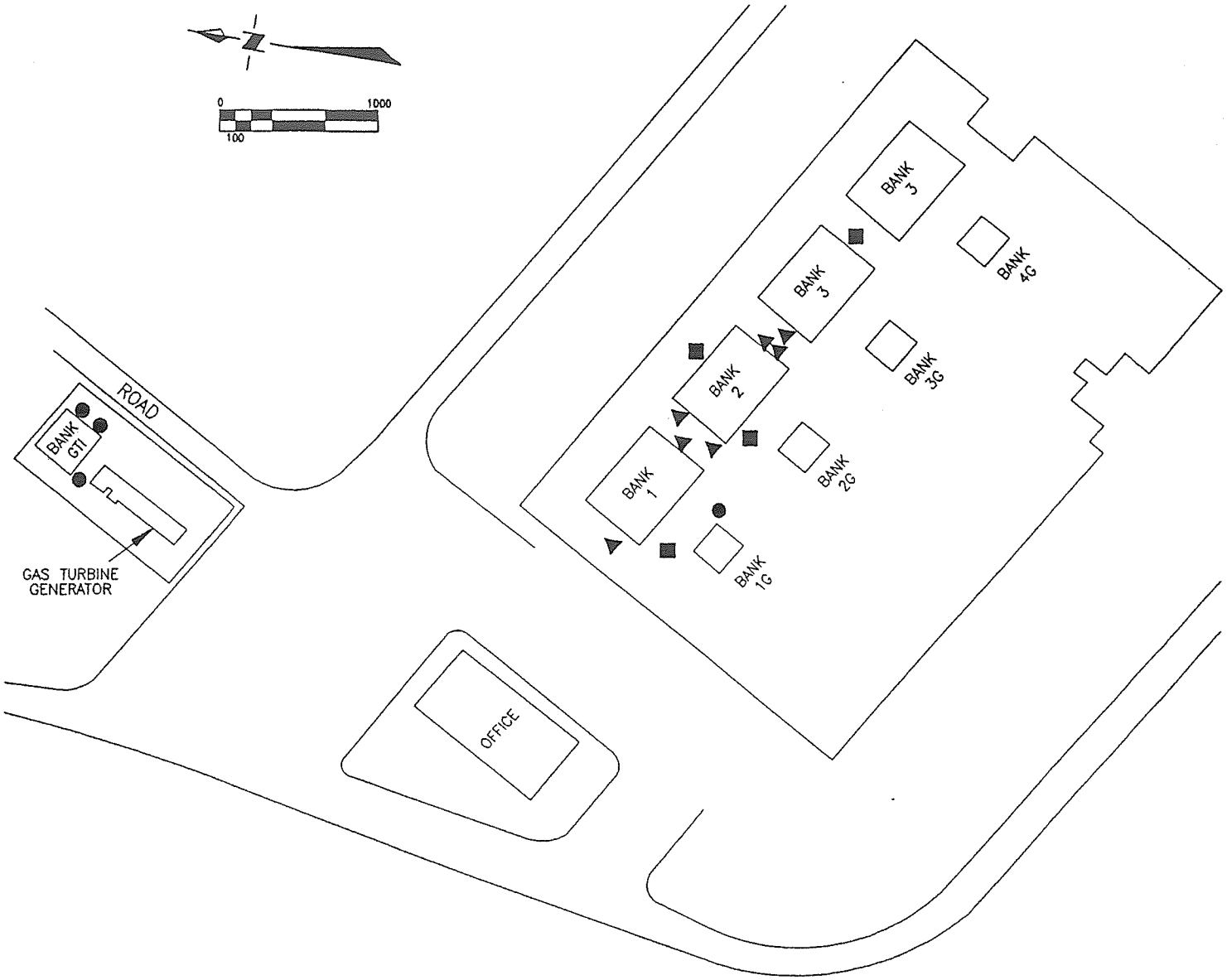
Project: SDG&E PHASE II ENVIRONMENTAL INVESTIGATION

990 BAY BOULEVARD
CHULA VISTA, CALIFORNIA

SOUTH BAY POWER PLANT
PCB SAMPLING

File No.:	ACAD No.:	Drawn:	Designed:	Checked:	Approved:	Date:	Rev.:	Figure No.:
02-01298-001	P4-6				MJG	11/96		8



LEGEND

- ● – WIPE SAMPLE
- ▲ – SOIL SAMPLE
- ■ – WIPE AND SOIL SAMPLE

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SDG&E PHASE II ENVIRONMENTAL INVESTIGATION

990 BAY BOULEVARD
CHULA VISTA, CALIFORNIA

SOUTH BAY POWER PLANT
PCB SAMPLING

File No.: 02-01298-001	ACAD File No.: 1298LNG2		Date: 11/96	REV.:
Drawn By:	Design By:	Checked By:	Approved By: MJG	Figure No.: 9

TABLE 4: PCB Wipe Samples for South Bay Power Plant

Sample Number	Sample Location and Equipment Designation	Sample Date	PCB Concentration ($\mu g/100\ cm^2$)
0	Blank	11/07/96	<0.50
1	OCB 15N - West	11/07/92	0.63
2	Bank 50 - E	11/07/96	0.93
3	Bank 50 - S	11/07/96	8.30
4	Bank 50 - W	11/07/96	2.20
5	Bank 50 - N	11/07/96	1.70
6	OCB 305N - East	11/07/96	0.88
7	OCB 3S - East	11/07/96	0.35
8	OCB 7S - West	11/07/96	13.0
9	Bank 3 - East	11/07/96	6.30
10	Bank 2 - North	11/07/96	4.10
11	Bank 2 - South	11/07/96	3.60
12	Bank 1G - North Vault Wall	11/07/96	2.00
13	Bank 1 - South	11/07/96	3.70
14	Bank GT1 - West	11/07/96	1.20
15	Bank GT1 - East A	11/07/96	0.92
16	Bank GT1 - East B	11/07/96	1.10

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SWMU #9, Map Location 3b, Maintenance Area, West Central Portion of Site, West of Power Plant

Table 1-1 of the Phase II ESA Report indicates that potential releases exist in this area from the following:

a. Hydrocarbon losses from pipelines between above ground storage tanks and the power plant

b. Occasional spills of wastewater or cleaning liquids used during maintenance and painting operations
c. Discharge of volatile organic solvents from the Stores Building

Section 6.1 of the Phase II ESA Report indicates that no soil and groundwater contamination from the power plant has occurred. However, the Phase II ESA Report did not have any other discussion of investigations conducted in this area that pertains to the three potential releases described above. Based on the review of Figure 3-1a of the Phase II Report, the nearest boring locations placed near the Maintenance Building are SB5-090 and SB3-009. No other investigation was conducted inside the Maintenance Building.

The Stores are located between the Maintenance Building and the Inlet and Discharge Basin, and no specific investigation was conducted in Stores area.

DTSC suggests that soil sampling for metals, VOCs, SVOCs, pH and hydrocarbons in the pipe lines between the ASTs and Power Plant, Maintenance Building, and Stores areas be conducted.

Response: Impacts beneath the Maintenance and Stores Buildings,if any, will be addressed in the future during facility decommissioning. The results of the Phase I and II investigations did not indicate any known historical releases at the Maintenance Building and Stores Building. A total of six soil borings (SB03-005, SB03-006, SB03-008, SB3-009, SB3-010, and SB05-090) were drilled in the general area outside of the Maintenance and Stores Buildings (see Figure A). A total of 13 soil samples were collected at various depths. VOCs and PCBs were not detected in any of the soil samples. Low concentrations of TEH were detected in five of the samples (2.2 to 54 mg/kg). Concentrations of metals were in the range of naturally occurring background levels. One groundwater sample was collected downgradient of the Stores Building (SB03-007). TEH, VOCs, PAHs, and PCBs were not detected in the groundwater sample. Of the metals analyzed for, lead (4.9 ug/l), antimony (35 ug/l), arsenic (7.4 ug/l), copper (23 ug/l), vanadium (32 ug/l), and zinc (25 ug/l) were detected in the groundwater sample. With the exception of antimony, the concentrations of detected metals were generally below the primary and secondary MCLs. These results are not indicative of significant soil and groundwater quality issues near and downgradient of the Maintenance and Stores Buildings. As such, we do not recommend at this stage any additional sampling outside in the general area of the two buildings.

The series of aboveground storage tanks located adjacent and south of the power plant (see Figure A) are used for the storage of water and condensate. These tanks are all located on paved areas. No releases related to these tanks have been identified during the previous site assessments.

SWMU #10, Map Location 3c, Gas Turbine

Table 1-1 of the Phase II ESA Report indicates potential losses of hydrocarbons from the pipelines and ASTs, and PCB losses from the transformer within the Gas Turbine compound. It is also believed that releases from overfilling of the sump, may have occurred in this area. The Gas Turbine area is located near the Jet Fuel Area. Section 2.2.3.2 indicates that two boring locations, SB03-021, SB03-022 and SB3-023 were installed in this area, however there was no sampling conducted underneath the Gas Turbine. SB03-023 detected 0.23 mg/kg Acenaphthene, the maximum concentration found at the site.
DTSC is not clear if the sampling activities conducted in this area were placed near the pipelines, ASTs, or the sump in order to assess the potential contaminants in these areas. DTSC suggests that the information be included and submitted to DTSC for review. Based on Section 6.1 of the Phase II ESA Report, the potential release of contaminants beneath the Gas Turbine is unknown and should be addresses during decommissioning. Additional investigation is required in this area

Response: Impacts directly beneath the gas turbine area, if any, will be addressed in the future during facility decommissioning. Sampling at two locations, one near the transformer (SB03-023) and one near the turbine (SB03-021) did not indicated the presence of petroleum hydrocarbons or PCBs and the concentration of the metals in soil samples were within naturally occurring background levels. Petroleum hydrocarbons were not detected in the soil boring JF-03 located west and downgradient of the Gas Turbine area. Furthermore, petroleum hydrocarbons were not detected in soil boring SB01-070D located northwest of the gas Turbine area near the 2-inch diameter oil line connecting the Jet Fuel Tank to the Gas Turbine. We recommend that further assessment, if needed, to be conducted based on field observations during decommissioning of the gas turbine.

SWMU #11, Map Location 4a, Former Drum Storage Area and Laydown Area

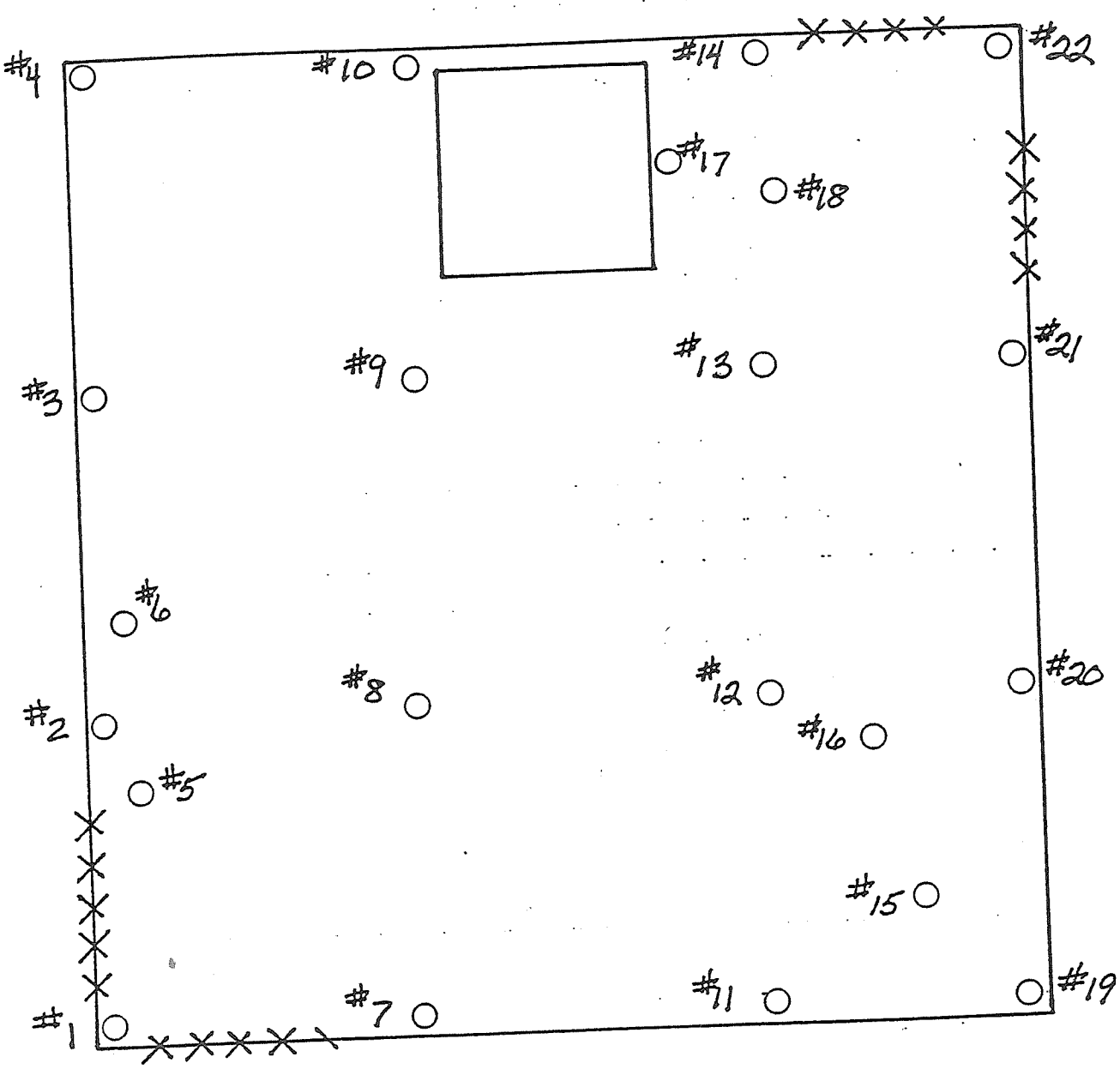
Table 1-1 of the Phase II Report indicates that soil impacted by PCP was excavated, and that a Stipulation and Order including NFA was issued by DTSC. In December 9, 1994, DTSC issued a Stipulation and Order, Docket Number 95/95-039 to San Diego Gas & Electric. Paragraph 8 of the Stipulation and Order indicates that corrective action or remediation of PCP has taken place, and therefore no further corrective action was required. A copy of the Stipulation and Order can be found in Fluor Daniel's Phase I Report, Appendix C, section Appendix C.4.2. Section 6.1 of the Phase II ESA Report indicates that the results of the biased grid sampling of soil and groundwater in the vicinity of this area indicates that no potential environmental condition remains, and no further action is recommended. However, only one boring location was placed inside the Drum Storage area. DTSC is also not clear if the Drum Storage Area is different from the Laydown Area. Due to its proximity to the First Generation Surface Impoundment, DTSC suggests that additional investigation is required in the Drum Storage and Laydown area for metals, pH, TEH, VOCs, SVOCs

Response: The drum storage area is a fenced area located north and adjacent to the former First Generation Impoundment (Figure A). The laydown area is located in the open area outside of the fenced drum storage area and to its south. Figures showing sample locations and laboratory results included in the Phase 1 report are attached herein. The PCP related investigation included collecting 22 surface soil samples across the drum storage area. This investigation identified one location with elevated PCP concentrations. The PCP-impacted area was remediated by excavating a relatively small area (7 feet by 11 feet and depth of 12 to 18 inches). Confirmation soil sampling did not detect PCPs (a report of that sampling is attached). During the Phase II investigation, one soil boring SB04-013 was advanced in the general area of the former PCP impacted area. Soil samples were collected at depths of 0.5 to 1 feet and 4 to 5 feet bgs. VOCs and PCBs were not detected in any of the soil samples. Low concentration of TEH (18 mg/kg) was detected in the surface sample only. SVOCs, including PCP, were below the detection limit in both samples. However, high SVOC detection limits were reported for the surface soil sample with PCPs less than 5 mg/kg. Since this high detection limit is below the industrial PRG of 9 mg/kg, no further action related to PCPs is recommended.

Source: Phase I Report Vol. 1 - Book 3 - Appendix C

SOUTH BAY SAMPLING PLAN

3/16/93



N

O-DENOTES SAMPLING POINT

XX - DENOTES FENCE

#1 - EXAMPLE OF SAMPLE POINT LOCATION

SCALE 1" = 10' WGB 3/16/93

Emergency Coordinator Donald [illegible]

Business [illegible]ess 990 Bay Boulevard, Chula Vista, CA 92011 Phone Number - Day 427-7022 / 420-7303 24 hr/home 461-4460

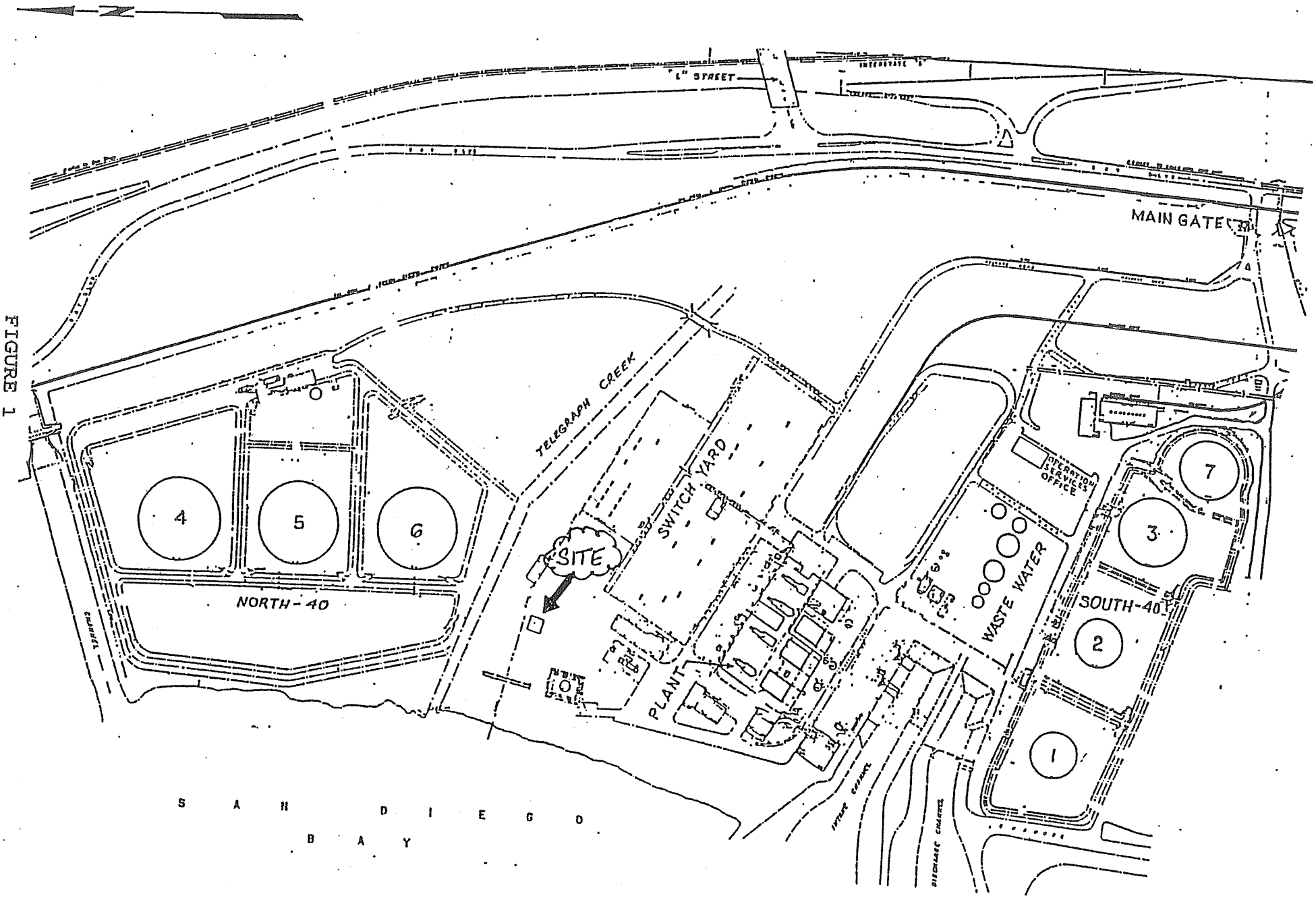
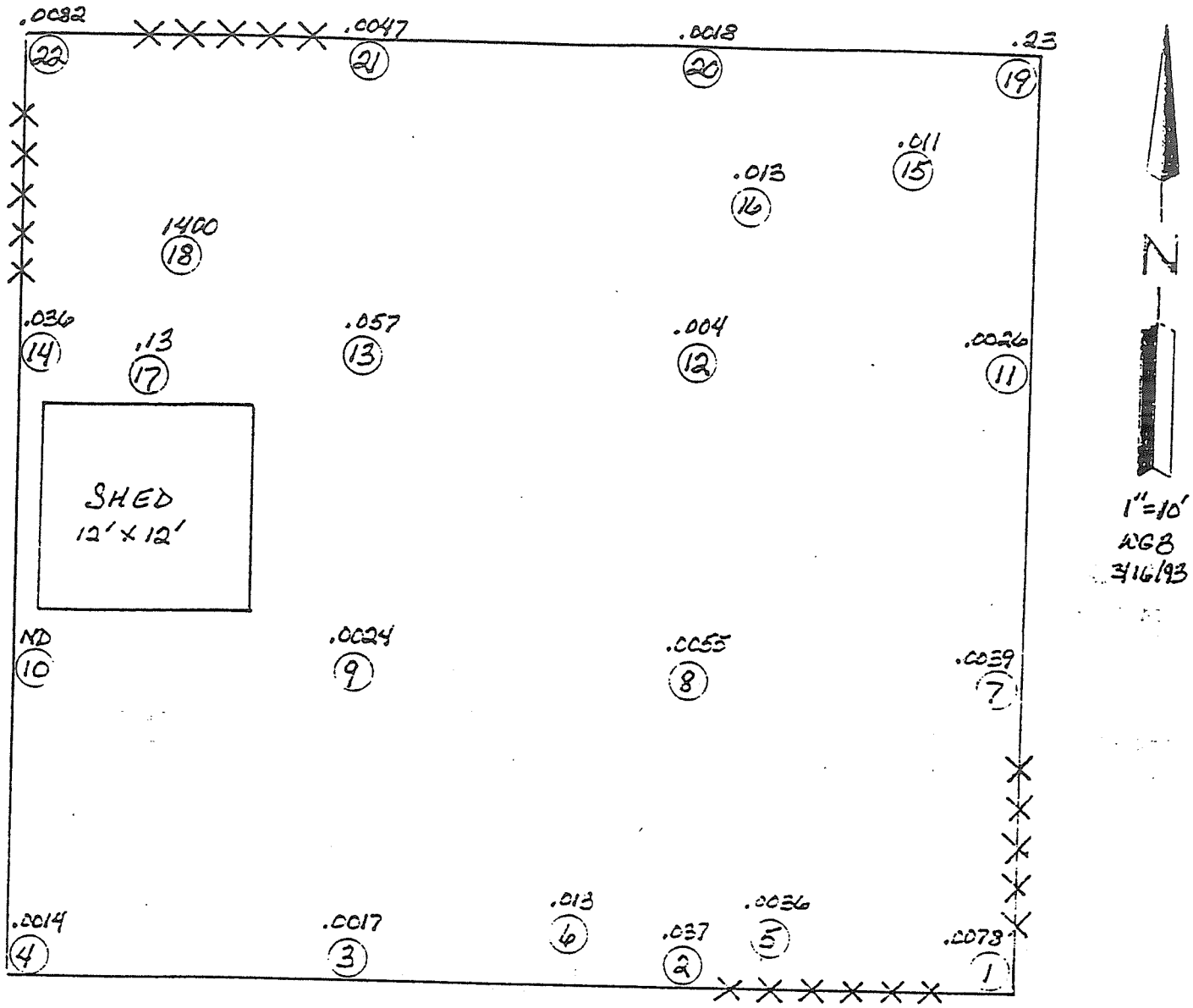


FIGURE 1

"PLANT OVERVIEW"

SOUTH BAY SAMPLING PLAN



(1) = SAMPLE POINT #1

.0078 = VALUE AT SAMPLE POINT (mg/kg)

SAMPLE POINT	PCP VALUE (mg/kg)	SAMPLE POINT	PCP VALUE (mg/kg)
1	.0078	12	.004
2	.037	13	.057
3	.0017	14	.036
4	.0014	15	.011
5	.0036	16	.013
6	.013	17	.13
7	.0039	18	1400
8	.0055	19	.23
9	.0024	20	.0018
10	NON-DETECT	21	.0047
11	.0026	22	.0082

FIGURE 2

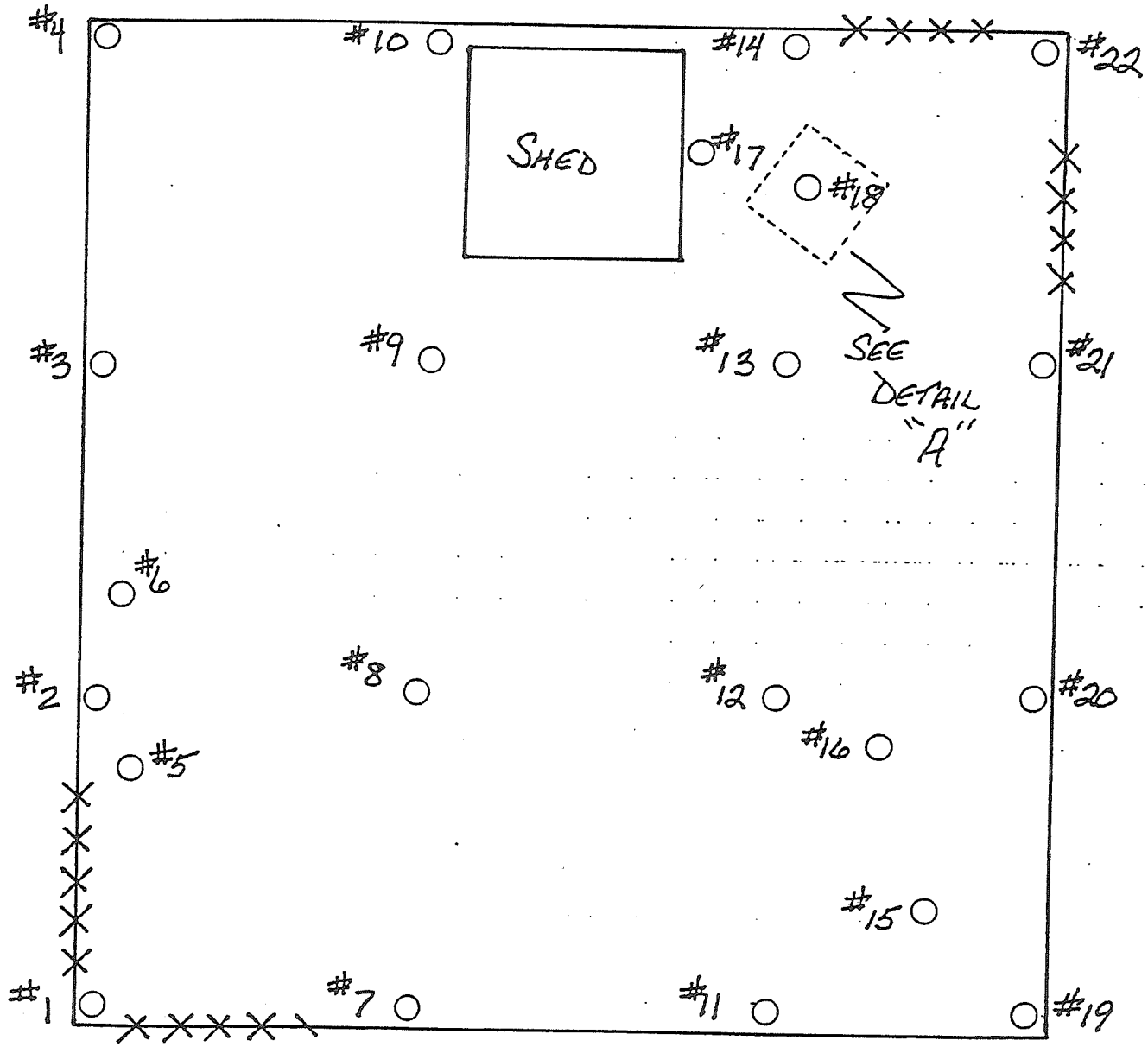
REGULAR TEST RESULTS BY TEST

PENTACHLORPHENOL, SOLID **Minimum:** **Maximum:**
Method: EPA 8270

Samp	Sample Description	Result	Units	Limit	Prepared	Analyzed	By
01A	SAMPLE #1	0.0078	mg/kg	0.0010	03/18/93	03/22/93	ATI
02A	SAMPLE #2	0.037	mg/kg	0.0010	03/18/93	03/22/93	ATI
03A	SAMPLE #3	0.0017	mg/kg	0.0010	03/18/93	03/23/93	ATI
04A	SAMPLE #4	0.0014	mg/kg	0.0010	03/18/93	03/23/93	ATI
05A	SAMPLE #5	0.0036	mg/kg	0.0010	03/18/93	03/23/93	ATI
06A	SAMPLE #6	0.013	mg/kg	0.0010	03/18/93	03/23/93	ATI
07A	SAMPLE #7	0.0039	mg/kg	0.0010	03/18/93	03/23/93	ATI
08A	SAMPLE #8	0.0055	mg/kg	0.0010	03/18/93	03/23/93	ATI
09A	SAMPLE #9	0.0024	mg/kg	0.0010	03/18/93	03/23/93	ATI
10A	SAMPLE #10	nd	mg/kg	0.0010	03/18/93	03/23/93	ATI
11A	SAMPLE #11	0.0026	mg/kg	0.0010	03/18/93	03/23/93	ATI
12A	SAMPLE #12	0.0040	mg/kg	0.0010	03/18/93	03/23/93	ATI
13A	SAMPLE #13	0.057	mg/kg	0.0010	03/18/93	03/23/93	ATI
14A	SAMPLE #14	0.036	mg/kg	0.0010	03/18/93	03/23/93	ATI
15A	SAMPLE #15	0.011	mg/kg	0.0010	03/23/93	03/24/93	ATI
16A	SAMPLE #16	0.013	mg/kg	0.0010	03/18/93	03/23/93	ATI
17A	SAMPLE #17	0.13	mg/kg	0.0010	03/18/93	03/23/93	ATI
18A	SAMPLE #18	1400	mg/kg	0.0010	03/18/93	03/23/93	ATI
19A	SAMPLE #19	0.23	mg/kg	0.0010	03/18/93	03/23/93	ATI
20A	SAMPLE #20	0.0018	mg/kg	0.0010	03/18/93	03/23/93	ATI
21A	SAMPLE #21	0.0047	mg/kg	0.0010	03/18/93	03/23/93	ATI
22A	SAMPLE #22	0.0082	mg/kg	0.0010	03/18/93	03/23/93	ATI

SOUTH BAY SAMPLING PLAN

3/16/93



N

O-DENOTES SAMPLING POINT

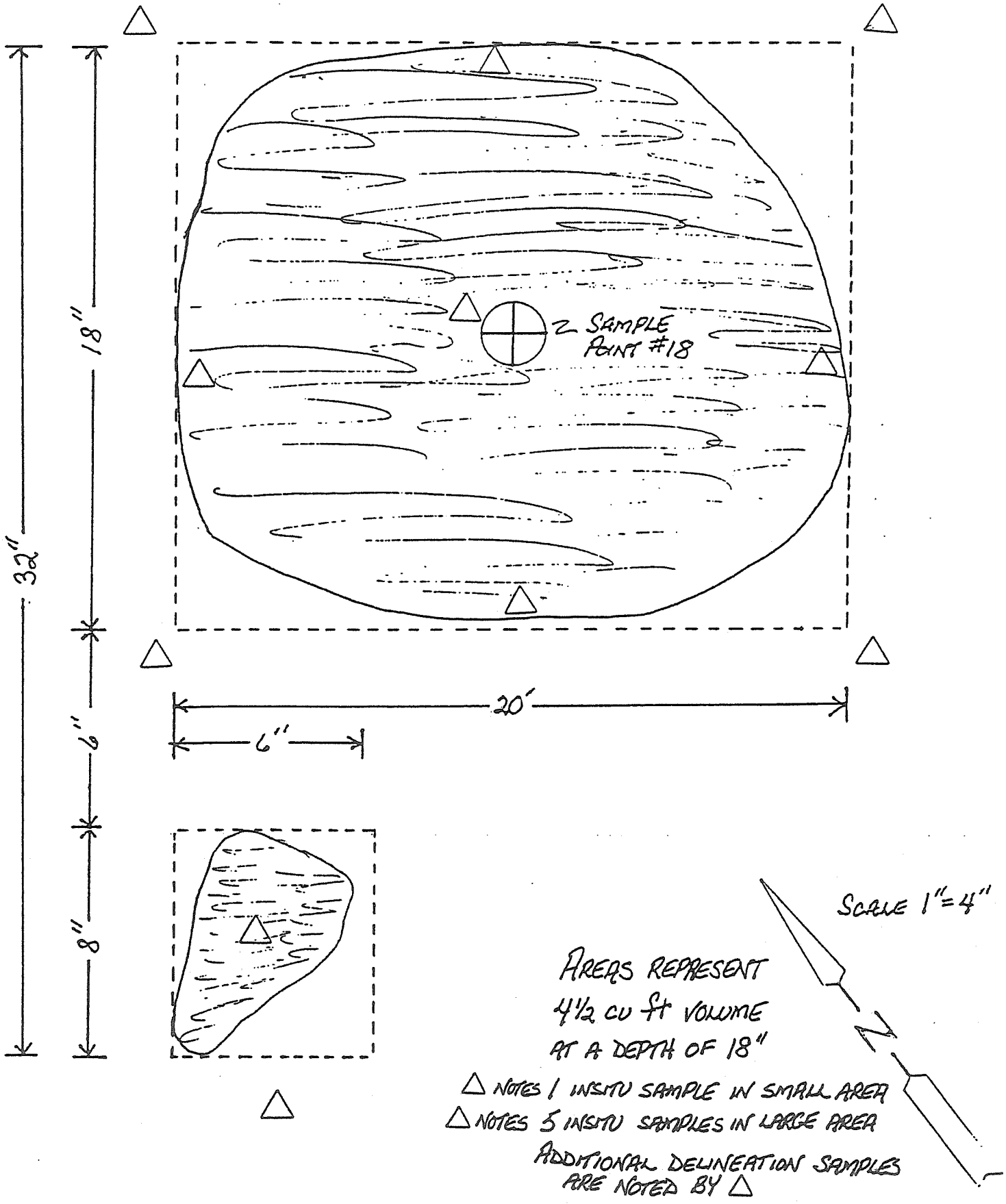
XX - DENOTES FENCE

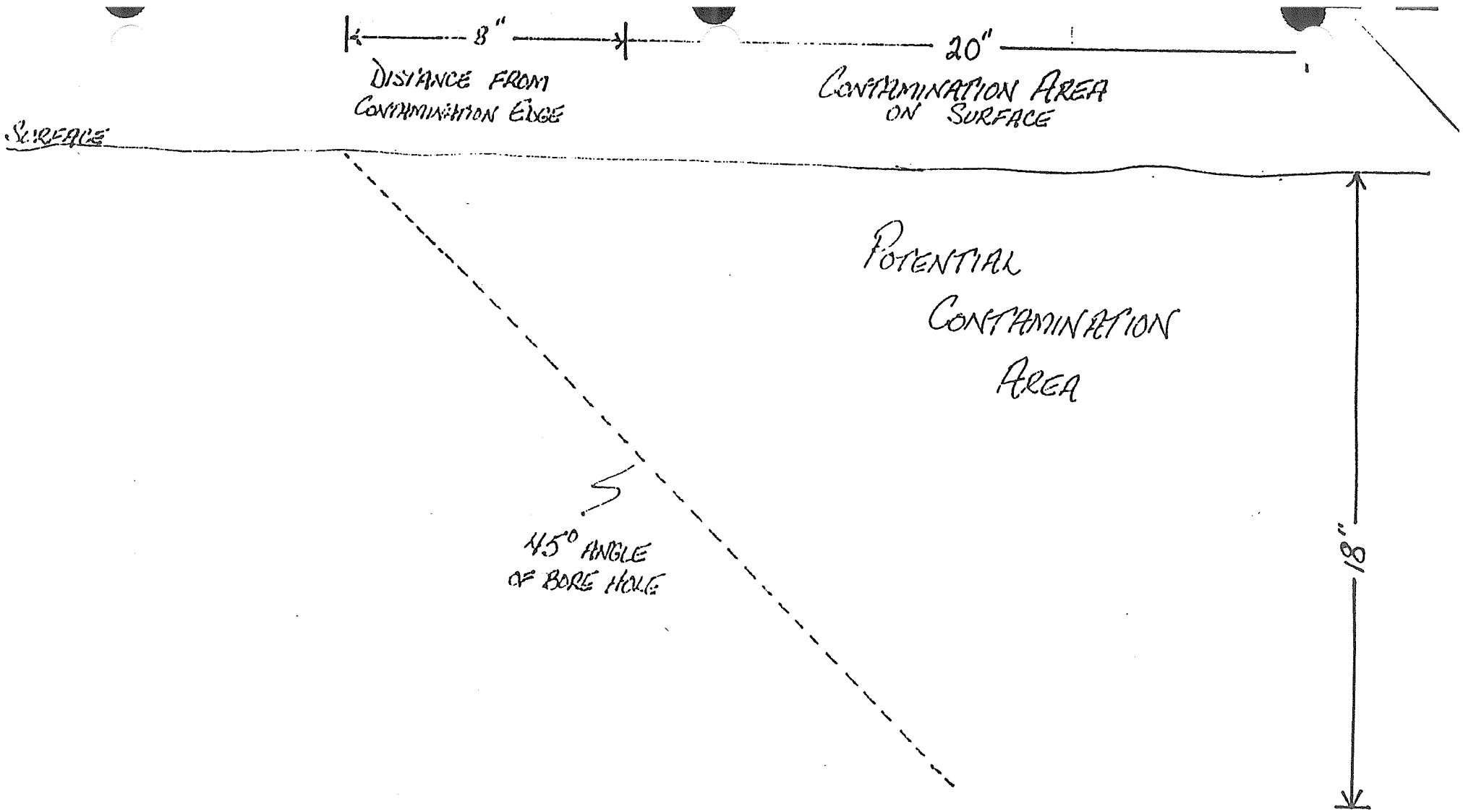
#1 - EXAMPLE OF SAMPLE POINT LOCATION

SCALE 1" = 10' VCB 3/16/93

SOUTH BAY SAMPLING PLAN

DETAIL 'A'

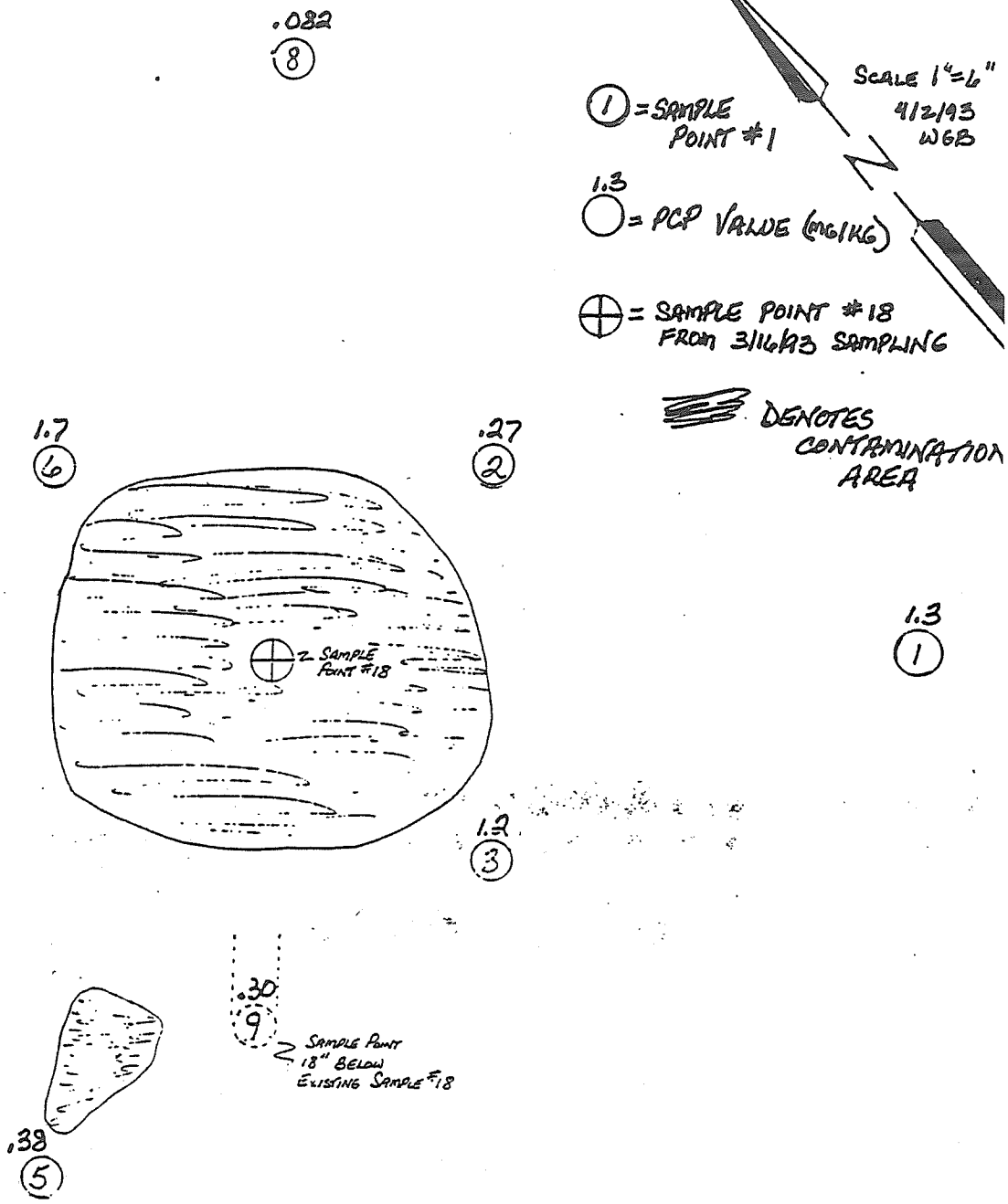




PROFILE OF ADDITIONAL SAMPLE
18" UNDER SAMPLE #18

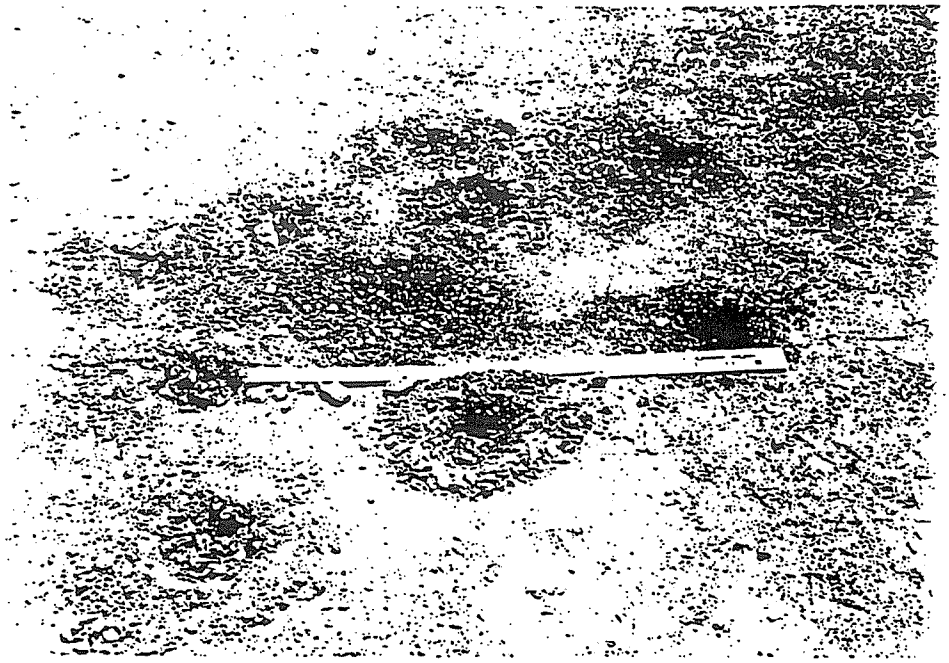
DETAIL 'B'

SOUTH BAY SAMPLING PLAN



SAMPLE POINT	PCP VALUE (MG/KG)
1	1.3
2	.27
3	1.2
4	.018
5	.38
6	1.7
7	.68
8	.082
9	.30

FIGURE 3



4/12/93 NINE SAMPLE POINTS

FIGURE 4

REGULAR TEST RESULTS BY TEST

PENTACHLORPHENOL, SOLID Minimum: Maximum:
Method: EPA 8150

Samp	Sample Description	Result	Units	Limit	Prepared	Analyzed	By
01A	Hole #1	1.3	mg/kg	0.0010	04/07/93	04/12/93	ATI
02A	Hole #2	0.27	mg/kg	0.0010	04/07/93	04/12/93	ATI
03A	Hole #3	1.2	mg/kg	0.0010	04/07/93	04/12/93	ATI
04A	Hole #4	0.018	mg/kg	0.0010	04/07/93	04/11/93	ATI
05A	Hole #5	0.38	mg/kg	0.0010	04/07/93	04/12/93	ATI
06A	Hole #6	1.7	mg/kg	0.0010	04/07/93	04/12/93	ATI
07A	Hole #7	0.68	mg/kg	0.0010	04/07/93	04/12/93	ATI
08A	Hole #8	0.082	mg/kg	0.0010	04/07/93	04/12/93	ATI
09A	Hole #9	0.30	mg/kg	0.0010	04/07/93	04/12/93	ATI

PENTACHLOROPHENOL CLEANUP

PROJECT DESCRIPTION/OBJECTIVE

This project will remove a small quantity of pentachlorophenol (PCP) contaminated soil located at South Bay Power Plant. This project is necessary to due to a minor release of PCP at the retired South Bay drum yard site.

PROJECT MANAGEMENT

Project management and coordination activities will be handled by the Hazardous Materials and Waste Management Section of the company's Environmental department. Senior Environmental Analyst Jerry Brull or other designated individual of this section will be assigned oversight duties.

ASSESSMENT OF REMEDIATION

SDG&E's certified environmental laboratory will take insitu samples of the excavation to determine if the remediation is complete or further assessment is required. One sample will be taken from the midpoint of each wall and the bottom of the excavation.

REMEDIATION

Remediation of the PCP contamination will be performed by Fleet Operations - Hazardous Waste Section. Contaminated soil will be placed in a drum(s) of adequate size with proper labeling denoting contents, chemical analysis, generation date, screening data and volume.

WORK DESCRIPTION

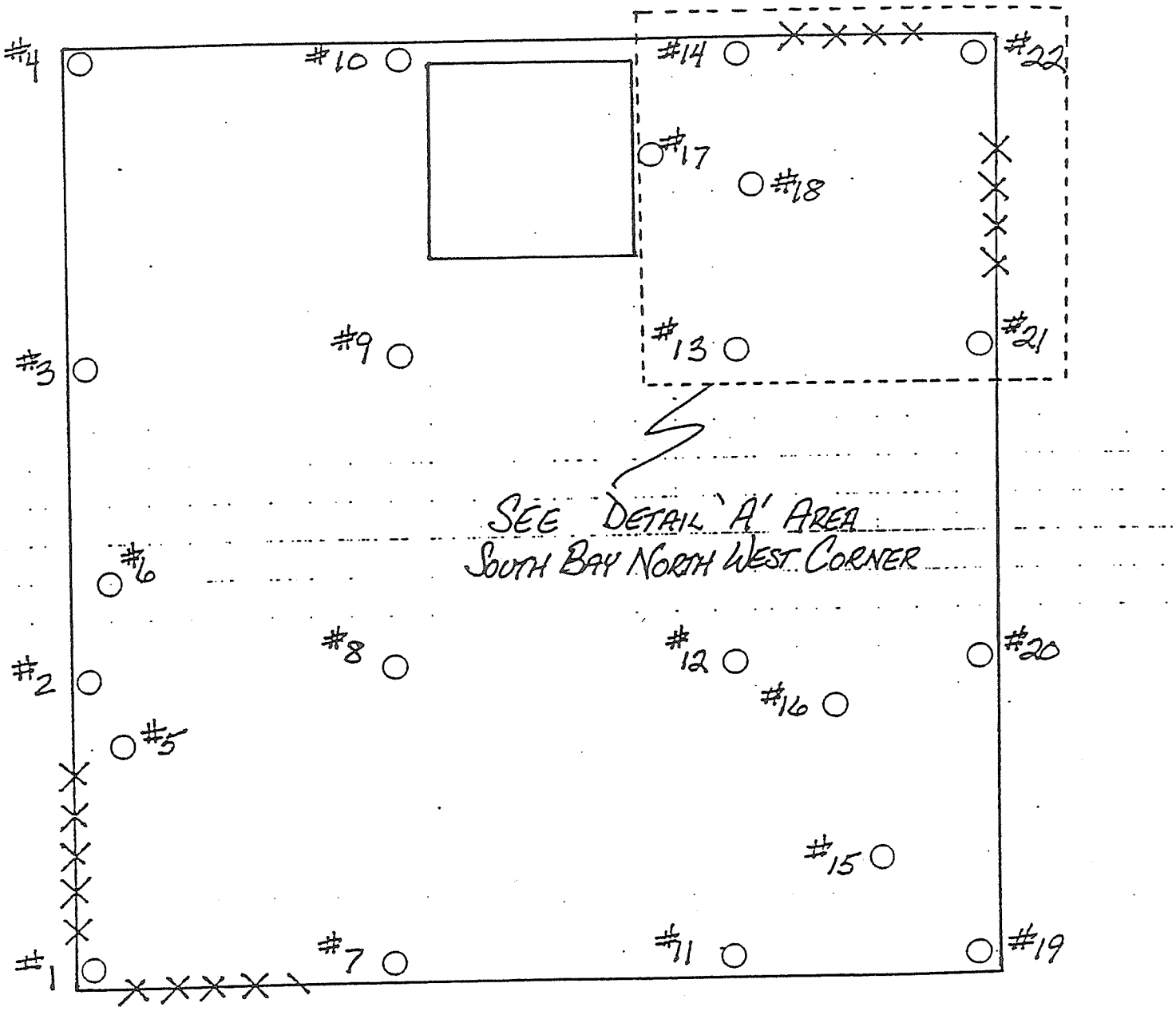
Fleet Operations, a licensed hazardous waste hauler, will remove all soil within the area encompassed by the samples previously taken to delineate the area of contamination, which is 43" X 50" with a depth of 18". Manual labor with appropriate personal protective equipment will be utilized to remove the contaminated soil.

REGULATORY INTERFACE

Final results of analysis, chain-of-custody report and quality assurance/quality control report will be provided to appropriate agencies upon completion of remediation.

SOUTH BAY SAMPLING PLAN

3/16/93



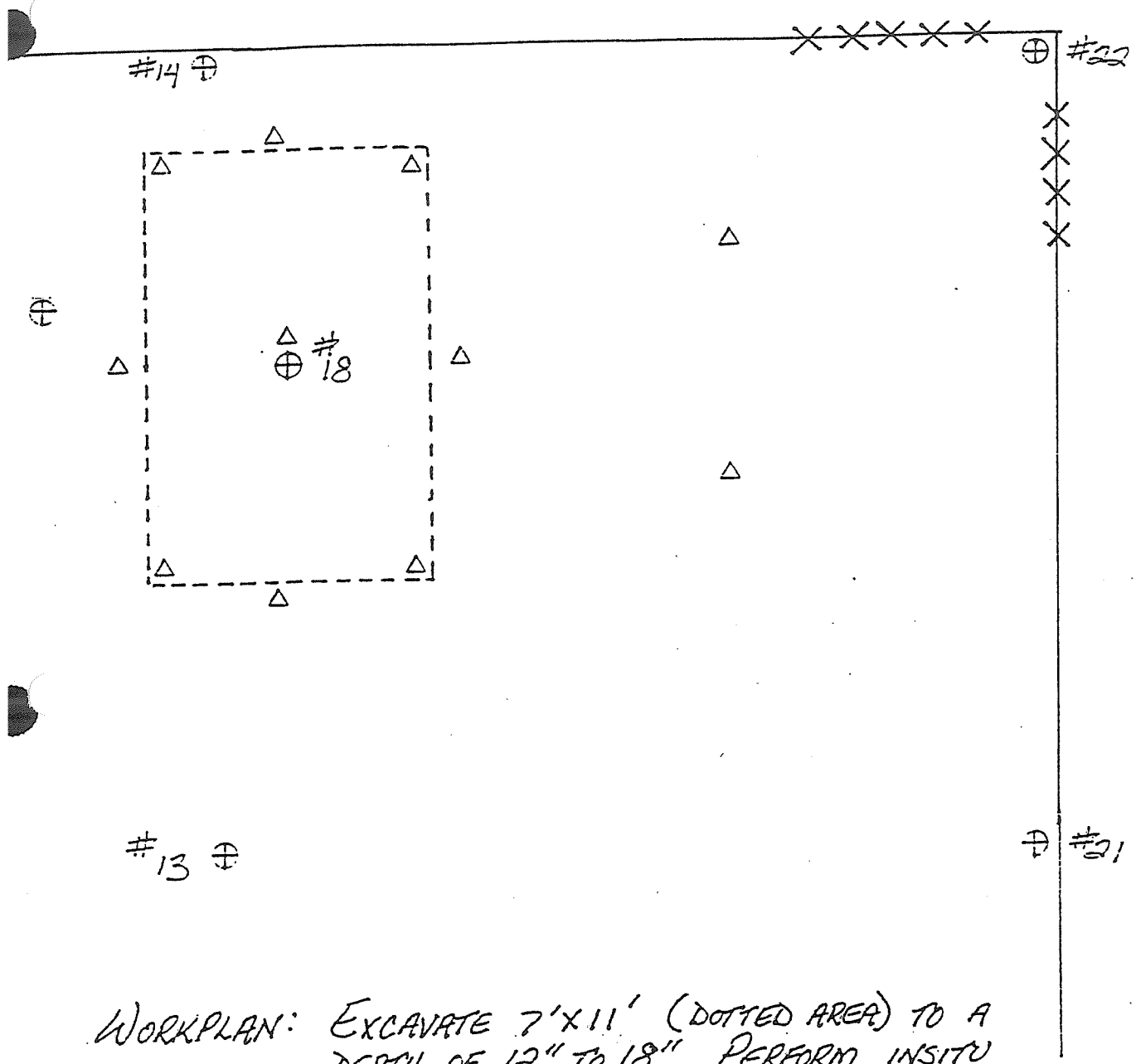
O-DENOTES SAMPLING POINT

X X - DENOTES FENCE

#1 - EXAMPLE OF SAMPLE POINT LOCATION

SCALE 1" = 10' WGB 3/16/93

SOUTH BAY NORTH WEST CORNE
WORKPLAN AND SAMPLING PLAN
(DETAIL 'A' AREA)



WORKPLAN: EXCAVATE 7'X11' (DOTTED AREA) TO A DEPTH OF 12" TO 18". PERFORM INSITU SAMPLING ON EXCAVATION AND TAKE ADDITIONAL SAMPLES OF AREA AT SURFACE AS NOTED.

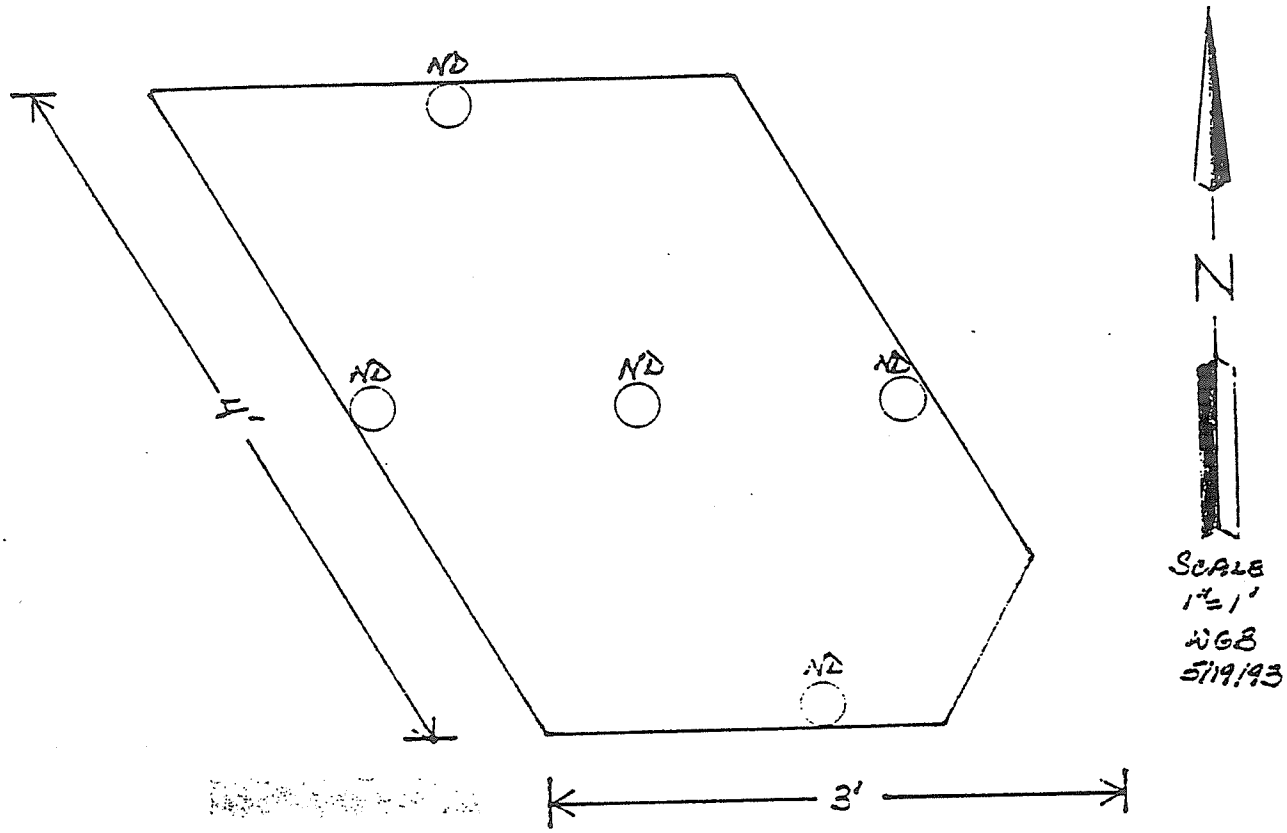
⊕ PREVIOUS SAMPLES FROM 3/16/93

△ ADDITIONAL SAMPLES TO BE TAKEN

XXXXXX DENOTES FENCE.

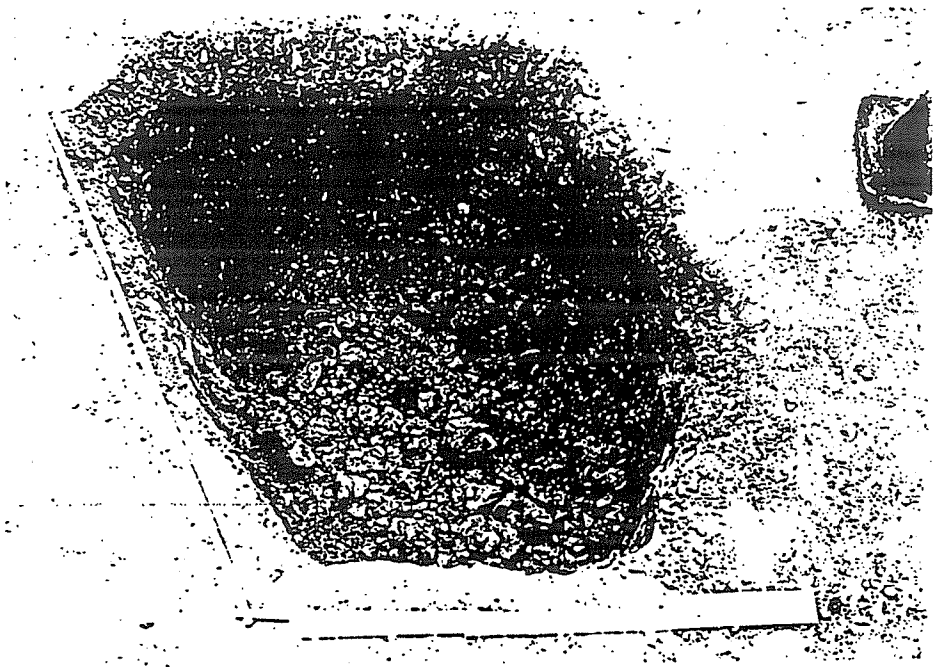
SCALE 1"=4' WGB 3/31/93

SOUTH BAY SAMPLING PLAN

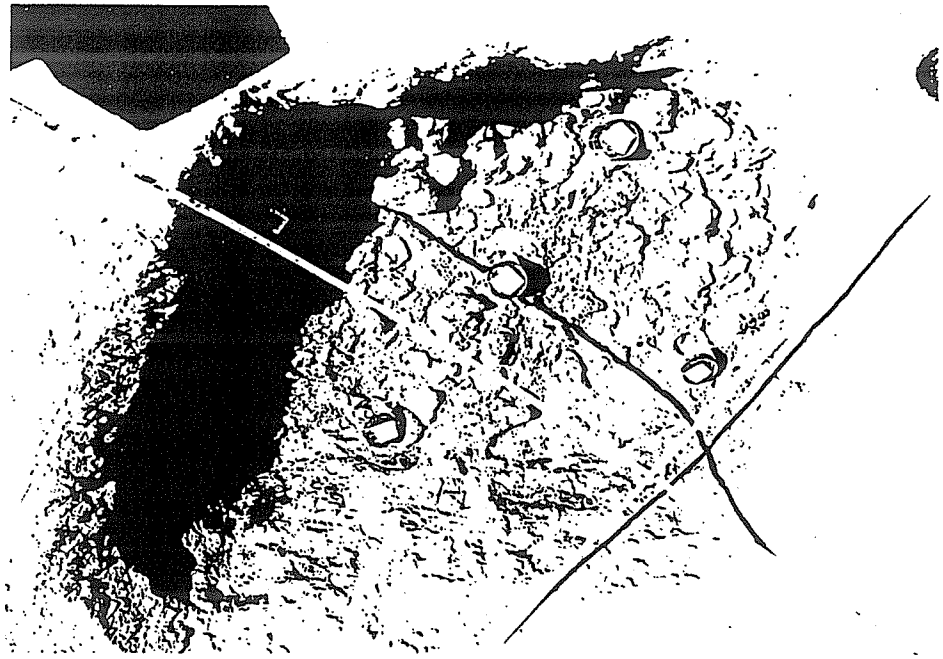


SAMPLE POINT	PCP VALUE (MG/KG)
1	NON-DETECT
2	NON-DETECT
3	NON-DETECT
4	NON-DETECT
5	NON-DETECT

FIGURE 5



5/19/93 REMEDIATION EXCAVATION



5/19/93 FIVE SAMPLE POINTS

FIGURE 6

SWMU #12, Pole Wrap Yard, Pentachlorophenol

Section 2.3, page 2-15 of RAP Workplan indicates that in April 1993, 30 shallow soil samples were collected to assess PCP bearing materials in the PCP wrap storage area. PCP was detected up to 1,400 mg/kg, and was excavated in May 1993. DTSC is not clear if the Pole Wrap Yard is in the same location as the above Former Drum Storage Area and Laydown Area. DTSC suggests that a discussion to clarify the distinction between the Pole Wrap Yard and the Former Drum Storage Area and LayDown Area be submitted to DTSC.

Response: The pole wrap yard is the same area described above under SWMU #11 in the drum storage area where PCP related investigation and remediation occurred.

SWMU #13, Map Location 4b, Construction Yard

Table 1-1 of the Phase II Report identified that a potential exists of metal impact from the sandblasting activity in this area. Section 6.1 of the Phase II ESA Report indicates that soil and ground water was sampled and no contamination was found, however there was no discussion of sampling locations and analysis that were conducted to justify this statement. Figure 3-1a indicates that the nearest boring location found in area 4b are SB4-005, SB4-006 and SB2-003, however, DTSC is not clear if these sampling locations were placed to assess the impacts of metals from the sandblasting activities. DTSC suggests that a discussion of the investigation activities conducted to assess metals from the sandblasting activities in this area be submitted to DTSC, and that the actual location of the sandblasting area in the map should be identified.

Response: Based on previous site information documented in the Phase II report (Figure 1-2A) and information provided by SDG&E during the 8 April 2003 site visit, the construction yard is located adjacent to the southeastern corner of the wastewater treatment plant. Abrasive blasting occurred in a separate area to the west of the construction yard (Figure A). During the Phase II investigation, two soil borings were drilled within the construction yard (SB02-003 and SB04-005). Two soil samples were collected at each of the borings at depths of 0.5 to 1 foot and 4 to 5 feet bgs. A groundwater sample was collected from boring SB04-005. VOCs were not detected in soil samples from boring SB04-005. PCBs were not detected in the soil samples from the two subject borings. Metals were detected at concentrations in the range of naturally occurring background levels. Low concentrations of TEH were detected in three of the four the soil samples in the range of 1.7 to 13 mg/kg. VOCs, PAHs, and PCBs were not generally detected in the groundwater sample. Low concentration of TEH (0.22 mg/l) was detected in the groundwater sample with no BTEX component. Based on the results of the Phase II sampling, no significant soil and groundwater quality impacts have been identified at the construction yard and no further action is recommended.

SWMU #14, Map Location 4c, Hazardous Materials Storage Area

Table 1-1 of the Phase II Report indicates that a potential exists for hazardous materials impact in this area, including metals from sandblasting activities. DTSC found no discussion of the investigation activities conducted in this area. Figure 3-1a indicates that boring locations SB4-006 through SB4-009 were conducted in the vicinity of the Hazardous Materials Storage Area, however these boring locations do not depict whether they were placed near or at storage area, or where sandblasting activities were conducted.

Response: Figure A shows the location of the Hazardous Materials Storage Area. During the Phase II investigation, soil boring SB02-001 was drilled adjacent to the storage area. In addition, as part of supplemental environmental assessment at the site, Ninyo & Moore, on behalf of the Port, drilled three soil borings (HM-001, HM-002, and HM-003) in the vicinity of the Hazardous Materials Storage Area. PID screening of the soil samples did not detect presence of VOCs in the soil samples during drilling activities. Furthermore, field staff did not observe any odors during the sampling program. VOCs, SVOCs, and PCBs, and herbicides and pesticides were not detected in any of the soil samples analyzed for these compounds. In boring SB02-001, TEH was detected at low concentrations (18 mg/kg in the surface sample and 1.6 mg/kg in the sample from depth of 5 to 6 feet bgs). With the exception of copper and molybdenum, metals were detected in the range of naturally occurring background levels. Although the maximum copper concentration of 140 mg/kg was above the background level of 56 mg/kg, it was below the residential PRGs. Molybdenum was also detected slightly above the background level, but below the residential PRGs. A complete copy of the Ninyo & Moore report is provided under a separate cover.

SWMU #15, Map Location 5, Open Area, Former LNG Plant

a. Former LNG Plant - Enecotech's Final Report dated April 29, 1997 indicates that Methyl Mercaptan spilled on bare ground at the LNG facility. Methyl Mercaptans are sulfur-containing hydrocarbon group of chemicals with a boiling point of 43 degrees Farenheit and are used to odorized liquid natural gas. LNG operated at south of the site between 1966 to 1987. The soil investigation in 1997 includes 1 soil boring and analysis result did not detect Mercaptan in soil. It was concluded that there was no impact due to high vapor pressure of Mercaptan. DTSC suggests that additional sampling is required to verify presence of Mercaptan in this area.

Response: The former LNG area is located offsite to the south of the South Bay Power Plant facility (see Figure A). As discussed and agreed during DTSC's April 8, 2003 site visit, the LNG site is not part of the power plant property and is not included in the ongoing site characterization / remediation efforts related to the power plant.

b. Truck unloading station for Tank #7 - It appears that this area is similar to Tank #7 located in the South Tank Farm. A discussion about its location and related investigation should be included. DTSC also suggests to identify this location in the map.

Response: The location of the former truck loading area is shown on Figure A. During the Phase II investigation, one soil boring (SB01-068) was advanced in that general area. Petroleum hydrocarbons were not detected in the three soil samples collected from this boring and metals were detected in the range of naturally occurring levels (see Appendix A). Monitoring well MW-1 was installed near the loading area in 1988 as a background well as part of investigation of the former USTs. Five monitoring events between 1988 and 2000 did not detect petroleum hydrocarbons. Based on the above information, no further investigation is recommended for the truck loading / unloading area.

c. Sandblasting Grit Area -Table 1-1 of the Phase II Report indicates that sandblasting grit was observed in the north east corner of the open area. It identified that metals, and semi-volatile had potentially impacted the area. DTSC found that the size and specific location of this area is not identified in the map. DTSC suggests that the Sandblasting Grit Area be identified in the map. A discussion of investigation activities conducted in this area should be submitted to DTSC.

Response: Figure A shows the location where blasting grit may potentially have been observed (HR-28 and HR-29) in the northeastern portion of the open area based on employee interviews. Trenching was conducted in 1980s in the area to locate any blasting grit. No blasting grit was found in the area investigated. During the 1998 Phase II investigation, a number of soil borings were advanced in the northeast portion of the open area (SB05-074, 075, 076, 077, 078, 079, 080, 081 and 082). PCBs were not detected in any of the soil samples. TEH was not detected in the majority of soil samples (maximum concentration of TEH detected in a few samples was 5.8 mg/kg). The results of the Phase II soil sampling do not indicate presence of impacted soil in this area. This is further supported by the background data evaluation, presented in Appendix C, which indicates that the metals in the soils in the area are representative of native soil and do not appear to be imported fill with other materials such as blasting grit. The results of the Phase II soil sampling do not indicate the presence of impacted soil in this area. No further investigation is recommended. For soil laboratory results please refer to Appendix A.

d. Dumping of Contaminants anywhere within the open areas - Table 1-1 of the Phase II Report identified that a potential of contaminants dumping occurred in this area. DTSC did not find a discussion of how the above activity was investigated in the site. DTSC suggests submitting this information for review.

Response: According to SDG&E, construction debris was present in this area during construction of the road and as a result of past widening of the Telegraph Canyon Creek. However, dumping of contaminated soil in this area did not occur. Review of aerial photographs for 1963, 1975, 1989, and 1994 do not show evidence of soil dumping in this area. During the Phase II investigation, four soil borings (SB05-061, SB05-062, SB05-078, and SB05-080) were drilled in this general area (see Figure A). PCBs were not detected. TEH was detected in three soil samples in the range of 0.83 to 3.5 mg/kg. Soil boring logs do not indicate that blasting grit or other fill materials were observed by the field staff during drilling. This is further supported by the background data evaluation, presented in Appendix C of this document, which indicates that the metals in the soils in the area are representative of native soil and do not appear to be imported fill.

SWMU # 16, Map Location 5a, Dissolved VOCs in Groundwater

The Phase II investigation conducted in 1998 found that dissolved VOCs was found in groundwater samples collected from well SB5-041A, located in the eastern part of the site. The VOCs include 53.9 ug/l Trichloroethene (TCE) and 19 ug/l cis-1,2 –Dichloroethene. Soil gas investigation also detected minor concentration of Chloroform. A report entitled "Investigation and Proposed Remediation of Dissolved VOCs in Groundwater Eastern Portion of South Bay Power Plant" (Proposed Remediation Report) dated November 2001, prepared by IT Corporation is proposing to remediate the VOCs contamination by natural attenuation. Based on our review, DTSC found that prior to Additional investigation is required based on the following:

a. Section 2.0 Site Assessment, Eastern Part of the South Bay Power Plant -The third paragraph indicates that 24 additional soil gas samples in 2001, however, Table 1 only listed 13 soil gas sampling data. DTSC suggests that the rest of the data be submitted to DTSC for review.

Response: Based on our review of the previous reports, the chain of custody document for the January 15, 2001 soil gas survey indicate that a total of 13 soil gas samples, not 24 samples, were collected in 2001. We believe that the statement in the November 2001 IT Corporation report indicating that 24 soil gas samples were collected in 2001 is not accurate. The documentation for the number of samples is attached including the chain of custody form.

b. Appendix A, Section 3.1.1–This section indicates that Cis-1,2-DCE was detected below the MCL of 70 ug/l. It should be noted that the correct MCL is 6 ug/l instead of 70. Four samples collected and analyzed in February 2001 indicate cis 1,2-DCE above 6 ug/l. DTSC also suggest to correct the MCL for trans 1,2-dichloroethene from 100 to10 ug/l, and Vinyl Chloride from 2 to 0.5 ug/l. In addition, the recommended detection limit for trichloroethylene, and Cis 1,2-dichloroethylene is 0.5 instead of 5.0

Response: We agree with DTSC's comment regarding MCLs for the above compounds. The new MCLs will be included in further assessment and remediation proposed for the VOC plume area.

c. Table 1, Soil Gas Survey Results – This table indicates that sampling locations SG8-5 and SG14-3.5 sampling location do not have soil gas analysis result values, while laboratory analysis indicates detection Tetrachloroethene at 0. 7 and 1.0 ug/l, respectively. Sampling location SG19-2.5 indicates 0.6 ug/l for Tetrachloroethene, while laboratory analytical result indicates 1.0 ug/l. DTSC suggest to correct Table 1.

Response: We agree with DTSC's comments. The corrected data is in the new project database and corrected Table 1 is attached.

d. Table 3-3, Background Metal Concentrations in Groundwater of the Phase II ESA Report -The table indicates that 1.5 ug/l (MCL=2.0 ug/l) Mercury, and 290 ug/l (MCL=100 ug/l) Barium were detected in SB5-052. Sampling location SB5-052 is located in the mid eastern section of the site. DTSC suggests that additional sampling and analysis is required to verify concentration of Mercury and Barium in this area.

Response: Both Mercury and Barium were detected in groundwater slightly above their detection limits but below the MCLs of 2 ug/l and 1,000 ug/l respectively. Mercury and Barium have not been detected at other nearby sampling locations. The results of the Phase I and II site assessments did not identify presence of sources or historic releases of barium or mercury in the general vicinity of Boring SB05-052. Barium was detected in soil samples in Boring SB05-052 at 48 to 55 mg/kg which is on the low end of the published naturally occurring range of 23 mg/kg to 560 mg/kg in Southern California, below site-specific background concentrations and orders of magnitude below the residential PRG of 5,400 mg/kg and industrial PRG of 67,000 mg/kg. Mercury was below the detection limit of 0.05 mg/kg in the same soil samples. The above information is not indicative of barium and mercury impacts at this location. Based on the above information, no further action is recommended at Boring SB05-052 location.

e. Table 3-8 - Mercury at 2.4 mg/l was detected in sampling location SB5-005 at 4.5 feet depth. SB5-005 is located near the Guardhouse. DTSC suggests that additional sampling near SB5-005 to determine the lateral and vertical extent of metals in this area

Response: SB05-005 and SB05-006 are located near the guardhouse. Mercury was not detected in soil samples in boring SB05-006. Mercury was detected in the shallow soil sample (2.4 mg/kg) but was not detected in the deeper sample collected in boring SB05-005. The concentration of other metals was also in the range of naturally occurring background levels. Based on our review of the boring log for SB05-005, both the shallow sample (0.5 to 1 foot) and deeper sample (4 to 5 feet) were classified as silt and are similar in nature. The presence of mercury is considered to be representative of background conditions. No further sampling is recommended.

f. Table 3-10, Baseline Groundwater Results for TEH and Organics of the Phase II ESA Report - This table identified that Xylene at 5 ug/l (MCL = 0.5 ug/l) was detected in SB5-062 well located in Area 5a. Based on the review of the Figures contained in the Report, DTSC suggests that additional sampling is required to verify presence of VOCs in this area.

Response: The MCL for xylenes is 1,750 ug/l not 0.5 ug/l. The detected xylenes concentration of 5 ug/l is orders of magnitude below the subject MCL. No further action is recommended at this location.

f. Table 3-10 of the Phase II ESA Report also indicates that 14 ug/l 1,1-Dichloroethene was detected in SB5-094. SB5-094 is located on the northwest side of the Switchyard. DTSC suggests that additional sampling is necessary to determine presence of VOCs in this area.

Response: 1,1-Dichloroethene (1,1-DCE) was not detected in groundwater sample at Boring SB05-094. However, 1,1-dichloroethane was the compound detected at 14 ug/l. VOCs, including 1,1-DCA, were not detected in the downgradient well SB04-011 or in the upgradient well SB05-054. Additional groundwater sampling and analysis for VOCs will be conducted in the vicinity of Boring SB05-094 to further assess the extent of VOC groundwater impact.

Section 5.1 of the Proposed Remediation Report is recommending Monitored Natural Attenuation remediation limited to a two-year period of quarterly monitoring of the wells at the site. So far, DTSC found that there are insufficient data to conclude that natural attenuation is occurring at the

site. In addition, other sampling locations were found to have metals and VOCs, therefore, prior to considering remedial action by natural attenuation, additional investigation is required in this area.

Response: TCE has been detected in the area east of the power plant/switch yard at relatively low concentrations of up to 59 ug/l (see attached table). Cis-1,2-DCE, a degradation product of TCE, has also been detected at lower concentrations at same locations where TCE has been detected. As such, we recommend that additional groundwater monitoring be conducted to generate adequate recent data for the assessment of Monitored Natural Attenuation (MNA). At that time, a decision will be made as to the effectiveness of MNA as a sole groundwater remedy or a combination of MNA with some kind of enhanced biodegradation technique such as injection of electron donors and /or nutrients to the subsurface to increase bacterial growth to allow increased degradation rates.

Groundwater samples have been collected at three locations in the general area of the VOC plume (SB05-040, SB05-041, and SB05-52). With the exception of a few metals (copper, zinc, vanadium, and barium) that were detected at trace concentrations, metals were not generally detected in groundwater samples. The detected concentrations of these few metals were orders of magnitude below their respective primary and secondary MCLs. In our opinion, metals are not of environmental concern at this location and no further investigation related to metals is recommended. For laboratory results please refer to Appendices A and B.

15617 S. Normandie Ave. Gardena, CA 90247 Facsimilie: (310) 329-5561 | Page 1 of

Project No. 82 348

Project Name or Location SDG&E South Bay Power Plant Chula Vista

Project Manager (Consultant) ~~ELIZABETH SMITH~~ Kyle Rhenbottom

Consultant name IT CORPORATION

Address (Consultant)

Telephone No. (Consultant) 619 446-4535

Fax No. (Consultant)

Invoice To (Client):

P.O. No. (Client) LA0101-0014R

Sampler's Printed Name B. Jow

Special Detection Limits/Reporting/QA QC

Client Sample I.D.	Line No. MJAN1501	Lab Sample No.	Matrix: Liquid	Solid	Vapor	Preservation: HCL	HNO3	H2SO4	Ice	Collection: Date	Time	Container: 40 ml vial	Brass Tube	Glass Jar Bulb	Analyses To Be Performed: BTEX/TPHG EPA 602/8020/M8015/LUFT	BTEX EPA 8020/602	TPH Diesel M8015/CA LUFT	Hydocarbon Screen EPA M8015/CA LUFT	TRPH by IR (CA/LUFT Screening Method)	Halogenated Volatile Organics 601/8010	Purge Vol. cc	Remarks
SG-21 (9')	1	-01			X					1/15/01	0930			X						X	500	
SG-22 (9')	2	-02			X						0947			X						X	700	
SG-23 (9')	3	-03			X						1004			X						X	700	
SG-24 (12')	4	-04			X						1050			X						X	700	
SG-25 (12')	5	-05			X						1126			X						X	500	
SG-26 (12')	6	-06			X						1148			X						X	500	
SG-~~26~~27 (5')	7	-07			X						1205			X						X	500	
SG-~~27~~28 (12')	8	-08			X						1308			X						X	500	
SG-~~28~~29 (12')	9	-09			X						1328			X						X	500	
SG-~~29~~30 (9')	10	-10			X						1350			X						X	600	
SG-~~30~~31 (9')	11	-11			X						1410			X						X	500	
SG-32 (9')	12	-12			X						1425			X						X	500	
SG-~~32~~33 (9')	13	-13			X						1440			X						X	500	

Turnaround Time

X Mobile Lab Same Day

Priority Overnight

24 HR (1 Business Day)

48 HR (2 Business Days)

72 HR (3 Business Days)

Condition of sample:

Temperature received:

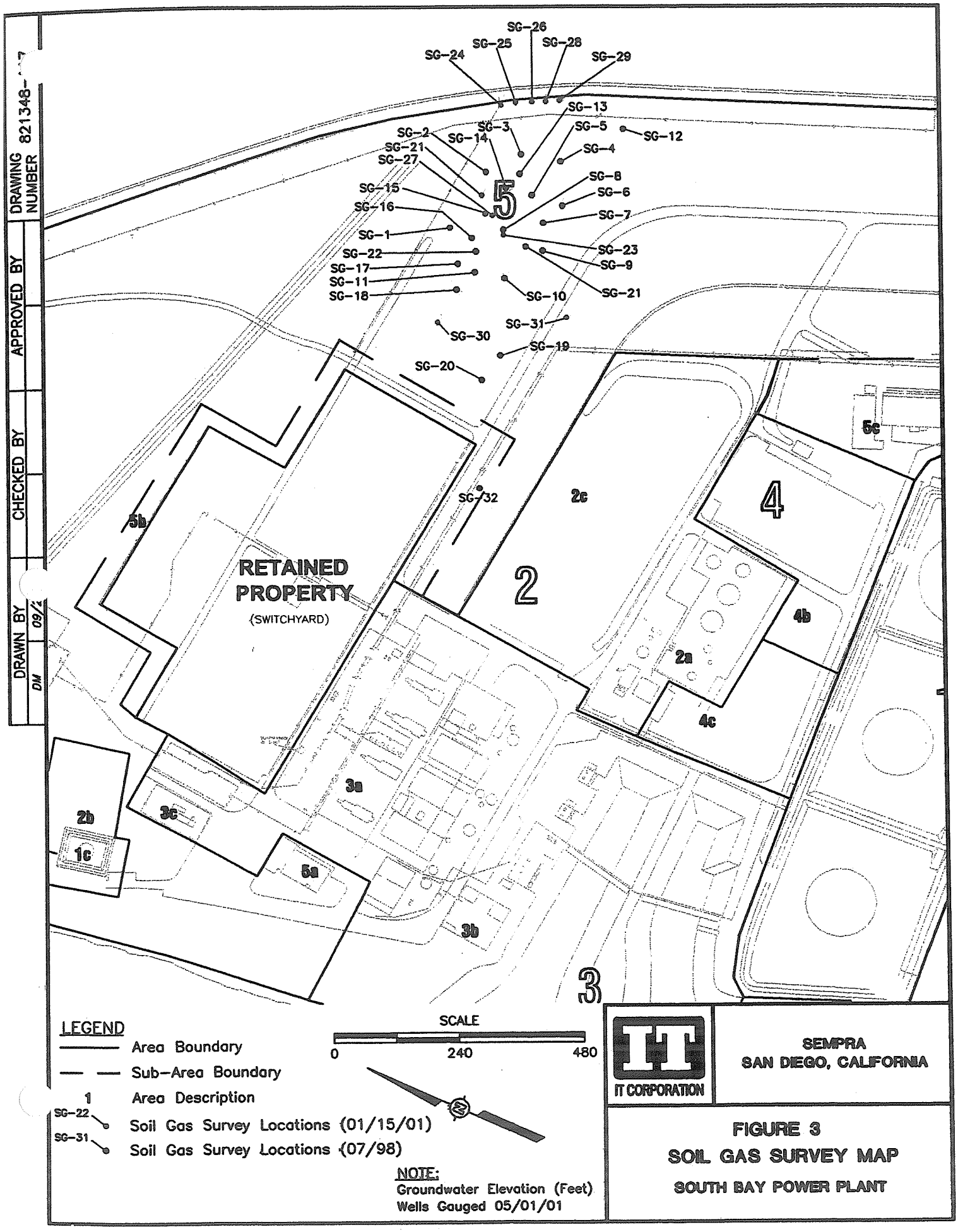
Relinquished by sampler	Date	Time	Received by	Company
Relinquished by	Date	Time	Received by	Company
Relinquished by	Date	Time	Received by laboratory Bill Jow on site	Date 1/15/01 Time

Please Check One

___Dispose by Lab

___Return To Client

3/97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SG-20
SG-32
5
5c
5b
2c
4
RETAINED PROPERTY
(SWITCHYARD)
2
4b
2a
4c
3a
3c
2b
1c
5a
3b
3
LEGEND
Area Boundary
Sub-Area Boundary
1 Area Description
SG-22 Soil Gas Survey Locations (01/15/01)
SG-31 Soil Gas Survey Locations (07/98)
SCALE
0
240
480
NOTE:
Groundwater Elevation (Feet)
Wells Gauged 05/01/01
IT
IT CORPORATION
SEMPRA
SAN DIEGO, CALFORNIA
FIGURE 3
SOIL GAS SURVEY MAP
SOUTH BAY POWER PLANT

TABLE 1
Soil Gas Survey Results
Detected VOCs
TCE Plume, South Bay Power Plant
San Diego, California

Sample Location	Date	Depth (ft)	TCE	Chloroform	cis 1,2 - DCE	Other Detected Analytes
SG1	26-Oct-98	5	<1.4	<1	<0.8	
SG2	26-Oct-98	5	<1.4	<1	<0.8	
SG3	26-Oct-98	5	<1.4	<1	<0.8	
SG4	26-Oct-98	5	<1.4	<1	<0.8	
SG5	26-Oct-98	5	<1.4	<1	<0.8	
SG5	26-Oct-98	10	<1.4	<1	<0.8	
SG6	26-Oct-98	5	<1.4	<1	7.6	
SG7	26-Oct-98	5	<1.4	2.2	<0.8	
SG8	26-Oct-98	5	<1.4	<1	<0.8	
SG8	26-Oct-98	10	<1.4	<1	<0.8	
SG9	26-Oct-98		No Data Available			
SG10	26-Oct-98	5	<1.4	<1	<0.8	
SG11	26-Oct-98	5	<1.4	<1	<0.8	
SG12	26-Oct-98	3	<1.4	<1	<0.8	
SG13	26-Oct-98	2.5	<1.4	<1	<0.8	
SG14	26-Oct-98	3.5	<1.4	<1	<0.8	
SG15	26-Oct-98	4	<1.4	<1	<0.8	
SG16	26-Oct-98	3.5	<1.4	<1	<0.8	
SG17	26-Oct-98	3.5	<1.4	<1	<0.8	
SG18	26-Oct-98	2.5	<1.4	<1	<0.8	
SG19	26-Oct-98	2.5	<1.4	<1	<0.8	Tetrachloroethene ~~0.6~~ 1.0
SG20	26-Oct-98	4	<1.4	<1	<0.8	Tetrachloroethene 0.6
SG21	26-Oct-98	5	<1.4	<1	<0.8	
SG21	15-Jan-01	9	<0.3	<0.3	<0.3	
SG22	15-Jan-01	9	<0.3	<0.3	<0.3	
SG23	15-Jan-01	9	<0.3	<0.3	<0.3	
SG24	15-Jan-01	12	<0.3	<0.3	<0.3	
SG25	15-Jan-01	12	<0.3	<0.3	<0.3	
SG26	15-Jan-01	12	<0.3	<0.3	<0.3	
SG27	15-Jan-01	5	<0.3	<0.3	<0.3	
SG28	15-Jan-01	12	<0.3	<0.3	<0.3	
SG29	15-Jan-01	12	<0.3	<0.3	<0.3	
SG30	15-Jan-01	9	<0.3	<0.3	<0.3	
SG31	15-Jan-01	9	<0.3	<0.3	<0.3	
SG32	15-Jan-01	9	<0.3	<0.3	<0.3	
SG33	15-Jan-01	9	<0.3	<0.3	0.7	

1) All results reported in µg/L
2) TCE = Trichloroethene, DCE = cis 1,2 - Dichloroethene
3) (*) Indicates other analytes were detected
4) (<) Laboratory results were less than the Estimated Quantitation Limit (E.Q.L)
5) Test Methods: EPA 8260 (5030 Prep.) all samples October 1998; EPA 8021 B all samples January 2001

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roject Location: SDG&E Power Plant, Chula Vista
Vork Order Number: MJAN1501

ANALYTICAL RESULTS
Purgeable Halocarbons in Soil Vapor
EPA Method 8021B[a]

Lab ID Number		MJAN1501-00	MJAN1501-01	MJAN1501-02	MJAN1501-03	MJAN1501-04	MJAN1501-05	MJAN1501-06
Client Identification		Method Blank	SG-21	SG-22	SG-23	SG-24	SG-25	SG-26
Date Analyzed		01/15/01	01/15/01	01/15/01	01/15/01	01/15/01	01/15/01	01/15/01
Hour Taken		0800	0930	0947	1004	1050	1126	1150
Reporting Limit Multiplier		1	1	1	1	1	1	1
Purge Volume (CC)		-	500	700	700	700	500	500
Analyte	Reporting Limit,ug/L	Concentration, ug/L						
Freon 113	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carbon Tetrachloride	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chloroethane	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chloroform	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Dichlorodifluoromethane (Freon 12)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
1,1[illegible]hloroethane (1,1-DCA)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
1,2-Dichloroethane (1,2-DCA)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
1,1-Dichloroethylene (1,1-DCE)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
trans-1,2-Dichloroethylene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Methylene Chloride	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
1,1,1,2-Tetrachloroethane	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
1,1,2,2-Tetrachloroethane	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Tetrachloroethylene (PCE)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
1,1,1-Trichloroethane (111-TCA)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
1,1,2-Trichloroethane (112-TCA)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Trichloroethylene (TCE)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Trichlorofluoromethane (Freon11)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Vinyl chloride	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethylene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
SURROGATE: 4-Bromofluorobenzene[b]		79.5	119	87.2	120	87.0	125	106

[a] Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, EPA SW-846. Third Edition, Revision 2, US EPA December, 1996; Organics in Water, EPA Method 601; "Test Procedures for Analysis of Organic Pollutants," Code of Federal Regulations, 40CFR Part 136, Appendix A, July 1992. [b] Surrogate recovery acceptability limits: 60-140%.

Freon 113=1,1,2-Trichloro-1,2,2-Trifluoroethane

Consultant: IT CORPORATION
Pr t: 821348
Project Location: SDG&E Power Plant, Chula Vista
Work Order Number: MJAN1501

ANALYTICAL RESULTS
Purgeable Halocarbons in Soil Vapor
EPA Method 8021B[a]

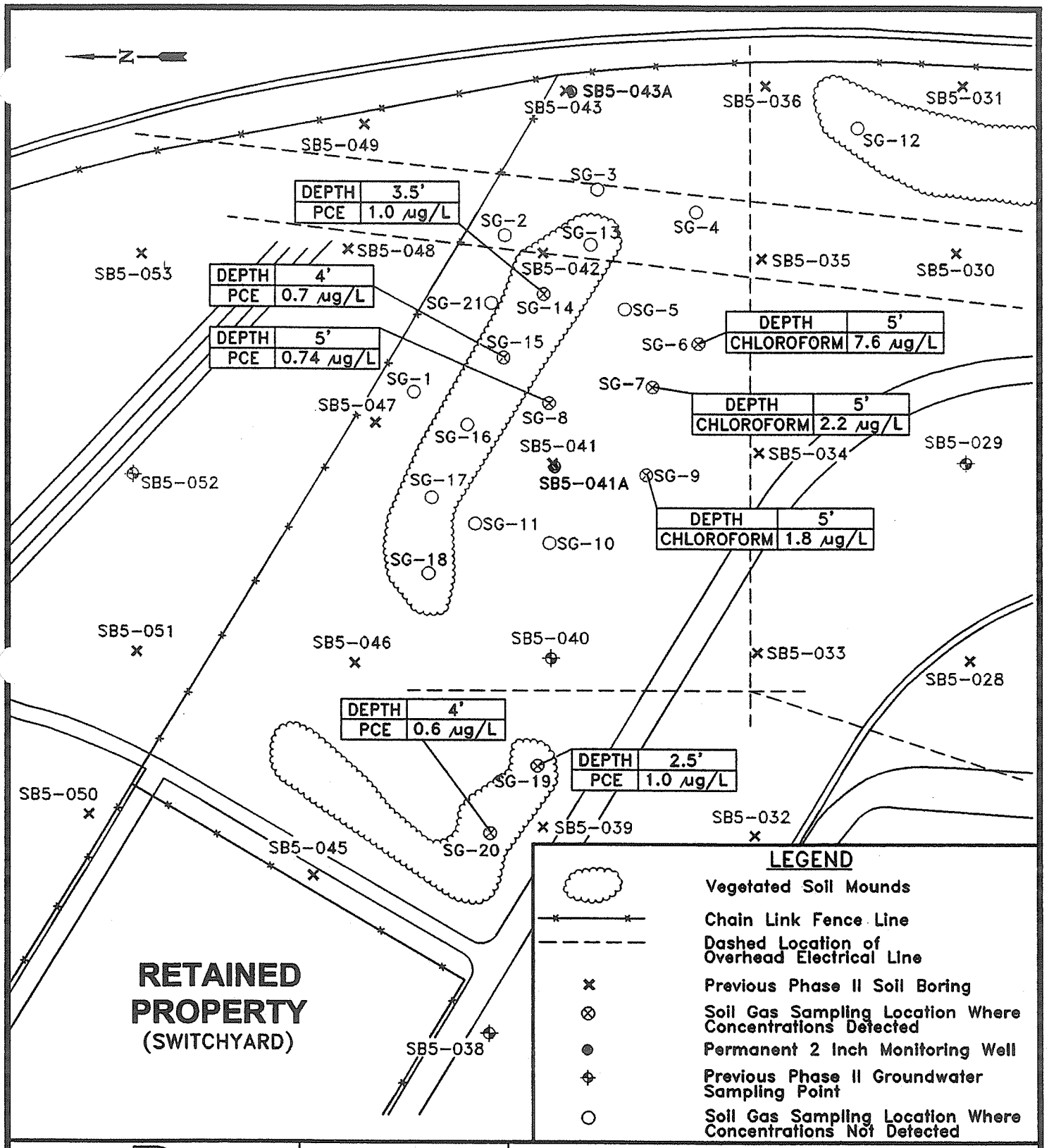
Lab ID Number		MJAN1501-07	MJAN1501-08	MJAN1501-09	MJAN1501-10	MJAN1501-11	MJAN1501-12	MJAN1501-13
Client Identification		SG-27	SG-28	SG-29	SG-30	SG-31	SG-32	SG-33
Date Analyzed		01/15/01	01/15/01	01/15/01	01/15/01	01/15/01	01/15/01	01/15/01
Hour Taken		1040	1150	1205	1220	1350	1435	1455
Reporting Limit Multiplier		1	1	1	1	1	1	1
Purge Volume (CC)		1000	1000	1000	1000	1000	1000	1000
Analyte	Reporting Limit,ug/L	Concentration, ug/L						
Freon 113	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carbon Tetrachloride	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chloroethane	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chloroform	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Dichlorodifluoromethane (Freon 12)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
1,1-Dichloroethane (1,1-DCA)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
1,2-Dichloroethane (1,2-DCA)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
1,1-Dichloroethylene (1,1-DCE)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
trans-1,2-Dichloroethylene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Methylene Chloride	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
1,1,1,2-Tetrachloroethane	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
1,1,2,2-Tetrachloroethane	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Tetrachloroethylene (PCE)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
1,1,1-Trichloroethane (111-TCA)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
1,1,2-Trichloroethane (112-TCA)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Trichloroethylene (TCE)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	**0.7**
Trichlorofluoromethane (Freon11)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Vinyl chloride	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethylene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
SURROGATE: 4-Bromofluorobenzene[b]		129	91.3	120	105	88.3	108	110

[a] Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, EPA SW-846. Third Edition, Revision 2, US EPA December, 1996; Organics in Water, EPA Method 601; "Test Procedures for Analysis of Organic Pollutants," Code of Federal Regulations, 40CFR Part 136, Appendix A, July 1992. [b] Surrogate recovery acceptability limits: 60-140%.
Freon 113=1,1,2-Trichloro-1,2,2-Trifluoroethane

Table 1
SDG&E South Bay
Soil Gas Analytical Data
October 26, 1998

Sample #	Depth	Detectable VOC's (by EPA method 8260)
SG1	5'	ND
SG2	5'	ND
SG3	5'	ND
SG4	5'	ND
SG5	5'	ND
SG5	10'	ND
SG6	5'	7.6 ug/L Chloroform
SG7	5'	2.2 ug/L Chloroform
SG8	5'	(0.74 ug/L PCE)
SG8	10'	ND
SG9	5'	1.8 ug/L Chloroform
SG10	5'	ND
SG11	5'	ND
SG12	3'	ND
SG13	2.5'	ND
SG14	3.5'	1.0 ug/L PCE
SG15	4'	(0.70 ug/L PCE)
SG16	3.5'	ND
SG17	3.5'	ND
SG18	2.5'	ND
SG19	2.5'	1.0 ug/L PCE
SG20	4'	(0.6 ug/L PCE)
SG21	5'	ND
SG21	10'	ND

Note:
1) All other compounds were not detected
2) PCE = Tetrachloroethene
3) (0.6 ug/L PCE) = value in parentheses represents an instrument sensitized value below a higher detection limit set for this method



FLUOR DANIEL GTI

0 FEET 100
SCALE

SOIL GAS SAMPLING LOCATIONS AND DETECTED VOC CONCENTRATIONS

CLIENT: SAN DIEGO GAS AND ELECTRIC	FILE: 3589SSL (1:1.2)	PROJECT NO.: 103589	PM	PE/RG
	REV.			
LOCATION: SOUTH BAY POWER PLANT CHULA VISTA, CALIFORNIA	DES. DF	DET. RG	DATE: 10/29/98	FIGURE: 1

SWMU #17, Map Location 5b, Switch Yard Border, PCB Investigation

The TP Data Sheet identified that coolant oil was released from minor gasket leaks for over a period of several years in the Switchyard. The size of the release was approximately 80 square feet in the transformer and circuit breaker pads. The stains in the equipment pads may have been caused by PCB that was used in the past. Page 2-13 of the RA Workplan indicates that wipe and soil samples were collected in the transformer and switch yard areas to assess stains and discoloration of soil and concrete from leaking chain valves and transformer cooling fin assemblies. Section 4, page 3 of the RA Workplan indicates that majority of the samples with detectable concentrations of PCB were identified as containing Archlor 1254 and Archlor 1260. Table 5 identified that analysis of soil sample #1, 2, 3, 4, 6, 8 and 10 detected Archlor 1260 concentration ranging from 0.02 to 0.63 mg/kg. Both Archlor 1254 and 1260 have Residential PRG of 0.22 mg/kg. DTSC suggests additional investigation in these areas to determine lateral extent of PCB contamination.

Response: Please refer to our response for SWMU #8, f. Plant Transformer Banks. Based on the future industrial use of the site and the industrial PRG of 0.74 mg/kg for PCBs, no further action is recommended at this location.

SWMU #18, Map Location 5c, Septic/Leach Field

Table 1-1 of the Phase II Report indicates that a potential exists that hydrocarbons, metals and other contaminants have entered the septic system and impacted soil and groundwater. The Septic system and Leach field are located to the west of the warehouse. Section 2.2.5.3 of the Phase II ESA Report indicates that four soil borings were installed in Sub area 5c, and one water sample was collected. It was later summarized under section 6.1 that no petroleum hydrocarbons, solvents, and metal contamination in soil and groundwater occurred in this area without identifying the sampling locations and analysis that were conducted in this area. Based on the review of Figure 3-1a, the nearest boring locations conducted west of the warehouse are SB5-008 and SB5-018. The Septic System and Leach Field is not identified in Figure 3-1a. DTSC suggests to include a discussion of the sampling locations and results of analysis in this area and identify the location of the Septic System and Leach Field in the map.

Response: Based on our observations during site visits and discussions with SDG&E, the septic system/leachfield was likely located east and near the northeastern corner of the Warehouse Building. Figure A shows the approximate general area of the subject septic system/leachfield. During the Phase II investigation, Boring SB05-017 was drilled at this location. TEH and VOCs were not detected in the collected soil samples and concentrations of metals were in the range of naturally occurring concentrations. VOCs, SVOCs, and BTEX were not detected in the downgradient groundwater sample (SB05-018). Petroleum hydrocarbons were detected in ground water at boring SB05-018 at a concentration of 1.6 mg/l. Arsenic (0.0085 mg/l), Copper (0.020 mg/l), Barium (0.22 mg/l), Lead (0.0045 mg/l), Zinc (0.036 mg/l), and Vanadium (0.031 mg/l) were detected in the groundwater sample below their respective MCL and/or action level. Laboratory results are shown in Appendices A and B. Based on the above information, soil and groundwater in the general area of the subject septic tank/leachfield have not been significantly impacted. No further action is recommended at this location.

SWMU # 19, Former Automobile Junkyard

Table 1-1 of the Phase II Report indicates that this area might have impacted groundwater. This area is located upgradient from the power plant. DTSC did not find a discussion of how this area was investigated. DTSC suggests that a discussion regarding the investigation conducted should be included, including identification of its location in the map.

Response: As indicated in Table 1-1 of the Phase II report, the former automobile junkyard is located off site to the east and is not part of the South Bay Power Plant property (see Figure A). As discussed and agreed during DTSC's April 8, 2003 site visit, since the junk yard is not part of the power plant, no investigation is necessary and recommended. Although limited investigation has been conducted upgradient of the VOC plume near the property boundary, we recommend that additional groundwater sampling be conducted near the property boundary directly upgradient of the VOC plume and downgradient of the Junkyard to confirm the presence/absence of an offsite VOC plume.

<u>SWMU #20, National City to South Bay Fuel Pipeline</u>

a. Table 1-1 of the Phase II Report indicates that in January 1986, 60 to115 barrels of diesel were lost from the pipeline as a result of pipe failure, and approximately 1,400 cubic yards of impacted soil was excavated. The release occurred west of I-5, 0.2 miles north of "E" Street in Chula Vista, at the southern edge of the Sweetwater marshes. SDG&E excavated and disposed of contaminated soil, and installed monitoring wells. In a September 19, 1986 letter, the RWQCB stated that no further remedial action was necessary at the time. A copy of the RWQCB's letter may be found in Appendix C.7.2 of the Phase I Report, Appendix C. DTSC suggests that a discussion whether new releases, if any, or no new release of contamination was identified in this area after September 1996. If there are no new releases, then, no further investigation is required in this area.

Response: As discussed and agreed during DTSC's April 8 site visit, the approximately 4.5 mile long pipeline connecting the South Bay Power Plant and National City Tank Farm is owned by the Port, is located off-site and is not considered to be part of the South Bay Power Plant facility. As such, no investigation is necessary and recommended for the pipeline.

b. Table 1-1 of the Phase II Report also identified that release of hydrocarbons occurred in 1970. The pipeline was repaired, however, there was no confirmation that soil was excavated. DTSC would like additional information regarding the release described above, and its location if different from the above location. If different from the above, then, an investigation is required.

Response: As discussed and agreed during DTSC's April 8 site visit, the approximately 4.5 mile long pipeline connecting the South Bay Power Plant and National City Tank Farm is located off-site and is not considered to be part of the South Bay Power Plant facility. As such, no investigation is necessary and recommended for the pipeline.

SWMU #21, East Loop Pipeline

Phase I Site Assessment, Volume 1, Book 3, page 30 indicates that approximately 50 bbls of fuel oil was released resulting from a failed section of the fuel pipeline in 1991. The failed section of the fuel oil pipeline was replaced, and impacted soil was excavated to a depth of approximately 8 to 10 feet. In November 1996, Enecotech Environmental Consultants advanced 3 soil borings. Review of "Final Report for Phase II Environmental Investigation Services, San Diego Gas & Electric, April 29, 1997, Enecotech Environmental Consultants" indicates that borings B1, B2 and B3 were located immediately adjacent to the limits of the excavation along the north side of the trench due to adjacent fuel piping. TRPH at 1,600 mg/kg was detected at boring B1-6. DTSC suggests that additional soil sampling be conducted in this area to determine the lateral extent of fuel oil contamination

Response: Please refer to response to comment for SWMU #8 (b). Based on the results of the previous site investigation and remediation, the remaining residual petroleum hydrocarbon containing soil in the former East Loop release area is reportedly localized. Therefore, we recommend that further delineation, if needed, be conducted during excavation of impacted soil when subsurface soil in this area is exposed. This will allow a more efficient method of identifying and excavating the remaining impacted soil.

SWMU #22, Localized Surface Staining (San Diego Gas & Electric)

Section 2.3 of the Remedial Action Workplan, Fuel Hydrocarbons and Metal Impacted Areas, August 2001, IT Corporation (RA Workplan) identified fuel oil staining in the North Tank Farm. Section 5.3.4 of the RAP Workplan proposed to excavate the surface staining to 2 feet and collecting confirmatory sampling for TPH. DTSC suggests that additional sampling is required to determine the lateral and vertical extent of fuel oil contamination. Samples should be analyzed for TPH, BTEX and Title 22 metals.

Response: Additional sampling will be conducted to define the lateral and vertical extent of the reported surface staining in this area.

SWMU #23, Former Discharge in the Bay – ***See Geological Services Unit, Geology and Corrective Action Branch Memorandum***

Response: In 1988, the Port retained MEC Analytical Systems, Inc. (MEC) to sample the sediments in the bay adjacent to the South Bay Power Plant. A copy of the MEC report is provided separately for your review. MEC collected a total of 22 push cores below mud line from 15 sample locations (see attached figure). The samples were analyzed for Priority Pollutants. The table presenting the sampling results is attached. The MEC report concluded that measured concentrations for sample locations were low (close to detection limit and/or below published screening values) and that the detected constituents pose no significant risk. Based on this available information, no further investigation of subject sediments is considered necessary or recommended.

RESULTS FOR SAMPLING AND ANALYSIS OF SEDIMENTS COLLECTED ADJACENT TO THE SDG&E SOUTH BAY POWER PLANT

Prepared For:

Port of San Diego
Unified Port District
3165 Pacific Highway
San Diego, California 92101

MEC ANALYTICAL SYSTEMS, INC.

Background

MEC Analytical Systems Inc. (MEC) provided sampling and analytical services in support of a due diligence investigation on behalf of the Port of San Diego (the Port). Sediment samples were collected and analyzed to evaluate potential contamination of the aquatic environment adjacent to SDG&E's South Bay Power Plant. Because of short time constraints the Port has requested that MEC provide two sampling designs representing differing levels of effort and spatial resolution of potential contamination. Option one represents the smallest level of effort of the two options presented. Field sampling design was intended to provide a moderate level of spatial coverage for potentially contaminated aquatic sites adjacent to the South Bay facility with archival of additional samples for a subsequent, more detailed assessment if required.

A total of 22 push cores (2" diameter) were collected to depths of 3' below mud line from 15 sites indicated in figure 1. Sites were selected to represent two distinct areas: the mudflat just north of the intake channel jetty and adjacent to the former wastewater impoundment and leaking fuel tank and the discharge channel. Twelve of these sites (A-1 thru A-8, and B-1 thru B-3) were cored twice at each location. The first core was homogenized over the entire core length and a sub-sample of this homogenized sediment was analyzed for priority pollutants under a quick turn analytical schedule. The second core collected at each of these locations was divided into upper and lower strata (at about 1.5' below mudline) these strata were homogenized separately and archived for future analysis should greater spatial resolution be required. Two additional push cores (A-10 and A-12) were collected from sites located slightly further offshore in the the mudflat area (figure 1) these samples were divided into upper and lower strata as described previously and archived for future analysis.

Results and Discussion

Core locations (latitude and longitude, WGS84), core penetration depths, and sample retrieval depths are given in table 1. At a limited number of locations (B-2, B-3, A-5, A-10) a target retrieval depth of 3 feet could not be achieved. At sites B-1 and B-3 refusal was encountered at 1.5 - 2.0 feet below the mudline due to hard pack sand. At sites A-5 and A-10 penetration depths were 3-4 feet but retrieval was less, likely due to compaction of soft clay.

Results of chemical analysis are summarized in table 2. To evaluate chemistry data measured sediment chemistry concentrations were compared with published screening level values. These values include the Threshold Effect Level (TEL) and Probable Effect Level (PEL) of MacDonald et al. (1996) and the Effects Range Low (ER-L) and Effects Range Median (ER-M) of Long et al. (1995) (see Appendix C). Both sets of screening values are derived via correlative analysis of data sets which contain matching chemical and biological data. A more detailed description of the data sets used to develop these screening values can be found in MacDonald et al. (1996) and Long et al. (1995). MacDonald et al.'s TEL values were derived by calculating the geometric mean of the

15th percentile of concentrations resulting in effects and the 50th percentile of sediment concentrations for which no effects were reported. The TEL was intended to provide a screening level estimate of the sediment concentration for a specific contaminant below which effects rarely occur. PELs were derived by calculating the geometric mean of the 50th percentile of the effects data and the 85 percentile of the no effects data and was intended to provide a screening level estimate of the sediment concentration for a specific contaminant above which effects frequently occurred. Long et al.'s ER-L values were derived by calculating the 10 percentile of concentrations resulting in effects and was intended to provide a level below which effects were unlikely (i.e. <10% of the time). Similarly the ER-M value was derived as the 50th percentile of effects data and was intended to provide screening estimate of the sediment concentration above which effects were more likely to occur (i.e., about 50% of the time).

Metals were detected at all sample locations which underwent chemical analysis. However, metal concentrations were less than published screening level values (TELs [MacDonald et al., 1996]; ER-Ls [Long et al., 1995]). The only exceptions were cadmium which was slightly higher than the TEL (0.68 mg/Kg) at sites A-2 (0.7 mg/Kg), A-5 (0.7 mg/Kg), A-7 (0.9 mg/Kg) and silver was slightly above the ER-L (1.0 mg/Kg) at site B-2 (1.1 mg/Kg). All values were well below PELs (MacDonald et al., 1996) and ER-Ms (Long et al., 1995). For the few metals with concentrations slightly higher than the TEL/ER-L the measured concentrations were all within ± 20% of the TEL/ER-L value (i.e., the normal range of analytical error). Concentrations of measured organic contaminants at all sites were well below published screening values and for contaminants with no published screening value were within a factor of three of the detection limit.

Summary

Measured concentrations for all sites analyzed were low (close to detection limits and/or below published screening values). Consequently, contaminants measured in sediments from selected sites adjacent to the SDG&E South Bay power plant pose no significant risk.

References

Long, E.R., D.D. MacDonald, S.L. Smith, and F.D. Calder. 1995. "Incidence of adverse biological effects within ranges of chemical concentrations in marine and estuarine sediments." Environmental Management 19:81-97.

MacDonald, D.G., R.S. Carr, F.D. Calder, E.R. Long, C.G. Ingersoll. 1996. "Development and evaluation of sediment quality guidelines for Florida coastal waters." *Ecotoxicology*, 5:253-278.

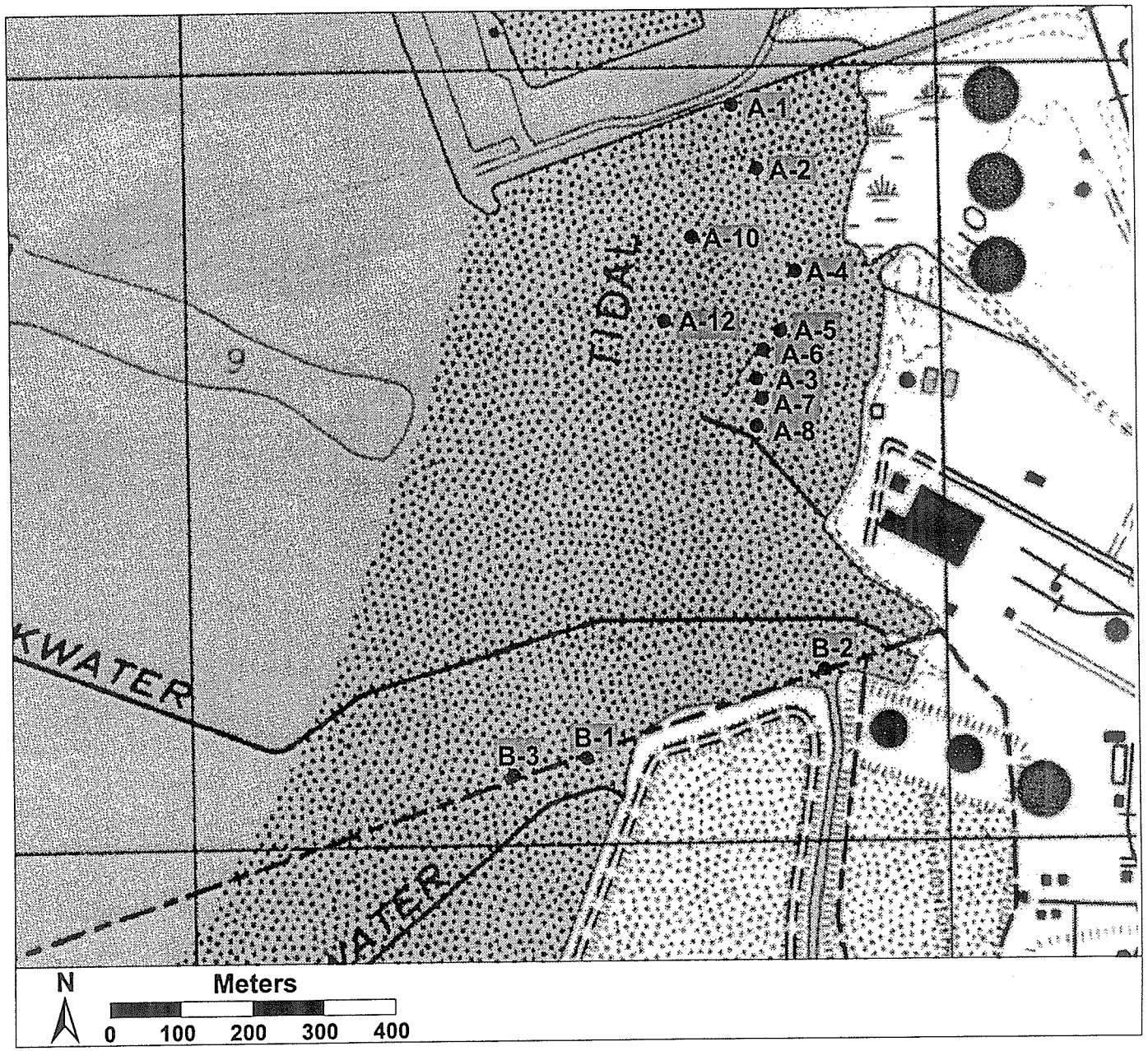


Figure 1. Sample Locations - SDG&E South Bay Power Plant.

Table 1: Sampling locations for Port of San Diego-South Bay Project.

Station I.D.	Latitude (WGS 84)	Longitude (WGS 84)	Penetration Depth* (feet)	Retrieval Depth* (feet)
A-1	32° 37.1816	117° 05.9773	4.0	2.25
A-1-O	32° 37.1816	117° 05.9773	3.5	3.25
A-2	32° 37.1382	117° 05.9613	4.0	2.75
A-2-O	32° 37.1382	117° 05.9613	4.0	3.0
A-3	32° 36.9927	117° 05.9626	4.0	3.75
A-3-O	32° 36.9927	117° 05.9626	3.75	2.75
A-4	32° 37.0696	117° 05.9290	3.0	2.25
A-4-O	32° 37.0696	117° 05.9290	3.25	3.0
A-5	32° 37.0253	117° 05.9431	3.0	1.5
A-5-O	32° 37.0253	117° 05.9431	3.0	2.25
A-6	32° 37.0082	117° 05.9517	3.25	2.75
A-6-O	32° 37.0082	117° 05.9517	3.25	2.75
A-7	32° 36.9919	117° 05.9589	3.75	3.0
A-7-O	32° 36.9919	117° 05.9589	3.75	2.75
A-8	32° 36.9708	117° 05.9603	3.0	3.0
A-8-0	32° 36.9708	117° 05.9603	3.0	3.0
A-10-O	32° 37.0905	117° 06.0174	3.0	2.0
A-12-O	32° 37.0356	117° 06.0393	4.0	2.5
B-1	32° 36.7261	117° 06.1079	3.75	3.0
B-1-O	32° 36.7261	117° 06.1079	3.5	2.75
B-2	32° 36.7907	117° 05.9075	1.75	1.5
B-2-O	32° 36.7907	117° 05.9075	2.0	1.75
B-3	32° 36.7157	117° 06.1709	3.0	2.0
B-3-O	32° 36.7157	117° 06.1709	3.0	2.0

*Relative to mudline

Table 2. Summary of sediment-associated contaminants above method detection limits.

Site	Chemical/Analyte	Concentration	TEL	ER-L	Ratio of Measured Concentration: Detection Limit
A-1	Arsenic	5.2 mg/Kg	7.24 mg/Kg	8.2 mg/Kg	26
	Cadmium	0.5 mg/Kg	0.68 mg/Kg	1.2 mg/Kg	2.5
	Chromium	25.7 mg/Kg	52.3 mg/Kg	81 mg/Kg	126
	Copper	15.7 mg/Kg	18.7 mg/Kg	34 mg/Kg	78.5
	Lead	13.0 mg/Kg	30.2 mg/Kg	46.7 mg/Kg	65
	Nickel	8.9 mg/Kg	15.9 mg/Kg	20.9 mg/Kg	44.5
	Zinc	48.6 mg/Kg	124 mg/Kg	150 mg/Kg	243
	Selenium	0.4 mg/Kg	N.A.	N.A.	2
	Pyrene	23 ug/Kg	153ug/Kg	665 ug/Kg	1.3
	Benzo(a)pyrene	19 ug/Kg	88.8ug/Kg	430 ug/Kg	1.05
A-2	Arsenic	3.5 mg/Kg	7.24 mg/Kg	8.2 mg/Kg	35
	Cadmium	**0.7 mg/Kg**	**0.68 mg/Kg**	**1.2 mg/Kg**	**7**
	Chromium	20.3 mg/Kg	52.3 mg/Kg	81 mg/Kg	203
	Copper	11.6 mg/Kg	18.7 mg/Kg	34 mg/Kg	116
	Lead	8.7 mg/Kg	30.2 mg/Kg	46.7 mg/Kg	87
	Nickel	5.8 mg/Kg	15.9 mg/Kg	20.9 mg/Kg	58
	Zinc	33.9 mg/Kg	124 mg/Kg	150 mg/Kg	339
	Selenium	0.2 mg/Kg	N.A.	N.A.	2
	Arochlor-1260	22 ug/Kg	N.A.	N.A.	1.47
A-3	Arsenic	2.3 mg/Kg	7.24 mg/Kg	8.2 mg/Kg	23
	Cadmium	0.2 mg/Kg	0.68 mg/Kg	1.2 mg/Kg	2
	Chromium	9.4 mg/Kg	52.3 mg/Kg	81 mg/Kg	94
	Copper	7.4 mg/Kg	18.7 mg/Kg	34 mg/Kg	74
	Lead	7.7 mg/Kg	30.2 mg/Kg	46.7 mg/Kg	77
	Nickel	4.0 mg/Kg	15.9 mg/Kg	20.9 mg/Kg	40
	Zinc	20.3 mg/Kg	124 mg/Kg	150 mg/Kg	203
	Selenium	0.2 mg/Kg	N.A.	N.A.	2
A-4	Arsenic	1.9 mg/Kg	7.24 mg/Kg	8.2 mg/Kg	19
	Cadmium	0.3 mg/Kg	0.68 mg/Kg	1.2 mg/Kg	3
	Chromium	9.0 mg/Kg	52.3 mg/Kg	81 mg/Kg	90
	Copper	6.8 mg/Kg	18.7 mg/Kg	34 mg/Kg	68
	Lead	12.8 mg/Kg	30.2 mg/Kg	46.7 mg/Kg	128
	Nickel	3.7 mg/Kg	15.9 mg/Kg	20.9 mg/Kg	37
	Zinc	22.4 mg/Kg	124 mg/Kg	150 mg/Kg	224
	Selenium	0.2 mg/Kg	N.A.	N.A.	2
	Arochlor-1260	18 ug/Kg	N.A.	N.A.	1.3
A-5	Arsenic	2.4 mg/Kg	7.24 mg/Kg	8.2 mg/Kg	24
	Cadmium	**0.7 mg/Kg**	**0.68 mg/Kg**	**1.2 mg/Kg**	**7**
	Chromium	15.7 mg/Kg	52.3 mg/Kg	81 mg/Kg	157
	Copper	9.6 mg/Kg	18.7 mg/Kg	34 mg/Kg	96
	Lead	12.3 mg/Kg	30.2 mg/Kg	46.7 mg/Kg	123
	Nickel	5.9 mg/Kg	15.9 mg/Kg	20.9 mg/Kg	59
	Zinc	33.2 mg/Kg	124 mg/Kg	150 mg/Kg	332
	Selenium	0.2 mg/Kg	N.A.	N.A.	2
	Pyrene	19 ug/Kg	153 ug/Kg	665 ug/Kg	1.4
	Benzo(a)pyrene	20 ug/Kg	88.8 ug/Kg	430 ug/Kg	1.4
	Arochlor-1260	18 ug/Kg	N.A.	N.A.	1.3

Site	Chemical/Analyte	Concentration	TEL	ER-L	Ratio of Measured Concentration: Detection Limit
A-6	Arsenic	2.1 mg/Kg	7.24 mg/Kg	8.2 mg/Kg	21
	Cadmium	0.4 mg/Kg	0.68 mg/Kg	1.2 mg/Kg	4
	Chromium	12.4 mg/Kg	52.3 mg/Kg	81 mg/Kg	90
	Copper	7.1 mg/Kg	18.7 mg/Kg	34 mg/Kg	71
	Lead	14.2 mg/Kg	30.2 mg/Kg	46.7 mg/Kg	142
	Nickel	4.8 mg/Kg	15.9 mg/Kg	20.9 mg/Kg	48
	Zinc	26.4 mg/Kg	124 mg/Kg	150 mg/Kg	264
	Selenium	0.2 mg/Kg	N.A.	N.A.	2
	Pyrene	20 ug/Kg	153 ug/Kg	665 ug/Kg	1.4
	Benzo(k)fluoranthene	22 ug/Kg	N.A.	N.A.	1.6
A-7	Arsenic	2.1 mg/Kg	7.24 mg/Kg	8.2 mg/Kg	21
	Cadmium	**0.9 mg/Kg**	**0.68 mg/Kg**	**1.2 mg/Kg**	**9**
	Chromium	19.4 mg/Kg	52.3 mg/Kg	81 mg/Kg	194
	Copper	10.0 mg/Kg	18.7 mg/Kg	34 mg/Kg	100
	Lead	15.9 mg/Kg	30.2 mg/Kg	46.7 mg/Kg	159
	Nickel	6.4 mg/Kg	15.9 mg/Kg	20.9 mg/Kg	64
	Zinc	32.1 mg/Kg	124 mg/Kg	150 mg/Kg	321
	Selenium	0.2 mg/Kg	N.A.	N.A.	2
	Pyrene	16 ug/Kg	153 ug/Kg	665 ug/Kg	1.1
	Benzo(a)pyrene	14 ug/Kg	88.8 ug/Kg	430 ug/Kg	1
	Arochlor-1260	25 ug/Kg	N.A.	N.A.	1.8
A-8	Arsenic	4.2 mg/Kg	7.24 mg/Kg	8.2 mg/Kg	21
	Cadmium	0.5 mg/Kg	0.68 mg/Kg	1.2 mg/Kg	2.5
	Chromium	23.6 mg/Kg	52.3 mg/Kg	81 mg/Kg	118
	Copper	16.9 mg/Kg	18.7 mg/Kg	34 mg/Kg	84.5
	Lead	21.0 mg/Kg	30.2 mg/Kg	46.7 mg/Kg	105
	Nickel	8.9 mg/Kg	15.9 mg/Kg	20.9 mg/Kg	44.5
	Zinc	54.2 mg/Kg	124 mg/Kg	150 mg/Kg	271
	Selenium	0.3 mg/Kg	N.A.	N.A.	1.5
	Fluoranthene	24 ug/Kg	113 ug/Kg	N.A.	1.5
	Pyrene	39 ug/Kg	153 ug/Kg	665 ug/Kg	2.4
	Benzo(a)anthracene	21 ug/Kg	74.8 ug/Kg	261 ug/Kg	1.3
	Chrysene	23 ug/Kg	108 ug/Kg	384 ug/Kg	1.4
	Benzo(b)fluoranthene	34 ug/Kg	N.A.	N.A.	2.1
	Benzo(k)fluoranthene	21 ug/Kg	N.A.	N.A.	1.3
	Benzo(a)pyrene	34 ug/Kg	88.8 ug/Kg	430 ug/Kg	2.1
	Indeno(1,2,3-cd)pyrene	28 ug/Kg	N.A.	N.A.	1.8
	Benzo(g,h,i)perylene	33 ug/Kg	N.A.	N.A.	2.1
	Arochlor-1260	62 ug/Kg	N.A.	N.A.	3.9
B-1	Arsenic	1.8 mg/Kg	7.24 mg/Kg	8.2 mg/Kg	18
	Cadmium	0.2 mg/Kg	0.68 mg/Kg	1.2 mg/Kg	2
	Chromium	10.1 mg/Kg	52.3 mg/Kg	81 mg/Kg	101
	Copper	8.5 mg/Kg	18.7 mg/Kg	34 mg/Kg	85
	Lead	5.3 mg/Kg	30.2 mg/Kg	46.7 mg/Kg	53
	Nickel	3.8 mg/Kg	15.9 mg/Kg	20.9 mg/Kg	38
	Zinc	23.7 mg/Kg	124 mg/Kg	150 mg/Kg	237
	Selenium	0.2 mg/Kg	N.A.	N.A.	2

Site	Chemical/Analyte	Concentration	TEL	ER-L	Ratio of Measured Concentration: Detection Limit
B-2	Arsenic	1.3 mg/Kg	7.24 mg/Kg	8.2 mg/Kg	13
	Cadmium	0.2 mg/Kg	0.68 mg/Kg	1.2 mg/Kg	2
	Chromium	5.2 mg/Kg	52.3 mg/Kg	81 mg/Kg	52
	Copper	9.9 mg/Kg	18.7 mg/Kg	34 mg/Kg	99
	Lead	6.3 mg/Kg	30.2 mg/Kg	46.7 mg/Kg	63
	Nickel	2.6 mg/Kg	15.9 mg/Kg	20.9 mg/Kg	26
	Zinc	29.0 mg/Kg	124 mg/Kg	150 mg/Kg	290
	Silver	**1.2 mg/Kg**	**0.73 mg/Kg**	**1 mg/Kg**	**12**
	Pyrene	21 ug/Kg	153 ug/Kg	665 ug/Kg	1.5
B-3	Arsenic	3.6 mg/Kg	7.24 mg/Kg	8.2 mg/Kg	36
	Cadmium	0.2 mg/Kg	0.68 mg/Kg	1.2 mg/Kg	2
	Chromium	13.6 mg/Kg	52.3 mg/Kg	81 mg/Kg	136
	Copper	16.4 mg/Kg	18.7 mg/Kg	34 mg/Kg	164
	Lead	7.8 mg/Kg	30.2 mg/Kg	46.7 mg/Kg	78
	Nickel	5.4 mg/Kg	15.9 mg/Kg	20.9 mg/Kg	54
	Zinc	42.9 mg/Kg	124 mg/Kg	150 mg/Kg	429
	Selenium	0.3 mg/Kg	N.A.	N.A.	3

SWMU #24, Ecological Assessment - *See Geological Services Unit, Geology and Corrective Action Branch Memorandum*

Response: Based on the response provided for SWMU #23 above, no ecological assessment is considered to be necessary.

SWMU #25, Former Agricultural Site History - ***See Geological Services Unit, Geology and Corrective Action Branch Memorandum***

Response: Soil sampling will be conducted in portions of the site that historically may have been used for agricultural activities.

SWMU #26, Storm water Drainage Channel - *See Geological Services Unit, Geology and Corrective Action Branch Memorandum*

Response: Stormwater at the site falls under the jurisdiction of the Regional Water Quality Control Board, San Diego Region, pursuant to Order No. 97-03-DWG (NPDES No. CAS000001), Section B, Paragraph 14. Attached are the most recent Annual reports for Best Management Practices Program (March 25, 2003), Annual Stormwater Monitoring Report (June 25, 2002), and a site map showing stormwater flow and conveyance systems.

Duke Energy®
Generation Services

Duke Energy Fossil-Hydro
California, Inc.
990 Bay Blvd.
Chula Vista, CA 91911
(619) 498-5315 OFFICE
(619) 498-5287 FAX

June 25, 2002

California Regional Water Quality
Control Board - San Diego Region
9174 Sky Park Court, Suite 100
San Diego, CA 92123

Attn: Executive Officer

Pursuant to Order No. 97-03-DWQ (NPDES No. CAS000001), Section B, paragraph 14, we are herewith submitting the annual stormwater monitoring report for the South Bay Power Plant. The plant's WDID number is 9 37S015022.

The report is for the 2001-2002 reporting period.

Revisions to the plan for this year are enclosed.

A revised Notice of Intent (NOI), site map and updated contact information, were sent to the State Water Resources Control Board.

If you have any questions regarding this report, please contact Tom Liebst at (619) 498-5223.

Sincerely,

Donald W. Weaver III
Power Plant Manager

DWW:tel
Enclosure

cc: U.S. Environmental Protection Agency
Region IX
Permits Issuance Section (W-5-1)
75 Hawthorne Street
San Francisco, CA 94105

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

2001-2002 ANNUAL REPORT
FOR STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITIES

Reporting Period July 1, 2001 through June 30, 2002

An Annual Report is required to be submitted to your local Regional Water Quality Control Board (Regional Board) by July 1 of each year. This document must be certified and signed, under penalty of perjury, by the appropriate official of your company. Many of the Annual Report questions require an explanation. Please provide explanations on a separate sheet as an attachment. **Retain a copy of the completed Annual Report for your records.**

If any information contained in Items A, B, and C below is incorrect, please cross out or highlight the incorrect information (do not white out or erase) and provide the correct information next to or above the incorrect information so that we can update our records. Please remember that a Notice of Termination and new Notice of Intent is required whenever your facility is relocated or changes ownership.

If you have any questions, please contact your Regional Board Storm Water Program Contact. The address of the Regional Board (where the Annual Report must be submitted) along with the name, telephone number, and e-mail address of the contact is indicated below. Additional copies of the Annual Report may be obtained from our web site at **www.swrcb.ca.gov/stormwtr/industrial.html**

REGIONAL BOARD INFORMATION:

SAN DIEGO REGIONAL WATER BOARD
9771 CLAIREMONT MESA BLVD, STE A
SAN DIEGO, CA 92124-1324

GLORIA FULTON
Tel: (858) 467-2971
E-mail: fultg@rb9.swrcb.ca.gov

GENERAL INFORMATION

A. Facility Location:

SOUTH BAY POWER PLANT
990 Bay Blvd
Chula Vista, CA 91911-1651

Waste Discharge Order No: 96005

Facility WDID No: 9 37S015022

B. Facility Operator Information:

Contact Person:
~~THOMAS GUTHRIE~~ Donald W. Weaver III
Tel: (619) ~~409-7004~~ 498-5317

DUKE ENERGY SOUTH BAY LLC
990 Bay Blvd
Chula Vista, CA 91911-1651

C. Facility Information:

Contact Person:
~~THOMAS GUTHRIE~~ Donald W. Weaver III
Tel: (619) ~~409-7004~~ 498-5317

Mailing Address:
SOUTH BAY POWER PLANT
990 Bay Blvd
Chula Vista, CA 91911-1651

SIC Code(s):
4911 Electric Services

Additional Table D Parameters: Fe

4. For each storm event sampled, did you collect and analyze a sample from each of the facilitys' storm water discharge locations? ☐ YES, go to Item E.6 ☒ NO

5. Was sample collection or analysis reduced in accordance with Section B.7.d of the General Permit? ☒ YES ☐ NO, attach explanation

   If "YES", **attach documentation** supporting your determination that two or more drainage areas are substantially identical.

   Date facility's drainage areas were last evaluated 6 /21 / 02

6. Were all samples collected during the first hour of discharge? ☐ YES ☒ NO, **attach explanation**

7. Was all storm water sampling preceded by three (3) working days without a storm water discharge? ☐ YES ☒ NO, **attach explanation**

8. Were there any discharges of stormwater that had been temporarily stored or contained? (such as from a pond) ☐ YES ☒ NO, go to Item E.10

9. Did you collect and analyze samples of temporarily stored or contained storm water discharges from two storm events? (or one storm event if you checked item D.2.i or iii. above) ☐ YES ☐ NO, **attach explanation**

10. Section B.5. of the General Permit requires you to analyze storm water samples for pH, Total Suspended Solids (TSS), Specific Conductance (SC), Total Organic Carbon (TOC) or Oil and Grease (O&G), other pollutants likely to be present in storm water discharges in significant quantities, and analytical parameters listed in Table D of the General Permit.

    a. Does Table D contain any additional parameters related to your facility's SIC code(s)? ☒ YES ☐ NO, Go to Item E.11

    b. Did you analyze all storm water samples for the applicable parameters listed in Table D? ☐ YES ☒ NO

    c. If you did not analyze all storm water samples for the applicable Table D parameters, check one of the following reasons:

    _____ In prior sampling years, the parameter(s) have not been detected in significant quantities from two consecutive sampling events. **Attach explanation**

    _____ The parameter(s) is not likely to be present in storm water discharges and authorized non-storm water discharges in significant quantities based upon the facility operator's evaluation. **Attach explanation**

    XX Other. **Attach explanation**

11. For each storm event sampled, attach a copy of the laboratory analytical reports and report the sampling and analysis results using **Form 1** or its equivalent. The following must be provided for each sample collected:

- Date and time of sample collection
- Name and title of sampler.
- Parameters tested.
- Name of analytical testing laboratory.
- Discharge location identification.
- Testing results.
- Test methods used.
- Test detection limits.
- Date of testing.
- Copies of the laboratory analytical results.

G. MONTHLY WET SEASON VISUAL OBSERVATIONS

Section B.4.a of the General Permit requires you to conduct monthly visual observations of storm water discharges at all storm water discharge locations during the wet season. These observations shall occur during the first hour of discharge or, in the case of temporarily stored or contained storm water, at the time of discharge.

1. Indicate below whether monthly visual observations of storm water discharges occurred at all discharge locations. **Attach an explanation for any "NO" answers.** Include in this explanation whether any eligible storm events occurred during scheduled facility operating hours that did not result in a storm water discharge, and provide the date, time, name and title of the person who observed that there was no storm water discharge.

	YES	NO		YES	NO
October	☐	XX	February	☐	XX
November	☐	XX	March	☐	XX
December	☐	XX	April	☐	XX
January	☐	XX	May	☐	XX

2. Report monthly wet season visual observations using **Form 4** or provide the following information.

   a. date, time, and location of observation
   b. name and title of observer
   c. characteristics of the discharge (i.e., odor, color, etc.) and source of any pollutants observed.
   d. **any** new or revised BMPs necessary to reduce or prevent pollutants in storm water discharges. Provide new or revised BMP implementation date.

ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION (ACSCE)

H. ACSCE CHECKLIST

Section A.9 of the General Permit requires the facility operator to conduct one ACSCE in each reporting period (July 1-June 30). Evaluations must be conducted within 8-16 months of each other. The SWPPP and monitoring program shall be revised and implemented, as necessary, within 90 days of the evaluation. The checklist below includes the minimum steps necessary to complete a ACSCE. Indicate whether you have performed each step below. **Attach an explanation for any "NO" answers.**

1. Have you inspected all potential pollutant sources and industrial activities areas? XX YES ☐ NO
   The following areas should be inspected:

   - areas where spills and leaks have occured during the last year.
   - outdoor wash and rinse areas.
   - process/manufacturing areas.
   - loading, unloading, and transfer areas.
   - waste storage/disposal areas.
   - dust/particulate generating areas.
   - erosion areas.
   - building repair, remodeling, and construction
   - material storage areas
   - vehicle/equipment storage areas
   - truck parking and access areas
   - rooftop equipment areas
   - vehicle fueling/maintenance areas
   - non-storm water discharge generating areas

2. Have you reviewed your SWPPP to assure that its BMPs address existing potential pollutant sources and industrial activities areas? XX YES ☐ NO

3. Have you inspected the entire facility to verify that the SWPPP's site map, is up-to-date? The following site map items should be verified: XX YES ☐ NO

   - facility boundaries
   - outline of all storm water drainage areas
   - areas impacted by run-on
   - storm water discharges locations
   - storm water collection and conveyance system
   - structural control measures such as catch basins, berms, containment areas, oil/water separators, etc.

2001-2002

ANNUAL REPORT

ATTACHMENT SUMMARY

Answer the questions below to help you determine what should be attached to this annual report. Answer NA (Not Applicable) to questions 2-4 if you are not required to provide those attachments.

1. Have you attached Forms 1,2,3,4, and 5 or their equivalent?	[XX] YES (Mandatory)		
2. If you conducted sampling and analysis, have you attached the laboratory analytical reports?	[ ] YES	[ ] NO	[XX] NA
3. If you checked box II, III, IV, or V in item D.2 of this Annual Report, have you attached the first page of the appropriate certifications?	[ ] YES	[ ] NO	[XX] NA
4. Have you attached an explanation for each "NO" answer in items E.1, E.2, E.5-E.7, E.9, E.10.c, F.1.b, F.2.a, F.2.c, G.1, H.1-H.7, or J?	[XX] YES	[ ] NO	[ ] NA

ANNUAL REPORT CERTIFICATION

I am duly authorized to sign reports required by the INDUSTRIAL ACTIVITIES STORM WATER GENERAL PERMIT (see Standard Provision C.9) and 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 ensure 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 person directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Printed Name: Dennis W. Weaver II

Signature: [signature] Date: 6/27/02

Title: Plant Manager

Stormwater Annual Report - Explanation Sheet
2001- 2002

E. Sampling and Analysis Results

1. No storm events were sampled because no storms met all qualifying storm criteria.

2. The first storm of the season was not sampled because no qualifying storms occurred.

5. See attached sheet labeled E.5.

6. No, no qualifying storm events occurred.

7. No, no qualifying storm events occurred.

10c. No qualifying storms occurred.

F. Quarterly Visual Observations

1b. Visual observations were performed at all authorized non-storm water discharge sources. See attached sheet labeled F.1.b., regarding visual observation of authorized non-storm discharges.

G. Monthly Wet Season Visual Observations

1. October - No qualifying storms occurred.
   November - no qualifying storms occurred.
   December - no qualifying storms occurred.
   January - No qualifying storms occurred.
   February - no qualifying storms occurred.
   March - no qualifying storms occurred.
   April - no qualifying storms occurred.
   May - no qualifying storms occurred.

Based on the General Permit monitoring requirements, stormwater samples collected at the South Bay Power Plant are analyzed for:

- pH
- Total suspended solids (TSS)
- Specific conductance
- Oil and grease
- Iron (General Permit Table D)

E.5.

2.4.3 WET-WEATHER SAMPLING LOCATIONS

Stormwater permit regulations require collection of runoff samples from industrial areas where stormwater is discharged that represent the quality and quantity of the facility's stormwater discharges from the storm event (General Permit Section B.7.). However, if a facility discharges stormwater at multiple locations, the facility may collect a reduced number of samples if different locations are substantially identical. Another alternative is to collect samples from each substantially identical drainage area and analyze a combined sample from each substantially identical drainage area. Facility operators must document such a determination in the Annual Report.

If the facility's stormwater discharges are commingled with run-on from surrounding areas the facility operator should identify other visual observation and sample collection locations that have not been commingled by run-on and that represent the quality and quantity of the facility's stormwater discharges from the storm event.

Locations designated below for wet-weather sampling are areas that are associated with stormwater runoff, which have the potential to contain pollutants:

- Basin A: The discharge outlet located in the earth detention basin, identified as A-1. It should be noted that the discharge valve may not be opened during a storm event. Water samples will be collected during discharge operations. If water is not discharged from this basin (i.e., the stormwater evaporates), samples will not be collected.
- Basins B and C: These basins consist of vacant lots and area estimated to be substantially similar to Basins F. Basin F contains a vacant lot which is graded similarly to Basins B and C and the estimated sediment loading should be comparable. For this reason, Basins B and C are <u>not</u> sampled.
- Basin D: The discharge outlet to the ditch, identified as D-1.

- Basin E: The 18-inch pipe to the intake channel, identified as E-1.
- Basin F: The first inlet located upstream of the 36-inch pipe which discharges to the discharge channel, identified as F-1.
- Basin G: The 12-inch pipe which discharges to the intake channel, identified as G-1.
- Basin H: The 12-inch pipe which discharges to the intake channel. This basin is <u>not</u> **sampled**, but is rather *characterized by the representative sampling at station G-1*.
- Basin I: This basin is adjacent to Basin H, contains similar equipment, and therefore, is substantially similar to Basin H and Basin G. Therefore, this basin also is <u>not</u> **sampled**, but is rather *characterized by the representative sampling at station G-1*.
- Basin J: The discharge outlet located in the berm surrounding Tank No. 2, identified as J-1. It should be noted that the discharge valve may not be opened during a storm event. Water samples will be collected during discharge operations. **If water is not discharged from this basin (i.e., the stormwater evaporates), samples will <u>not</u> be collected.**
- Basin K: The ditch located adjacent to Tank No. 7, identified as K-1.

Figure 2 shows these sampling locations. Appendix C provides sampling procedures.

2.4.4 VISUAL OBSERVATION AND SAMPLE COLLECTION EXEMPTIONS

In accordance with the General Permit Section B.8., the following exceptions to the mandatory visual observation and sample collection requirements are allowed:

- A facility operator is **not** required to collect a sample and conduct visual observations when:
  - Dangerous weather conditions exist, such as flooding, electrical storm, etc.
  - Stormwater discharges begin after scheduled facility operating hours.
  - Stormwater discharges are not preceded by three working days without discharge.
  - Stormwater discharges do not occur during daylight.
- A facility operator may conduct visual observations and sample collection more than one hour after discharge begins if the facility operator determines that the objectives of the observation and sampling program will be better satisfied.

If these exceptions are employed, then an explanation for the exception must be provided in the Annual Report

1.5.5 NON-STORMWATER DISCHARGES

A major element of stormwater NPDES permitting is the elimination of non-stormwater discharges to the stormwater collection system. The General Permit allows certain non-stormwater discharges provided that the non-stormwater component of the discharge complies with the following:

- Local Regional Water Quality Control Board requirements.
- Local agency ordinances and/or requirements.
- BMPs are specifically included in the SWPPP to: (1) prevent or reduce pollutants in non-stormwater discharges; and (2) minimize the flow or volume of non-stormwater discharges.
- The non-stormwater discharges do not contain significant quantities of pollutants.
- The monitoring program includes quarterly visual observations of each non-stormwater discharge and its sources to ensure that BMPs are being implemented and are effective.

F.1.b. The non-stormwater discharges are reported and described annually as part of the annual report.

Although authorized non-stormwater discharges occur at the South Bay Power Plant, they are often random and are not typically associated with one particular area. Therefore, the source, quantity, frequency, and characteristics of non-stormwater discharges and associated drainage areas vary and are not consistent. In any case, the following sources of non-stormwater are exempt per General Permit Section D:

- Discharges from fire fighting activities.
- Fire hydrant flushings.
- Potable water sources, including waterline flushings.
- Drinking fountain water.
- Uncontaminated compressor or air conditioner condensate.
- Irrigation drainage.
- Lawn drainage and watering.

During routine maintenance and servicing at the South Bay Power Plant, these discharges are sometimes allowed to drain to the ground because they do not pose a potential pollution problem for stormwater. However, standard protocol at the South Bay Power Plant is to minimize and otherwise prevent non-stormwater discharges to the ground. When these discharges do occur they are infrequent, typically of low volume, and evaporate in a short time. In addition, these discharges either are from a potable water source supplied by the City of Chula Vista or are otherwise known not to contain substances that pose a threat to stormwater quality.

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SIDE A

FORM 1-SAMPLING & ANALYSIS RESULTS

FIRST STORM EVENT

- If analytical results are less than the detection limit (or non detectable), show the value as less than the numerical value of the detection limit (example: <.05)
- If you did not analyze for a required parameter, do not report "0". Instead, leave the appropriate box blank
- When analysis is done using portable analysis (such as portable pH meters, SC meters, etc.), indicate "PA" in the appropriate test method used box
- Make additional copies of this form as necessary.

NAME OF PERSON COLLECTING SAMPLE(S): _____ TITLE: _____ SIGNATURE: _____

DESCRIBE DISCHARGE LOCATION Example NW Out Fall	DATE/TIME OF SAMPLE COLLECTION	TIME DISCHARGE STARTED	ANALYTICAL RESULTS For First Storm Event									
			BASIC PARAMETERS					OTHER PARAMETERS				
			pH	TSS	SC	O&G	TOC					
N/A	/ / ☐ AM : ☐ PM	: ☐ AM ☐ PM										
	/ / ☐ AM : ☐ PM	: ☐ AM ☐ PM										
	/ / ☐ AM : ☐ PM	: ☐ AM ☐ PM										
	/ / ☐ AM : ☐ PM	: ☐ AM ☐ PM										
TEST REPORTING UNITS:			pH Units	mg/l	umho/cm	mg/l	mg/l					
TEST METHOD DETECTION LIMIT:												
TEST METHOD USED:												
ANALYZED BY (SELF/LAB):												

TSS - Total Suspended Solids SC - Specific Conductance O&G - Oil & Grease TOC - Total Organic Carbon

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SIDE A

FORM 2-QUARTERLY VISUAL OBSERVATIONS OF AUTHORIZED NON-STORM WATER DISCHARGES (NSWDs)

- Quarterly dry weather visual observations are required of each authorized NSWD.
- Observe each authorized NSWD source, impacted drainage area, and discharge location.
- Authorized NSWDs must meet the conditions provided in Section D (pages 5-6). of the General Permit.
- Make additional copies of this form as necessary.

QUARTER: JULY-SEPT. DATE: 8 /30 /01	Observers Name: Tom Liebst Title: Scientist Signature: T. Liebst	WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER? [XX] YES [ ] NO — If YES, complete reverse side of this form.
QUARTER: OCT.-DEC. DATE: 12/ 19/ 01	Observers Name: Tom Liebst Title: Scientist Signature: T. Liebst	WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER? [XX] YES [ ] NO — If YES, complete reverse side of this form.
QUARTER: JAN.-MARCH DATE: 1 /10 /02	Observers Name: Tom Liebst Title: Scientist Signature: T. Liebst	WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER? [XX] YES [ ] NO — If YES, complete reverse side of this form.
QUARTER: APRIL-JUNE DATE: 5 /13 /02	Observers Name: Tom Liebst Title: Scientist Signature: T. Liebst	WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER? [XX] YES [ ] NO — If YES, complete reverse side of this form.

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ANNUAL REPORT

SIDE A

FORM 3-QUARTERLY VISUAL OBSERVATIONS OF UNAUTHORIZED NON-STORM WATER DISCHARGES (NSWDs)

- Unauthorized NSWDs are discharges (such as wash or rinse waters) that do not meet the conditions provided in Section D (pages 5-6) of the General Permit.
- Quarterly visual observations are required to observe current and detect prior unauthorized NSWDs.
- Quarterly visual observations are required during dry weather and at all facility drainage areas.
- Each unauthorized NSWD source, impacted drainage area, and discharge location must be identified and observed.
- Unauthorized NSWDs that can not be eliminated within 90 days of observation must be reported to the Regional Board in accordance with Section A.10.e of the General Permit.
- Make additional copies of this form as necessary.

QUARTER: JULY-SEPT. DATE/TIME OF OBSERVATIONS 8/30/01 12:53 ☐ AM ☒ PM	Observers Name: Tom Liebst Title: Scientist Signature:	WERE UNAUTHORIZED NSWDs OBSERVED? ☐ YES ☒ NO WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDs? ☐ YES ☒ NO	If YES to either question, complete reverse side.
QUARTER: OCT.-DEC. DATE/TIME OF OBSERVATIONS 12/19/01 10:25 ☒ AM ☐ PM	Observers Name: Tom Liebst Title: Scientist Signature:	WERE UNAUTHORIZED NSWDs OBSERVED? ☐ YES ☒ NO WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDs? ☐ YES ☒ NO	If YES to either question, complete reverse side.
QUARTER: JAN.-MARCH DATE/TIME OF OBSERVATIONS 01/10/02 10:20 ☒ AM ☐ PM	Observers Name: Tom Liebst Title: Scientist Signature:	WERE UNAUTHORIZED NSWDs OBSERVED? ☐ YES ☒ NO WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDs? ☐ YES ☒ NO	If YES to either question, complete reverse side.
QUARTER: APRIL-JUNE DATE/TIME OF OBSERVATIONS 5/13/02 9:51 ☒ AM ☐ PM	Observers Name: Tom Liebst Title: Scientist Signature:	WERE UNAUTHORIZED NSWDs OBSERVED? ☐ YES ☒ NO WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDs? ☐ YES ☒ NO	If YES to either question, complete reverse side.

2001-

ANNUAL REPORT

FORM 4-MONTHLY VISUAL OBSERVATIONS OF STORM WATER DISCHARGES

SIDE A

- Storm water discharge visual observations are required for at least one storm event per month between October 1 and May 31.
- Visual observations must be conducted during the first hour of discharge at all discharge locations.
- Discharges of temporarily stored or contained storm water must be observed at the time of discharge.
- Indicate "None" in the first column of this form if you did not conduct a monthly visual observation
- Make additional copies of this form as necessary.
- Until a monthly visual observation is made, record any eligible storm events that do not result in a storm water discharge and note the date, time, name, and title of who observed there was no storm water discharge.

Observation Date: October ____ 2001	Drainage Location Description	#1 NONE	#2	#3	#4
Observers Name _____	Observation Time	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
Title _____	Time Discharge Began	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
Signature _____	Were Pollutants Observed (If yes, complete reverse side)	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐
Observation Date: November____ 2001	Drainage Location Description	#1 NONE	#2	#3	#4
Observers Name _____	Observation Time	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
Title _____	Time Discharge Began	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
Signature _____	Were Pollutants Observed (If yes, complete reverse side)	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐
Observation Date: December____ 2001	Drainage Location Description	#1 NONE	#2	#3	#4
Observers Name _____	Observation Time	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
Title _____	Time Discharge Began	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
Signature _____	Were Pollutants Observed (If yes, complete reverse side)	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐
Observation Date: January____ 2002	Drainage Location Description	#1 NONE	#2	#3	#4
Observers Name _____	Observation Time	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
Title _____	Time Discharge Began	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
Signature _____	Were Pollutants Observed (If yes, complete reverse side)	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐

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ANNUAL REPORT

FORM 4 (Continued)-MONTHLY VISUAL OBSERVATIONS OF STORM WATER DISCHARGES

SIDE A

- Storm water discharge visual observations are required for at least one storm event per month between October 1 and May 31.
- Visual observations must be conducted during the first hour of discharge at all discharge locations.
- Discharges of temporarily stored or contained storm water must be observed at the time of discharge.
- Indicate "None" in the first column of this form if you did not conduct a monthly visual observation
- Make additional copies of this form as necessary.
- Until a monthly visual observation is made, record any eligible storm events that do not result in a storm water discharge and note the date, time, name, and title of who observed there was no storm water discharge.

Observation Date: February _____ 2002	Drainage Location Description	#1 NONE	#2	#3	#4
Observers Name _____	Observation Time	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
Title _____	Time Discharge Began	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
Signature _____	Were Pollutants Observed (If yes, complete reverse side)	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐
Observation Date: March _____ 2002	Drainage Location Description	#1 NONE	#2	#3	#4
Observers Name _____	Observation Time	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
Title _____	Time Discharge Began	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
Signature _____	Were Pollutants Observed (If yes, complete reverse side)	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐
Observation Date: April _____ 2002	Drainage Location Description	#1 NONE	#2	#3	#4
Observers Name _____	Observation Time	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
Title _____	Time Discharge Began	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
Signature _____	Were Pollutants Observed (If yes, complete reverse side)	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐
Observation Date: May _____ 2002	Drainage Location Description	#1 NONE	#2	#3	#4
Observers Name _____	Observation Time	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
Title _____	Time Discharge Began	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
Signature _____	Were Pollutants Observed (If yes, complete reverse side)	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐

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ANNUAL REPORT

SIDE A

FORM 5-ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION
POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY BMP STATUS

EVALUATION DATE: 06/20/02 INSPECTOR NAME: Tom Liebst TITLE: Scientist SIGNATURE: T. Liebst

POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY AREA (as identified in your SWPPP)			Describe deficiencies in BMPs or BMP implementation	Describe additional/revised BMPs or corrective actions and their date(s) of implementation
SANDBLASTING SHACK	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? ☐ YES ☒ NO	If yes, to either question, complete the next two columns of this form		
	ARE ADDITIONAL/REVISED BMPs NECESSARY? ☐ YES ☒ NO			
POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY AREA (as identified in your SWPPP)			Describe deficiencies in BMPs or BMP implementation	Describe additional/revised BMPs or corrective actions and their date(s) of implementation
SATELLITE HAZARDOUS MATERIALS STORAGE	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? ☐ YES ☒ NO	If yes, to either question, complete the next two columns of this form		
	ARE ADDITIONAL/REVISED BMPs NECESSARY? ☐ YES ☒ NO			
POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY AREA (as identified in your SWPPP)			Describe deficiencies in BMPs or BMP implementation	Describe additional/revised BMPs or corrective actions and their date(s) of implementation
PLANT MAINTENACE SHOPS	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? ☐ YES ☒ NO	If yes, to either question, complete the next two columns of this form		
	ARE ADDITIONAL/REVISED BMPs NECESSARY? ☐ YES ☒ NO			
POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY AREA (as identified in your SWPPP)			Describe deficiencies in BMPs or BMP implementation	Describe additional/revised BMPs or corrective actions and their date(s) of implementation
TANK FARMS	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? ☐ YES ☒ NO	If yes, to either question, complete the next two columns of this form		
	ARE ADDITIONAL/REVISED BMPs NECESSARY? ☐ YES ☒ NO			

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ANNUAL REPORT

SIDE A

FORM 5-ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION
POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY BMP STATUS

EVALUATION DATE: 06 / 20 / 02 INSPECTOR NAME: Tom Liebst TITLE: Scientist SIGNATURE: T. Liebst

POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY AREA (as identified in your SWPPP)			Describe deficiencies in BMPs or BMP implementation	Describe additional/revised BMPs or corrective actions and their date(s) of implementation
DRUM STORAGE	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? ☐ YES ☒ NO	If yes, to either question, complete the next two columns of this form		
	ARE ADDITIONAL/REVISED BMPs NECESSARY? ☐ YES ☒ NO			
VEHICLE PARKING	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? ☐ YES ☒ NO	If yes, to either question, complete the next two columns of this form	STREET SWEEPER CLEANED PARKING LOT & ROADWAYS	
	ARE ADDITIONAL/REVISED BMPs NECESSARY? ☐ YES ☒ NO			
RECYCLE BINS	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? ☐ YES ☒ NO	If yes, to either question, complete the next two columns of this form		
	ARE ADDITIONAL/REVISED BMPs NECESSARY? ☐ YES ☒ NO			
	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? ☐ YES ☐ NO	If yes, to either question, complete the next two columns of this form		
	ARE ADDITIONAL/REVISED BMPs NECESSARY? ☐ YES ☐ NO			

REVISIONS

TO THE

STORMWATER POLLUTION PREVENTION PLAN

June-2002

STORMWATER POLLUTION PREVENTION PLAN

SOUTH BAY POWER PLANT
CHULA VISTA, CALIFORNIA

Rev. 4 by Duke: June 2002

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LIST OF CONTROLLED COPY HOLDERS
STORMWATER POLLUTION PREVENTION PLAN
SOUTH BAY POWER PLANT
CHULA VISTA, CALIFORNIA

NUMBER OF COPIES	BOOK LOCATION	ISSUED TO
1	South Bay Power Plant	Plant Manager
1	South Bay Power Plant	Stormwater Compliance Coordinator
1	South Bay Power Plant	Scientist
1	South Bay Power Plant	Compliance Engineer
1	Regional Water Quality Control Board - San Diego Region	Executive Officer
2	South Bay Power Plant	Unassigned

DUKE ENERGY SOUTH BAY LLC
STORMWATER POLLUTION PREVENTION PLAN TEAM
LIST OF PRINCIPAL CONTACTS

SOUTH BAY POWER PLANT

PLANT MANAGER ..... DONALD WEAVER III
(619) 498-5317

STORMWATER COMPLIANCE COORDINATOR ..... SUSAN PIZZO
(619) 498-5218

COMPLIANCE ENGINEER ..... JIM NYLANDER
(619) 498-5344

SCIENTIST ..... TOM LIEBST
(619) 498-5223

REVISION RECORD
STORMWATER POLLUTION PREVENTION PLAN
SOUTH BAY POWER PLANT
CHULA VISTA, CALIFORNIA
DUKE ENERGY SOUTH BAY
SUMMARY OF SWPPP CHANGES

Revision Number	Date	Revisions	Comment	Initial/ Date When Plan Revised
4	June, 2002	• Title Page	• Changed revision date	
4	June, 2002	• Revision Record	• Updated	
4	June, 2002	• List of Controlled Copy Holders	• Revised titles/personnel	6/27/02
4	June, 2002	• List of Principal Contacts	• Revised titles/personnel	
4	June, 2002	• Certification	• Updated	
4	June, 2002	• Table of Contents, Pages i-ii	• Updated page numbers	
4	June, 2002	• Table of Contents, Pages iii-iv	• Reprinted	
4	June, 2002	• Sections 1.0 – 1.8	• Sections 1.0 - 1.2: Reprinted • Section 1.2.1: Revised title/personnel • Sections 1.3 - 1.3.1.1: Reprinted • Section 1.3.1.2: Revised Basin G description • Sections 1.3.1.2 – 1.5.1: Reprinted • Section 1.3.1.3: Revised security description • Sections 1.5.1.1 – 1.5.2: Reprinted	

Revision Number	Date	Revisions	Comment	Initial/ Date When Plan Revised
4	June, 2002	• Sections 1.0 – 1.8 (cont.)	• Section 1.51.3 : Revised low volume wastewater description • Section 1.5.2.2 – 1.5.2.4: Reprinted • Sections 1.5.2.5 – 1.7.1.7: Reprinted • Section 1.5.2.7: Removed paint shop. Changed to Aqueous Ammonia Storage • Section 1.7.1.8: Revised gravel filter maintenance timeframe • Sections 1.7.1.8 – 1.7.2.5: Reprinted • Section 1.7.1.9: Revised personnel title • Sections 1.7.2.6 – 1.7.2.8: Reprinted • Sections 1.7.3 – 1.8: Reprinted	6/27/02
4	June, 2002	• Table 2	• Updated chemicals stored, storage locations and volumes	
4	June, 2002	• Table 3	• Removed paint shop and transformers/switch yard	

STORMWATER POLLUTION PREVENTION PLAN CERTIFICATION

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. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Donald W. Weaver III 6/27/02

Signature Date

Donald W. Weaver III

Name

Plant Manager

Title

1.0 STORMWATER POLLUTION PREVENTION

1.1 INTRODUCTION

This Stormwater Pollution Prevention Plan (SWPPP) has been developed for the South Bay Power Plant in accordance with requirements of State Water Resources Control Board (SWRCB) National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000001 (SWRCB Water Quality Order No. 97-03-DWQ) for discharge of stormwater associated with industrial activities excluding construction activities (the "General Permit").

The overall objectives of this SWPPP are to:

- Identify sources of pollution that affect the quality of industrial stormwater discharges and authorized non-stormwater discharges.
- Implement practices to reduce or prevent pollutants in stormwater discharges.

Elements of this SWPPP include a topographic map of the general vicinity around the site, a site plan, a description of activities that may affect stormwater quality, a significant materials inventory, an assessment of potential pollutant sources, stormwater best management practices, and compliance monitoring and evaluation procedures.

The practices used to reduce or eliminate pollutants in stormwater include identification of SWPPP personnel responsible for developing, implementing and revising this Plan, preventive maintenance and inspections, good housekeeping, spill prevention and response, and stormwater management practices including structural and nonstructural controls for minimizing stormwater contamination, sediment and erosion control, employee training, and inspections.

Section 2.0 of this SWPPP includes the Monitoring Program required by Section B of the General Permit.

The following appendices contain information to facilitate the implementation of this SWPPP:

- Appendix A provides examples of forms that will be used for routine observations and monitoring. These forms may be modified from time-to-time, as appropriate.
- Appendix B provides a copy of the Stormwater General Permit for reference use.
- Appendix C provides a stormwater sampling protocol.

1.2 COMPANY MANAGEMENT AND ORGANIZATION

The following discussion provides a perspective on the responsibilities and organization of the personnel associated with the Stormwater Pollution Prevention Team.

1.2.1 POLLUTION PREVENTION TEAM

In accordance with the requirements of the General Permit, a Stormwater Pollution Prevention Team has been organized to assist in development, implementation and revision of this SWPPP, and to conduct monitoring program activities required by the General Permit. These positions and their responsibilities are described below. The List of Principal Contacts is found at the front of this document for specific personnel assigned to these positions.

- The **Plant Manager** will be responsible for signing the Annual Report and certifying that elements of this plan are being implemented.
- The **Stormwater Compliance Coordinator** will be responsible for recommending revisions and updates to the SWPPP to assure compliance. He/she will also assist in updating this plan as appropriate based on team recommendations, and assist in annual reporting efforts.
- The **Compliance Engineer** will be responsible for assigning respective staff members specific responsibilities for prevention of stormwater pollution and provide quality assurance that implementation is carried through for fueling shipments and transfers. He/she will also be responsible for planning and scheduling staff training and implementation programs in accordance with this plan. He/she will be accountable for instructing and assuring their respective staff members operate and maintain the facility in a stormwater-sensitive manner to assure compliance with this SWPPP. He/she will also coordinate indoctrination and orientation of new facility employees such that onsite employees are consistently educated in stormwater pollution awareness. He/she will assure that shipping, receiving, storage, and potential spillage of significant materials is safeguarded to prevent stormwater pollution.
- The **Scientist** will be responsible for conducting observations and sampling in accordance with this SWPPP, for performing laboratory analyses of the samples collected, and preparing the Annual Report. He/she will also be responsible for archiving data and support information collected, as well as completion of the Annual Compliance Evaluation report.

The above personnel will receive training for each of their specific responsibilities in stormwater pollution prevention. These persons will then assure that remaining site personnel are educated regarding proper work practices and management techniques to minimize discharge of pollutants in stormwater runoff. These duties may be designated to other properly trained and qualified personnel. Refresher training for site personnel will be conducted annually. Specific responsibilities will be in accordance with those specified in Table 1.

1.3 FACILITY DESCRIPTION

1.3.1 REGIONAL SETTING

The South Bay Power Plant is located in southwest San Diego County, California. The facility is located in the Imperial Beach-Baja California Norte United States Geologic Survey 7.5 minute quadrangle (Figure 1) The facility lies southeast of J Street and Bay Boulevard in the City of Chula Vista and encompasses approximately 150 acres (Figures 1 and 2).

The South Bay Power Plant produces electricity utilizing fossil fuels, and is classified by Standard Industrial Classification (SIC) code 4911: "Steam Electric Generating Facilities."

The plant contains four steam-powered generating units and a small gas turbine (GT) generating unit. The GT is used infrequently for generating additional electricity during peak-demand periods.

Main transformers for the steam generating units are located immediately north of the power plant building. Four main transformers and six auxiliary transformers are located in this area. The transformer oil capacities range from 1,390 gallons to 11,300 gallons. North of the power plant building is a large 138-kilovolt (kV) switching station followed by a smaller 69-kV switching station.

Southeast of the plant are six industrial wastewater treatment tanks for retaining water that is treated prior to discharge. The tanks are aboveground with capacities ranging from 56,000 gallons to 357,000 gallons.

1.3.1.1 Climate

The South Bay Power Plant area is characterized as an arid climate with warm, dry summers and mild winters. Winter precipitation in the area is associated with storms migrating inland from

the Pacific Ocean. Nearly 90 percent of the annual rainfall occurs during the period from November to April with a mean annual rainfall of about 9 inches (NOAA, 1991).

1.3.1.2 Topography and Drainage

Topography at the site is moderately flat and generally slopes westward toward San Diego Bay. Roadway stormdrains discharge to San Diego Bay. Plant trench water discharges to sumps that have automatic high level starts that expel to the onsite wastewater facility tanks, where it is treated and routinely tested prior to release to the sewer system in accordance with an Industrial User Discharge Permit. The wastewater facility storage tanks are surrounded by a containment berm with two berm drainage valves, which are closed and locked when not in use. Valves are opened only by an authorized operator, during daylight hours, and only if no oily sheen is observed on the collected rainwater to be drained. The north and south tank farms also are bermed. The north tank farm berm drains are discharged to an outer holding berm area. The outer holding area valve is opened to the bay only during daylight hours by an authorized operator and only if there is no oily sheen observed on the collected rainwater to be drained. The south tank farm berm drains are opened to the bay under the same circumstances as the north tank farm.

As indicated by earlier stormwater investigations at the South Bay Power Plant (Geocon Environmental Consultants Inc., 1992), the South Bay facility contains 11 different surface drainage basins (Figure 2). These drainage basins are described as follows:

- **Basin A:** This basin is comprised by the north tank farm and associated containment areas. Note that Tanks 4, 5, 6 and their supporting facilities were removed in 2000.
- **Basin B:** Located southeast of Basin A; contains vacant lot (evaporation area).
- **Basin C:** Located south of Basin B; contains vacant lot (evaporation area), and a portion of the 69 kV substation.
- **Basin D:** Located west of Basin C; contains an evaporation area, equipment storage area, maintenance building, plant administration building, Jet-A tank, gas turbine and associated transformer, storeroom, loading dock and parking lot and a portion of the 69 kV substation.
- **Basin E:** Located south of Basin C; contains an evaporation area, hazardous materials storage, wastewater treatment plant, sandblast booth and power plant building.

- **Basin F:** Located south and east of Basin E; contains truck loading area, maintenance service office, engineering offices, gas turbine office, supply warehouse, operation service office, aqueous ammonia tank and evaporation areas.
- **Basin G:** Located near the western perimeter of the facility; contains maintenance office and prep shop, paint shop, and intake screen house for plant cooling water.
- **Basin H:** Located north of Basin G near the western perimeter of the facility; contains 7,000-gallon sodium hypochlorite tank.
- **Basin I:** Located east of Basin H; contains screen control house.
- **Basin J:** This basin is comprised by the south tank farm (Tanks 1, 2, 3, and 7) and associated detention areas.
- **Basin K:** Located at the southern perimeter of the site; contains a drainage ditch and emergency exit for the facility.

The amount of impervious surface (e.g., paved surfaces, structures) on this site is approximately 18 percent (Geocon, 1992; revised March, 2001). The balance of the site consists of planted landscaping, natural vegetation, and evaporation or retention areas. During periods of rain, stormwater runoff is generally diverted by surface gradients and curbing to stormwater inlets and drainage channels located throughout the site. The nearest surface water body is San Diego Bay located immediately to the west.

There are several types of stormwater conveyance and discharge structures located on the site. These include sumps, pump pits, swales and ditches. In addition to surface and subsurface drains throughout the site, multiple roof drains divert stormwater to the ground surface.

1.3.1.3 Security

The South Bay Power Plant is enclosed by a chain link fence with access allowed only through the front gate. Persons entering the premises can only do so by checking in at the guard post. Security guards monitor the grounds 24 hours a day. The Production Team Leader has a complete set of keys for the facility and key locker containing a second set of keys is located in the administration building. The security guard and operators also have keys for the main areas and buildings. All outside areas are lighted during the night. Visitors are required to sign and check in at the main entrance before clearance can be given for site visitation.

1.4 SIGNIFICANT MATERIALS

There are a number of "significant materials"[1] used at the South Bay Power Plant which have the potential to be exposed to precipitation.

In accordance with Section A.5. of the General Permit, detailed information regarding significant materials handled and/or stored at the South Bay Power Plant is provided in Table 2.

1.5 POTENTIAL POLLUTANT SOURCES

Outside activities or operations which could affect ambient stormwater quality at the South Bay Power Plant are mostly limited to maintenance activities, hazardous waste/materials storage, aboveground fuel storage, shipping and receiving, and dust/particulate generation.

1.5.1 INDUSTRIAL PROCESSES

Each major industrial process is described below in terms of the type, characteristics, and quantity of significant materials used in or resulting from the process. As this facility is solely used for generating electricity, it is not involved in any manufacturing, cleaning, rinsing, disposal, or other activities related to the electricity-generation process unless warranted by maintenance. It is important to note that most tanks, pipeways, associated piping, valves, and other ancillary equipment capable of spillage, rupture, leakage, or otherwise failure are protected by secondary containment structures. Secondary containment provides enough capacity to hold 110 percent of the total tank volume plus the accumulation of rainfall from a 25-year, 24-hour-duration storm event.

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(1) The 1997 General Permit defines significant materials as including but not limited to "raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under Section 101 (14) of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA); any chemical the facility is required to report pursuant to Section 313 of Title III of Superfund Amendments and Reauthorization Act (SARA); fertilizers; pesticides; and waste products such as ashes, slag, and sludge that have the potential to be released with stormwater discharges."

1.5.1.1 Steam-Powered Generating Units

There are four steam-powered generating units located within the main plant building. These units can be fired using either natural gas or fuel oil. Fuel oil is used mainly as a backup fuel and therefore rarely is burned. Fuel oil for the units is stored at a tank farm located at the south end of the facility.

1.5.1.2 Gas Turbine Generating Unit

In addition to the steam-powered generating units, there is a gas turbine (GT) generating unit located north of the administration building. Adjacent to the GT is a fuel oil tank containing jet fuel (Jet-A) and natural gas cylinders for firing the GT. The tank is filled by truck at an adjacent unloading area and has a cone roof and double bottom.

1.5.1.3 Wastewater Treatment Facility

A wastewater treatment facility located in Basin E southeast of the main power plant building is used to pretreat low volume wastewater (e.g., boiler blowdown, reverse osmosis reject, floor drain water, condenser cleaning water) and boiler cleaning wastewater prior to discharge to the sewer in accordance with an Industrial User Discharge Permit.

The wastewater treatment facility consists of six aboveground tanks with capacities ranging from 56,000 gallons to 357,000 gallons. Four tanks are designated as primary and two tanks as secondary. Plant wastewater is treated in the primary tanks to achieve proper pH for solids removal. Water is then held in the secondary tanks until laboratory analysis confirms that it can be discharged to the sanitary sewer in accordance with Industrial User Discharge Permit limitations. Secondary containment for the aboveground tanks is provided around the wastewater treatment facility.

The wastewater treatment facility produces a solid filter cake containing metals as a byproduct. This filter cake is managed within a confined, protected area and disposed as hazardous waste on an as needed basis.

1.5.2 MATERIAL AND WASTE HANDLING STORAGE AREAS

Described below are the major areas associated with handling and storage of significant materials. Specific spill or leak prevention and response procedures are provided by the Spill Prevention Control and Countermeasures Plan and the Hazardous Material and Waste Contingency Plan. As noted above, most areas having the potential for spills, leaks or ruptures are equipped with secondary containment and adequate containment capacity.

1.5.2.1 Tank Farms

Fuel oil is stored in three aboveground tanks. Fuel oil tanks 1, 2, and 3 are located south of the plant building. The tank farm is surrounded with earthen berms. Tank 7, located near Tanks 1, 2 and 3, is empty, clean, and out of service. In 2000, fuel oil tanks 4, 5 and 6, a displacement oil tank and associated support facilities were removed.

1.5.2.2 Fuel Oil Loading/Unloading

Residual fuel oil is transferred to the South Bay Power Plant tank farm by tank trucks. Oil stored in the South tank farm is pumped to the Power Plant and burned in the boilers. The aboveground floating and fixed-roof tanks have adequate earthen secondary containment.

Tank trucks are used for hauling fuel oil and Jet-A fuel to the South Bay Power Plant. The tank truck loading and unloading procedures meet state and federal requirements. The truck loading and unloading areas have a quick drainage system. This containment system will hold the maximum capacity of any single compartment of the tank trucks. A warning sign is posted at each loading/unloading rack which states: "Warning: Disconnect Hose Before Departing." Tank trucks are required to be attended by truck operators or plant personnel at all times during loading and unloading.

The fuel oil loading areas associated with Tank 7 and Jet A fuel tank by the GT are equipped with secondary containment and an associated drain valve. These drain valves remain closed and padlocked when not in use and have a warning sign posted requiring anyone who operates the valve first to inspect and remove any visible oil before allowing the containment area to drain. Visual observation for sheens and other visible pollutants is conducted prior to draining. Water held in the containments surrounding the tanks and equipment, if necessary, is sampled and analyzed for suspected contaminants before drainage is authorized.

1.5.2.3 Hazardous Material and Waste Storage

An area at the facility is dedicated to the storage of accumulated hazardous wastes and materials. The building contains both solid and liquid hazardous wastes, which are stored in 55-gallon drums or other appropriate containers. The drums are segregated according to waste type (e.g., toxic solids, nonflammables, corrosives). Secondary containment at the waste management building is provided. Nearby stormwater drainage is controlled by a locked, closed system that is only opened when the absence of contaminants is confirmed.

1.5.2.4 Liquid Caustic Soda and Sulfuric Acid Storage

Liquid caustic soda and sulfuric acid are stored at the demineralizer and wastewater treatment facility areas. These liquids are stored at both locations in two, separate tanks, and are used for regeneration of the demineralizer and for the wastewater treatment process. Currently, these tanks are empty and were flushed with water prior to being placed out of service.

1.5.2.5 Fuel Oil Additive Storage

Residual fuel oil additive is stored in a 6,000 gallon storage tank with its own secondary containment located southeast of Unit 4. The additive is injected to control stack exhaust gas pH, which reduces corrosion of the boiler firesides and the air preheaters.

1.5.2.6 Storeroom Building

Several miscellaneous hazardous materials required for plant operation and maintenance are stored in appropriate sections of the storeroom building (e.g., paints, cleaners, welding rods, spare parts).

1.5.2.7 Aqueous Ammonia Storage

Containment facilities are provided in the aqueous ammonia storage and receiving area. Containment facilities incorporate special precautions to contain, observe, and sample liquids prior to their manual release to the stormwater system. Emergency spill containment is provided in the loading area, and air-dispersion safety features are also incorporated by design.

1.5.3 DUST AND PARTICULATE GENERATING ACTIVITIES

Industrial activities that generate dust or particulates at the South Bay Power Plant are mostly associated with the power plant exhaust stacks, gas turbines, and maintenance activities. Deposition of airborne particulates and dust occur within the facility's boundaries and generally follow a west-east distribution, which is consistent with onshore-offshore wind patterns typical of the area.

Principal areas at the South Bay Power Plant that may produce dust and particulates are permitted by the San Diego Air Pollution Control District (SDAPCD). These operations are described below.

- Gas Turbines - Section 1.5.1.2 provides information on this equipment.
- Abrasive blasting booth - Abrasive blasting of parts and equipment at the South Bay Power Plant is performed in a sealed booth located near Unit #4 in the southwest area of Basin E. Particulates generated during the abrasive blasting process are channeled via a negative air-pressure system into an adjacent baghouse and cyclone system that filters the air. The booth is also equipped with door seals for positive sealing at the ground, contains concrete flooring, and is fully enclosed.

1.5.4 SIGNIFICANT SPILLS/LEAKS

In accordance with the General Permit, any material or chemical spilled or leaked to stormwater in significant quantities, or the release of any unauthorized non-stormwater discharge, that has occurred since April 17, 1994 must be identified. One minor spill did occur at the South Bay Power Plant in the "East Loop" area in Basin E on September 13, 1994, when the facility was under control of a previous operator. Approximately 40 barrels of fuel oil were released to the soil when underground piping developed a leak. An equivalent of two barrels reached the storm drain and less than one gallon reached San Diego Bay. The oil was immediately contained and cleaned up by trained onsite personnel and a contractor. The cause of the spill was external corrosion of carbon-steel piping. The piping subsequently was emptied, cleaned, repaired and tested, and remains on standby for emergency use. No other reportable spills or leakages of significant materials have occurred or introduced pollutants to the stormwater discharge system since April 17, 1994.

1.5.5 NON-STORMWATER DISCHARGES

A major element of stormwater NPDES permitting is the elimination of non-stormwater discharges to the stormwater collection system. The General Permit allows certain non-stormwater discharges provided that the non-stormwater component of the discharge complies with the following:

- Local Regional Water Quality Control Board requirements.
- Local agency ordinances and/or requirements.
- BMPs are specifically included in the SWPPP to: (1) prevent or reduce pollutants in non-stormwater discharges; and (2) minimize the flow or volume of non-stormwater discharges.
- The non-stormwater discharges do not contain significant quantities of pollutants.
- The monitoring program includes quarterly visual observations of each non-stormwater discharge and its sources to ensure that BMPs are being implemented and are effective.
- The non-stormwater discharges are reported and described annually as part of the annual report.

Although authorized non-stormwater discharges occur at the South Bay Power Plant, they are often random and are not typically associated with one particular area. Therefore, the source, quantity, frequency, and characteristics of non-stormwater discharges and associated drainage areas vary and are not consistent. In any case, the following sources of non-stormwater are exempt per General Permit Section D:

- Discharges from fire fighting activities.
- Fire hydrant flushings.
- Potable water sources, including waterline flushings.
- Drinking fountain water.
- Uncontaminated compressor or air conditioner condensate.
- Irrigation drainage.
- Lawn drainage and watering.

During routine maintenance and servicing at the South Bay Power Plant, these discharges are sometimes allowed to drain to the ground because they do not pose a potential pollution problem for stormwater. However, standard protocol at the South Bay Power Plant is to minimize and otherwise prevent non-stormwater discharges to the ground. When these discharges do occur, they are infrequent, typically of low volume, and evaporate in a short time. In addition, these discharges either are from a potable water source supplied by the City of Chula Vista or are otherwise known not to contain substances that pose a threat to stormwater quality.

The potential for stormwater contamination at the South Bay Power Plant from non-stormwater discharges was investigated in July 1997. Methods used to perform the investigation consisted of the following:

- Observation of stormwater outfalls during dry weather and normal working hours.
- Inspection of outside areas for presence of unidentified discharge pipes.
- Review of site plans to determine whether they matched current conditions.
- Identification of potential drainage routes where spills or leaks could occur.

In addition, routine monitoring for non-stormwater discharges is performed periodically in accordance with the General Permit.

1.6 ASSESSMENT OF POTENTIAL POLLUTANT SOURCES

Table 3 presents a summary of industrial activities that occur at the South Bay Power Plant, potential pollutant sources, potential pollutants and Best Management Practices (BMPs) used to control the pollutants. The outfalls and potential source areas listed in Table 3 are shown in Figure 2.

Based on stormwater and non-stormwater site inspections conducted pursuant to the General Permit, the overall risk of industrial activity at the South Bay Power Plant contributing contaminants to stormwater discharges is considered low.

1.7 STORMWATER BMPS

The BMPs employed at the South Bay Power Plant can be classified according to nonstructural controls and structural controls. Nonstructural controls are implemented by various personnel throughout the site, while structural controls involve physical features to contain potential pollutants. The following sections describe these BMPs.

1.7.1 NONSTRUCTURAL BMPs

1.7.1.1 Good Housekeeping

Proper "housekeeping" practices are performed by maintenance staff so the facility is kept in a clean and orderly condition. This element of the SWPPP is continually implemented to minimize the exposure of significant materials to stormwater. Proper housekeeping practices include:

- Periodic cleanup.
- Storage of parts and equipment under roofed or covered areas where practical.
- Sweeping of impervious surfaces.
- Proper temporary storage and disposal practices for spent paint cans, waste oils, etc.
- Maintenance of oil-absorbing materials in areas of potential spillage.
- Proper storage and rainfall protection techniques for potential contaminants.
- Briefing of contractors on SWPPP efforts and potential stormwater issues.

1.7.1.2 Preventive Maintenance

Preventive maintenance of stormwater management controls occurs on an as-needed basis.

Stormwater management controls preventive maintenance includes the following:

- Cleaning of accumulated debris and potential contaminants from retention basins (i.e., fuel oil pump pits, sump pump areas, conveyance structures and outfalls).
- Clearing of debris from grate drains, catch basins, diversion ditches, and drainage pipes.
- Inspection and maintenance of secondary containment structures and associated drain valves.
- Inspection and maintenance of pumping equipment as needed.
- Inspection and maintenance of rainfall protection coverings for waste storage bins and receptacles.

1.7.1.3 Spill Response

Prevention of spills and response to spills at the South Bay Power Plant occurs according to the facility's Hazardous Material and Waste Contingency Plan and Emergency Procedures, as well as the SPCC and other response and contingency plans.

Spill response kits and spill collection devices are maintained at strategic locations around the facility. Typical components of a spill cleanup kit include, but are not limited to, dry absorbents such as pads, socks, mops, absorbing clays, portable booms or diverting structures, containers, and appropriate personal protective equipment (PPE). Spill response materials are maintained in clearly labeled containers at various locations around the site and are accessible to employees.

1.7.1.4 Material Handling and Storage

Handling and storage of significant materials is conducted in accordance with various plans, policies, and control documents such as the Hazardous Materials Business Plan, Spill Prevention Control and Countermeasures Plan and operations manuals.

1.7.1.5 Employee Training

The training program for the South Bay Power Plant Pollution Prevention Team includes proper preparation for, and response to, storm events. Team members undergo stormwater management training for areas and operations at this facility. Training updates are conducted annually. New employees are provided with a program summary of stormwater management practices as part of their employment orientation.

Topics addressed in the annual training program include updates to stormwater pollution prevention regulations, spill response, material management practices, stormwater BMPs, good housekeeping, inspection protocol, and consequences of noncompliance.

1.7.1.6 Waste Handling/Recycling

The following types of hazardous waste are generated at the South Bay facility:

- Oil-contaminated solid waste - e.g., oily rags, oil-contaminated dirt and/or absorbent (generated by routine maintenance/cleanup of oil leaks). This waste is held in a drum or hazardous waste bin until disposal is arranged.

- Asbestos - solid asbestos-containing insulation and lagging wastes are removed during maintenance and replaced with non-asbestos insulation. The asbestos waste is double-bagged and held at the hazardous waste bin until disposal is arranged.
- Wastewater treatment facility filter cake - the wastewater treatment facility produces solid wastes containing low-concentrations of metals that are a by-product of boiler acid cleanings and fireside washes. A special hazardous waste bin is brought in on an as-needed basis for filter cake disposal.
- Empty product drums - Several 55-gallon drums from various vendors are generated through site activities. These empty drums either are returned to the vendor or are sent to a licensed drum recycler. In the interim, the drums are held at the hazardous waste building.
- Boiler fireside/soot hopper solid wastes - these wastes may contain some metals in low concentrations. They normally are removed during overhauls and are placed in hazardous waste drums or bins brought in for these jobs. They are disposed of on an as-needed basis.

Each of these materials is managed in an environmentally responsible manner in accordance with federal, state, and local regulations.

1.7.1.7 Recordkeeping and Internal Reporting

The maintenance and storage of environmental records is conducted in accordance with this SWPPP and other environmental management programs. These procedures ensure that records of inspections, spills, maintenance activities, corrective actions, and visual observations are developed, retained, and provided, as necessary, to the appropriate facility personnel.

1.7.1.8 Erosion Control and Site Stabilization

Because approximately 82 percent of the South Bay Power Plant facility consists of pervious surfaces, sediment and erosion prevention and control measures have been implemented to maximize site stabilization. If the facility site undergoes modifications in the future that will involve a high potential for significant soil erosion, then appropriate measures to limit erosion will be identified and implemented. A gravel filter strip (approximately 15' wide and 3" – 4" deep) was installed around the west and south perimeters of a material staging area located east of Unit 4 for the Unit 2 and Unit 3 Selective Catalytic Reduction projects. This gravel filter strip continues to be maintained since the conclusion of these projects (Spring, 2001) as a post-construction Best Management Practice for erosion and sediment control for this area. Annual inspection, and maintenance of the filter as necessary, will be conducted each year.

1.7.1.9 Inspections

A compliance evaluation is conducted once a year by the Compliance Engineer, Scientist or another qualified designee to verify that the description of potential pollutant sources is accurate, that the drainage map has been updated or otherwise modified to reflect current conditions; and that controls to reduce pollutants in stormwater discharges associated with industrial activity identified in the SWPPP are being implemented and are adequate. Records documenting significant observations made during the site inspection and corrective actions resulting from the inspection are retained for 5 years.

In addition to this annual inspection, visual inspections are conducted by facility personnel who are trained to observe for evidence of, or the potential for, pollutants to enter the drainage system from equipment, or materials handling and storage areas. If only minor corrective actions are needed, they are performed immediately and not reported. If more extensive actions are required, the Production Team Leader is to be notified, and he or she in turn notifies the Plant Manager. Records of visual inspections and corrective actions also are retained for 5 years.

Non-stormwater discharge inspections and observations are performed quarterly at potential discharge locations and containment areas in accordance with the General Permit. In addition, stormwater discharge visual observations are performed at each discharge and run-on location (Figure 2) for at least two storms per year to detect indications of contaminants. If indications of contaminants exist, the source is investigated and action taken to reduce pollutants in the discharge.

1.7.1.10 Quality Assurance

Procedures employed at the South Bay Power Plant that help to confirm this SWPPP and associated monitoring are adequately conducted include:

- Monitoring program quality assurance/quality control activities (details provided in Appendix C).
- Employee training programs (see Section 1.7.1.5).
- Recordkeeping practices (see Section 1.7.1.7).
- Regular site inspections (see Section 1.7.1.9).

1.7.2 STRUCTURAL BMPs

In addition to nonstructural BMPs identified above, specific structural BMPs are implemented at the South Bay Power Plant. Structural BMPs consist of devices that reduce or prevent

constituents in stormwater discharges and other non-authorized discharges. These are described below.

1.7.2.1 Secondary Containment Structures

Secondary containment is provided for most tanks and areas throughout the facility with the potential to spill, leak, or rupture. In areas where significant materials are stored outside without rainfall protection, secondary containment provides capacity for the largest single container or tank and runoff from a 24-hour, 25-year return period storm. Secondary containment areas are outfitted with manually controlled discharge valves and warning signs. Discharge valves remained closed and locked when not in use. Access to drain valves are provided by catwalks for high-volume storage tank locations such that they can be operated while containing spills. Inspection and maintenance procedures are tailored to maintain these BMPs in good condition. Where the sewer pipeline traverses Telegraph Creek, it is double-walled to contain potential spills, leaks, or ruptures from primary containment.

1.7.2.2 Hazardous Waste/Materials Storage

Hazardous waste/materials storage areas are sloped to contain spills. Management practices for this less-than-90-day storage facility mandates that significant precautions be employed to prevent leaks or spills, and that the potential for release to the stormwater conveyance system is mitigated.

1.7.2.3 Aqueous Ammonia Handling

Containment facilities are provided in the aqueous ammonia storage and receiving area. Special precautions are in place to contain, observe, and sample liquids prior to their manual release to the stormwater system. Emergency spill containment is provided in the loading area, and air-dispersion safety features are also incorporated by design.

1.7.2.4 Abrasive Blasting

The booth dedicated to this activity is provided with air-emission control equipment, sealed doors and windows, secondary containment, and is completely enclosed to minimize any potential exposure.

1.7.2.5 Maintenance Service Welding Shops

This area is outfitted with a heavy-fabric containment curtain to protect the area from wind dispersion, weather, and shield employees from harmful arc light. The welding area is cleaned using dry methods.

1.7.2.6 Spill Kits

Equipment for emergency spill response is provided via spill kits situated in strategic locations throughout the facility. These are also supplied with Personal Protective Equipment to safeguard response personnel when using absorbents and emergency response equipment.

1.7.2.7 Drain Seals

The South Bay Power Plant provides safety mechanisms for storm drains at strategic locations around the facility where the potential for environmentally damaging spills exist. These special valves contain liquids below the inlet grate surface but do not allow release to the conveyance system unless the valve is opened manually. This precaution allows liquids that could be potentially discharged to be inspected prior to release.

1.7.2.8 Stormwater Evaporation Area and Pump Pit

On the east side of Basin A is a stormwater discharge evaporation area, which accepts waters collected in the adjacent pump pit. Stormwater accumulated in the pump pit is inspected before it is manually pumped to the evaporation area rather than allowing it to flow offsite as runoff or discharging it to the sewer system. Stormwater that passes visual inspection and other quality assessments is pumped to this holding area for evaporation.

1.7.3 POTENTIAL ADDITIONAL BMPs

In addition to existing BMPs employed at the South Bay Power Plant, other potential BMPs may be appropriate in the future as conditions warrant.

The results of routine monitoring and future annual inspections will determine whether additional BMPs are necessary.

One area that is watched to see if additional effort is necessary is the lower reaches of Telegraph Creek. At times in the past, unnatural debris has required removal prior to the wet season. The majority of this concrete-lined conveyance is very clean; however, debris tends to accumulate upstream of the flow baffles near the mouth. As necessary, Duke Energy South Bay LLC will work in conjunction with the City of Chula Vista to remove trash and other debris, which will lessen floatable and other visually offensive materials from entering San Diego Bay during heavy rainfall.

1.8 ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION

In accordance with Section A.9. of the General Permit, a comprehensive site compliance evaluation must be conducted at least once per year. Evaluations are to be conducted within 8 to 16 months of each other. A formal site inspection shall be conducted annually by a member of the Pollution Prevention Team to verify that controls to reduce pollutants in stormwater discharges identified in this SWPPP are adequate and properly implemented. If it is determined that existing control measures are not adequate, additional control measures will be recommended and implemented within 90 days of the evaluation.

The site evaluation will include a review of visual observation records, inspection records, and sampling and analysis records. Site inspection and corrective action records produced under this program shall be retained for 5 years. Inspections will be used to verify that best management practices are in place, including structural and nonstructural controls. Recommendations for additional or modified stormwater controls, evaluation of good housekeeping techniques, and verification of erosion prevention will also be included as part of the annual compliance evaluation.

The South Bay Power Plant SWPPP will be reviewed and compliance with it determined based on the annual compliance evaluation. If conditions throughout the facility comply with the SWPPP, a certification to that effect will be signed by the Plant Manager or other person authorized to sign reports pursuant to Section C.9 of the General Permit.

TABLE 2

SIGNIFICANT MATERIALS HANDLED AND STORED AT THE SOUTH BAY POWER PLANT

MATERIAL	RECEIVING LOCATION	HANDLING LOCATION	STORAGE LOCATION	QUANTITY/CAPACITY
Aqueous Ammonia	Storage tanks	Tanks & Units 1, 2 & 3	South of hazmat building	23,000-gallons/tank: 2 tanks
Fuel Oil	Tank farm	Tank farm	South tank farm	28,386,246 gallons(1)
Jet Fuel	GT tank	GT tank	100,000-gallon tank west of GT	97,500 gallons (max)
Natural Gas	Via two pipelines	Boilers	Two pressure regulating reducing stations located west of switchyard	No storage tanks
Natural Gas	Gas turbine	Gas turbine	Gas turbine	2,800 c.f.
Propane Gas	Backup generator	Three horizontal tanks - one near propane generator at NE end of site; one near ONAN generator at NW end of site; and one near propane generator at SW end of site		As needed
Sodium Hypochlorite	Used for chlorination of cooling water	Tank	Storage tank south of plant	7,000-gallon
Liquid Caustic Soda	Make-up Demineralizer and Wastewater Treatment Facility		Two tanks; one located at the make-up demineralizer and one located at WWTF	7,000 gallons (demineralizer) 3,000 gallons (WWTF) - both tanks out of service
Various Lubricating Oils	Storeroom or bulk turbine oil tank	Various lube oil reservoirs in plant	11,000 gallon storage tank, containers or drums located just inside the plant west truck aisle	4 reservoirs; 2,000 gallons each
Insulating Oil	Storeroom	Unit 3 generator stator cooler	One drum in basement	110 gallons
Kerosene	Storeroom	Basement	Storeroom	165 gallons
Polymer	Storeroom	Wastewater	Wastewater	55 gallons
Combustion Catalyst (Lube Oil #1; Calcium Nitrate)	Storage tank	Pumps at storage tank	6,000-gallon tank at SE end of the plant	6,000 gallons

TABLE 2

SIGNIFICANT MATERIALS HANDLED AND STORED AT THE SOUTH BAY POWER PLANT
(Continued)

MATERIAL	RECEIVING LOCATION	HANDLING LOCATION	STORAGE LOCATION	QUANTITY/CAPACITY
Neutralizing Amine	Storeroom	Plant chemical feed stations	Storeroom	75 gallons
Eliminox	Storeroom	Plant chemical feed stations	Storeroom	150 gallons
Compressed Oxygen	Storeroom	Storeroom	Storeroom	4,215 c.f.
Sulfuric Acid	Storage tank	Storage tank	Two tanks; one located at the make-up demineralizer and one located at WWTF	6,000 gallons (demineralizer) 1,200 gallons (WWTF) - both tanks out of service

(1) Maximum capacity of all fuel oil tanks in the South Tank Farm.

TABLE 3

ASSESSMENT OF POTENTIAL POLLUTION SOURCES AND CORRESPONDING BEST MANAGEMENT PRACTICES SUMMARY

AREA	ACTIVITY	POLLUTANT SOURCE	POLLUTANT	BEST MANAGEMENT PRACTICES
Tank Farm	• Storage and transfer of fuel oil, diesel oil and Jet A fuel	• Spills and leaks during delivery and transfer • Leakage from AGTs • Failure of roof drain hose	• #6 fuel oil • Jet A fuel	• Use of secondary containment around tank farm perimeter, as well as truck unloading areas. • Frequent inspection for spills or leaks. • Visual inspection and/or laboratory analysis of samples taken in containment areas prior to storm water discharge. • Apply SPCC measures when applicable. • Perform regular inspections of fueling area. • Maintain spill kit in vicinity of areas in case of spill incident. • Provide employee training regarding proper fueling, cleanup and spill response techniques.
Storeroom/ Warehouse	• Handling, storage and delivery of supplies	• Spills during delivery	• Small quantities of various supplies	• Apply SPCC measures when applicable. • Perform regular inspections of area. • Maintain spill kit in vicinity of area in case of spill incident. • Provide employee training regarding proper cleanup and spill response techniques.
Equipment Repair Areas	• As needed repairs of various equipment	• Metal shavings • Paints • Lubricating materials	• Small quantities of various equipment maintenance supplies	• Train contractors using the facility's contractor safety notice program. • Encourage housekeeping during and after maintenance repairs.
Sandblasting Shack	• Sandblasting of parts and equipment	• Particulate generated during sandblasting activities	• Abrasive blast material (i.e., lead, copper)	• Use of baghouse to capture particulate. • Daily cleanup of booth. • Prohibition of water in booth.
Satellite Hazardous Materials Storage	• Storage of hazardous materials and waste (e.g., waste oils)	• Leaks and spills	• Various	• Use of secondary containment. • Restricted access to personnel. • Regular employee training. • Regular inspections.

TABLE 3

ASSESSMENT OF POTENTIAL POLLUTION SOURCES AND CORRESPONDING BEST MANAGEMENT PRACTICES SUMMARY
(Continued)

AREA	ACTIVITY	POLLUTANT SOURCE	POLLUTANT	BEST MANAGEMENT PRACTICES
Plant Maintenance Shops	• Welding/grinding materials	• Leaks and spills	• Various	• Regular employee training. • Daily housekeeping required.
Wastewater Treatment Facility	• Wastewater	• Spills and leaks	• Metal cleaning waste	• Use of secondary containment. • Use of alarms. • Regular employee training, use of various contingency and SPCC plans, and regular inspections.
Trash Racks	• Seaweed debris removal	• Equipment leaks	• Oils and greases	• Regular maintenance of equipment.
Drum Storage	• Waste accumulation	• Residue on containers	• Various	• Use of rain covers. • Inside storage when possible.
Vehicle Parking	• Parking/driving	• Oil leaks	• Oil, antifreeze, gasoline	• Cleanup of significant stains.
Material Staging Area	• Equipment and material laydown	• Dirt base	• Sediment	• Gravel filter around the west and south perimeter
Recycle Bins	• Storage of waste products	• Leaching during rainstorms; leakage	• Metals shavings • Oils	• Placement of roll-off bins away from storm drains. • Regular housekeeping. • Provide covers for bins.

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CALIFORNIA, INC.
990 Bay Blvd.
Chula Vista, CA 91911

619 498 5315
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March 25, 2003

California Regional Water Quality
Control Board - San Diego Region
9174 Sky Park Court, Suite 100
San Diego, CA 92123

Subject: **South Bay Power Plant - Best Management Practices Program – 2002 Annual Report and Review**

Attn: Executive Officer

Pursuant to California Regional Water Quality Control Board (RWQCB), San Diego Region, Order No. 96-05 (NPDES No. CA0001368), paragraphs E16, E16A and E16B, a Best Management Practices Program[1] (the "Program") for the South Bay Power Plant was implemented in 1998. Enclosed is the annual report on BMP activities and the annual review of the BMPs for 2002. This submittal represents the fifth annual Program report and review.

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. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Please call Tom Liebst at 619-498-5223, if you have any questions regarding this report and review.

Sincerely,

Donald W. Weaver III
Plant Manager

Enclosure

[1] *South Bay Power Plant Best Management Practices Program, NPDES No. CA0001368*, dated November 13, 1997.

Duke Energy®
Generation Services

DUKE ENERGY FOSSIL-HYDRO
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990 Bay Blvd.
Chula Vista, CA 91911

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March 25, 2003

U.S. Environmental Protection Agency, Region IX
Permits Issuance Section (W-5-1)
75 Hawthorne Street
San Francisco, CA 94105

Gentlemen:

Enclosed is the Best Management Practices Program Annual Report for 2002, submitted to the Regional Water Quality Control Board – San Diego Region. This report is for the following location:

South Bay Power Plant NPDES CA0001368

If you have any questions regarding these reports, please contact Tom Liebst at (619) 498-5223.

Sincerely,

Donald W. Weaver III
Power Plant Manager

DWW:tl

Enclosures

SOUTH BAY POWER PLANT LLC

BEST MANAGEMENT PRACTICES PROGRAM

2002 ANNUAL REPORT AND REVIEW

March 2003

Program Annual Report

Background

Paragraphs E16, E16A and E16B of Order No. 96-05 (California Regional Water Quality Control Board - San Diego Region (RWQCB)), require a Best Management Practices (BMPs) Program[1] for the South Bay Power Plant. The initial BMP Program was prepared and submitted to the RWQCB in November, 1997. In February, 1998, the San Diego Gas & Electric Company (SDG&E) received a letter[2] from the RWQCB stating that the RWQCB did not have any objections to the implementation of the BMP Program. The South Bay Power Plant implemented the BMPs in 1998, as described in its initial BMP Program. The BMP Program was revised during SDG&E's 1998 and 1999 annual reviews and was also updated in July, 1999 by Duke Energy South Bay LLC after SDG&E's sale of the plant.

The BMP Program has the following basic components: 1) replacement of the existing zinc sacrificial anode cathodic protection systems in the condensers for Units 3 and 4 with impressed current cathodic protection systems; 2) conductance of quarterly monitoring of the impressed-current cathodic protection systems on the condensers; 3) replacement of the chromate-based water treatment chemicals in the service water system; 4) conductance of daily inspections of the service water levels in the systems' collector tanks; and 5) conductance of an annual inspection of the zinc sacrificial anodes in the service water heat exchangers and replacement of the anodes as necessary.

Cathodic Protection Retrofit

The BMPs specified that the zinc anode cathodic protection systems in the condensers for Units 3 and 4 be replaced with impressed current cathodic protection systems. The installation, start-up and initiation of the routine operation of the new systems were completed in December, 1999. The old systems were removed in December, 1999. Routine impressed current monitoring, as described below, was initiated in 2000 in accordance with this BMP Program.

Impressed Current Monitoring

The condenser waterboxes and tubesheets are cathodically protected by impressed current systems (ICPs). ICPs consist of dual rectifiers, an array of platinized titanium anodes, and silver/silver chloride (Ag/AgCl) reference cells. When the ICP systems were commissioned, baseline settings for current were established for each rectifier based on a series of structure-to-Ag/AgCl reference voltage measurements. To ensure that adequate cathodic protection levels are maintained, the voltage and current on each of the rectifiers are checked quarterly. Particularly important in this check, is the rectifier current. Rectifier current is affected by various factors such as water temperature, salinity, and dissolved solids. In addition to variations caused by these factors, rectifier current may generally be expected to trend higher as the waterbox coatings age over time. A significant decrease in rectifier current, however, may indicate failure of one or more anodes and warrants further examination. Readings that are greater than 20% below the baseline readings should trigger further examination.

Rectifier voltages and currents on the condensers for Units 1 - 4 were monitored routinely during 2002. These measurements are reported in Tables 1 - 8. Measurements were in most cases conducted monthly, but in no case were conducted less frequently than quarterly. All measurements of rectifier

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[1] *South Bay Power Plant Best Management Practices Program, NPDES No. CA0001368*, dated November 13, 1997.

[2] Letter from John H. Robertus (RWQCB Executive Officer) to Scott N. Peterson (Power Plant Manager). *"Best Management Practices (BMP) Program Required By Order No. 96-05; NPDES No. CA0001386 (SIC); South Bay Power Plant; WDID No. 000000091"*, dated February 3, 1998.

current on the condensers for Units 1 - 4 were greater than the levels that would trigger further examination.

Service Water Treatment Chemicals

The Plant changed out the chromate-based service water treatment chemicals in the summer of 1996 to less hazardous molybdate/nitrite-based treatment chemicals. The Plant continues to use the molybdate/ nitrite-based treatment chemicals in the service water systems.

Monitoring of the Service Water Tank Levels

Service water collector tank fluid levels are monitored daily for any indication of system leaks. This monitoring was performed daily during 2002. This monitoring did detect a small leak of service water from the Unit 3 west service water heat exchanger on November 8, 2002. Phone notification was made and a follow–up letter was sent to the RWQCB as per NPDES permit reporting requirement No. 6. Based on the types of additives used in the service water and the small daily volume of the leak, no reportable quantities of the constituents in the service water were released and there was no endangerment of human health or the environment.

Inspection/Replacement of Zinc Anodes on Service Water Heat Exchangers

The Plant inspected and replaced, as necessary, the zinc sacrificial anodes in all of the service water heat exchangers (SWHE) during 2002. Table 9 (enclosed) provides the month(s) in 2002 during which these inspections were conducted for each SWHE.

Program Annual Review

Members from the BMP Program's Team conducted the annual review of the Program in March, 2003. Several changes were made to the impressed current monitoring BMP in 2000, to ensure that measurements of operating condensers are obtained each quarter. The Plant Scientist was tasked with the responsibility to ensure that measurements are obtained each quarter from condensers that operate during the quarter. Also, on-site technicians conducted the monitoring instead of the contract technicians that previously conducted this monitoring. The BMP Team has confirmed that these changes have been successful. The BMP Team also evaluated the cooling water and service water BMPs in place in 2002 and concluded that no additional modifications are required at this time.

The annual review of the Plant's Stormwater Pollution Prevention Plan (SWPPP) was conducted in June, 2002, as part of the SWPPP's annual General Industrial Stormwater Permit reporting process and the next annual review will be conducted in accordance with the schedule in the SWPPP.

The Program has been revised to incorporate miscellaneous changes (e.g., personnel name and title changes) as detailed in the Program's revision records. Additionally, a review in 1998 of EPA's BMP guidance manual[3] for its applicability to the Plant's Program, found that the Manual's guidance material is largely incorporated into the Program protocols and that the scope of the Program is appropriate for feasibly controlling all major sources of pollutants to San Diego Bay. The review recommended an evaluation of data and records relative to the Program's controls, with subsequent corrective actions or modifications to the Program, if appropriate. These evaluations have been and will be conducted as part of the Program's review process, as described in Section VI. Revisions to the Program are in Appendix A (enclosed).

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[3] EPA. *"Guidance Manual for Developing Best Management Practices (BMP)"*, October, 1993 (EPA 833-B-93-004).

Table 1

SOUTH BAY POWER PLANT
IMPRESSED CURRENT MEASUREMENT SUMMARY
UNITS 1 - 4 ICCP RECTIFIERS

Survey Period: 1/1/02 to 12/31/02

Company: Duke Energy
Station: 65.1

Location	Description	Type	Date	Technician	Volts	Amps	Comments
SBPP Unit 1 North Condenser	Condenser	Rectifier	1/22/02	Corning	6.6	35.4	
	Condenser	Rectifier	2/19/02	Rodriguez	---	---	Unit off line
	Condenser	Rectifier	3/28/02	Rodriguez	---	---	Unit off line
	Condenser	Rectifier	4/25/02	Rodriguez	6.6	36.8	
	Condenser	Rectifier	5/30/02	Rodriguez	6.4	39.2	
	Condenser	Rectifier	6/25/02	Corning	6.5	38.1	
	Condenser	Rectifier	7/23/02	Corning	6.6	39.3	
	Condenser	Rectifier	8/16/02	Corning	6.6	39.4	
	Condenser	Rectifier	9/18/02	Corning	6.5	39.4	
	Condenser	Rectifier	10/23/02	Corning	6.6	40.0	
	Condenser	Rectifier	11/27/02	Corning	6.8	36.2	
	Condenser	Rectifier	12/19/02	Corning	6.7	36.5	

Baseline Readings:			11/95		6.8	38.5	

Table 2

SOUTH BAY POWER PLANT
IMPRESSED CURRENT MEASUREMENT SUMMARY
UNITS 1 - 4 ICCP RECTIFIERS

Survey Period: 1/1/02 to 12/31/02

Company: Duke Energy
Station: 65.11

Location	Description	Type	Date	Technician	Volts	Amps	Comments
SBPP Unit 1 South Condenser	Condenser	Rectifier	1/22/02	Corning	6.4	37.8	
	Condenser	Rectifier	2/19/02	Rodriguez	---	---	Unit off line
	Condenser	Rectifier	3/28/02	Rodriguez	---	---	Unit off line
	Condenser	Rectifier	4/25/02	Rodriguez	6.4	38.3	
	Condenser	Rectifier	5/30/02	Rodriguez	5.2	33.8	Amps lowered by Technician
	Condenser	Rectifier	6/25/02	Corning	5.2	27.4	
	Condenser	Rectifier	7/23/02	Corning	5.4	30.2	
	Condenser	Rectifier	8/16/02	Corning	5.4	28.6	
	Condenser	Rectifier	9/18/02	Corning	5.4	31.7	
	Condenser	Rectifier	10/23/02	Corning	5.4	29.7	
	Condenser	Rectifier	11/27/02	Corning	5.6	26.2	
	Condenser	Rectifier	12/19/02	Corning	5.5	24.5	

Baseline Readings:			11/95		6.4	36.9	

Table 3

SOUTH BAY POWER PLANT
IMPRESSED CURRENT MEASUREMENT SUMMARY
UNITS 1 - 4 ICCP RECTIFIERS

Survey Period: 1/1/02 to 12/31/02

Company: Duke Energy
Station: 65.2

Location	Description	Type	Date	Technician	Volts	Amps	Comments
SBPP Unit 2 North Condenser	Condenser	Rectifier	1/22/02	Corning	6.2	33.7	
	Condenser	Rectifier	2/19/02	Rodriguez	5.7	30.9	
	Condenser	Rectifier	3/28/02	Rodriguez	5.7	25.4	
	Condenser	Rectifier	4/25/02	Rodriguez	5.5	30.4	
	Condenser	Rectifier	5/30/02	Rodriguez	5.4	32.8	
	Condenser	Rectifier	6/25/02	Corning	5.4	31.0	
	Condenser	Rectifier	7/23/02	Corning	5.6	31.0	
	Condenser	Rectifier	8/16/02	Corning	5.7	32.1	
	Condenser	Rectifier	9/18/02	Corning	5.7	30.9	
	Condenser	Rectifier	10/23/02	Corning	---	---	Unit off line
	Condenser	Rectifier	11/27/02	Corning	---	---	Unit off line
	Condenser	Rectifier	12/19/02	Corning	5.6	27.1	

Baseline Readings:			1/97		6.7	31	

Table 4

SOUTH BAY POWER PLANT
IMPRESSED CURRENT MEASUREMENT SUMMARY
UNITS 1 - 4 ICCP RECTIFIERS

Survey Period: 1/1/02 to 12/31/02

Company: Duke Energy
Station: 65.21

Location	Description	Type	Date	Technician	Volts	Amps	Comments
SBPP Unit 2 South Condenser	Condenser	Rectifier	1/22/02	Corning	6.2	36.9	
	Condenser	Rectifier	2/19/02	Rodriguez	5.7	34.6	
	Condenser	Rectifier	3/28/02	Rodriguez	5.8	32.8	
	Condenser	Rectifier	4/25/02	Rodriguez	5.6	33.0	
	Condenser	Rectifier	5/30/02	Rodriguez	5.4	36.0	
	Condenser	Rectifier	6/25/02	Corning	5.5	33.8	
	Condenser	Rectifier	7/23/02	Corning	5.6	33.7	
	Condenser	Rectifier	8/16/02	Corning	5.7	34.5	
	Condenser	Rectifier	9/18/02	Corning	5.7	33.0	
	Condenser	Rectifier	10/23/02	Corning	---	---	Unit off line
	Condenser	Rectifier	11/27/02	Corning	---	---	Unit off line
	Condenser	Rectifier	12/19/02	Corning	5.7	30.2	

Baseline Readings:			11/95		6.7	29.2	

Table 5

SOUTH BAY POWER PLANT
IMPRESSED CURRENT MEASUREMENT SUMMARY
UNITS 1 - 4 ICCP RECTIFIERS

Survey Period: 1/1/02 to 12/31/02

Company: Duke Energy
Station: 65.30

Location	Description	Type	Date	Technician	Volts	Amps	Comments
SBPP Unit 3 North Condenser	Condenser	Rectifier	1/22/02	Corning	6.6	27.9	
	Condenser	Rectifier	2/19/02	Rodriguez	6.5	28.0	
	Condenser	Rectifier	3/28/02	Rodriguez	6.5	28.0	
	Condenser	Rectifier	4/25/02	Rodriguez	6.5	29.0	
	Condenser	Rectifier	5/30/02	Rodriguez	6.3	30.5	
	Condenser	Rectifier	6/25/02	Corning	4.8	28.8	
	Condenser	Rectifier	7/23/02	Corning	4.9	29.1	
	Condenser	Rectifier	8/16/02	Corning	4.9	29.0	
	Condenser	Rectifier	9/18/02	Corning	6.6	29.4	
	Condenser	Rectifier	10/23/02	Corning	---	---	Unit off line
	Condenser	Rectifier	11/27/02	Corning	---	---	Unit off line
	Condenser	Rectifier	12/19/02	Corning	5.2	31.6	

Baseline Readings:			11/99	Doughty*	6.5	31	

* Norton Corrosion employee

Table 6

SOUTH BAY POWER PLANT
IMPRESSED CURRENT MEASUREMENT SUMMARY
UNITS 1 - 4 ICCP RECTIFIERS

Survey Period: 1/1/02 to 12/31/02

Company: Duke Energy
Station: 65.31

Location	Description	Type	Date	Technician	Volts	Amps	Comments
SBPP Unit 3 South Condenser	Condenser	Rectifier	1/22/02	Corning	6.3	27.1	
	Condenser	Rectifier	2/19/02	Rodriguez	6.2	27.3	
	Condenser	Rectifier	3/28/02	Rodriguez	6.2	27.3	
	Condenser	Rectifier	4/25/02	Rodriguez	6.2	27.8	
	Condenser	Rectifier	5/30/02	Rodriguez	6.0	30.0	
	Condenser	Rectifier	6/25/02	Corning	4.7	28.7	
	Condenser	Rectifier	7/23/02	Corning	4.8	28.3	
	Condenser	Rectifier	8/16/02	Corning	4.8	28.2	
	Condenser	Rectifier	9/18/02	Corning	6.3	28.8	
	Condenser	Rectifier	10/23/02	Corning	---	---	Unit off line
	Condenser	Rectifier	11/27/02	Corning	---	---	Unit off line
	Condenser	Rectifier	12/19/02	Corning	5.1	31.5	

Baseline Readings:			11/99	Doughty*	6.2	30	

* Norton Corrosion employee

Table 7

SOUTH BAY POWER PLANT
IMPRESSED CURRENT MEASUREMENT SUMMARY
UNITS 1 - 4 ICCP RECTIFIERS

Survey Period: 1/1/02 to 12/31/02

Company: Duke Energy
Station: 65.40

Location	Description	Type	Date	Technician	Volts	Amps	Comments
SBPP Unit 4 North Condenser	Condenser	Rectifier	1/22/02	Corning	5.0	18.1	
	Condenser	Rectifier	2/19/02	Rodriguez	---	---	Unit off line
	Condenser	Rectifier	3/28/02	Rodriguez	---	---	Unit off line
	Condenser	Rectifier	4/25/02	Rodriguez	---	---	Unit off line
	Condenser	Rectifier	5/30/02	Rodriguez	---	---	Unit off line
	Condenser	Rectifier	6/25/02	Corning	4.0	19.2	
	Condenser	Rectifier	7/23/02	Corning	---	---	Unit off line
	Condenser	Rectifier	8/16/02	Corning	---	---	Unit off line
	Condenser	Rectifier	9/18/02	Corning	---	---	Unit off line
	Condenser	Rectifier	10/23/02	Corning	---	---	Unit off line
	Condenser	Rectifier	11/27/02	Corning	---	---	Unit off line
	Condenser	Rectifier	12/19/02	Corning	4.2	18.3	

Baseline Readings:			11/99	Doughty*	5.0	20	

* Norton Corrosion employee

Table 8

SOUTH BAY POWER PLANT
IMPRESSED CURRENT MEASUREMENT SUMMARY
UNITS 1 - 4 ICCP RECTIFIERS

Survey Period: 1/1/02 to 12/31/02

Company: Duke Energy
Station: 65.41

Location	Description	Type	Date	Technician	Volts	Amps	Comments
SBPP Unit 4 South Condenser	Condenser	Rectifier	1/22/02	Corning	4.7	20.8	
	Condenser	Rectifier	2/19/02	Rodriguez	---	---	Unit off line
	Condenser	Rectifier	3/28/02	Rodriguez	---	---	Unit off line
	Condenser	Rectifier	4/25/02	Rodriguez	---	---	Unit off line
	Condenser	Rectifier	5/30/02	Rodriguez	---	---	Unit off line
	Condenser	Rectifier	6/25/02	Corning	4.1	22.4	
	Condenser	Rectifier	7/23/02	Corning	4.2	23.5	
	Condenser	Rectifier	8/16/02	Corning	4.3	24.2	
	Condenser	Rectifier	9/18/02	Corning	---	---	Unit off line
	Condenser	Rectifier	10/23/02	Corning	---	---	Unit off line
	Condenser	Rectifier	11/27/02	Corning	---	---	Unit off line
	Condenser	Rectifier	12/19/02	Corning	3.9	25.1	

Baseline Readings:			11/99	Doughty*	4.8	22	

* Norton Corrosion employee

Table 9

SOUTH BAY POWER PLANT

ZINC ANODE INSPECTIONS/REPLACEMENTS IN THE SERVICE WATER HEAT EXCHANGERS (SWHE) DURING 2002

Period: 1/1/02 to 12/31/02

Unit	West SWHE	East SWHE
1/2	March, 2002	March, 2002
	December, 2002	December, 2002
3	April, 2002	April, 2002
4		

BEST MANAGEMENT PRACTICES PROGRAM

SOUTH BAY POWER PLANT
CHULA VISTA, CALIFORNIA

Duke Energy South Bay

Chula Vista, California

March 2003

1.0 INTRODUCTION

On April 23, 1999, Duke Energy South Bay LLC (Duke) assumed responsibility for operation of the South Bay Power Plant (SBPP) in Chula Vista, California. Duke submitted an updated Best Management Practices (BMP) Program to the San Diego Regional Water Quality Control Board (RWQCB) in July, 1999, to update the SBPP BMP Program previously accepted by the RWQCB (*South Bay Power Plant Best Management Practices Program, NPDES No. CA0001368*, San Diego Gas & Electric Company, November 13, 1997). The updated BMP Program did not modify the BMP practices compared to the plan previously accepted by the RWQCB, but included only minor editing to reflect the change in operator and reformatting of text. Subsequent annual reviews of the BMP Program in March, 2000 and March, 2001 have resulted in only minor changes.

The RWQCB adopted Order 96-05 (National Pollutant Discharge Elimination System [NPDES] Permit No. CA0001368) for the SBPP on November 14, 1996. Provision 16 of this permit contains various requirements for the development and implementation of BMPs for SBPP operations, as follows:

- Provision 16 requires that the SBPP have and implement a BMP program for ancillary activities in accordance with 40 Code of Federal Regulations (CFR) 125.100-125.104.
- Provision 16A requires that the SBPP have and implement a BMP program to minimize the quantity of metals and arsenic discharged from the SBPP to San Diego Bay.
- Provision 16B requires that the SBPP have and implement a BMP program to prevent discharges from the SBPP's service water system to San Diego Bay.
- Provision 16C requires the preparation of a report identifying, among other things, BMPs and pollution prevention measures which could prevent, or minimize the potential for the discharge of pollutants and waste from the SBPP, for specific wastestreams and/or pollutants.

This BMP Program satisfies the requirements for Provisions 16, 16A and 16B. The report required by Provision 16C was submitted to the RWQCB by the previous owner/operator (San Diego Gas & Electric Company) on November 13, 1997.

A copy of this BMP Program will be maintained in the Administrative Offices at the SBPP in a location which is available to the operating personnel at all times.

2.0 STATEMENT OF POLICY

It is the policy of Duke to comply with applicable laws and regulations and to conduct operations in an environmentally sound manner.

3.0 BEST MANAGEMENT PRACTICES TEAM

Following are descriptions of the organization and responsibilities of the SBPP BMP Team:

- The Plant Manager is responsible for signing the Annual Report and certifying that the elements of this Program are being implemented.
- The BMP Compliance Coordinator is responsible for recommending revisions and updates to the BMPs to assure compliance. He/she will also assist in updating this Program as appropriate based on team recommendations, and assist in annual reporting efforts.
- The Compliance Engineer is responsible for the overall coordination with Plant/Company operational and maintenance groups to implement this Program.
- The Scientist is responsible for planning and scheduling staff training and implementation programs in accordance with this Program. He/she will be responsible for instructing and assuring that respective staff members operate and maintain the facility in a manner to continually assure compliance with these BMPs. He/she will also coordinate indoctrination and orientation of new facility employees such that each appropriate onsite employee is educated in the requirements of the BMPs.

Members of the Team are identified in the front of this document.

4.0 FACILITY DESCRIPTION

4.1 REGIONAL SETTING AND SITE MAP

The SBPP facility is located in southwest San Diego County, California, in the Imperial Beach-Baja California Norte USGS quadrangle (Figure 1). The facility encompasses approximately 150 acres southeast of J Street and Bay Boulevard in the City of Chula Vista.

The SBPP produces electricity primarily from four steam-powered generating units located in the Power Plant Building shown in Figure 2. The steam-powered generating units are powered by natural gas, with fuel oil used as a backup fuel. In addition to the steam units, there is a combustion turbine (CT) generating unit located north of the administration building. The SBPP is classified by Standard Industrial Classification (SIC) Code 4911: "Steam Electric Generating Facilities."

The main transformers for the steam generating units are located immediately north of the Power Plant Building. Four main transformers and six auxiliary transformers are located in this area. North of the Power Plant Building is a 138-kilovolt (kV) switching station followed by a smaller 69-kV switching station.

Southeast of the Power Plant Building is a wastewater treatment facility which is used to treat low-volume wastes and metal-cleaning wastes prior to their discharge to the sewer pursuant to an Industrial User Discharge Permit. The wastewater treatment facility has secondary containment.

4.2 CLIMATE

The area in which the SBPP is located is characterized as an arid climate with warm, dry summers and mild winters. Winter precipitation in the area is associated with storms migrating inland from the Pacific Ocean. Nearly 90 percent of the annual rainfall occurs during the period from November to April, with a mean annual rainfall of about 9 inches(1).

4.3 TOPOGRAPHY AND DRAINAGE

The topography of the site is moderate to flat and generally slopes westward toward San Diego Bay. The roadway storm drains discharge to San Diego Bay. The amount of impervious surface (e.g., paved surfaces, structures) on this site is approximately 18 percent(2). The balance of the site consists of planted landscaping, natural vegetation, and evaporation or retention areas. During periods of rain, stormwater run-off is generally diverted by surface gradients and curbing

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(1) NOAA (National Ocean and Atmospheric Administration). 1991. *Climatological Data, Annual Summary, California, 1991*. Volume 95, Number 13.

(2) Duke Energy South Bay LLC, March, 2001. *Stormwater Pollution Prevention Plan, South Bay Power Plant, Chula Vista, California.*

to stormwater inlets and drainage channels located throughout the site. The nearest surface water body is San Diego Bay located immediately to the west.

There are several stormwater conveyance and discharge structures located on the site. These include sumps, pump pits, swales and ditches. In addition to surface and subsurface drains throughout the site, multiple roof drains convey stormwater to the ground surface.

5.0 BEST MANAGEMENT PRACTICES PROGRAM

This BMP Program consists of the following three main components:

- BMPs related to potential sources of pollutants from plant activities which could be released to stormwater (Section 5.1).
- BMPs related to the potential release of metals from the plant's once-through, noncontact, cooling water system (Section 5.2).
- BMPs related to the potential release of pollutants from the plant's service water system (Section 5.3).

As discussed in Section 1.0, requirements for this BMP program are defined in Provisions 16, 16A and 16B of RWQCB Order 96-05 (NPDES Permit No. CA0001368). The following subsections 5.1, 5.2 and 5.3 reference the relevant provisions as well as relevant Findings that form the basis of Order 96-05. The Findings are presented in Order 96-05, immediately following the Table of Contents in that document.

5.1 PROVISION 16 - BMPS FOR ANCILLARY ACTIVITIES AND FOR SPECIFIC POLLUTANTS

Provision 16 requires that SBPP have and implement a BMP Program, in accordance with 40 CFR 125.100-124.104, to prevent the release of toxic or hazardous pollutants from ancillary activities, including specific pollutants identified in permit Findings 11 through 21, to waters of the United States. BMPs for this provision are described below.

5.1.1 ANCILLARY ACTIVITIES

On March 17, 1999 Duke filed a Notice of Intent to comply with State Water Resources Control Board Water Quality Order No. 97-03, NPDES General Permit No. CAS000001, Waste

Discharge Requirements (WDRs) for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities, April 17, 1997. In compliance with this permit, Duke has prepared a Storm Water Pollution Prevention Plan (SWPPP) to minimize pollutants in stormwater run-off from the site.

The overall objectives of the SWPPP are to:

- Identify sources of pollution that affect the quality of industrial stormwater discharges and authorized nonstormwater discharges.
- Implement practices to reduce or prevent pollutants in stormwater discharges.

The SWPPP evaluates SBPP facilities and activities for their potential to release pollutants to waters of the United States and identifies a number of nonstructural and structural BMPs to minimize the release of pollutants. Nonstructural BMPs include good housekeeping, preventive maintenance, spill response, material handling and storage, employee training, waste handling/recycling, recordkeeping and internal reporting, erosion control and site stabilization, inspections and quality assurance measures. Structural BMPs include secondary containment structures, hazardous waste/materials storage, aqueous ammonia handling, abrasive blasting, maintenance service welding shops, spill kits, drain seals, stormwater evaporation area and pump pit. The SWPPP also addresses material inventory, material compatibility, employee training, reporting and notification procedures, visual inspections, preventive maintenance, housekeeping and security.

The SWPPP is SBPP's BMP Program for ancillary activities. Areas and activities assessed for BMPs in the SWPPP are summarized in Table 1. The SWPPP is incorporated into this BMP Program as Appendix A.

5.1.2 SPECIFIC POLLUTANTS

Findings referenced below are from RWQCB Order 96-05 (NPDES Permit No. CA0001368).

Finding No. 11: Cooling Water System Erosion and Corrosion

The potential for release of metals from the cooling water system and BMPs for minimizing the release of metals are addressed in Section 5.2.

Finding No. 12: Cooling Water Chlorination

The SBPP utilizes liquid sodium hypochlorite for intermittent chlorination of the cooling water system. Bulk deliveries of sodium hypochlorite are made by tanker trucks to a single tank located on the cooling water deck. This tank has a secondary containment to prevent the release of sodium hypochlorite in the event of a tank rupture. The containment has a locked drain for the release of rainwater, after it has been observed to confirm that it is not contaminated. The operation of the chlorination system is routinely checked throughout the day by operational and/or laboratory personnel. The potential for release of significant amounts of toxic or hazardous pollutants to waters of the United States due to equipment failure, improper operation, natural phenomena, etc. is insignificant.

The plant may use bromine in the future with or in lieu of sodium hypochlorite. The facilities for bromine are expected to be similar to those used for sodium hypochlorite.

Finding No. 13: Cooling Water System Encrusting Organisms

Encrusting organisms and sediment are manually removed periodically from the cooling water intake structures. These materials are conveyed to the discharge basin via the traveling screen debris trough. Since this material is primarily biological in origin, no significant amounts of toxic or hazardous pollutants are expected to be added to waters of the United States from this operation.

Finding No. 14: Saltwater Reverse Osmosis System

The saltwater reverse osmosis system that was anticipated in Finding No. 14 was never installed. Therefore, BMPs are not considered for the system.

Finding No. 15: Fuel Oil Tank Hydrotest Discharges

The NPDES permit application requested authorization to discharge water from infrequent hydrotesting which is conducted on the fuel oil tanks prior to their return to service after certain maintenance activities. The tanks are cleaned of product and maintenance debris prior to being filled with city water to conduct the hydrotest. The NPDES permit does not authorize the discharge of hydrotest water from these activities and states that the discharge may be authorized at a later date. In the event that future hydrotests are necessary, Duke will obtain the necessary permits and/or authorizations for the disposal of the hydrotest water at the time of the hydrotest.

The fuel oil tanks have secondary containment, so in the event of a leak during a hydrotest, the water would be contained. Therefore, the potential for causing a release of significant amounts of toxic or hazardous pollutants to waters of the United States from these activities is insignificant.

Finding No. 16: Low Volume Waste Treatment and Discharge

Low volume wastewater is generated in the SBPP from multiple sources. It is collected in several sumps and forwarded to a central wastewater treatment facility located southeast of the Power Plant Building. Treated effluent from the treatment facility is discharged to the sewer pursuant to an Industrial User Discharge permit. The wastewater treatment facility has secondary containment for the aboveground tanks. BMPs for the wastewater treatment facility are identified in the SWPPP.

Finding Nos. 17-21: Metal Cleaning Waste Generation, Treatment and Discharge

The SBPP generates chemical metal-cleaning wastes from periodic chemical cleaning of the internal walls of the boilers. Nonchemical metal-cleaning wastes are generated from the periodic water washing of the external surfaces of the boilers and the air heaters. Water washes of selective catalytic reduction units may be performed very infrequently. Wastewater generated from these operations is collected via trenches and sumps and routed to the wastewater treatment facility. Treated effluent from the treatment facility is discharged to the sewer pursuant to an Industrial User Discharge permit. The wastewater treatment facility has secondary containment for the aboveground tanks. BMPs for the wastewater treatment facility are identified in the SWPPP.

5.2 PROVISION 16A - BMPS FOR DISCHARGE OF METALS

The SBPP's cooling water system utilizes up to 601 million gallons per day (gpd) of San Diego Bay water as once through noncontact cooling water to condense steam and to cool auxiliary equipment. Steam is condensed in four condensers (one per generating unit) and auxiliary cooling is accomplished through eight saltwater heat exchangers (six service water heat exchangers and two condensate heat exchangers).

The discharge of de minimus quantities of metals to the noncontact cooling water from the cooling water system occur as a result of the erosion and/or corrosion of the system's components which are exposed to the noncontact cooling water. The significant components of the cooling water system are the condensers and heat exchangers. Altogether, the four condensers and eight saltwater heat exchangers present an estimated 392,000 square feet (ft^2) of exposed surface area, of which an estimated 389,000 ft^2 is present in the condenser and heat exchanger tubes. The other metal surface contact areas, including the bar racks, traveling screens, and pumps, only comprise an estimated 32,000 ft^2. Therefore, the discharge of metals from the condenser and saltwater heat exchanger tubes comprises almost all of the discharge of metals from the cooling water system. The cooling water system metals discharge is more fully described below.

5.2.1 COPPER

Copper is contained in: (1) the condenser and saltwater heat exchanger tubes; (2) the condenser and saltwater heat exchanger tubesheets, with the exception of the Unit No. 4 service water heat exchanger which is constructed of carbon steel; (3) the Unit No. 1 and No. 2 cooling water pump impellers (which are coated with epoxy) and the small vacuum pump and saltwater booster pump impellers; and (4) the service water heat exchanger heads. The percent of copper in the tubes ranges from approximately 70 to 90 percent, except for the stainless steel condenser tubes in Unit No. 1 where the percent copper is a maximum of 0.75 percent. The corrosion rate for the stainless steel is considered to be nil.

In 1995, the condenser tubes for the Unit No. 2 generating unit were replaced due to cracking caused by nonroutine operational events. Information from the Unit No. 2 condenser tube replacement project has been used to estimate the release of copper from the plant's condenser tubes. The old tubes from Unit No. 2 were weighed when they were sold as scrap. The original weight of the tubes was calculated based upon the tube construction specifications because the information regarding their actual installation weight is not available. The scrap weight was subtracted from the calculated installation weight and divided by the number of years in service to determine the estimated average annual amount of copper lost to the cooling water discharge per year. The estimated rate of copper loss from the saltwater heat exchangers and the Unit Nos. 2, 3, and 4 condensers was then calculated based on the proportion of their exposed surface areas and copper content in relation to the exposed surface area and copper content of the Unit No. 2 condenser. Based upon these calculations, the total amount of copper discharged from all condenser and saltwater heat exchanger tubes is estimated to be between 300 and 400 pounds of

copper per year or approximately 1 pound per day. This estimated copper discharge rate of 1 pound per day corresponds to an estimated discharge concentration range of between 0.2 micrograms per liter (μg/L) and 0.4 μg/L, based upon cooling water flows of 600 million gpd and 300 million gpd, respectively. This concentration range of copper in the cooling water discharge is neither detectable nor quantifiable by U.S. Environmental Protection Agency (EPA)-approved analytical methods. The differentiation of copper discharged from the cooling water system from the background copper concentrations in the bay is not feasible using standard EPA approved methods, because at these low concentration levels the amount discharged is less than the variability or margin for error in the sample results caused by the sampling and analytical methods. A subsequent study[1] of the difference in copper concentrations between the cooling water intake and the combined discharge, using research and development (R&D) grade sampling and test methods, estimated the average concentration difference as 0.39 ± 0.17 ug/l. Based upon this concentration and the plant's maximum cooling water flow rate, it is estimated that the plant could potentially discharge up to 710 ± 310 lbs. of copper per year. These results compare favorably with the previous estimate cited above.

5.2.2 NICKEL

The majority of the tubes in the Unit Nos. 2, 3, and 4 condensers, and in the saltwater heat exchangers for Units Nos. 1, 2, 3 and 4 (with the exception of Unit Nos. 1 and 2 service water heat exchangers which do not contain nickel) contain approximately 10 percent nickel. The stainless steel condenser tubes for generating Unit No. 1 contain approximately 24 percent nickel, but its corrosion rate is considered to be nil. The rate of erosion and corrosion of nickel in copper-nickel tubing is generally similar to the rate of copper. Based upon the same method used to estimate the concentration of copper discharged to the cooling water, the concentration of nickel discharged to the cooling water is estimated to be between 0.02 μg/L and 0.04 μg/L, based on cooling water flows of 600 million gpd and 300 million gpd, respectively. Based upon the results of the special R&D copper study discussed in Section 5.2.1, the estimated nickel concentrations would be 0.039 ± 0.017 ug/l. This concentration of nickel in the cooling water discharge is consequently neither detectable nor quantifiable by EPA-approved analytical methods. The differentiation of nickel discharged from the cooling water system from the background nickel concentrations in the bay is not feasible, because at these low concentration

[1] "*Final Report Cooling Water System Special Copper Study for Duke Energy South Bay LLC, South Bay Power Plant (WDR No. 96-05)*" December 29, 1999.

levels the amount discharged is less than the variability or margin for error in the sample results caused by the sampling and analytical methods.

5.2.3 ZINC

Zinc is present in: (1) the condenser tubes in generating Units Nos. 2, 3 and 4 in trace quantities (i.e., less than 1 percent); (2) the saltwater heat exchanger tubes; (3) the condenser tubesheets; and (4) the vacuum pumps and Unit Nos. 1 and 2 cooling water pump impellers. Zinc is also used as sacrificial anodes in all of the saltwater heat exchangers. Prior to December, 1999, zinc sacrificial anodes were used for cathodic protection in the condensers on Units 3 and 4. However, with the completion in December, 1999, of the project to replace these sacrificial anodes with impressed current cathodic protection systems, the zinc anodes have been removed from the condensers.

The total surface area of the saltwater heat exchanger tubes and in condenser tubesheets which contain zinc above trace amounts is equivalent to approximately 3 percent of the total condenser and saltwater heat exchanger tube surface area. Based upon the same method used to estimate the concentration of copper discharged to the cooling water, the concentration of zinc discharged to the cooling water from the Unit Nos. 2, 3 and 4 condensers and the saltwater heat exchanger tubes would be a very small fraction of the estimated concentrations of copper discharged to the cooling water.

In addition, zinc sacrificial anodes are used for cathodic protection, as previously described. The heat exchangers each utilize approximately 6 to 12 1-inch x 6-inch x 6-inch zinc plates. The condition of these plates is inspected approximately every 12 to 18 months and the plates are replaced as necessary. This frequency of inspection is dependent upon the frequency of the internal maintenance of the saltwater heat exchangers and the predicted life of the zinc sacrificial anodes. Based upon the estimated mass of zinc loss over a 1 year period, an estimated 8-16 pounds of zinc is discharged to the cooling water annually. This would result in a concentration of zinc in the cooling water discharge is neither detectable nor quantifiable by EPA-approved analytical methods. The differentiation of zinc discharged from the cooling water system from the background bay zinc concentrations is not feasible, because at these low concentration levels the amount discharged is less than the variability or margins for error in the sample results caused by the sampling and analytical methods.

5.2.4 CHROMIUM

The stainless steel condenser tubes in generating Unit No. 1 contain approximately 21 percent chromium. The stainless steel corrosion rate is considered to be nil. Chromium is also present in the stainless steel used in other cooling system components, as previously described.

5.2.5 OTHER METAL CONSTITUENTS

Other metal constituents which are found in the alloys which make up the condenser and heat exchangers include iron, carbon, molybdenum, aluminum, arsenic, lead, manganese, nitrogen, silver, tin and titanium. With the exception of iron, these are found in trace quantities in the parent metal. Since these metals are present at much smaller percentages than copper in the parent metals, their discharge will be much smaller than copper and therefore be unmeasurable and insignificant in the cooling water.

None of the metals described above are discharged from the cooling water system in concentrations which will cause, have the reasonable potential to cause, or contribute to an excursion above any applicable water quality standard within the meaning of 40 CFR 122.44(d)(1)(i).

5.2.6 BEST MANAGEMENT PRACTICES

The SBPP's cooling water system is essential to the plant's operation. Its operation involves large surface areas of heat-transferring metal being in contact with the cooling water. This contact results in a low rate of metals discharge to San Diego Bay through erosion and corrosion of the system's metallic components. Given these circumstances, the goal of these BMPs is to minimize the discharge of metals from the Plant's cooling water system to the San Diego Bay.

It is impracticable to devise and implement BMPs for all components of the plant's cooling water system. For example, the relative small size and therefore insignificant surface area of the cooling water pump casings and impellers do not warrant BMPs. Additionally, some metals are present at trace levels and can not be feasibly addressed. However, because the condenser and saltwater heat exchangers contain an estimated 90 percent of the exposed metal surface area of the entire cooling water system, BMPs are described below to minimize the discharge or the potential for discharge of copper, nickel, zinc and/or chromium to the bay. These BMPs will: (1)

reduce zinc discharges from the Unit Nos. 3 and 4 condensers; (2) improve the reliability of the cathodic protection on Unit Nos. 3 and 4; and (3) ensure the proper operation of the cathodic protection systems through a routine system monitoring program.

The BMPs for the cooling water system are summarized in Table 2 and discussed further below.

Cathodic Protection Retrofit

The condensers on Units Nos. 3 and 4 were retrofitted with impressed current cathodic protection systems to eliminate the use of zinc sacrificial anodes in the condensers. This has: (1) eliminated this source of zinc discharge in the condensers; and (2) ensured better corrosion protection of these condensers. This elimination of the sacrificial anodes has minimized the overall release of zinc from the SBPP. Impressed current cathodic protection provides better corrosion protection than sacrificial anodes as its level of protection can be monitored on a routine basis and be adjusted as required; whereas the use of zinc sacrificial anodes requires the condenser to be taken out of service to conduct inspections and maintenance. This allows for more routine monitoring of the cathodic protection system. The retrofitting was completed within 24 months after the Executive Officer approved these BMPs. Quarterly progress reports were submitted to the Executive Officer describing plans and progress in installing the above cathodic protection system until the new systems were placed in service. Installation of the new cathodic protection systems on these condensers was completed in December, 1999.

Cathodic Protection Routine Monitoring

The impressed current cathodic protection systems protect the condenser waterboxes, tubesheets and the portion of the tubes immediately adjacent to the tubesheets from corrosion. The impressed current systems will be monitored quarterly. Monitoring the systems' equipment will verify that the rectifiers[3] and other aspects of the system are operating properly and that an adequate level of cathodic protection exists. These routine checks of the system will be used to determine whether maintenance needs to be performed. Maintenance which requires removing operating equipment from service will be performed during unit outages, as feasible. Annual reports describing the quarterly monitoring results will be submitted to the RWQCB.

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[3] Rectifiers provide DC current to the protection system.

5.3 PROVISION 16B - PLANT SERVICE WATER SYSTEM BMPs

The plant utilizes closed-loop cooling water systems to cool auxiliary equipment. These closed-loop systems are referred to as the Service Water System. Anticorrosion chemicals are used in the systems to maintain reliable service. Service water might leak directly into the plant's once-through cooling water system in the event a leak should develop in a service water heat exchanger tube or tubesheet.

Following are the BMPs for the service water system metal pollutants. The BMPs are also summarized in Table 2. These BMPs will: (1) minimize the potential for discharge of service water from the service water heat exchangers; and (2) reduce the hazard associated with a discharge of service water from the service water system.

5.3.1 MINIMIZE THE POTENTIAL FOR SERVICE WATER RELEASES

To minimize the potential for the discharge of service water from the heat exchangers to the once-through cooling water, Duke or its contractors will conduct annual visual inspections of the cathodic protection sacrificial anodes to confirm that corrosion protection is occurring. Since the zinc sacrificial anodes are located inside the saltwater heat exchanger, more frequent inspections would unduly affect plant operations. Annual inspections will provide a frequency of inspection that, based upon operating experience and the predictable rate of sacrificial anode consumption, will ensure continuous cathodic protection of the heat exchangers. These sacrificial anodes will not be replaced by impressed current cathodic protection systems because the estimated release rate of zinc from the sacrificial anodes of approximately 8 to 16 pounds per year is insignificant.

To detect leaks in the service water system, the service water levels in the system collector tanks are measured. There are three collector tanks, one for Units Nos. 1 and 2, and one each for Unit No. 3 and Unit No. 4. The tank levels will be measured and the levels logged at a minimum of once per day. Any significant change is investigated to determine whether the change in tank level is from a leak or an operational change.

5.3.2 REDUCE THE HAZARD OF SERVICE WATER

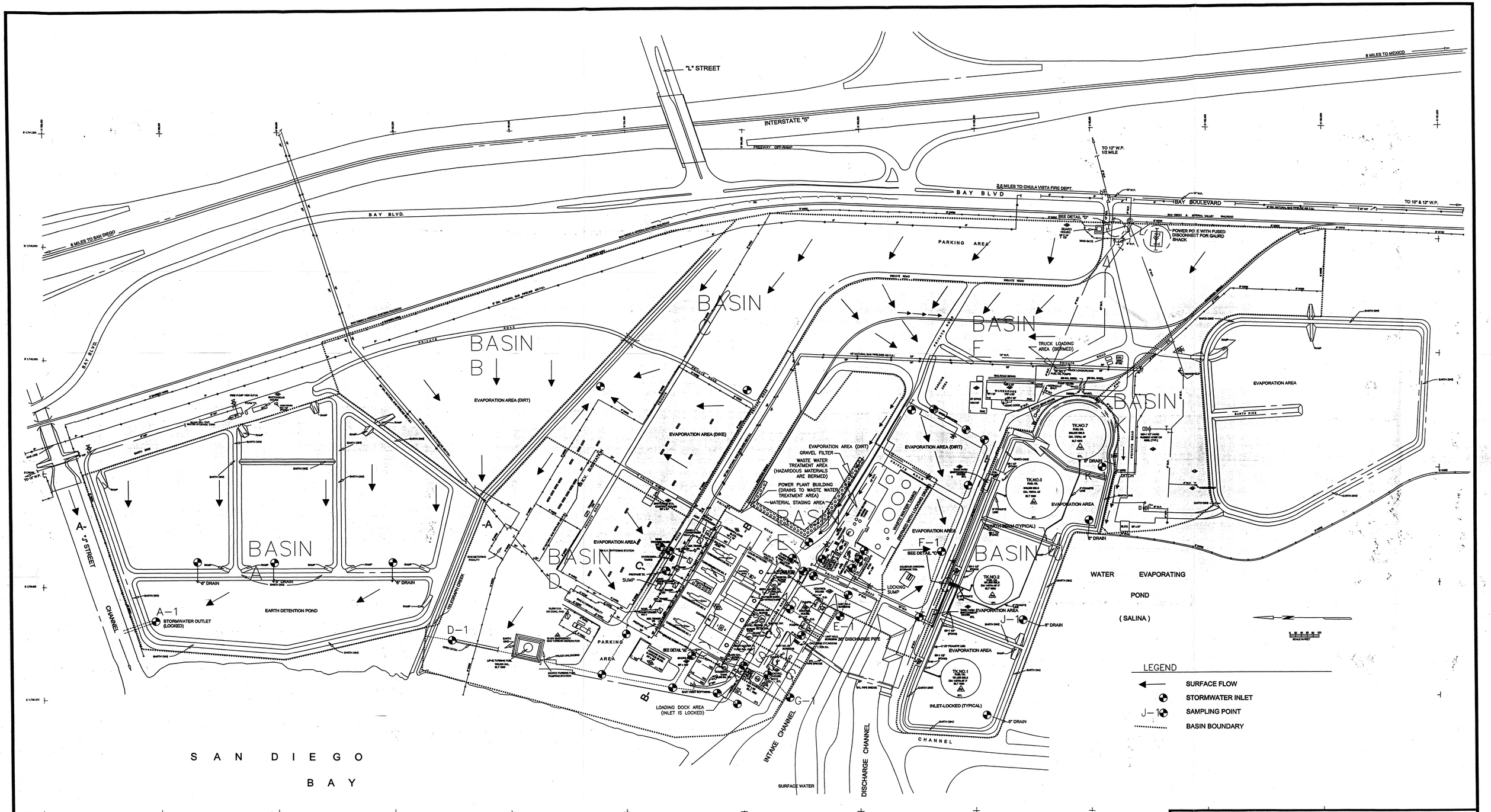
The plant historically utilized sodium dichromate as a corrosion control additive in its service water system, which is a common practice in the utility industry. The plant replaced sodium

dichromate in 1996 with less hazardous anticorrosion chemicals. These chemicals are sodium molybdate and sodium nitrite. The chromium concentration in the service water was approximately 150 milligrams per liter (mg/L), requiring that it be managed as a hazardous material. Sodium nitrite does not have a listed hazardous waste regulatory threshold and does not exhibit other hazardous waste characteristics at the concentration (150 mg/L) at which it will be used. The listed hazardous waste regulatory threshold for molybdenum is relatively high at 350 mg/L (by STLC) and it will be used at a concentration of approximately 200 mg/L, which is well below the regulatory threshold. The service water will also be dosed periodically with a microbiocide to control bacteriological fouling of the service water by bacteria.

6.0 PROGRAM REVIEW AND UPDATE

At a minimum, the BMP Program will be reviewed annually, and updated as necessary. The BMP Program will be reviewed and updated whenever there is a change in facility design, construction, operation, or maintenance which materially affects the potential for discharge from the SBPP of significant amounts of hazardous or toxic pollutants into waters of the United States.

Amendments to the BMPs will be submitted to the San Diego RWQCB Executive Officer for review and approval.



DUKE ENERGY SOUTH BAY LLC
SOUTH BAY POWER PLANT
SAN DIEGO CALIFORNIA

PLANT SITE MAP

SHEET		DRAWING NO.
FIGURE 2		S 101
DATE: 3/14/01		

SWMU #27, National City Terminal

The National City Terminal is located approximately 4 miles away from the South Bay Power Plant. It appears that additional investigation is required at the site, however, DTSC suggests that investigation be conducted separately from the South Bay Power Plant.

Response: As discussed and agreed during DTSC's April 8, 2003 site visit, the former National City Tank Farm is not part of the South Bay Power Plant. The National City Tank Farm site investigation and remediation is currently being conducted through the County of San Diego Department of Environmental Health (DEH) Voluntary Assistance Program.

SECTION 3

3.0 RESPONSE TO GEOLOGICAL SERVICES UNIT COMMENTS

General Comments

1. In addition to the five areas indicated by SDG&E as requiring action, there are other Areas of Concern (AOCs) and/or Solid Waste Management Units (SWMUs) at the facility that may require action in the future. One possible area of concern that was expressly excluded from the Due Diligence Program is the former discharge to the bay. Sempra, Duke, and/or the Port Authority must address the possibility of contaminated bay sediments. Some of the reports also include information on the National City Terminal and the Pipeline; which are not currently areas being evaluated by DTSC.

Response: Response to questions for all 27 SWMUs identified by the State Regulatory Program Division (SRPD) have been provided separately and are included in this document. Specific to discharge into the bay (SWMU #23), please refer to our response to SRPD SWMU #23 which is also repeated below.

As explained on page two of this Report, this project is not designated to foreclose DTSC's rights to implement a RCRA closure upon facility decommissioning. This voluntary SDG&E project is to implement interim closure for five areas it agreed to complete upon the sale of the SBPP facility.

In 1988, Port of San Diego retained MEC Analytical Systems, Inc. (MEC) to sample the sediments in the bay adjacent to the South Bay Power Plant. A copy of the MEC report is provided separately for your review. MEC collected a total of 22 push cores below mud line from 15 sample locations (see attached figure). The samples were analyzed for Priority Pollutants. The table presenting the sampling results is attached. MEC report concluded that measured concentrations for sample locations were low (close to detection limit and/or below published screening values) and that the detected constituents pose no significant risk. Based on the above information, no further investigation of subject sediments is considered to be necessary.

As discussed and agreed during DTSC's April 8, 2003 South Bay Power Plant site visit, the former National City Tank Farm and the fuel pipeline that transported fuel to the power plant are not part of the South Bay Power Plant. The National City Tank Farm site investigation and remediation is currently being conducted through the County of San Diego Department of Environmental Health Voluantry Assistance Program.

2. Ecological assessment of potential impacts has not been included in the reports reviewed. A comprehensive ecological assessment should be conducted and evaluated prior to making decisions for risk management.

Response: Discharge of cooling water and wastewater from the plant has fallen under the jurisdiction of the RWQCB since the plant started in 1960. All water discharge into the bay has been regulated under RWQCB Waste Discharge Requirements (WDR) operations or NPDES permits (Orders 7491, 7610, 8509 and 9605). Wastewater was collected, tested, and treated, if necessary, to meet NPDES discharge requirements, and then discharged into the bay along with the plant cooling water until 1997. This was done in compliance with the plant's NPDES permit. In 1996, a new NPDES permit (Order

9605) was issued to the plant that prohibited the discharge of wastewater to the bay after 1997. The discharge of the wastewater treatment plant was re-plumbed in 1997 to discharge to the municipal wastewater sewer system. As indicated by our response to Item 1 above, sediment sampling adjacent to the plant did not indicate any impact. As such, further ecological assessment is not recommended.

3. Current and historic drainage outfall or plant discharge locations should be noted and mapped.

Response: Please refer to the map provided in response to SRPD's comment SWMU #26.

4. A map should be produced showing the depths and extent of fill soil throughout the site. Background soil analytical data should be re-evaluated with respect to fill and non-fill areas.

Response: Based on our review of the available site geologic information, fill soils appear to occur primarily near onsite structures. Presence of significant amount of fill in open areas of the site is not indicated in existing site documents. Consequently, preparation of a site wide map showing extent of fill is not warranted. Attached figure shows major fill areas of San Diego Bay obtained from a June 2002 report prepared for the Port of San Diego. As indicated in this figure, major fill areas do not appear to be located in the area of the power plant located in the lower portion of the map. Please refer to the detailed discussion of site background data conducted by IRIS Environmental presented in Appendix C of this document.

5. Soil samples from the National City Terminal should not be included in the background data set. Analytical data from all areas at the South Bay Power Plant should be compared to background data that has been re-evaluated with concurrence from DTSC.

Response: We agree with DTSC's comment. Soil samples from the National City Tank Farm will not be included in the South bay Power Plant background data set.

Specific Comments on Environmental Due Diligence Program, South Bay Power Plant, Phase I Environmental Site Assessment

1. Page 17, Section 2.6.2 Hazardous Waste. This section indicates that two categories of wastewater are generated by the power plant operations, low-volume water (LVW) and metals cleaning wastewater (MCW). Since 1997, both categories of wastewater are being routed to treatment and holding tanks prior to permitted discharge to the municipal sewer. Prior to 1997, the wastewater was apparently discharged to San Diego Bay. Information should be provided as to the point of discharge and an investigation should be conducted to identify if contaminants of potential concern are present in the Bay sediments as a result of the discharge

Response: The wastewater from the plant discharged into the cooling water discharge channel located in the southwestern corner of the site. Please refer to our response to SRPD comment for SWMU #23. As described in the response provided for that comment, the collected sediment quality data in San Diego Bay adjacent to the power plant indicate that sediments adjacent to the plant have not been materially impacted by plant's operations.

2. Page 33 and 34, Section 3.4.1.2 Wastewater Treatment Impoundments. Six second-generation impoundments were located east of the power plant structure and north of the wastewater

treatment plant (WWTP). Section 3.4.1.2 indicates that the impoundments were constructed with two "hydraulic asphalt concrete liners separated by an intervening layer of gravel." The upper liner was also coated with a tar-like coating. Closure of the impoundments was conducted under Regional Board oversight in 1991. Soil cleanup standards used included 1,000 mg/kg for total petroleum hydrocarbons (TPH) and background-based standards for metals calculated from the arithmetic mean plus three standard deviations. Most soil sampled from the impoundment area was determined to meet the specified standards and excavated soils were approved for onsite spreading. Soil from beneath some areas of the impoundments was determined to be adversely impacted and was excavated and disposed of as hazardous waste. Metals in excess of water quality protection standards and low concentrations of VOCs were noted in the groundwater monitoring wells in the area of the second-generation surface impoundments. The Regional Board granted clean closure of the impoundments in 1991 and determined that post-closure groundwater monitoring would not be required. The DTSC also provided acceptance of the closure certification. The current area of groundwater VOC contamination overlaps somewhat with the former second-generation pond area; although maximum concentrations of the VOC plume are found further east than the location of the former ponds. Please indicate locations of former groundwater monitoring compliance wells for the ponds and results of the former groundwater monitoring data. Please evaluate the possibility that the current VOC plume may be related to the previous possible releases from the ponds or from the onsite soil spreading.

Response: In response to your comment, attached we are providing you copies of a few figures from previous site investigation reports. Figure 3.1 (Woodward Clyde) shows the location of the monitoring wells around the former second generation impoundment. Figure C-2 (Woodward Clyde) shows the same monitoring wells and groundwater flow direction near the former impoundment. Figure 5 (IT Corp) shows the location of the former impoundment and the groundwater VOC plume and groundwater flow direction in the general area. Figure 4 (IT Corp) shows the location of groundwater sampling locations at and downgradient of the groundwater VOC plume area and the former impoundment. As indicated in these figures, the general direction of groundwater flow is to the west toward the bay. As such, the groundwater VOC plume area is located upgradient of the former impoundment. Furthermore, as indicated in Figure 4, the highest detected concentrations of VOCs are upgradient of the impoundment. VOCs were not detected in any of the groundwater samples directly downgradient of the impoundment. Based on this information, the VOCs detected in groundwater in the VOC plume area are not considered to be related to the impoundment and the impoundment does not appear to be a source of VOCs in groundwater.

During the Phase II investigation, a number of soil and groundwater samples were collected within the VOC plume area. VOCs were not detected in any of the soil samples. Boring locations are shown on Figure A. However, VOCs (primarily TCE) of up to 53.9 ug/l were detected in the groundwater samples at Boring SB5-41. A soil gas survey consisting of 21 soil gas probes was conducted in 1998 in the vicinity of Boring SB5-041 including area of the imported soil mounds and adjacent flat open areas. Figure A shows the location of the soil gas samples. TCE and DCE, which were the VOCs detected in groundwater were below the detection levels in all soil gas samples (see attached Figure 1 [IT Corp] and Table 1). As discussed in previous sections of this document, the IT Corp. tables contained errors that were corrected in our database. Trace levels (1 ug/l) of PCE were detected in two of the 21 soil gas samples. To confirm the absence of VOCs in vadose zone soils, 13 additional soil gas samples were collected in the same general area (see Figure 3 and Table 1 attached). TCE was detected in

trace levels (0.7 ug/l) in one of the soil gas samples. The above soil and soil gas results are not indicative of presence of VOC source areas in soils in this area.

3 Table 1-1, Current and Past Tankage. Please update the information on this table.

Response: The table is an accurate representation of conditions at the time of facility sale to the Port in 1998. Duke/Port provided SDG&E updated information for the time frame after 1998 presented below:

Following is the current status of tankage listed in Table 1-1 of the Phase I report.

Page 1 of 4
- Area 1d – Vehicle Fueling Station – 1601a: Removed by SDG&E in 1999
- Area 1d – Vehicle Fueling Station – 1602a: Removed by SDG&E in 1999

Page 2 of 4
- Area 1a – North 40 – Fuel Oil Tanks 4, 5, 6 and the Displacement Oil Tank: Removed in 2000.
- Area 1b – South 40 – Fuel Oil Tanks 3 and 7: Tanks structures removed in 2002/2003; Concrete foundations and tank bottom remain in place.
- Area 2a – Waste Water: 1,000 gallon sulfuric acid tank – out of service, empty and clean.

Page 3 of 4
- Area 2a – Waste Water: 3,000 gallon sodium hydroxide tank – out of service, empty and clean.
- Area 3a – Plant: 6,000 gallon sulfuric acid tank – out of service.
- Area 3a – Plant: 7,000 gallon sodium hypochlorite tank – in service.
- Area 3a – Plant: 400 gallon sulfuric acid tank – out of service, empty and clean.

Page 4 of 4
- Area 6 – Terminal – Tanks 1, 2 and DO: Removed in 2002.

4 Table 2-1, Solid Waste Management Units. If necessary, update the information on this table.

Response: The table is an accurate representation of conditions at the time of facility sale to the Port in 1998. The current owner/operator will have to provide updated information for the time frame after 1998.

5 Table 3-1, Site Release History, should be updated for the Current Conditions Report. Unique identifiers should be assigned to each area described and should be keyed to a specific map location. All sampling or remedial activities associated with the release areas should be indicated and a separate column should be added for a "further action/no further action required" designation for each site.

Response: SDG&E has not been involved with SBPP operations since 1998. Information regarding releases, if any, after this date should be requested from the Port and/or Duke as the owner/operator of the facility. Table 3-1 of the Phase I report has been updated with unique identifiers for each area

(attached herein) and keyed to Figure A, as requested by DTSC. In addition, Duke/Port provided SDG&E updated information related to releases that have occurred during their operation of the facility as presented below:

HR-31

Area: 1: Tank containment for Fuel Oil Tank 2
Date: May 23, 2001
Material: Light Cycle Oil
Volume: 200 gallons
Description: Contractor inadvertently overfilled a Baker tank containing light cycle oil causing product to spill to the ground.

Actions
Taken: The spilled material was immediately contained and absorbent was used to collect product. Approximately 135 cubic yards of impacted soil was removed. Cleanup was confirmed by soil sampling and analysis.
Status: A report entitled, *Assessment and Remediation of a Light Cycle Oil Spill in the Tank 2,* dated August 13, 2001, was submitted to the DTSC on September 6, 2001. No further action required.

HR-32

Area: 3c: Gas Turbine
Date: July 12, 2001
Material: Turbine Oil
Volume: 25 gallons
Description: Turbine oil seeped from the exciter housing onto rock and soil due to pump failure.
Actions
Taken: Contaminated soil and rock was immediately removed for proper disposal.
Status: No further action.

HR-33

Area: 3: 4E Cooling Water Pump Deck
Date: September 11, 2002
Material: Lube Oil
Volume: 1 gallon
Description: 5 gallons lubricating oil was released from a cooling water pump sight glass to a concrete deck, of which approximately one (1) gallon drained into the forebay of the inlet cooling water channel for Unit 4, which caused an oily sheen on the water surface.
Actions
Taken: A boom was immediately deployed to contain the oily sheen inside the intake channel and absorbents placed on the concrete to prevent additional drainage. Foss Environmental was contracted for clean-up support. All residual oil was cleaned off the rocks and skimmed from the water surface.
Status: No impact to soil. No further action required.

Specific Comments on Environmental Due Diligence Program, South Bay Power Plant, Phase II Environmental Site Assessment

6 Executive Summary, Page ES-6. Clean-up levels for previous remediation activities were not negotiated with the DTSC. DTSC HERD should review the "clean-up" levels to determine if additional remedial activities may be required to meet concentrations protective of human health and the ecology

Response: SDG&E's response to HERD's comments on the risk assessment and any relevant clean-up levels are discussed in Sections 4 & 5 of this document.

7 Table ES-2 of the Executive Summary and the text indicate that only one soil sample was analyzed for the presence of pesticides and herbicides. No pesticides or herbicides were detected in that sample; however, given that one historical use for the eastern portion of the site was agricultural, additional soil samples should be analyzed for pesticides and herbicides from areas identified in aerial photographs (or other appropriate methods) as formerly agricultural.

Response: Additional soil sampling will be conducted in the former agricultural use portion of the site.

8 The QAPP indicates that samples for VOC analyses by Method 8260 were prepared using method 5030; however there is no reference to field preparation of the samples by methanol preservation or collection of Encore soil samples, in either the Phase II ESA, the Field Sampling Plan or the QAPP. More details regarding soil sampling methodology and procedures for VOC samples should be provided.

Response: EPA sample preparation method 5030 was not a regulatory requirement for Method 8260 analysis in 1998 when Phase II investigation was conducted. However, method 5035 was used for the samples collected in the follow up 2000/2001 sampling.

9 The GSU did not conduct an in-depth review of Section 5.0, Baseline Health Risk Assessment. It is understood that DTSC HERD will be reviewing this section in detail.

Response: DTSC HERD reviewed the risk assessment section and provided comments. Responses to HERD's comments are presented in Sections 4 and 5 of this document.

10 Section 5.4.5.4 indicates that the groundwater analytical results were screened against "ambient water quality criteria (AWQC) for marine waters" and Table 5-14 presents the summary evaluation and rationale for retention or removal as a COPC. This table should also indicate specifically which AWQC were used for each evaluation.

Response: Specific discussion and use of the AWQC will be provided in the revised risk assessment.

11 Stormwater runoff is not addressed in the Phase II ESA. Surface soil contamination may be entrained in runoff and deposited as sediment in the stormwater drainage channel system for the site. Stormwater runoff and sediment should be addressed.

Response: Please refer to our response to comment for SWMU #26.

12 Section 5.4.6.1 and 5.4.6.2 include discussion of the use of VLEACH and TRANS1D models to determine impact from contaminants to the San Diego Bay. Evaluation of contaminant transport will need to be reconsidered based on the re-evaluation of Contaminants of Potential Concern. Additionally, points of compliance should be established and groundwater monitoring data can be collected and evaluated.

Response: Following reevaluation of the site COPCs, fate and transport modeling will be re-evaluated, if necessary. Figure A shows the location of monitoring wells (SB01-002, SB03-007, SB05-088, SB05-086, SB01-078, SB05-084, SB01-072, and SB01-067) located along the western site boundary. These groundwater sample locations are considered to be the furthermost downgradient wells with respect to groundwater flow and represent "points of compliance" for groundwater quality assessment purpose and will be used to assess impacts on the bay.

13 The risk assessment section indicates that groundwater is considered non-potable due to higher concentrations of total dissolved solids. The groundwater is still within that area designated by the San Diego Regional Water Quality Control Board as having a beneficial use of "MUN", municipal and domestic supply. The Regional Board staff person responsible for this site should be identified and contacted to confirm that proposed clean-up levels for groundwater are acceptable to the Regional Board and are in accordance with the Basin Plan and Regional Board Guidance.

Response: As requested by DTSC, groundwater clean up levels developed as part of the revised risk assessment will be discussed with the RWQCB.

14 The limits of "fill" versus "native soil" should be indicated on any future figures like Figures 3-1a, 3-1b, and 3-1c.

Response: Please refer to response to Questions under the SRPD's general comments.

15 Was the background data set evaluated to account for differences in fill or native soil?

Response: Please refer to our response to SRPD General Comment section.

16 Future figures like Figure 3-2 should indicate which wells have surveyed data and which are estimated elevations. Future reports addressing groundwater should include the most recent potentiometric maps. Additionally, seasonal or tidal variations in groundwater elevation, flow direction, and gradient should be discussed and illustrated.

Response: We agree with the above comment and will include the requested information in any area investigated in the future.

17 If applicable, indicate the extent of fill versus native soil on Figure 3-3a.

Response: Please refer to our response to Questions under General Comments.

18 Figure 3-4a illustrates the presence of organic compounds in groundwater. The data is filtered so that only those concentrations greater than selected screening criteria are shown. Figures

showing all detected organics in groundwater should be presented also. Additionally, the groundwater flow directions should be indicated on this figure.

Response: The requested figure has been prepared and included in the Introduction section of this document (Figure D).

19 Appendix G contains laboratory analytical results apparently summarized from electronic data. Original laboratory reports from the analytical laboratory have not been included. Case narrative discussion from the laboratory has not been included. These are generally considered a critical portion of any report and should be submitted to DTSC.

Response: Laboratory reports for the 1998 Phase II investigation are presented under a separate cover.

20 Appendix H includes a description of the background data set and selection of COPCs. Section H.3.1, Preliminary Screening, indicates that data was excluded from further evaluation based on screening against the U. S. EPA Preliminary Remediation Goals (PRGs). DTSC does not concur that it is acceptable to exclude data from further risk assessment based on comparison to PRGs.

Response: Comment acknowledged. PRGs will not be used to exclude data during the revision of the risk assessment. Please refer to our response to HERD's comments.

21 Section H.4.1 indicates that eleven wells were included as the background locations for metals in groundwater. An indication of the eleven locations should be presented in a table and a map, including the analytical results for these wells. The map should also indicate groundwater flow directions.

Response: Figure A shows the groundwater sample and well locations. Attached Table presents the groundwater monitoring wells considered representative of background conditions. We believe that the wells located along the eastern boundary of the site shown on the attached figure and presented in the Table are the ones that should be selected for groundwater background analysis, as previously discussed in response to SRPD's general comment. Figure 3-2 of the Phase II report presents groundwater contours indicating that the general direction of groundwater flow is to the west.

22 Section H.4.1 also indicates that the background for groundwater was selected as the upper confidence limit of the 95th percentile. HERD policy (February 1997) does not support this for a small data set. Selection of background concentrations for groundwater should be re-evaluated.

Response: Comment acknowledged. Selection of background concentrations for groundwater will be re-evaluated in the revised risk assessment.

23 Section H.5 presents the conclusions, but these should be reconsidered after the re-evaluations specified in this memo and in the corresponding memo from HERD.

Response: Comment acknowledged. Conclusions to the risk assessment will be revised following the appropriate recommended re-evaluations to the risk assessment, including re-evaluations related to the site background soil and groundwater quality and the identification of the COPCs.

Specific Comments on Environmental Due Diligence Program, South Bay Power Plant, Field Sampling Plan and Quality Assurance Project Plan

24 Figure 3-1, Conceptual Site Model, should include evaluation of pathways to surface water as an ecological receptor from both soil contamination and groundwater contamination.

Response: Conceptual Site Model will be evaluated and revised, as necessary, as part of revised risk assessment.

25 Section 4.1.1 should include an evaluation of the impact to surface water in the problem statement.

Response: As indicated in Section 4.1.1 of the QAPP, this section describes the "primary" problems requiring definition for the purpose of site characterization. The surface water issues (stormwater) at the site and its discharge to San Diego Bay are under and in compliance with an NPDES permit issued by the RWQCB. We believe that monitoring conducted as part of compliance with the subject NPDES adequately addresses surface water issues at this operational facility. We do not recommend a separate evaluation. However, groundwater discharge into the bay and potential impact on bay water quality will be evaluated.

26 Table 2-2 shows COPCs by area of concern. Please indicate the rationale for not including the following chemicals in certain areas: PCBs in areas 2a and 5c, VOCs in areas 2b, 3c, and 5b; and SVOCs in areas 4b and 4c.

Response: Table 2-1 of the QAPP provides the rationale for selection of selection of COPCs. A copy of Table 2-1 is attached.

27 Table 5-3 shows a specific sampling plan for area 2b. Please explain why PCBs were only analyzed in groundwater and not in soil.

Response: We believe that PCB sampling of groundwater at the Former First Generation Impoundment (Area 2b) indicated in Table 5-3 is erroneous. Previous site investigation at this location and the nature of wastewater discharged into the impoundment do not warrant PCB analysis. Our review of actual Phase II laboratory results for sample locations at and near Area 2b do not show that PCB analysis was conducted for any of the groundwater samples.

28 Table 8-6 indicates the reporting limits for VOCs. Reporting limits for some compounds (such as benzene and vinyl chloride) in groundwater are higher than MCLs. While the shallow groundwater may not be considered potable, assessment should still be completed to at least MCLs.

Response: During future site investigations, care will be taken to make sure that laboratory reporting limits are less than or equal to the MCLs.

Specific Comments on Investigation, Eastern Area, South Bay Power Plant

29 Soil vapor sampling of vegetated soil mounds did not determine whether the soil mounds were a source area for the VOCs in groundwater. Low concentrations of PCE and chloroform were

detected in the soil vapor at discrete depths; however deeper soil vapor samples were not collected at those same locations. Additionally, the highest TCA concentration in groundwater was detected in SB5-041, but soil vapor was not sampled in the vicinity of the groundwater monitoring well. Based on the results presented, additional investigation should be proposed to identify possible source areas for the groundwater contamination to ensure that a soil source area has not been overlooked. A sampling plan should be submitted for review and approval by DTSC, prior to field work being conducted.

Response: Based on the results of the previous soil gas sampling in the area, we do not believe that soils in this area are the source of VOCs. However, additional soil sampling will be conducted near SB05-041.

30. What is the origin of the vegetated soil mounds?

Response: Soil mounds are believed to have originated during the construction/grading of the surface impoundments.

31 If any future soil vapor sampling is conducted, detection limits for carcinogenic compounds (for instance, vinyl chloride) must be lower.

Response: Appropriate detection limits will be utilized during any future soil gas surveys.

Specific Comments on Assessment Work Plan, San Diego Gas and Electric, South Bay Power Plant

32 This Work Plan proposed additional work in the jet fuel LNAPL plume area, the first generation surface impoundment area, the VOCs in groundwater area (see comment 26 above) and the north tank farm area. GSU has no specific comments on this workplan. The proposed sampling has already been completed and the results were included in the "Investigation and Proposed Remediation..." report (GTI, 2001).

Specific Comments on Investigation and Proposed Remediation of Dissolved VOCs in Groundwater, Eastern Portion of South Bay Power Plant

33 In 2001, 24 more soil gas samples and 8 more groundwater wells were installed. Four more hydropunch locations were also sampled for groundwater. The locations of the soil gas samples did not correspond with the workplan (see comment number 28). The variance should be explained.

Response: Our review of the chain of custody forms and laboratory reports indicate that 13, and not 24, soil gas samples were collected in 2001 (see Table 1 of the subject document). The text of the subject document on page 2-1 indicating 24 soil gas samples is not correct.

34 Soil gas sample locations SG6 and SG7 had the highest detected VOCs, but step-outs were not done to the southeast to ensure that the concentrations did not increase in that direction. Further investigation should be completed in that area.

Response: Soil sampling will be conducted in the area south/southeast of soil gas sample locations SG6 and SG7.

35 Section 3-3 includes an estimation of the extent of the VOC groundwater plume and delineates it as 260-feet wide, 1,050 feet long and 10-feet thick. Thickness of the plume has not been discussed previously in the investigation results. Justification for the plume thickness should be provided. If this is an assumption, it should be clearly stated as such.

Response: Based on our review of the subject report, it appears that the stated 10-foot plume thickness is an assumption.

36 Section 3.4 includes a discussion of the results of a natural attenuation evaluation (included in Appendix A of the report). The results of the study indicate that some degree of natural attenuation is occurring, but only to a limited extent. Section 5.0 of the report then proposes monitored natural attenuation without a thorough discussion of the rationale for the selection of this alternative.

Response: Based on our review of the natural attenuation evaluation included in the November 2001 IT Corporation report, we recommend that additional natural attenuation groundwater monitoring be conducted prior to its selection as a remedy for the VOC groundwater plume. Existing information is not adequate for this purpose. Additional field activities for natural attenuation monitoring will be submitted to DTSC as part of a supplemental sampling work plan.

37 Section 4.0 "Cleanup Objectives" lacks detail and does not indicate any objectives. In any case "cleanup objective" cannot be selected without a thorough discussion of corrective measures study.

Response: We agree with DTCS's comment. As part of re-evaluation of background levels and response to DTSC's risk assessment comments, cleanup objectives will be reassessed and presented to DTSC.

38 Section 5.0 discusses remedial solutions prematurely. The selection of the solution should be the result of a corrective measure study and final objectives should be determined.

Response: In the absence of a VOC source and relatively low concentrations of VOCs in groundwater, Section 5.0 recommended that groundwater monitoring be conducted to confirm the occurrence and effectiveness of natural attenuation as a remedy for the VOC plume. We agree with this recommendation. Following completion of groundwater monitoring a focused corrective measure study will be conducted to evaluate and recommend the proposed remediation alternative for the VOC groundwater plume as part of the site Corrective Measure Study.

39 If a proposal for Monitored Natural Attenuation (MNA) is presented, details on water quality parameters and frequency of monitoring and the monitoring network should be provided. The proposal should also include how the MNA effectiveness will be evaluated and if necessary, what additional methods may be employed if MNA is not successful.

Response: We agree with the above comment. The proposed natural attenuation monitoring details will be submitted to DTSC as part of the work plan for conducting additional sampling at the site.

40 There is indication that there is some tidal influence, GSU recommends that future groundwater sampling events be planned so that they coincide with the waning tide.

Response: Future groundwater sampling will be conducted so that they coincide with the waning tide as much as possible.

41 Figure 6 was not in the copy of the report that I received originally. The copy that I was provided appears to be incomplete. It does not include all sample locations, concentrations of TCE, nor isoconcentration contours for the TCE in groundwater. A final copy of Figure 6 should be provided to DTSC for our review and use.

Response: Figure 6 of the subject report appears to be incomplete. A new figure showing TCE concentrations in groundwater is attached in this section.

42 Boring and well logs for IT-3, -4, -5, -6, and –7 are missing. Please provide these documents.

Response: The subject boring and well logs are attached.

Specific Comments on Remedial Action Work Plan: Fuel Hydrocarbons and Metal Impacted Areas, South Bay Power Plant

43 Section 2.2 of the report summarizes site-wide environmental issues that were previously identified in the Phase I report. This section discusses leaks from the ASTs, USTs and fuel delivery systems, the former wastewater treatment impoundments (first and second generations), the former Fleet Operations Drum Storage Area, and transformers. Soil contamination resulting from the leaks was evaluated by comparison to site background concentrations, industrial PRGs, and TEH and TPH greater than 1,000 mg/kg. Several soil removal actions have been conducted. This report specifies additional removal proposed at areas with remaining soil contamination with concentrations in excess of the specified objectives. Two areas with groundwater contamination have also been identified as requiring action. Corrective measures and objectives for each area should be clearly defined. Risk associated with each area and resultant risk after implementation should be evaluated and presented. Detailed confirmation sampling plans should be developed for each area and analytical methods should be proposed for all COCs for the area of concern. Confirmation soil samples for areas with metal contamination and VOCs cannot be analyzed only for TEH by 8015M, as indicated on page 5-1, but additional analyses for the other COCs should be proposed.

Response: Comment acknowledged. Following the submittal and approval of a supplemental sampling work plan, additional field activities will be implemented and the identified data gaps discussed in these responses will be filled. All relevant field techniques and analytic methods to be used in the upcoming field activities will be detailed in the supplemental sampling work plan. After completion of additional sampling at the selected locations described in this document, and the completion of the revised risk assessment, the RAW will be revised and further clarification of corrective measures and objectives for each area will be provided. The revised RAW will present a detailed confirmation sampling plan,

which will include the appropriate analytical methods for appropriate COCs. Following implementation of the RAW, a final Closure Report will be prepared which will document the results from the confirmation sampling, the residual levels of chemicals, if any, in each of the remediation areas, and the residual risk associated with the remaining chemicals.

44 Excavation has been proposed to remove the metals in soil near the first generation surface impoundments. However, this report notes that the removal may not be fully implementable because the contamination may extend under the Jet Fuel Tank which is located nearby. During our meetings with Sempra and Duke in January 2002, it was indicated that they are considering removing the Jet Fuel Tank. If the tank is removed excavation could be accomplished successfully. Contingency plans for the soil removal in this area should be developed and presented. Schedules for each alternative should be submitted. Public notice should be made of the alternatives under consideration.

Response: Based on our current understanding, the Jet Fuel Tank is still in operation and there are no plans for its removal in the near future As such, excavation of the impacted soil beneath the tank needs to be coordinated with the removal of the tank after decommissioning.

45 Figure 10 shows the proposed sample locations in the excavations at the Jet Fuel Tank and at the First Generation Surface Impoundments. More confirmation samples should be planned for the surface impoundment excavation. In areas where the soil plumes may comingle, COCs for both areas should be used for the confirmation analyses.

Response: Additional soil confirmation samples will be collected, as necessary, based on field observations. In areas of co-mingled plumes, COCs for both areas will be analyzed for and will be presented in the revised Remedial Action Work Plan.

46 Groundwater remediation of the Jet Fuel LNAPL and dissolved phase hydrocarbons is not adequately discussed. Bailing of the LNAPL has been ongoing, but a summary table should be presented that indicates dates of LNAPL measurement, thickness of LNAPL, dates of removal of LNAPL and estimated volume of LNAPL removed per removal event and total volume removed.

Response: To the best of our knowledge, additional bailing of LNAPL from well SB1-071A has not been conducted since the issuance of the August 2001 RAW (see Appendix C-3 of RAW). Future LNAPL removal from the area will be conducted consistent with the above request.

47 Section 6.0 indicates that Health and Safety Plans will be submitted. Prior to approval of the excavation plans, DTSC must have the opportunity to review and comment on the Health and Safety Plans.

Response: Project Health and Safety Plan will be provided to DTSC for review prior to start of site remediation work.

48 Based on soil analytical results shown on Figures 7, 8, and 9, GSU recommends that soil samples be collected along the 36-inch diameter storm drain and along the southern estimated edge of the plume to confirm the lateral and vertical extent of the soil contamination.

Response: Additional sampling will be conducted along the storm drain and southern edge of the plume near the Jet Fuel Tank Area. All proposed upcoming sampling activities will be presented in a supplemental sampling work plan, to be submitted to DTSC for review and approval.

49 Table 3 summarizes groundwater analytical data collected in January 2001. Chlorinated VOCs and metals should be added to the analytical suite for the SB1-70 wells that are located near the Jet Fuel tank and the former first generation surface impoundments. Analyses in the SB5 area should also include a downgradient well to evaluate the extent of migration of the groundwater plume.

Response: Groundwater samples from SB1-70 wells were analyzed for metals in 1998 as part of the Phase II investigation. The subject wells were not analyzed for VOCs via method 8260. Future groundwater sampling in the general area of the subject wells will include metals and VOCs. In the area of SB5 wells in the VOC groundwater plume location (SWMU #16), SB5-054, SB5-038 and IT-07 are located downgradient of the subject SB5 wells (see Figure A). The extent of the VOC plume will be defined and presented in the revised RAW.

50 DTSC HERD should review Appendix D, "Risk Calculation Summary Results", and associated text.

Response: HERD has provided comments regarding risk assessment. Response to HERD's risk assessment comments are provided in this document.

51 General Comments on the Duke Energy Work for the North Tank Farm
Review of the North Tank Farm characterization indicates that detection limits for semi-volatile organic compounds are too high. Duke concluded that SVOCs are not an issue for further consideration, but the detection limits for many compounds are higher than potential risk driver concentrations. Additionally, confirmation soil samples of the excavations should include all original contaminants of concern, to ensure that other constituents that may be associated with the area are not present at concentrations of concern. GSU noted that laboratory analytical reports included in an appendix were labeled as "LNG Facility" which creates uncertainty regarding the data. The Duke reports specified that Duke only addressed soil considered as "structural fill", areas that may have contamination deeper would still need to be addressed.

Response: Response to the above comment was provided to SDG&E by Duke/Port and is presented below:

As presented in the *Characterization Report*, the constituent of concern defining the vertical extent of excavation conducted in the North Tank Farm was total petroleum hydrocarbons in the diesel range (TPHd) analyzed using EPA Method 8015M. Other potential contaminates of concern, including PCBs, SVOCs and metals, were eliminated from consideration because sample results were either non-detected or within a concentration range indicative of background.

DTSC expressed concern that that the composite sampling protocol followed by Duke was inappropriate for properly characterizing SVOCs and metals in a previous comment [see DTSCs Specific Comments, Other Areas/Comments (a)]. As such, Duke has agreed to collect discrete soil samples for VOC,

SVOC and metals analysis. The results should also resolve the SVOC high detection limit issue and provide data necessary to confirm the absence of other potential constituents of concern.

Excavation activities and associated confirmation sampling under the ASTs in the North Tank Farm was conducted in accordance with the *Work Plan* and discussed in the *Final Report*. The scope of work presented in the Work Plan was written specific to "structural fill". However, field work determined that contamination existed beyond "structural fill" in isolated areas and additional excavation was required. All petroleum hydrocarbon impacted soils beneath the footprint of each AST was excavated and results of confirmation are presented in the *Final Report*.

TABLE 3-1 Revised
SITE RELEASE HISTORY
SOUTH BAY POWER PLANT

Location Area/Description		Date	Material/Volume	Actions Taken	Historic Release (see Figure 1)	Further Action
1a	North-40 Tank Farm, AST#5, release from heater unit	unknown	fuel oil/-15-20 gals	none* (interviews)	HR-1	Evaluate During Decommissioning
1a	North-40 Tank Farm, DO AST heat exchanger	unknown	periodic minor leaks of diesel	none (interviews)	HR-2	Evaluate During Decommissioning
1a	North-40 pump pit	periodic	fuel oil	discharged from pump pit to east side of AST #5 berm then pumped off and disposed (interviews)	HR-3	Conduct Additional Sampling
1b	South-40 Tank Farm, AST 2 leak in tank bottom, east side	3/19/1983	fuel oil	AST taken out of service (AGI, 1995 and Guiles, 1983)	HR-4	Evaluate During Decommissioning
1b	South-40 Tank Farm, AST 2 leak in tank bottom	prior to 1988	No. 6 fuel oil/15 bbl	soil removed and disposed * tank bottom repaired (AGI, 1995)	HR-5	Evaluate During Decommissioning
1b	South-40 Tank Farm, AST 3 leak in tank bottom	prior to 1988	No. 6 fuel oil/15 bbl	soil removed and disposed * tank bottom repaired (AGI, 1995 and interviews)	HR-6	Evaluate During Decommissioning
1b	South-40 Tank Farm, AST I leak in tank bottom	prior to 1989 (early 1970s)	No. 6 fuel oil/10 bbl, possibly Bunker C	soil removed and disposed * tank bottom repaired (AGI, 1995 and interviews)	HR-7	Evaluate During Decommissioning
1b	South-40 Tank Farm, pump packing leaks to pads, occasional overflows	continuous	fuel oil/unknown	oil removed* (interviews)	HR-8	No Further Action
1d	Vehicle fueling UST, original and replacement gasoline and diesel	12/10/86 failed tightness	gasoline/unknown	tank removed, soil removed, NAPL vacuumed off, impacted groundwater has migrated beneath AST #7 RWQCB granted NFA letter	HR-9	No Further Action
2b	Original, unlined, wastewater impoundments (east pond)	1960 to 1978	black sludge bearing nickel, chromium, and other metals	excavate and dispose of 920 tons soil elevated O&G and nickel levels remain in place	HR-10	Remediation Planned
2c	Second Generation Impoundments	1978 to 1990	nickel, chromium and other metals	excavate and dispose of soil, remaining concentrations acceptable groundwater has shown exceedences NFA granted	HR-11	No Further Action
3	Fuel system, east loop believed due to external corrosion	10/17/1991	No. 6 fuel oil/<50 bbl	excavated and disposed of undetermined volume of soil, post excavation sampling indicated exceedence shallow but not at depth, NFA recommended by EnecoTech (1997a)	HR-12	Remediation Planned
3a	Unit 1 supply line release inside Plant building	-1985	fuel oil/-100 gals	release captured by floor drain/trench system then discharged to intake channel* drains subsequently rerouted to low volume waste treatment plant (interviews)	HR-13	No Further Action

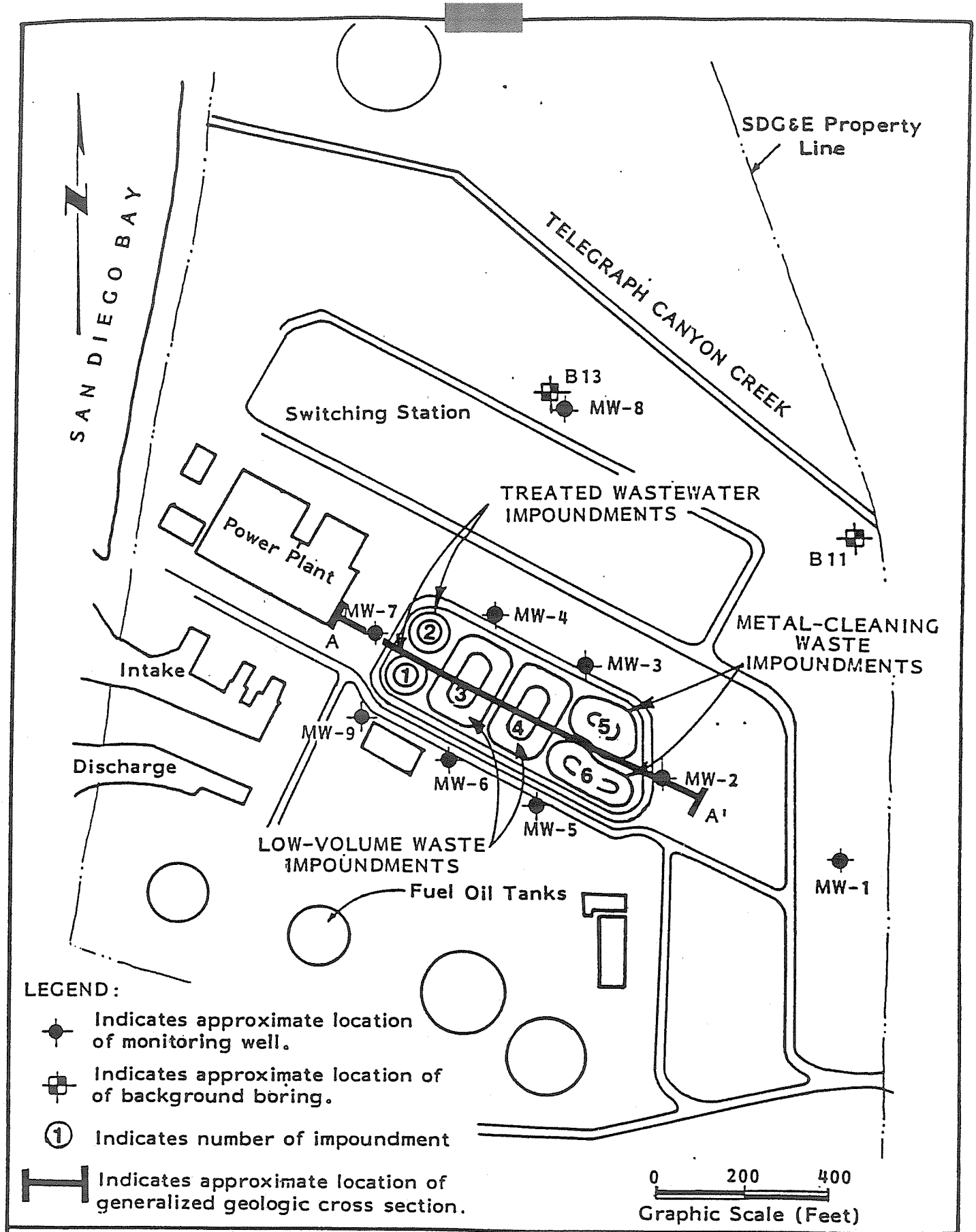
TABLE 3-1 Revised
SITE RELEASE HISTORY
SOUTH BAY POWER PLANT

Location Area/Description		Date	Material/Volume	Actions Taken	Historic Release (see Figure 1)	Further Action
3a	Combustion catalyst AST, released through AST drain plug (south), secondary contain drain also open, emptied into east end of cooling water intake channel	7/21/1986	NALCO -1225 combustion catalyst (calcium nitrate with ethyl alcohol, and polyethylene glycol nonylphenyl ether)/700 gal	removed 7 yds_3 impacted soil between AST and storm drain *, no apparent stress to marine life (inspected by Department of Fish & Game)	HR-14	No Further Action
3a	Unit 1 transformer	1987	PCB bearing dielectric oil	none* (AGI, 1995 and interviews)	HR-15	No Further Action
3a	Boiler make-up water demineralizer AST	7/3/1995	98% sulfuric/unknown	acid overfill was captured within containment basin and neutralized * (interviews)	HR-16	No Further Action
3a	Main transformer collection sump, north of and between Unit 1 and 2 transformer	continual minor releases	non-PCB bearing dielectric mineral oils/few ounces to few gallons per event	periodically pumped off with vacuum truck water and oil accumulated in sump, no known large volume catastrophic releases* (interviews)	HR-17	No Further Action
3a	Boiler make-up water demineralizer AST	7/3/1995	98% sulfuric/unknown	acid overfill was captured within containment basin and neutralized * (interviews)	HR-16	No Further Action
3a	Plant transformer banks, various minor leaks from gaskets, fittings, and valves onto concrete pads, containment basins, or in gravel blotter	unknown, several years	dielectric oil (currently SDG&E uses mineral oil, non PCB bearing, old oil could have had PCB)/150 ft_2 stained concrete	no remediation or sampling conducted * (AGI, 1995)	HR-18	No Further Action
3a	Day Tank area caustic releases to bare ground	unknown	caustic and acid/unknown	no remediation (interviews)	HR-19	No Further Action
3a	Circulated Water Deck, former sodium dichromate storage area	unknown	sodium dichromate/unknown	no remediation * (interviews)	HR-20	No Further Action
3a	Gas Turbine false start sump	periodic	Jet-A/unknown	liquids pumped off and disposed replaced with a below grade AST (interviews)	HR-21	No Further Action
3a	Service Water leaks	numerous	sodium dichromate/unknown	leaks contained within circulating water cooling system and discharged to Bay, no remediation or sampling applicable (interviews)	HR-22	No Further Action
3a	Waste Water Transfer Sump	probably in use since 1960	wastewater	No known releases	HR-23	No Further Action
4a	Retired Fleet Operations drum storage area, weather affected packaging failure	in use 1983 to 1992	Pole wrap material (PCP), off-specification paints and epoxies	approximately 5 drums PCP impacted soil removed and disposed sampling conducted, remaining concentrations for PCP meet applicable standards (SDG&E, 1993c and interviews) No sampling conducted for VOC or metals Stipulation and Order w/NFA issued	HR-24	No Further Action
4c	Former sand blasting area, open ground	after 1976	sand blast wastes, paint, coal tar/unknown	wastes may have been left in place * some waste may have been moved to northeastern 5a area (interviews)	HR-25	No Further Action

TABLE 3-1 Revised
SITE RELEASE HISTORY
SOUTH BAY POWER PLANT

Location Area/Description		Date	Material/Volume	Actions Taken	Historic Release (see Figure 1)	Further Action
4c	Current sand blasting area, on open ground prior to former sand blast area and prior to sand blast shed	before 1976	sand blast wastes, paint, coal tar/unknown	some wastes may have been left in place * some waste may have been moved to northeastern 5a area (interviews)	HR-26	No Further Action
4c	Haz mat/waste storage building			no known releases	HR-27	No Further Action
5a	Sand blast grit "disposal" northeastern 5a area	1970s	sand blast wastes, paint, coal tar/unknown quantity,	may remain in place (interviews)	HR-28	No Further Action
5a	Sand blast waste in dirt road near North 40 #				HR-29	No Further Action
5c	Septic leach field at "Schoolhouse"	continuous	restroom septic/continual	not anticipated to be an environmental concern, according to SDG&E personnel nothing other than restroom septic would have been emplaced (interviews)	HR-30	No Further Action
6	Terminal fuel oil pipeline expansion joint west of AST #1	3/9/1979	diesel/unknown	reportedly cleaned area, later addressed where accessible by EnecoTech remedial effort	Off Site	No Further Action
6	Terminal AST #1, tank overfill	7/15/1982	No.6 fuel oil	captured within secondary containment and removed	Offsite	No Further Action
7	Pipeline release west of Sweetwater Road	early-mid 1970s	most likely Bunker C or diesel/unknown	repaired pipeline, uncertain if soil was excavated and removed * (interviews)	Off Site	No Further Action
7	Pipeline release west of E Street	1/28/1986	diesel displacement oil	dike constructed to contain spill, 52,000 gals of oil and water were recovered, 1,400 yds3 of soil removed RWQCB granted NFA	Off Site	No Further Action

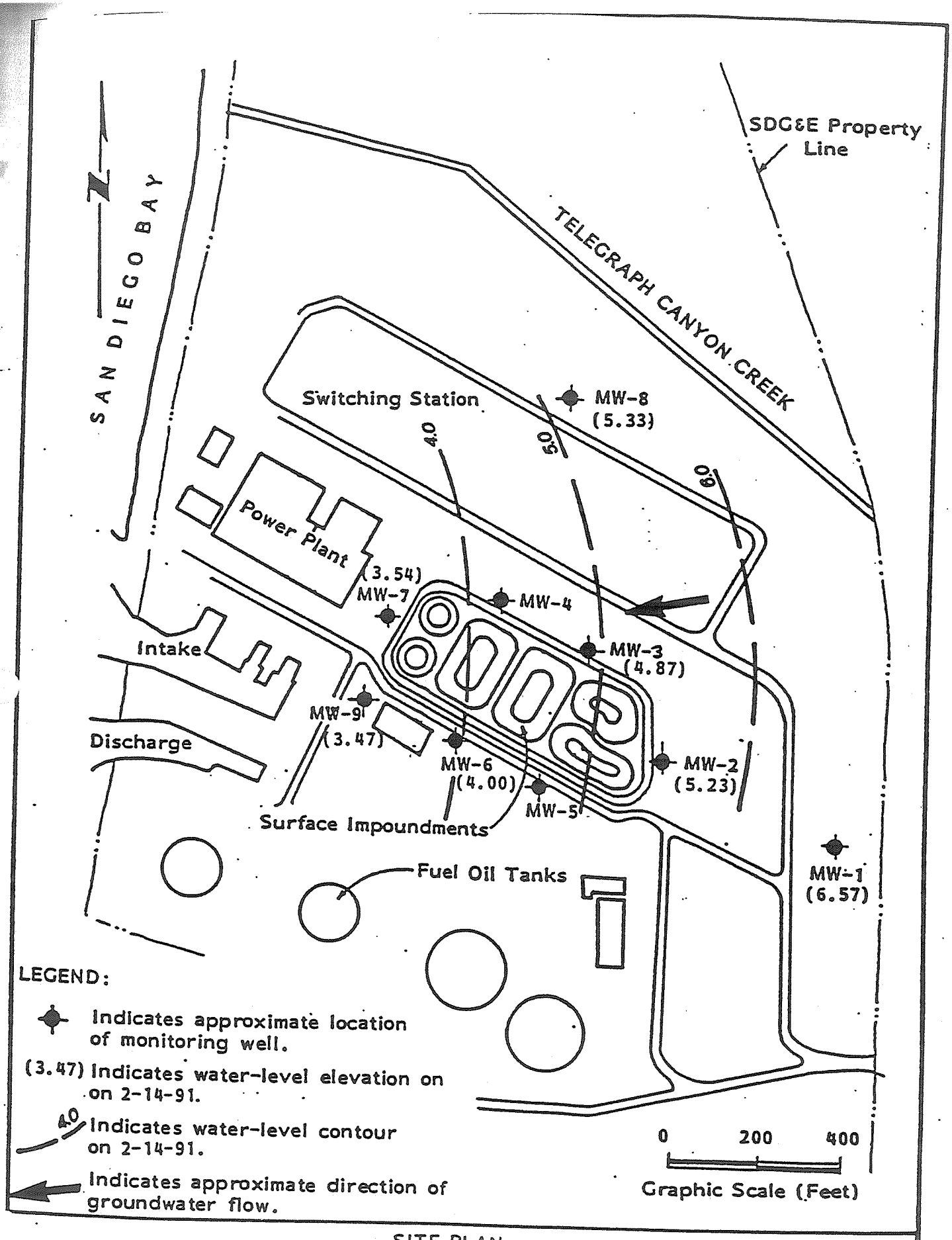
Note: Original Table 3 - 1 from Flour Daniel GTI Phase I Site Assessment Report, dated June 1998



SITE PLAN
SDG&E SOUTH BAY POWER PLANT

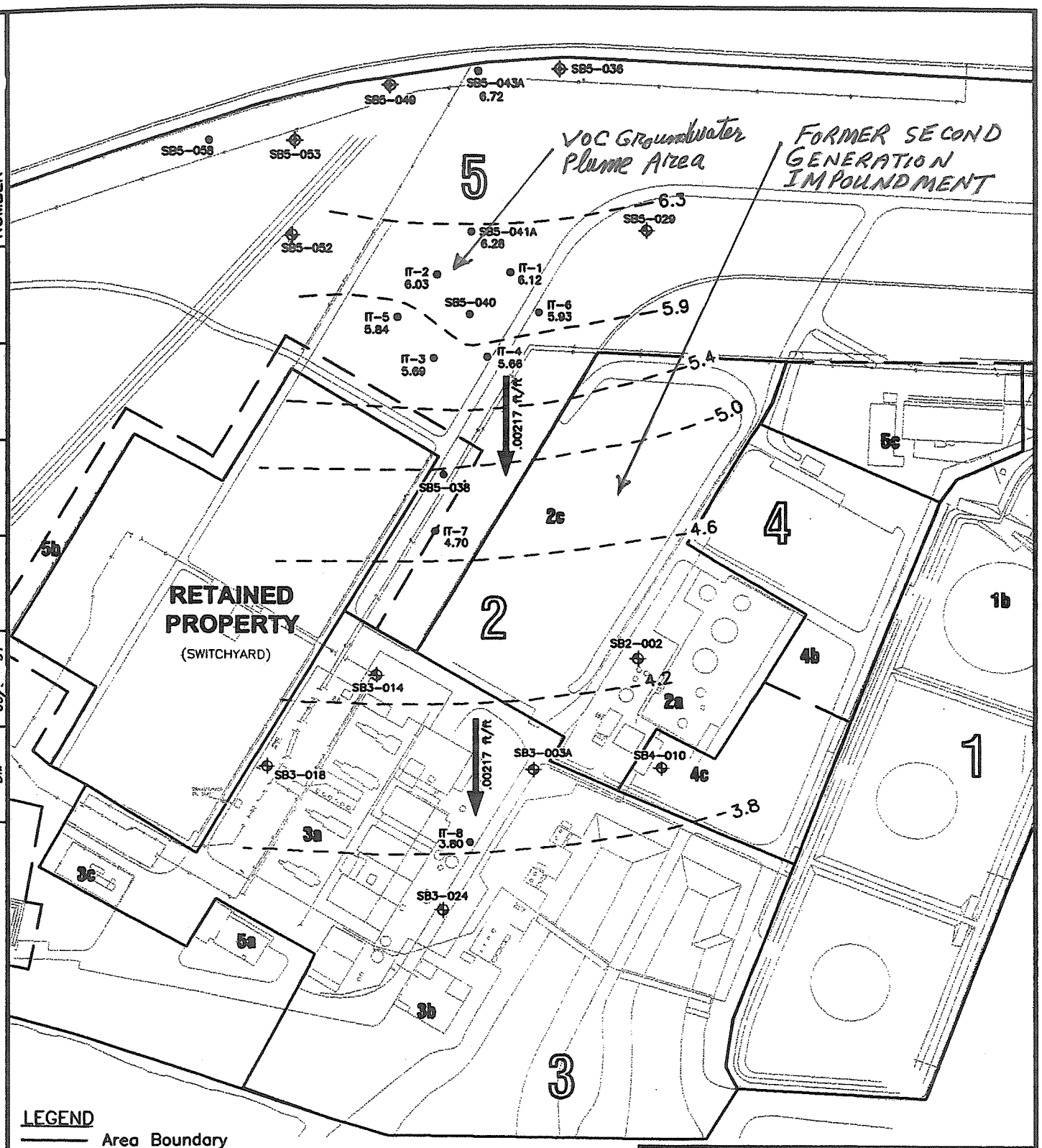
DRAWN BY: cb	CHECKED BY: KAJ	PROJECT NO: 8753249K-SBRP	DATE: 1-6-88	FIGURE NO: 3.1

WOODWARD-CLYDE CONSULTANTS



SITE PLAN
SDG&E IMPOUNDMENTS - SOUTH BAY

DRAWN BY: Cb	CHECKED BY: RPM	PROJECT NO: 9153117K-QT02	DATE: 6-18-91	FIGURE NO: C-2



LEGEND

- Area Boundary
- Sub-Area Boundary
- 1 Area Description
- Monitoring Well
- Groundwater Sampling Point
- Hydropunch Sampling Point
- Groundwater Flow Direction.
- 5.8 Groundwater Elevation Contour

SCALE

0 240 480

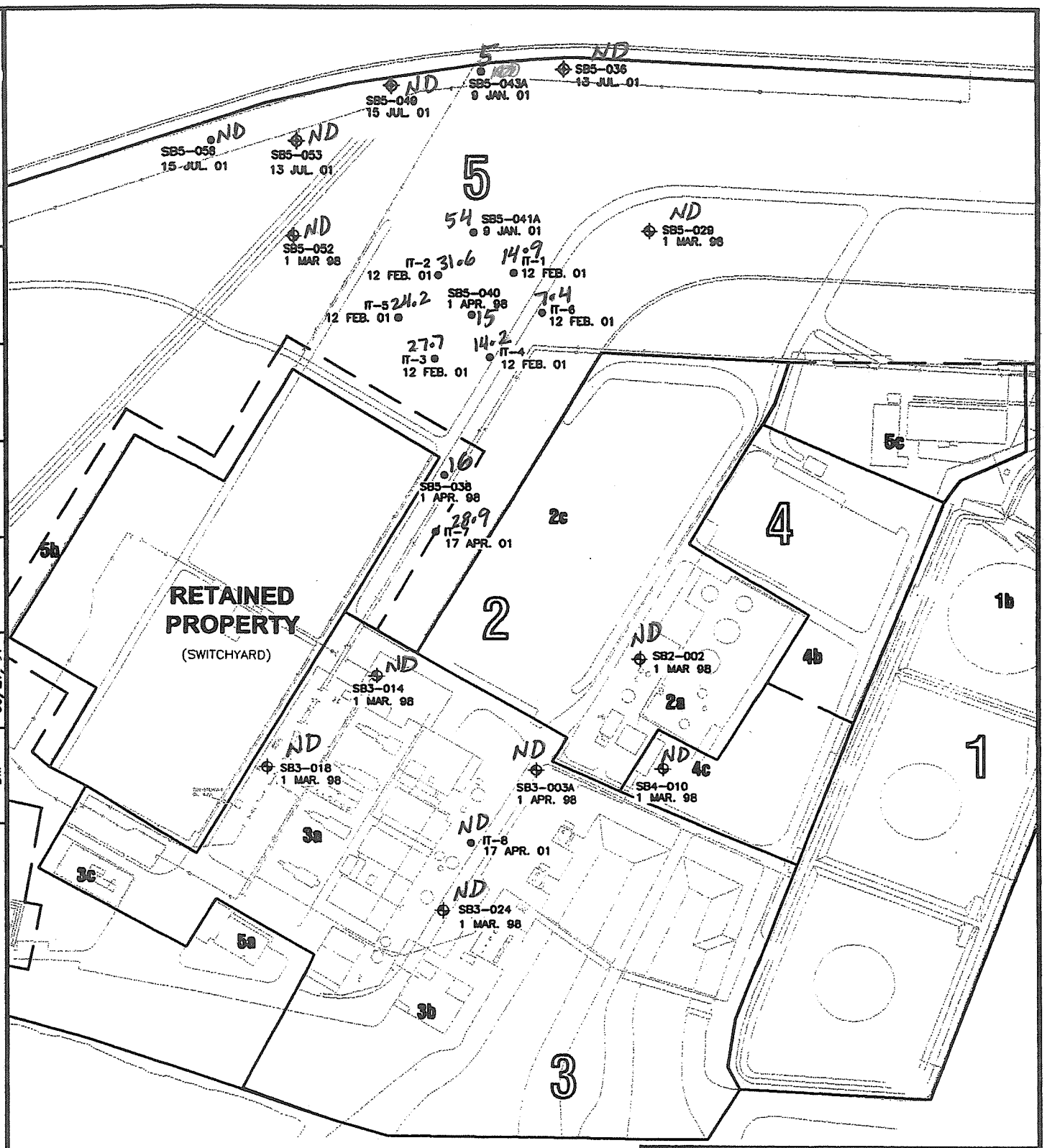
NOTE:
Groundwater Elevation (Feet)
Wells Gauged 05/01/01

IT CORPORATION

SEMPRA
SAN DIEGO, CALIFORNIA

FIGURE 5
GROUNDWATER GRADIENT MAP
SOUTH BAY POWER PLANT

DRAWING NUMBER 821346
APPROVED BY
CHECKED BY
DRAWN BY DM 09/ J1



LEGEND

- Area Boundary
- Sub-Area Boundary
- 1 Area Description
- Monitoring Well
- Groundwater Sampling Point
- Hydropunch Sampling Point

SCALE

0 240 480

NOTE:
Groundwater Elevation (Feet)
Wells Gauged 05/01/01

IT CORPORATION

SEMPRA
SAN DIEGO, CALIFORNIA

FIGURE 4
TCE IN GROUNDWATER
WELL LOCATION MAP

SOUTH BAY POWER PLANT

DRAWING NUMBER 82134

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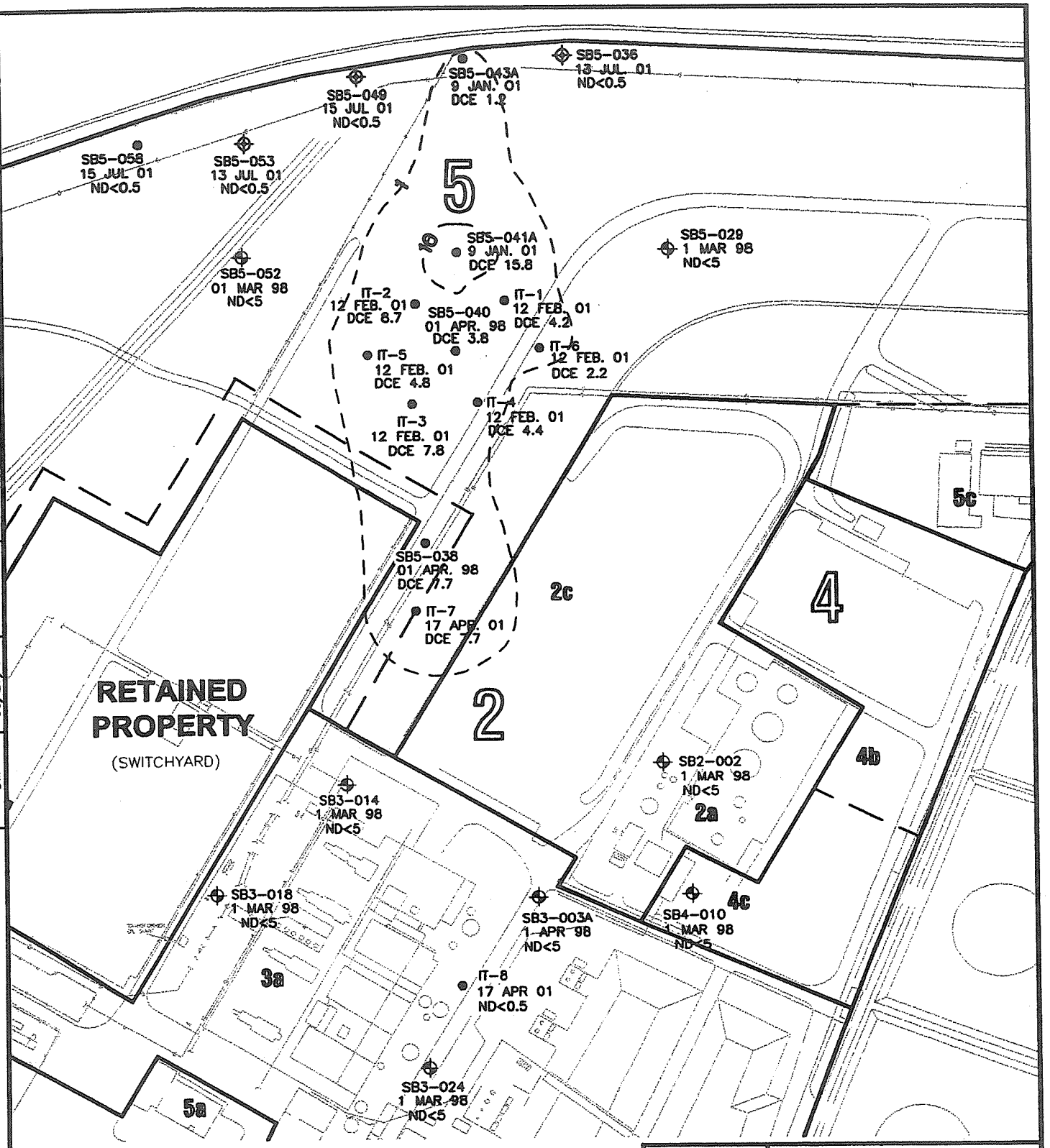
CHECKED BY

DRAWN BY DM 09/2



LEGEND

- Area Boundary
- Sub-Area Boundary
- 1 Area Description
- Monitoring Well
- Groundwater Sampling Point
- Hydropunch Sampling Point
- Inferred DCE Concentration (µg/L)

SCALE

0 260 520

IT CORPORATION

SEMPRA
SAN DIEGO, CALIFORNIA

FIGURE 7

DISSOLVED DCE CONCENTRATION MAP

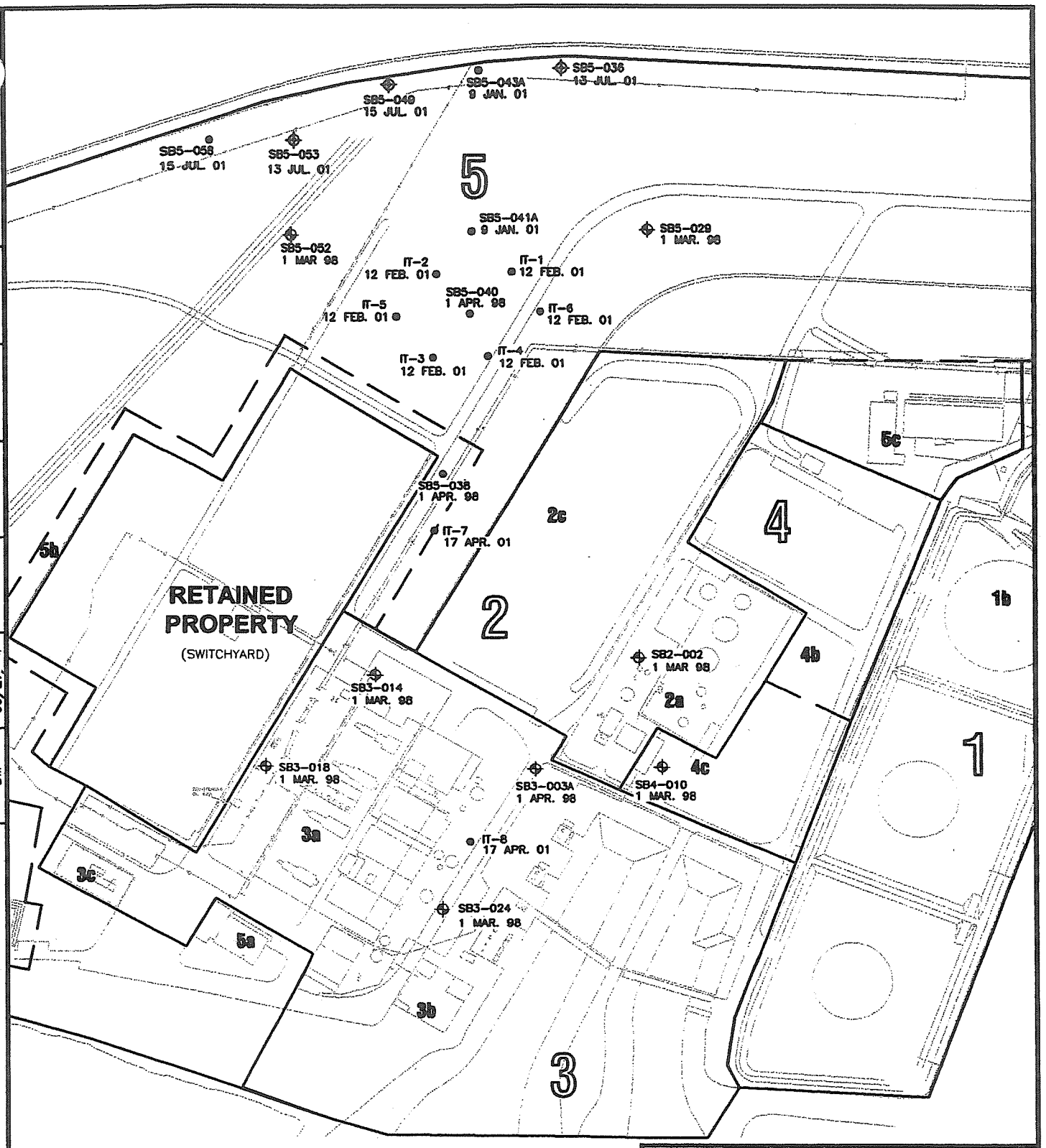
SOUTH BAY POWER PLANT

DRAWING NUMBER 821341

APPROVED BY

CHECKED BY

DRAWN BY DM 09/4/01



LEGEND

- Area Boundary
- Sub-Area Boundary
- 1 Area Description
- Monitoring Well
- Groundwater Sampling Point
- Hydropunch Sampling Point

SCALE

0 240 480

NOTE:
Groundwater Elevation (Feet)
Wells Gauged 05/01/01

IT CORPORATION

SEMPRA
SAN DIEGO, CALIFORNIA

FIGURE 4

WELL LOCATION MAP

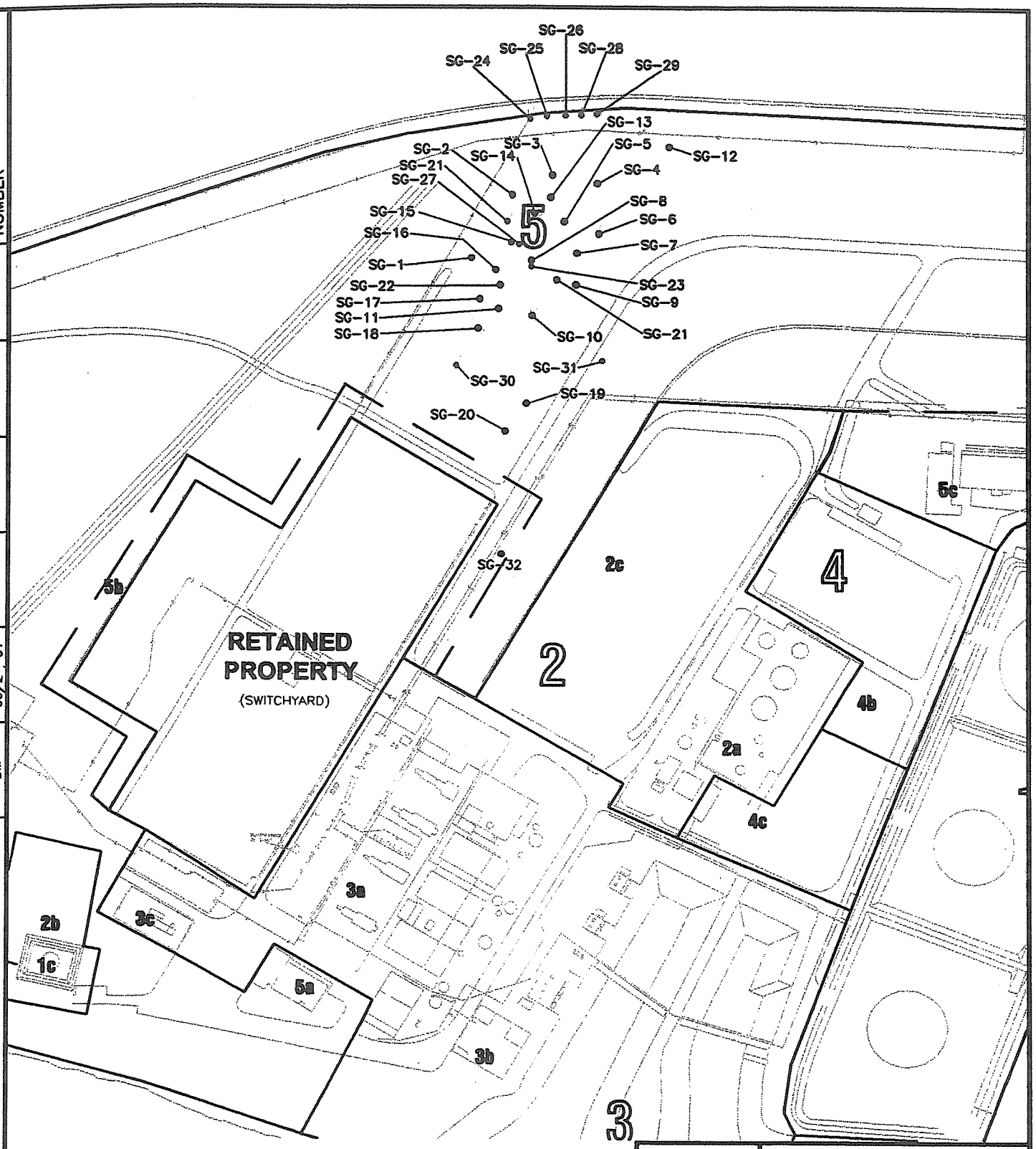
SOUTH BAY POWER PLANT

DRAWING NUMBER 821346

APPROVED BY

CHECKED BY

DRAWN BY DM 09/2



LEGEND

Area Boundary

Sub-Area Boundary

1 Area Description

SG-22 Soil Gas Survey Locations (01/15/01)

SG-31 Soil Gas Survey Locations (07/98)

SCALE

0 240 480

NOTE:
Groundwater Elevation (Feet)
Wells Gauged 05/01/01

IT CORPORATION

SEMPRA
SAN DIEGO, CALIFORNIA

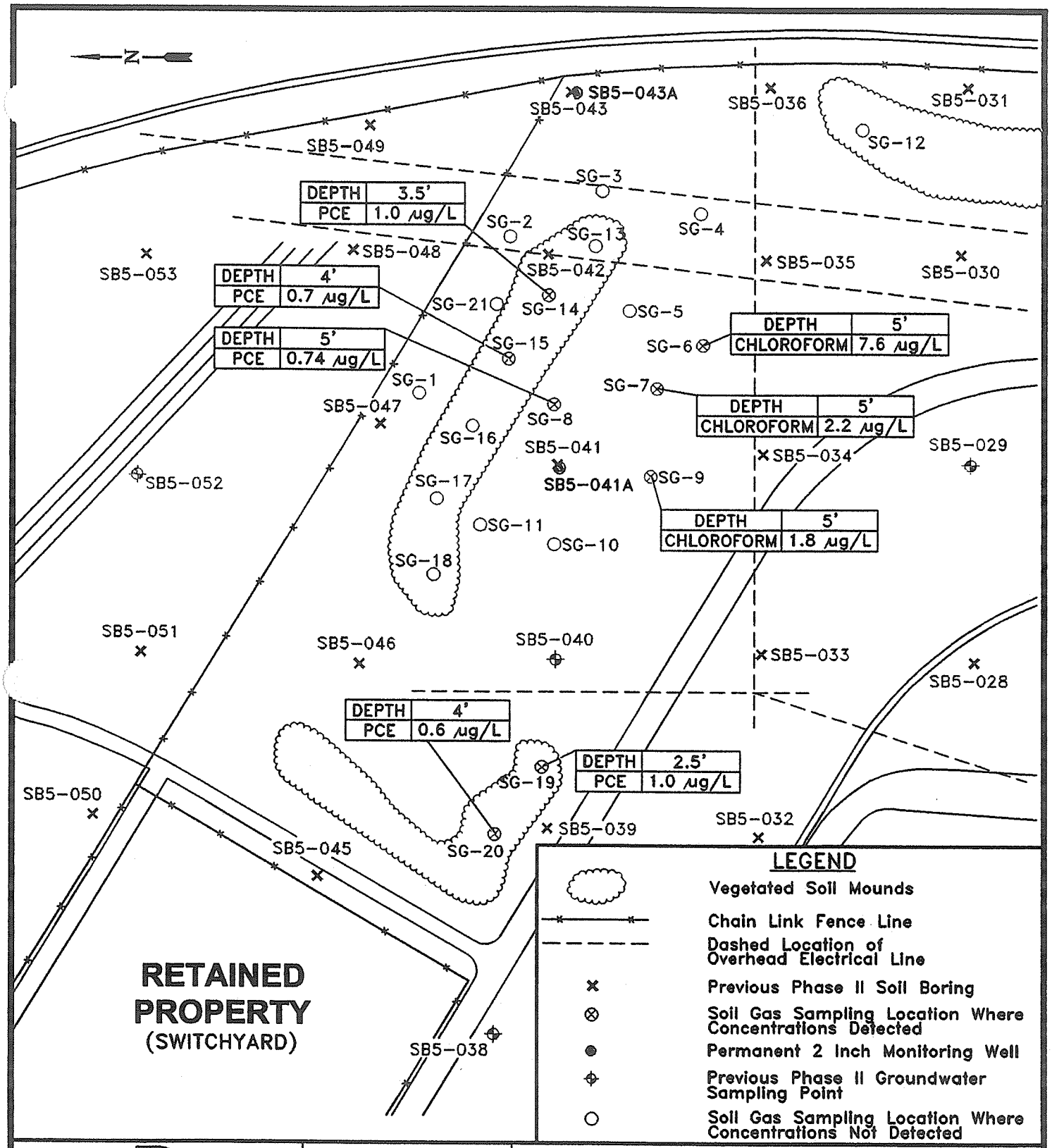
FIGURE 3
SOIL GAS SURVEY MAP
SOUTH BAY POWER PLANT

DRAWN E DM 09/ J1
CHECKED BY
APPROVED BY
DRAWING NUMBER 82134 7

TABLE 1
Soil Gas Survey Results
Detected VOCs
TCE Plume, South Bay Power Plant
San Diego, California

Sample Location	Date	Depth (ft)	TCE	Chloroform	cis 1,2 - DCE	Other Detected Analytes
SG1	26-Oct-98	5	<1.4	<1	<0.8	
SG2	26-Oct-98	5	<1.4	<1	<0.8	
SG3	26-Oct-98	5	<1.4	<1	<0.8	
SG4	26-Oct-98	5	<1.4	<1	<0.8	
SG5	26-Oct-98	5	<1.4	<1	<0.8	
SG5	26-Oct-98	10	<1.4	<1	<0.8	
SG6	26-Oct-98	5	<1.4	<1	7.6	
SG7	26-Oct-98	5	<1.4	2.2	<0.8	
SG8	26-Oct-98	5	<1.4	<1	<0.8	
SG8	26-Oct-98	10	<1.4	<1	<0.8	
SG9	26-Oct-98		No Data Available			
SG10	26-Oct-98	5	<1.4	<1	<0.8	
SG11	26-Oct-98	5	<1.4	<1	<0.8	
SG12	26-Oct-98	3	<1.4	<1	<0.8	
SG13	26-Oct-98	2.5	<1.4	<1	<0.8	
SG14	26-Oct-98	3.5	<1.4	<1	<0.8	
SG15	26-Oct-98	4	<1.4	<1	<0.8	
SG16	26-Oct-98	3.5	<1.4	<1	<0.8	
SG17	26-Oct-98	3.5	<1.4	<1	<0.8	
SG18	26-Oct-98	2.5	<1.4	<1	<0.8	
SG19	26-Oct-98	2.5	<1.4	<1	<0.8	Tetrachloroethene 0.6
SG20	26-Oct-98	4	<1.4	<1	<0.8	Tetrachloroethene 0.6
SG21	26-Oct-98	5	<1.4	<1	<0.8	
SG21	15-Jan-01	9	<0.3	<0.3	<0.3	
SG22	15-Jan-01	9	<0.3	<0.3	<0.3	
SG23	15-Jan-01	9	<0.3	<0.3	<0.3	
SG24	15-Jan-01	12	<0.3	<0.3	<0.3	
SG25	15-Jan-01	12	<0.3	<0.3	<0.3	
SG26	15-Jan-01	12	<0.3	<0.3	<0.3	
SG27	15-Jan-01	5	<0.3	<0.3	<0.3	
SG28	15-Jan-01	12	<0.3	<0.3	<0.3	
SG29	15-Jan-01	12	<0.3	<0.3	<0.3	
SG30	15-Jan-01	9	<0.3	<0.3	<0.3	
SG31	15-Jan-01	9	<0.3	<0.3	<0.3	
SG32	15-Jan-01	9	<0.3	<0.3	<0.3	
SG33	15-Jan-01	9	<0.3	<0.3	0.7	

1) All results reported in µg/L
2) TCE = Trichloroethene, DCE = cis 1,2 - Dichloroethene
3) (*) Indicates other analytes were detected
4) (<) Laboratory results were less than the Estimated Quantitation Limit (E.Q.L)
5) Test Methods: EPA 8260 (5030 Prep.) all samples October 1998; EPA 8021 B all samples January 2001



FLUOR DANIEL GTI

0 FEET 100
SCALE

SOIL GAS SAMPLING LOCATIONS AND DETECTED VOC CONCENTRATIONS

CLIENT: SAN DIEGO GAS AND ELECTRIC	FILE: 3589SSL (1:1.2)	PROJECT NO.: 103589	PM	PE/RG
	REV.			
LOCATION: SOUTH BAY POWER PLANT CHULA VISTA, CALIFORNIA	DES. DF	DET. RG	DATE: 10/29/98	FIGURE: 1

Table 1
SDG&E South Bay
Soil Gas Analytical Data
October 26, 1998

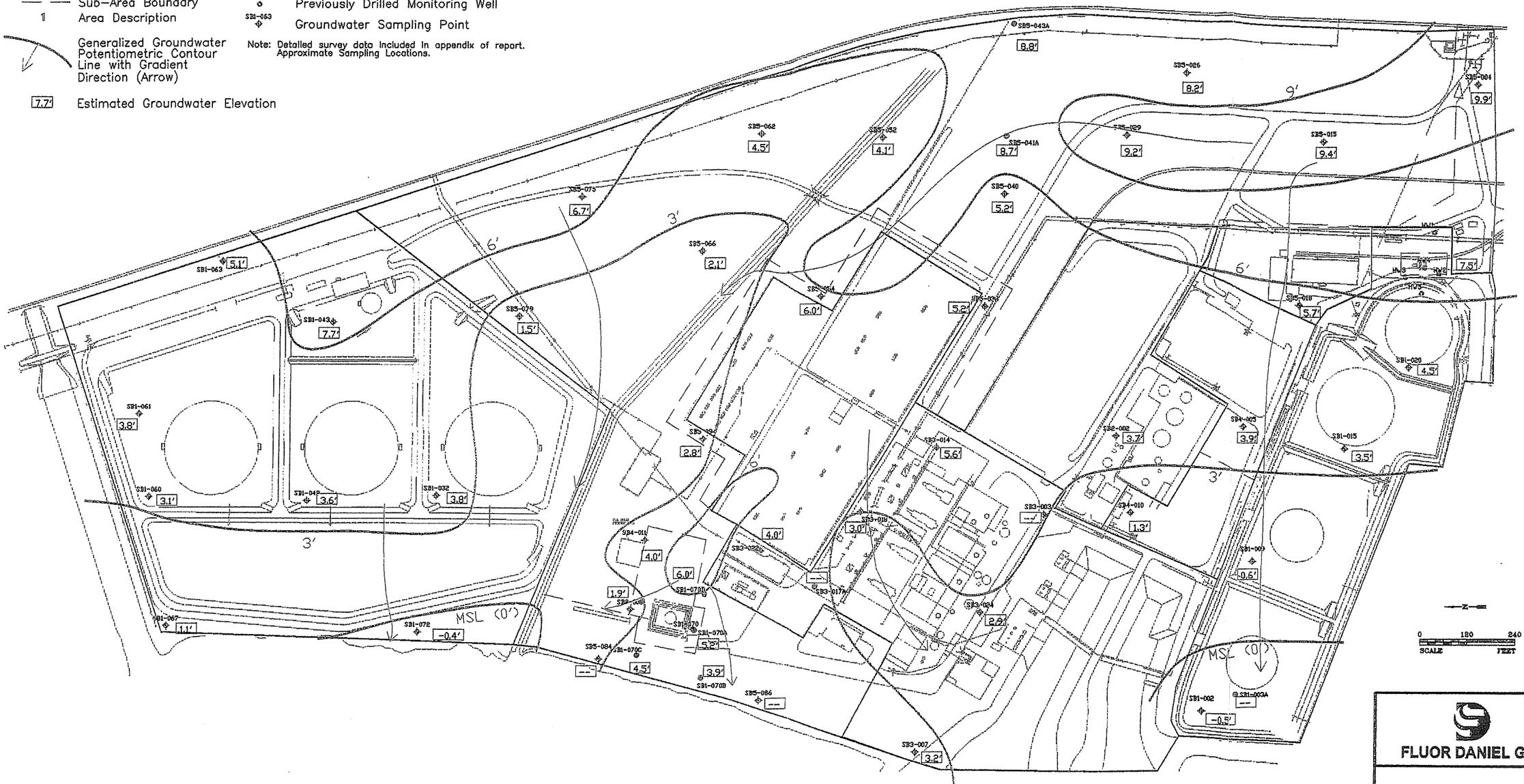
Sample #	Depth	Detectable VOC's (by EPA method 8260)
SG1	5'	ND
SG2	5'	ND
SG3	5'	ND
SG4	5'	ND
SG5	5'	ND
SG5	10'	ND
SG6	5'	7.6 ug/L Chloroform
SG7	5'	2.2 ug/L Chloroform
SG8	5'	(0.74 ug/L PCE)
SG8	10'	ND
SG9	5'	1.8 ug/L Chloroform
SG10	5'	ND
SG11	5'	ND
SG12	3'	ND
SG13	2.5'	ND
SG14	3.5'	1.0 ug/L PCE
SG15	4'	(0.70 ug/L PCE)
SG16	3.5'	ND
SG17	3.5'	ND
SG18	2.5'	ND
SG19	2.5'	1.0 ug/L PCE
SG20	4'	(0.6 ug/L PCE)
SG21	5'	ND
SG21	10'	ND

Note:
1) All other compounds were not detected
2) PCE = Tetrachloroethene
3) (0.6 ug/L PCE) = value in parentheses represents an instrument sensitized value below a higher detection limit set for this method

LEGEND

- Area Boundary
- Sub-Area Boundary
- 1 Area Description
- Generalized Groundwater Potentiometric Contour Line with Gradient Direction (Arrow)
- 7.7' Estimated Groundwater Elevation
- SB1-070C 2 Inch Monitoring Well
- HV3 Previously Drilled Monitoring Well
- SB1-063 Groundwater Sampling Point

Note: Detailed survey data included in appendix of report. Approximate Sampling Locations.



Note:
Groundwater potentiometric surface based on surveyed elevation of some wells and approximate well head elevations for temporary monitoring wells.

S A N D I E G O

B A Y

FLUOR DANIEL GTI

SAN DIEGO GAS AND ELECTRIC

SOUTH BAY POWER PLANT
CHULA VISTA, CALIFORNIA

GENERALIZED POTENTIOMETRIC SURFACE MAP
(MARCH / APRIL, 1998)

DESIGNED BY:	DRAWN BY:	CHECKED BY:
KS	JR	

DATE:	FILE:
6/8/98	3589PSM

PROJECT NO.:	CONTRACT:
103589	

DRAWING:

FIGURE 3-2

SECTION 4

4.0 RESPONSE TO HERD'S FEBRUARY 7, 2003 COMMENTS ON APPENDIX H OF A PHASE II ENVIRONMENTAL REPORT FOR THE SOUTH BAY POWER PLANT

DOCUMENT REVIEWED
"Environmental Due Diligence Program, South Bay Power Plant, Phase II Environmental Site Assessment, Appendix H," prepared for SDG&E by Fluor Daniel GTI, dated July 1998.

A. COMMENTS

1. ***Geology staff should further evaluate the background soils data set. Geology staff had commented previously about possible fill vs. native material in the background data set. HERD recommends that SDG&E prepare normal and lognormal probability plots for each of the metals in the background data set to see if there may be more than one population of background / ambient data. This should be completed for all metals and not simply those that were selected previously based on a screening methodology HERD does not recommend.***

   Response: Comment acknowledged. Please refer to the response to DTSC Geological Services Unit's February 11, 2003 General Comment #4 and the cited Appendix C for discussions of metal background concentrations in soil.

2. ***All organic chemicals must be evaluated in a risk assessment. It is HERD's policy not to eliminate chemicals of potential concern (COPCs) based on comparison to single chemical, single media "screening" criteria.***

   Response: Comment acknowledged. All organic chemicals detected at least once in any media will be carried through the revised risk assessment.

3. ***All metals which exceed background concentrations must be carried through as COPCs.***

   Response: Comment acknowledged. Any inorganic chemicals exceeding locally occurring natural background concentrations will be carried through the revised risk assessment.

4. ***Although the statistical analysis is generally appropriate, HERD does not agree with how the results were interpreted, or the final conclusions. Some metals that exceeded the upper range of background were further tested for statistical distribution medians, as described in the HERD background guidance. Even though the medians of some of the metals were not significantly different from the background data set (which still needs to be validated), the upper range of the site-related data suggests potential hot spots which should be further evaluated.***

   Response: Comment acknowledged. Conclusions in this appendix will be revised based on the results of the re-evaluation of the background data and comparison to site-related concentrations. The revisions will be incorporated following concurrence from GSU/HERD that the identification of the background dataset, for both soil and groundwater, is appropriate. Further, all data sets will be re-evaluated to determine if potential "hotspots" exist. Frequency distributions and cumulative probability plots for the

metals concentration data in both soil and groundwater will be presented, as necessary, in the revised risk assessment.

5. ***The statistical comparison to background should be done for all metals, not just those that failed the "screening" test in the Phase II investigation report reviewed previously.***

   Response: Comment acknowledged. The statistical comparisons to background will be conducted for all metals in the revised risk assessment. As noted above, any inorganic chemicals exceeding locally occurring natural background concentrations will be carried through the revised risk assessment.

6. ***For risk assessment purposes, petroleum hydrocarbon analyses should be conducted on chemicals expected to occur and not simply as TPH (total petroleum hydrocarbon). Depending on the source, chemical specific analyses should include BTEX , MTBE, and SVOCs, particularly polycyclic aromatic hydrocarbons (PAHs).***

   Response: Comment acknowledged. Petroleum hydrocarbons will be evaluated in the revised risk assessment based on the individual chemical constituents (i.e. BTEX and PAHs) present in the sample.

SECTION 5

5.0 RESPONSE TO HERD'S APRIL 30, 2002 COMMENTS ON HEALTH RISK ASSESSMENT SECTIONS OF A PHASE II ENVIRONMENTAL REPORT FOR THE SOUTH BAY POWER PLANT

DOCUMENT REVIEWED

"Environmental Due Diligence Program, South Bay Power Plant, Phase II Environmental Site Assessment, Volume 2, Book 1 - Text, Figures and Tables," prepared for SDG&E by Fluor Daniel GTI, dated July 1998, received by HERD 2/1/02 .

COMMENTS

Section 5.0. Baseline Health Risk Assessment (HRA), was reviewed by HERD. The risk assessment is not acceptable primarily because most chemicals of potential concern (COPCs) were eliminated from evaluation based on "screening" criteria which are not acceptable for a baseline risk assessment. All organic chemicals detected at least once in any media and any inorganic chemicals exceeding locally occurring natural background concentrations must be carried through the risk assessment. Nearly all chemicals were eliminated from estimation of risks because concentrations were below USEPA Region IX Preliminary Remediation Goals (PRGs), EPA Soil Screening Levels (SSLs), Ambient Water Quality Objectives or background concentrations. While comparison to these criteria is useful for risk management decisions, it is not acceptable to "screen- chemicals for risk estimation with the exception of metals occurring within the range of background concentrations. In addition, HERD does not concur with the process used to determine which metals are present at background concentrations in both soil and groundwater.

Response: Comment acknowledged. As requested, all organic chemicals detected at least once in any media and any inorganic chemicals exceeding locally occurring natural background concentrations will be carried through the risk assessment. Recommendations provided by HERD in Specific Comment B below for determining which metals are present at background concentrations in both soil and groundwater will be incorporated into the revised risk assessment.

SPECIFIC COMMENTS

A. Selection of Chemicals of Potential Concern

The HRA used an initial screening risk evaluation in which chemicals were removed from further consideration if concentrations were below "residential PRGs" citing CalEPA PEA guidelines. The DTSC PEA guidelines do not recommend that COCs be eliminated from baseline risk assessments based on comparison to single chemical, single media Preliminary Remedial Goals (PRGs). It is HERD's policy that all chemicals occurring above background be carried through the risk assessment. A key objective of a HRA is to provide an upper-bound estimate of risk which considers cumulative exposure from all chemicals in all media (multimedia, multichemical from all potential exposure pathways). The Region IX PRGs are calculated assuming exposures occur only from a single chemical at a time in a single media, e.g. direct contact (incidental soil ingestion, dermal contact and inhalation of dust or outdoor vapors) with soil contaminated with a single chemical. It is expressly noted in the Region IX PRG Introduction that they were not developed to be used as regulatory-approved screening criteria.

Response: Comment acknowledged. Region IX PRGs will not be used for initial screening for selection of chemicals of potential concern. All organic chemicals detected at least once in any media and any inorganic chemicals exceeding locally occurring natural background concentrations will be carried through the revised risk assessment.

B. Comparison to Background Concentrations.

Many of the COPCs in both soil and groundwater have been removed from the risk evaluation as being within the range of background concentrations. The text indicates that the DTSC/HERD guidance was used to perform this comparison. HERD agrees with this approach but the document supplied to HERD by Sempra Energy did not include Appendix H cited in the text that contains the details of the background evaluation. Regional staff should provide this material to DTSC Geological Services to determine if metals removed from consideration fall within the range of locally occurring metals concentrations in soil and groundwater. HERD can evaluate this Appendix as well if requested, but the final determination as to which metals occur at background concentrations should be made by Geological Services. Tables 3-2 (soil) and 3-3 (groundwater) summarize these results and based on HERD's initial experience, the soil background levels are about what we would expect in the San Diego coastal area. Background concentrations for groundwater were determined from on-site upgradient wells and not regional wells so it is unclear if the values are truly representative of regional groundwater conditions.

Response: Comment acknowledged. Please refer to the response to DTSC Geological Services Unit's February 11, 2003 General Comment #4 and SRPD's general comment #3 for discussions of metal background concentrations in soil and groundwater, respectively.

Section 3.5, Naturally Occurring Metal Concentrations, states that the DTSC/HERD guidance (not a "policy" as claimed) recommending the use of the Wilcoxon Rank Sum test was used to determine which metals may exceed background levels. These statistical results are presumably in Appendix H that HERD was not provided for review. The Wilcoxon test is a nonparametric test of means. Our guidance is a two part process that also requires an examination of the tails of the distribution in which one compares the site-measured maximum to an upper 95th percentile value. Based on a review of Tables 5-2, it seems this second step has not been done. For example, the maximum values of barium, mercury and molybdenum, removed from further evaluation as being within background, are shown as 243.9, 1.46 and 10.61 mg/kg respectively.
Table 3-2, Background Concentrations in Soil, report the 95th percentile chosen as the upper limit of background for these metals 120, 0.21 and 5 mg/kg respectively. This same pattern occurs in nearly every table for both soil and groundwater where a COPC has been removed from consideration as being within the range of background concentrations. A complete re-evaluation of the background data and comparison to site-related concentrations is necessary before any additional risk assessment activities are conducted.

Response: Comment acknowledged. A complete re-evaluation of the background data and comparison to site-related concentrations will be conducted in the revised risk assessment, following concurrence from GSU/HERD that the identification of the background dataset, for both soil and groundwater, is appropriate.

The presentation of the background summary statistics in Table 3-2 is confusing. One column is labeled a "Number of detections above reporting limit" and the next Number of detections below reporting limit." With the few exceptions where a chemical is detected at exactly the reporting limit, we expect the sum of these values to be the same as the sample size which is clearly not the case. Typically we are interested in knowing how frequently a chemical is detected. Our risk assessment guidance generally recommends calculating a 95% UCL of the mean using ½ the detection limit for samples reported as "nondetect" although it is well recognized that significant problems can occur when one has a large percentage of nondetects in a data set. EPA has recently provided additional guidance on calculating these concentration terms which provide some relief and should be followed (see Singh, A.K, Singh, A. and M. Engelhardt, The Lognormal Distribution in Environmental Applications. EPA ORD/OSWER, EPA/600/R-97/006, December 1997).

Response: We believe the confusion may be due to what the values under the column labeled "Number of detection below reporting limit" column represent. These values represent the number of detections reported below the sample reporting limit but above the method detection limit. The sample size is the sum of these two columns plus the number of "nondetect" sample results. The detection frequency of chemical detected will be clearly presented in the revised risk assessment. We acknowledge that using ½ the detection limits for samples reported as "nondetect" for a data set with large percentage of nondetects may bias the approximation of the mean concentration (i.e. 95% UCL of the mean). The recommended guidance cited in the comment above, along with a more recent EPA guidance ("Calculating Upper Confidence Limits for Exposure Point Concentrations at Hazardous Waste Sites", OSWER 9285.6-10, December 2002) will be utilized to calculate an appropriate approximation of the mean concentration.

C. Evaluation of Chromium in Soil.

Tables 5-1 through 5-10 treat total chromium as a potential carcinogen (i.e. hexavalent chromium) but not as a noncarcinogen. It does not appear that chromium has been speciated into Cr+3 and Cr+6 concentrations in the analyses (no data provided to HERD). Chromium should be included as both a carcinogenic and a noncarcinogenic COPC. The analyses shown in the Tables estimate cancer risks by comparison to a PRG developed by EPA Region IX which assumes a 1:6 ratio of Cr +6 to Cr+3 which may or may not be reasonable at this site. The Region IX PRG is also based on a cancer slope factor which is substantially below that developed by CalEPA further biasing the results to a lower risk estimate. Exposure Area A in particular has high levels of total chromium in subsurface soils (maximum of 5000 mg/kg; Table 5-2). Given these high concentrations, HERD recommends additional analysis of soil specifically for Cr+6.

Response: Comment acknowledged. Total chromium will be evaluated as a noncarcinogen in the revised risk assessment. The maximum of 5,000 mg/kg of total chromium in subsurface soils presented in Table 5-2 appears to be erroneous. This will be corrected in the revised risk assessment. The highest concentration of total chromium (i.e., 4,100 mg/kg at location T3 at 4 to 5 feet bgs collected in 1997 by EnecoTech as reported in Table 3-6) across the Site was detected in the former first generation surface impoundment area within Exposure Area A. Subsequent sampling collected in 2001 by IT Corporation in the former first generation surface impoundment area detected considerably lower total chromium concentrations in soils. As noted in the response to Specific Comment E below, risks will be estimated using CalEPA cancer slope factors, where available for a specific chemical, in the revised risk assessment. Speciation analysis for Cr+6 will

be performed during the upcoming supplemental sampling, through the collection of a few additional soil samples, to confirm if the assumption of a 1:6 ratio of Cr+6 to Cr+3 for the Site is appropriate and reasonable. Details of the proposed chromium sampling locations will be presented in the supplemental sampling work plan.

D. Evaluation of Cadmium in Soil.

Cadmium is evaluated as a noncarcinogen in Tables 5-1 through 5-10. CalEPA considers cadmium to be a potential carcinogen through the inhalation route of exposure and should be evaluated accordingly. Table 5-8, Subsurface Soils in Area D, reports one detect of cadmium at 10 mg/kg, above the noncancer PRG of 9 mg/kg. Additional stepout sampling is recommended at this location to further evaluate the extent of contamination.

Response: Comment acknowledged. Cadmium will be evaluated as a potential carcinogen through the inhalation route of exposure in the revised risk assessment. The one detection of cadmium at 10 mg/kg in subsurface soils in Area D presented in Table 5-8 appears to be erroneous. The highest concentration of cadmium detected across the Site is 8.7 mg/kg at location SB1-022 at 4 to 5 feet bgs as reported in Table 3-6, which is below the Cal/EPA-modified residential noncancer PRG of 9 mg/kg[2]. Additional step out sampling at this location is not warranted.

E. Toxicity Criteria.

The HRA does not use the cancer slope factors developed by the Office of Environmental Health Hazard Risks Assessment. Risks submitted to DTSC should use the CalEPA cancer potency slopes as well as the recently developed OEHHA chronic inhalation Reference Exposure Levels (RELs) where available for a specific chemical.

Response: Comment acknowledged. Risks will be estimated using CalEPA cancer slope factors, as well as the recently developed OEHHA chronic inhalation Reference Exposure Levels (RELs), where available for a specific chemical, in the revised risk assessment.

F. Calculation of Exposure Point Concentrations.

Exposure point concentrations used to calculate risks and hazards are stated to be the lower of the 95% UCL of the arithmetic mean or the maximum value, which is consistent with USEPA and DTSC guidelines. These guidelines are only applicable if the data is normally distributed and there are no hot spots of contamination, the latter which can lead to multimodal (non-normal) frequency

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[2] Note: The current residential USEPA Region IX PRG for cadmium is 37 mg/kg, and is based on noncancer health effects. Under the assumption that cadmium is a carcinogen via inhalation exposure only, and using Cal/EPA default residential assumptions regarding the carcinogenic potency of cadmium and the level of dust that might be present in the air (i.e., 50 ug/m^3), the Cal/EPA-modified PRG for cadmium would be approximately 9 mg/kg (cancer endpoint). Note, however, that if one uses the USEPA assumption regarding fugitive dust (instead of the default assumed dust level of 50 ug/m^3), as specified in the USEPA Soil Screening Guidance Manual, which is the current approach recommended by DTSC, the Cal/EPA-modified PRG for cadmium (cancer endpoint) would be on the order of 588 mg/kg. In this situation, the noncancer PRG of 37 mg/kg would be the driving screening-level PRG.

distributions and inappropriate calculation of statistical summary values such as an estimated mean. Using Table 5-2 as an example, it is difficult to believe that the metals data are normally distributed and that the 95% UCL is appropriate for estimating risks (i.e. chromium maximum 5000 mg/kg vs. 95% UCL 137 mg/kg; mercury maximum 1.46 mg/kg vs. 95% UCL 0.1 mg/kg; nickel maximum 2707 mg/kg vs. 95% UCL 76 mg/kg and others). All of these data sets need to be reevaluated to determine appropriate statistical estimates of exposure point concentrations. The data should be closely scrutinized to determine if there are potential hotspots of contamination. Locally high concentrations of metals could also very seriously affect the modeled fate and transport to groundwater and San Diego Bay. We strongly recommended presentation of frequency distributions and cumulative probability plots for all the metals concentration data in both soil and groundwater. See reference cited above.

Response: As noted in the response to Specific Comment B above, the recommended guidance cited in the comment above, along with a more recent EPA guidance ("Calculating Upper Confidence Limits for Exposure Point Concentrations at Hazardous Waste Sites", OSWER 9285. 6 to 10, December 2002) will be utilized in the revised risk assessment to calculate an appropriate approximation of the mean concentration in the revised risk assessment. Further, all data sets will be re-evaluated to determine if potential "hot spots" exist. Frequency distributions and cumulative probability plots for all the metals concentration data in both soil and groundwater will be presented, as necessary, in the revised risk assessment.

G. Section 5.4.5.1 Identification of Soil COPCs.

HERD does not concur with the conclusions in this section for no further action at Areas B, C, D and the NCT or that only arsenic, antimony, cadmium, nickel and zinc require further evaluation as soil COPCs in Area A. We also do not concur that no organic COPCs require further evaluation.

Response: Comment acknowledged. Conclusions in this section will be revised based on the results of the re-evaluation of the background data and comparison to site-related concentrations. As noted in the response to Comments above, all organic chemicals detected at least once in any media and any inorganic chemicals exceeding locally occurring natural background concentrations will be carried through the revised risk assessment.

H. Section 5.4.5.3 Groundwater COPCs.

COPCs were eliminated from further consideration if the maximum soil concentration exceeded EPA Soil Screening Levels (SSLs) with a dilution attenuation factor (DAF) to groundwater of 20. This SSL is based on a drinking water risk-based goal and may or may not be protective of marine resources in San Diego Bay. The text makes reference to "Table 5-12" for this comparision but Table 5-12 relates to COPCs in groundwater not soil to groundwater. Based on the text in Para. 1, pg. 5-12, it appears that eight metals were further evaluated (modeled leachate concentrations to groundwater) based on this screening approach. Whether or not only these metals have the potential to impact groundwater in modeling should be reviewed by DTSC Geological Services. Geology staff with expertise in modeling should also evaluate the mathematical models, parameter inputs and validation of the fate and transport models used to estimate impacts to groundwater and/or San Diego Bay.

Response: Comment acknowledged. As noted in the response to Comments above, all organic chemicals detected at least once in any media and any inorganic chemicals exceeding locally occurring natural background concentrations will be carried through the revised risk assessment. In lieu of using fate and transport models, groundwater data collected from wells across the Site (including data collected from onsite wells adjacent to the San Diego Bay), will be used to evaluate groundwater conditions at the Site and impacts to the San Diego Bay. We would propose to supplement the evaluation using fate and transport modeling, (i.e., models to predict the leaching of chemicals from the soil into the groundwater, or models to estimate the migration of chemicals in the groundwater and subsequent release to San Diego Bay) if necessary and appropriate. The rationale for using fate and transport models, and all relevant input assumptions, would be clearly presented in the revised risk assessment, where applicable.

I. Section 5.4.5.3 Groundwater COPCs.

The maximum concentration of the following chemicals at the SBPP exceeded State WRQB Basin Plan, State or Federal MCLs: benzene, TCE, antimony, barium, lead, thallium, 1,2-DCE and 1,1-DCA. Of these, antimony and lead are reported to be within the range of background concentrations although as noted above, the methodology used to evaluate background concentrations is flawed. The maximum values of both antimony and lead are above the 95th percentile of the upgradient well background data set and should be carried through the HRA. All COPCs that exceed MCLs (ARARs) should always be evaluated in a risk assessment. The HRA uses an outdated MCL for arsenic (50 ug/L). EPA has promulgated a new Federal MCL of 10 ug/l (2/2002). The maximum value of arsenic in on-site wells is 14 ug/l and we recommend that arsenic also be carried though the HRA.

Response: Comment acknowledged. As noted in the response to Comments above, all organic chemicals detected at least once in any media and any inorganic chemicals exceeding locally occurring natural background concentrations will be carried through the revised risk assessment. A complete re-evaluation of the background data and comparison to site-related concentrations for groundwater data will be conducted in the revised risk assessment, following concurrence from GSU/ incorporating recommendations provided by HERD that the identification of the background dataset, for both soil and groundwater, is appropriate. The comparison of background data to the site data will incorporate HERD's recommendations provided above in Specific Comment B and will be conducted in accordance with HERD guidance (DTSC 1997). Further, as noted by HERD, current MCLs will be used in the revised risk assessment, as appropriate.

J. Section 5.4.5.4 Groundwater Chemicals with Potential Effects on Surface Water Quality.

Chemicals in groundwater were screened from further evaluation if concentrations were below Ambient Water Quality Criteria. The text states this comparison is in Table 5-11 but the correct table is 5-14. While a comparison to AWQC is useful for some management decisions, the State RWQCBs can and usually do enforce more stringent regulations related to their beneficial use and antidegradation policies. Since DTSC cannot anticipate which water quality standards will be enforced by them at the SBPP, the risk assessment should evaluate all chemicals occurring over background concentrations in groundwater as a potential source of discharge to surface water or San Diego Bay. This evaluation should include both a human health and ecological risk assessment.

Response: Comment acknowledged. As noted in the response to Comments above, all organic chemicals detected at least once in any media and any inorganic chemicals exceeding locally occurring natural background concentrations will be carried through the revised risk assessment. As such, all groundwater COPCs will be evaluated as a potential source of discharge to San Diego Bay. This evaluation will include comparing groundwater data collected from onsite wells located adjacent to the San Diego Bay to appropriate and applicable water quality standards recommended in the State Basin Plan for this body of water.

K. Section 5.4.6 Chemical Fate and Transport Modeling.

The risk assessment uses the VLEACH model to predict migration COPCS in soil to groundwater, and the TRANS1D model to predict groundwater discharges to the Bay. Details of the model are in Appendix C and Appendix J which were not provided for review. The models were used to conclude that there would not be any discharge of site-related COPCs to the Bay. Both of these models can be very complicated to implement and difficult to validate. DTSC Geological Services staff should evaluate the adequacy of the model predictions for this site. It has been HERD's experience that the local RWQCBs, including the SDRWQCB, are often reluctant to accept modeling results for predicting whether or not a discharge to surface waters is likely, relying instead on near shore groundwater monitoring data. The report submitted to HERD did not include locations or concentration data from potential near shore wells that could become potential compliance points. If these data are available, the risk assessment should use this data rather than modeled concentrations, to estimate potential discharges to the Bay.

Response: Comment acknowledged. We agree with HERD that if available, it is often preferable to rely on actual groundwater monitoring data over results obtained using predictive models (e.g., VLEACH). In lieu of using fate and transport models, groundwater data collected from wells across the Site (including data collected from onsite wells adjacent to the San Diego Bay), will be used to evaluate groundwater conditions at the Site and impacts to the San Diego Bay. We would propose to supplement the evaluation using fate and transport modeling, if necessary and appropriate. The rationale for using fate and transport models, and all relevant input assumptions, would be clearly presented in the revised risk assessment, where applicable.

L. Section 5.4.7 Exposure Assessment.

The site conceptual site model (CSM) is generally appropriate for the site and considers exposures to on-site workers, invasive construction workers and visitors/trespassers. The latter is only evaluated if risk to on-site workers is above an acceptable risk for the site. Current and future on-site workers are assumed to be potentially exposed to COPCS in soil and groundwater by direct contact and indirectly by inhalation from VOCs released from groundwater. The assumed exposure factors are acceptable for these scenarios. Specific comments on individual exposure scenarios are as follows:

Response: Comment acknowledged.

Exposure to VOCs in groundwater for on-site workers. Several VOCs (benzene, 1,1-DCE, TCE and chloroform) were detected in groundwater. Fate and transport modeling was used in the HRA to estimate potential indoor air building concentrations from VOCs released from groundwater. No reference is provided for the modeling approach. HERD recommends that these exposures be

evaluated using the recent USEPA recommended exposure models for evaluating the migration of subsurface VOCs to indoor air. HERD will accept alternate modeling approaches if it can be demonstrated that they are at least as conservative as the EPA models. HERD has modified the EPA models to use the most recent CalEPA toxicity reference values and will supply these models on request. We are aware that these models have recently been heavily criticized in the media for failing to accurately model indoor air concentrations, especially from groundwater. HERD recommends that direct soil gas measurements taken immediately above the capillary fringe zone be used instead of groundwater concentrations to estimate indoor air risks. Soil gas detection limits must be low enough to detect potential indoor air risk levels of 1 x 10^{-6} for all COCs, including potential degradation products of TCE. HERD recommends the EPA SGSCREEN.XLS model for this calculation.

Response: Comment acknowledged. The HERD-modified version of the USEPA Model for evaluating the migration of subsurface VOCs to indoor air will be used in the revised risk assessment to estimate potential indoor air building concentrations from VOCs released from groundwater. The appropriate USEPA model (i.e. either for soil gas or groundwater) will be used based on the quality and appropriateness of the soil gas and groundwater data available for the Site.

Exposure to VOCs during on-site trenching and construction activities. No details or references are provided to describe the modeling approach used to estimate inhalation exposures during potential on-site trenching or excavation activities

Response: A description and references for the modeling approach used to estimate inhalation exposures during potential on-site trenching or excavation activities will be provided in the revised risk assessment.

Summary

The human health risk assessment is not acceptable as written. The HRA must be revised to evaluate all chemicals in all media that occur above local background concentrations. The existing data should be re-evaluated specifically to determine if local hot spots of contamination occur, and the exposure point concentration estimates should be revised accordingly. Considerable more detail should be provided to describe the exposure assessment fate and transport models. DTSC Geological Services should evaluate the soil and groundwater data to determine which chemicals occur above background concentrations.

Response: Comment acknowledged. Please refer to responses to Comment and Specific Comments above.

APPENDIX A

Soil Analytical Data

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	B-01	B-01	B-01	B-02	B-02	B-02	B-03	B-03	B-03	B-04
SAMPLE NAME	B1-10	B1-12	B1-8	B2-12	B2-14	B2-9	B3-11	B3-13	B3-8	B4-11
SAMPLING DATE	11/7/1996	11/7/1996	11/7/1996	11/7/1996	11/7/1996	11/7/1996	11/7/1996	11/7/1996	11/7/1996	11/7/1996
TOTAL EXTRACTABLE HYDROCARBONS	**57**	**3.9**	**160**	**12**	**5.5**	**3.3**	**9.7**	**1.8**	**6.1**	**630**
TPH (C23-C40) AS HH	--	--	--	--	--	--	--	--	--	--
TPH (C9-C23) AS DIESEL	--	--	--	--	--	--	--	--	--	--
TPH (C9-C40) AS TOTAL D&H	--	--	--	--	--	--	--	--	--	--

Units in mg/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	B-04	B-04	B-05	B-05	B-05	B-06	B-06	B-06	B-07	B-07
SAMPLE NAME	B4-13	B4-9	B5-12	B5-7.5	B5-9	B6-14	B6-7	B6-9	B7-10	B7-12
SAMPLING DATE	11/7/1996	11/7/1996	11/7/1996	11/7/1996	11/7/1996	11/7/1996	11/7/1996	11/7/1996	11/7/1996	11/7/1996
TOTAL EXTRACTABLE HYDROCARBONS	**3.3**	**56**	**5.1**	**2600**	**51**	**4.7**	**330**	**8300**	<1	<1
TPH (C23-C40) AS HH	--	--	--	--	--	--	--	--	--	--
TPH (C9-C23) AS DIESEL	--	--	--	--	--	--	--	--	--	--
TPH (C9-C40) AS TOTAL D&H	--	--	--	--	--	--	--	--	--	--

Units in mg/kg
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-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	B-07	B-08	B-08	B-08	FI-01	FI-01	FI-01	FI-02	FI-02	FI-02
SAMPLE NAME	B7-8	B8-10	B8-12	B8-7.5	FI-1-10	FI-1-4	FI-1-8	FI-2-10	FI-2-4	FI-2-8
SAMPLING DATE	11/7/1996	11/7/1996	11/7/1996	11/7/1996	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001
TOTAL EXTRACTABLE HYDROCARBONS	**18**	**5.5**	<1	**2700**	<0.5	<0.5	**78**	<0.5	**53.3**	<0.5
TPH (C23-C40) AS HH	--	--	--	--	<5	<5	**63.6**	<5	**53.5**	<5
TPH (C9-C23) AS DIESEL	--	--	--	--	<5	<5	**14.4**	<5	<5	<5
TPH (C9-C40) AS TOTAL D&H	--	--	--	--	<5	<5	**78**	<5	**53.5**	<5

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	FI-03	FI-03	FI-03	FI-04	FI-04	FI-04	FI-05	FI-05	FI-05	FI-06	FI-06
SAMPLE NAME	FI-3-10	FI-3-4	FI-3-8	FI-4-10	FI-4-4	FI-4-8	FI-5-10	FI-5-4	FI-5-8	FI-6-10	FI-6-5
SAMPLING DATE	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001
TOTAL EXTRACTABLE HYDROCARBONS	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**46**	<0.5
TPH (C23-C40) AS HH	<5	<5	<5	<5	<5	<5	<5	<5	<5	--	--
TPH (C9-C23) AS DIESEL	<5	<5	<5	<5	<5	<5	<5	<5	<5	--	--
TPH (C9-C40) AS TOTAL D&H	<5	<5	<5	<5	<5	<5	<5	<5	<5	--	--

Units in mg/kg
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-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	FI-07	FI-08	FI-08	FI-09	FI-09	FI-10	FI-10	FI-10	FI-11	FI-11	FI-11
SAMPLE NAME	FI-7-10	FI-8-10	FI-8-8	FI-9-10	FI-9-8	FI-10-2	FI-10-4	FI-10-6	FI-11-2	FI-11-4	FI-11-6
SAMPLING DATE	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001
TOTAL EXTRACTABLE HYDROCARBONS	**25.5**	<0.5	<0.5	<0.5	<0.5	<0.5	**190**	<5	**140**	**3600**	**5400**
TPH (C23-C40) AS HH	--	--	--	--	--	--	--	--	--	--	--
TPH (C9-C23) AS DIESEL	--	--	--	--	--	--	--	--	--	--	--
TPH (C9-C40) AS TOTAL D&H	--	--	--	--	--	--	--	--	--	--	--

Units in mg/kg
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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION SAMPLE NAME SAMPLING DATE	FI-12 FI-12-2 1/2/2001	FI-12 FI-12-4 1/2/2001	FI-12 FI-12-6 1/2/2001	FI-13 FI-13-2 1/2/2001	FI-13 FI-13-4 1/2/2001	FI-13 FI-13-6 1/2/2001	FI-14 FI-14-2 1/2/2001	FI-14 FI-14-4 1/2/2001	FI-14 FI-14-6 1/2/2001	FI-15 FI-15-2 1/2/2001	FI-15 FI-15-4 1/2/2001
TOTAL EXTRACTABLE HYDROCARBONS	**11**	<5	<5	**130**	<5	<5	<5	<5	<5	<5	<5
TPH (C23-C40) AS HH	--	--	--	--	--	--	--	--	--	--	--
TPH (C9-C23) AS DIESEL	--	--	--	--	--	--	--	--	--	--	--
TPH (C9-C40) AS TOTAL D&H	--	--	--	--	--	--	--	--	--	--	--

Units in mg/kg
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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION SAMPLE NAME SAMPLING DATE	FI-15 FI-15-6 1/2/2001	FI-16 FI-16-2 1/2/2001	FI-16 FI-16-4 1/2/2001	FI-16 FI-16-6 1/2/2001	FI-17 FI-17-2 1/2/2001	FI-17 FI-17-4 1/2/2001	FI-17 FI-17-6 1/2/2001	FI-18 FI-18-2 1/2/2001	FI-18 FI-18-4 1/2/2001	FI-18 FI-18-6 1/2/2001	FI-19 FI-19-2 1/2/2001
TOTAL EXTRACTABLE HYDROCARBONS	<5	**140**	<5	<5	**260**	**290**	**650**	**180**	**2600**	**60**	**360**
TPH (C23-C40) AS HH	--	--	--	--	--	--	--	--	--	--	--
TPH (C9-C23) AS DIESEL	--	--	--	--	--	--	--	--	--	--	--
TPH (C9-C40) AS TOTAL D&H	--	--	--	--	--	--	--	--	--	--	--

Units in mg/kg
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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	FI-19	FI-19	FI-20	FI-20	FI-20	FI-21	FI-21	FI-21	JF-01	JF-02	JF-02
SAMPLE NAME	FI-19-4	FI-19-6	FI-20-2	FI-20-4	FI-20-6	FI-21-2	FI-21-4	FI-21-6	JF-01-9	JF-02-5	JF-02-9
SAMPLING DATE	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	2/7/2001	2/8/2001	2/8/2001
TOTAL EXTRACTABLE HYDROCARBONS	**340**	**3600**	**220**	**230**	<5	<5	**4600**	<5	<5	**1370**	**1030**
TPH (C23-C40) AS HH	--	--	--	--	--	--	--	--	<5	<5	<5
TPH (C9-C23) AS DIESEL	--	--	--	--	--	--	--	--	<5	**1370**	**1030**
TPH (C9-C40) AS TOTAL D&H	--	--	--	--	--	--	--	--	<5	**1370**	**1030**

Units in mg/kg
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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	JF-03	JF-04	JF-05	JF-05	JF-06	JF-06	JF-06	JF-07	JF-07	JF-07	JF-08
SAMPLE NAME	JF-03-9	JF-04-9	JF-05-8	JF-05-9	JF-06-3	JF-06-6	JF-06-9	JF-07-3	JF-07-6	JF-07-9	JF-08-3
SAMPLING DATE	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001
TOTAL EXTRACTABLE HYDROCARBONS	<5	<5	--	<5	**82.3**	**2100**	**930**	<5	<5	<5	**2400**
TPH (C23-C40) AS HH	<5	<5	<5	--	--	--	--	--	--	--	--
TPH (C9-C23) AS DIESEL	<5	<5	<5	--	--	--	--	--	--	--	--
TPH (C9-C40) AS TOTAL D&H	<5	<5	<5	--	--	--	--	--	--	--	--

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION SAMPLE NAME SAMPLING DATE	JF-08 JF-08-6 1/2/2001	JF-08 JF-08-9 1/2/2001	JF-09 JF-09-3 1/2/2001	JF-09 JF-09-6 1/2/2001	JF-09 JF-09-9 1/2/2001	JF-10 JF-10-3 1/2/2001	JF-10 JF-10-6 1/2/2001	JF-10 JF-10-9 1/2/2001	JF-11 JF-11-3 1/2/2001	JF-11 JF-11-6 1/2/2001	JF-11 JF-11-9 1/2/2001
TOTAL EXTRACTABLE HYDROCARBONS	<5	<5	**5670**	**2890**	**3020**	<5	<5	**1400**	<5	<5	<5
TPH (C23-C40) AS HH	--	--	--	--	--	--	--	--	--	--	--
TPH (C9-C23) AS DIESEL	--	--	--	--	--	--	--	--	--	--	--
TPH (C9-C40) AS TOTAL D&H	--	--	--	--	--	--	--	--	--	--	--

Units in mg/kg
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-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	JF-12	JF-12	JF-13	JF-13	JF-13	JF-14	JF-14	JF-14	JF-15	JF-15	JF-15
SAMPLE NAME	JF-12-3	JF-12-6	JF-13-3	JF-13-6	JF-13-9	JF-14-5	JF-14-7	JF-14-9	JF-15-5	JF-15-7	JF-15-9
SAMPLING DATE	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001
TOTAL EXTRACTABLE HYDROCARBONS	<5	<5	<5	**10.6**	<5	<5	<5	<5	**174**	**10000**	**47.5**
TPH (C23-C40) AS HH	--	--	--	--	--	--	--	--	--	--	--
TPH (C9-C23) AS DIESEL	--	--	--	--	--	--	--	--	--	--	--
TPH (C9-C40) AS TOTAL D&H	--	--	--	--	--	--	--	--	--	--	--

Units in mg/kg
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-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	SB01-001	SB01-001	SB01-002	SB01-002	SB01-002	SB01-003	SB01-003	SB01-003	SB01-003	SB01-003A
SAMPLE NAME	S101@0.5-1	S101@5-6	S102@0.5-1	S102@14-15	S102@5-6	S103@0.5-1	S103@0.5-1D	S103@14-15	S103@4-5	S103A@16-16.5
SAMPLING DATE	3/17/1998	3/19/1998	3/17/1998	3/17/1998	3/17/1998	3/18/1998	3/18/1998	3/18/1998	3/18/1998	4/17/1998
TPH	**18**	**1.1**	**3.3**	**2.4**	**4.3**	**1.1**	**1.7**	**1.5**	**1.2**	**3.9**

Units in mg/kg
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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	SB01-004	SB01-004	SB01-004	SB01-005	SB01-005	SB01-005	SB01-006	SB01-006	SB01-006	SB01-007	SB01-007
SAMPLE NAME	S104@0.5-1	S104@14-15	S104@4-5	S105@0.5-1	S105@14-15	S105@4-5	S106@0.5-1	S106@14-15	S106@4-5	S107@0-1	S107@5-6
SAMPLING DATE	3/18/1998	3/18/1998	3/18/1998	3/18/1998	3/18/1998	3/18/1998	3/18/1998	3/18/1998	3/18/1998	3/19/1998	3/19/1998
TPH	**0.99 J**	**0.67 J**	**1.1**	**1.1**	**1.4**	**0.78 J**	**1.7**	**0.52 J**	**0.74 J**	**1.1**	**0.87 J**

Units in mg/kg
< = Not Detected at indicated reporting limit
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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	SB01-008	SB01-008	SB01-008	SB01-009	SB01-009	SB01-009	SB01-010	SB01-011	SB01-011	SB01-011	SB01-012
SAMPLE NAME	S108@0.5-1	S108@14-15	S108@4-5	S109@0-1	S109@10-11	S109@5-6	S110@0-1	S111@0-1	S111@10-11	S111@5-6	S112@0-1
SAMPLING DATE	3/18/1998	3/18/1998	3/18/1998	3/19/1998	3/19/1998	3/19/1998	3/19/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998
TPH	**0.57 J**	<1	**0.62 J**	**2.8**	**1.1**	**0.71 J**	**45**	<1	**0.83 J**	**0.99 J**	**2.2**

Units in mg/kg
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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	SB01-012	SB01-013	SB01-013	SB01-014	SB01-014	SB01-014	SB01-014	SB01-015	SB01-015	SB01-015A	SB01-015A
SAMPLE NAME	S112@5-6	S113@0-1	S113@5-6	S114@0-1	S114@0-1D	S114@10-11	S114@5-6	S115@0-1	S115@5-6	S115A@0.5-1	S115A@4.5-5
SAMPLING DATE	3/20/1998	3/19/1998	3/19/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/18/1998	3/18/1998	4/16/1998	4/16/1998
TPH	**2.8**	**0.65 J**	**1.3**	**3.1**	**1.9**	**0.8 J**	**5.9**	**1.2**	**0.76 J**	**1.4**	**2.3**

Units in mg/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	SB01-016	SB01-016	SB01-017	SB01-017	SB01-018	SB01-018	SB01-018	SB01-019	SB01-019	SB01-019	SB01-020	SB01-020
SAMPLE NAME	S116@0-1	S116@5-6	S117@0-1	S117@5-6	S118@0-1	S118@10-11	S118@4-5	S119@0-1	S119@0-1D	S119@5-6	S120@0-1	S120@0-1D
SAMPLING DATE	3/17/1998	3/17/1998	3/17/1998	3/17/1998	3/17/1998	3/17/1998	3/17/1998	3/18/1998	3/18/1998	3/18/1998	3/16/1998	3/16/1998
TPH	**1.7**	**1.7**	**4.3**	**1.7**	**4.6**	**2**	**2.3**	**1.5**	**1.4**	**1.1**	**20**	**13**

Units in mg/kg
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-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	SB01-020	SB01-020	SB01-021	SB01-021	SB01-022	SB01-022	SB01-023	SB01-023	SB01-024	SB01-024	SB01-024
SAMPLE NAME	S120@14-15	S120@5-6	S121@0-1	S121@4-5	S122@0.5-1	S122@4-5	S123@0.5-1	S123@4-5	S124@0.5-1	S124@10-11	S124@5-6
SAMPLING DATE	3/16/1998	3/16/1998	3/17/1998	3/17/1998	3/17/1998	3/17/1998	3/17/1998	3/17/1998	3/19/1998	3/19/1998	3/19/1998
TPH	<1	<1.9	**6.2**	**2.6**	**3.6**	**1.9**	**3.2**	**4.4**	**0.52 J**	<1	**0.98 J**

Units in mg/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	SB01-025	SB01-025	SB01-026	SB01-026	SB01-027	SB01-027	SB01-028	SB01-028	SB01-029	SB01-029	SB01-030	SB01-030
SAMPLE NAME	S125@0-1	S125@4-5	S126@0-1	S126@4-5	S127@0-1	S127@0-1D	S128@0-1	S128@3-3.5	S129@0-1	S129@2.5-3	S130@0-1	S130@0-1D
SAMPLING DATE	3/17/1998	3/17/1998	3/17/1998	3/17/1998	3/19/1998	3/19/1998	3/19/1998	3/19/1998	3/19/1998	3/19/1998	3/16/1998	3/16/1998
TPH	**4.3**	**1.9**	**3**	**2.1**	**140**	**130**	**0.91**	**0.77 J**	**0.78 J**	**2.1**	**5.7**	**19**

Units in mg/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	SB01-030	SB01-031	SB01-031	SB01-032	SB01-032	SB01-033	SB01-033	SB01-034	SB01-034	SB01-035	SB01-035
SAMPLE NAME	S130@4.5-5	S131@0-1	S131@4-5	S132@0-1	S132@4.5-5.5	S133@0-1	S133@3-3.5	S134@0-1	S134@3-3.5	S135@0-1	S135@5.5-6
SAMPLING DATE	3/16/1998	3/17/1998	3/18/1998	3/18/1998	3/18/1998	3/18/1998	3/18/1998	3/18/1998	3/18/1998	3/19/1998	3/19/1998
TPH	**2.2**	**2.5**	**2.9**	**11**	**1.2**	**49**	**2.8**	**1.4**	**4.8**	**2.5**	**2.7**

Units in mg/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	SB01-035	SB01-036	SB01-036	SB01-037	SB01-037	SB01-038	SB01-038	SB01-038A	SB01-038A	SB01-039	SB01-039
SAMPLE NAME	S135@6.5-7	S136@0-1	S136@4.5-5	S137@0-1	S137@3-3.5	S138@0-1	S138@5-5.5	S138A@0.5-1	S138A@4.5-5	S139@0.5-1	S139@4.5-5
SAMPLING DATE	3/19/1998	3/18/1998	3/18/1998	3/18/1998	3/18/1998	3/19/1998	3/19/1998	4/17/1998	4/17/1998	3/19/1998	3/19/1998
TPH	**0.87 J**	**190**	<1	**99**	**1.4**	**4.2**	<1	**38**	**33**	**13**	<1

Units in mg/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	SB01-040	SB01-040	SB01-041	SB01-041	SB01-042	SB01-042	SB01-042	SB01-043	SB01-043	SB01-044	SB01-044
SAMPLE NAME	S140@0.5-1	S140@3-3.5	S141@0-1	S141@5-5.5	S142@0-1	S142@0-1D	S142@3-3.5	S143@0-1	S143@2.5-3	S144@0.5-1	S144@14-15
SAMPLING DATE	3/19/1998	3/19/1998	3/18/1998	3/18/1998	3/18/1998	3/18/1998	3/18/1998	3/19/1998	3/19/1998	3/20/1998	3/20/1998
TPH	**0.97 J**	**0.98 J**	**73**	**25**	**30**	**15**	**1.9**	**10**	**1.3**	**0.96 J**	**0.74 J**

Units in mg/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	SB01-044	SB01-045	SB01-045	SB01-046	SB01-046	SB01-046	SB01-047	SB01-047	SB01-048	SB01-048	SB01-049
SAMPLE NAME	S144@4-5	S145@0.5-1	S145@4-5	S146@0-1	S146@10-11	S146@5-6	S147@0-1	S147@2.5-3	S148@0-1	S148@3-3.5	S149@0-1
SAMPLING DATE	3/20/1998	3/18/1998	3/18/1998	3/18/1998	3/18/1998	3/18/1998	3/18/1998	3/18/1998	3/18/1998	3/18/1998	3/18/1998
TPH	**0.69 J**	**8.6**	**1.3**	**1.1**	**0.74 J**	**0.74 J**	**91**	**3.8**	**19**	**4.4**	**84**

Units in mg/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	SB01-049	SB01-050	SB01-050	SB01-051	SB01-051	SB01-052	SB01-052	SB01-053	SB01-053	SB01-054
SAMPLE NAME	S149@3.5-4	S150@0.5-1	S150@4.5-5	S151@0.5-1	S151@4.5-5	S152@0.5-1	S152@3.5-4	S153@0.5-1	S153@4.5-5	S154@0.5-1
SAMPLING DATE	3/18/1998	3/19/1998	3/19/1998	3/19/1998	3/19/1998	3/19/1998	3/19/1998	3/19/1998	3/19/1998	3/19/1998
TPH	**1.4**	**0.77 J**	**0.97 J**	**2.2**	**0.75 J**	**1**	**1.3**	**2.7**	**0.64 J**	**0.81 J**

Units in mg/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	SB01-054	SB01-054	SB01-055	SB01-055	SB01-055	SB01-056	SB01-056	SB01-057	SB01-057	SB01-058
SAMPLE NAME	S154@0.5-1D	S154@4.5-5	S155@0.5-1.5	S155@0.5-1.5D	S155@5-6	S156@0.5-1.0	S156@5-6	S157@0.5-1.5	S157@2.5-3.5	S158@0.5-1.5
SAMPLING DATE	3/19/1998	3/19/1998	3/16/1998	3/16/1998	3/17/1998	3/17/1998	3/17/1998	3/17/1998	3/17/1998	3/17/1998
TPH	<1	**0.58 J**	**42**	**37**	**12**	**2.4**	**2.6**	**2**	**2.4**	**3.3**

Units in mg/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	SB01-058	SB01-059	SB01-059	SB01-060	SB01-060	SB01-061	SB01-061	SB01-062	SB01-062	SB01-062	SB01-063
SAMPLE NAME	S158@5-6	S159@0-1	S159@5-5.5	S160@0-1	S160@4.5-5	S161@0-1	S161@4-4.5	S162@0.5-1	S162@10-11	S162@4-5	S163@0.5-1
SAMPLING DATE	3/17/1998	3/17/1998	3/17/1998	3/17/1998	3/17/1998	3/17/1998	3/17/1998	3/20/1998	3/20/1998	3/20/1998	3/19/1998
TPH	**1.6**	**5**	**2**	**7.6**	**20**	**5.4**	**1**	**0.88 J**	**0.96 J**	**2.1**	**12**

Units in mg/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	SB01-063	SB01-064	SB01-064	SB01-064	SB01-065	SB01-065	SB01-066	SB01-066	SB01-066	SB01-067	SB01-067
SAMPLE NAME	S163@5-6	S164@0.5-1	S164@13-14	S164@4-5	S165@0.5-1	S165@4-5	S166@0.5-1	S166@4-5	S166@9.5-10	S167@0-1	S167@4-5
SAMPLING DATE	3/19/1998	3/20/1998	3/20/1998	3/20/1998	3/18/1998	3/18/1998	3/23/1998	3/23/1998	3/23/1998	3/17/1998	3/17/1998
TPH	**1.5**	**1.5**	**1.3**	**4.9**	**0.86 J**	<1	**1.8**	**62**	<1	**7.4**	**1.1**

Units in mg/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	SB01-068	SB01-068	SB01-068	SB01-069	SB01-069	SB01-069	SB01-070	SB01-070	SB01-070	SB01-070	SB01-070A
SAMPLE NAME	S168@0-1	S168@10-11	S168@5-6	S169@0.5-1	S169@11-12	S169@4.5-5	S170@0.5-1	S170@0.5-1D	S170@4-5	S170@9-10	S170A@8.5-9
SAMPLING DATE	3/23/1998	3/23/1998	3/23/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	4/20/1998
TPH	<1	<1	<1	**23**	**0.68 J**	**2.4**	**2.5**	**1.9**	**0.64 J**	**780**	**84**

Units in mg/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	SB01-070B	SB01-070C	SB01-070C	SB01-070C	SB01-070D	SB01-070D	SB01-071	SB01-071	SB01-072	SB01-072
SAMPLE NAME	S170B@10.5-11	S170B@6-6.5	S170C@10-11	S170C@10-11D	S170D@10-10.5	S170D@6-6.5	S171@0.5-1	S171@4-5	S172@0-1	S172@4-5
SAMPLING DATE	4/17/1998	4/17/1998	4/20/1998	4/20/1998	4/20/1998	4/20/1998	3/19/1998	3/19/1998	3/17/1998	3/17/1998
TPH	**350**	**5.2**	**5.1**	**3.6**	**3.5**	**3.8**	**2.4**	**2**	**8.1**	**1.6**

Units in mg/kg
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-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	SB02-001	SB02-001	SB02-002	SB02-002	SB02-003	SB02-003	SB02-004	SB02-004	SB02-005	SB02-005	SB02-005
SAMPLE NAME	S201@0-1	S201@5-6	S202@0-1	S202@5-6	S203@0.5-1	S203@4-5	S204@0.5-1	S204@4-5	S205@0.5-1	S205@2.5-3	S205@4-5
SAMPLING DATE	3/25/1998	3/25/1998	3/25/1998	3/25/1998	3/24/1998	3/24/1998	3/27/1998	3/27/1998	3/23/1998	3/23/1998	3/26/1998
TPH	**18**	**1.6**	**9.9**	**2.9**	**13**	**6.5**	**22**	<1.4	**67**	**120**	<1

Units in mg/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	SB02-006	SB02-006	SB02-007	SB02-008	SB02-008	SB02-008
SAMPLE NAME	S206@0.5-1	S206@4-5	S207@0.5-1	S208@0.5-1	S208@10-11	S208@4-5
SAMPLING DATE	3/23/1998	3/26/1998	3/25/1998	3/25/1998	3/25/1998	3/25/1998
TPH	**41**	<1	**39**	**3.1**	**1.4**	**0.82 J**

Units in mg/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	SB03-001	SB03-001	SB03-002	SB03-002	SB03-003	SB03-003	SB03-003A	SB03-004	SB03-004	SB03-005	SB03-005
SAMPLE NAME	S301@0.5-1	S301@4-5	S302@0.5-1	S302@4-5	S303@0.5-1	S303@4-5	S303A@8-8.5	S304@1.5-2	S304@4-5	S305@1.5-2	S305@4-5
SAMPLING DATE	3/25/1998	3/25/1998	3/25/1998	3/25/1998	3/26/1998	3/26/1998	4/16/1998	3/26/1998	3/26/1998	3/26/1998	3/26/1998
TPH	**17**	**5.9**	**27**	**5.2**	<1	<1	**2.2**	<1	<1	<1	<1

Units in mg/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	SB03-006	SB03-006	SB03-007	SB03-007	SB03-007	SB03-008	SB03-008	SB03-008	SB03-008	SB03-009	SB03-009
SAMPLE NAME	S306@0.5-1	S306@4-5	S307@0.5-1	S307@4-5	S307@8-9	S308@0.5-1	S308@0.5-1D	S308@4-5	S308@9-10	S309@0.5-1	S309@4-5
SAMPLING DATE	3/25/1998	3/25/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/26/1998	3/26/1998
TPH	<1	**1.4**	**7.5**	**1.8**	**2.5**	**27**	**54**	**3.1**	**1.8**	<1	<1

Units in mg/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	SB03-010	SB03-010	SB03-011	SB03-011	SB03-012	SB03-012	SB03-013	SB03-013	SB03-014	SB03-014	SB03-014
SAMPLE NAME	S310@0.5-1	S310@4-5	S311@0-1	S311@4-5	S312@0.5-1	S312@4-5	S313@0.5-1	S313@3-3.5	S314@1-1.5	S314@1-1.5D	S314@5-5.5
SAMPLING DATE	3/26/1998	3/26/1998	3/26/1998	3/26/1998	3/25/1998	3/25/1998	3/26/1998	3/26/1998	3/27/1998	3/27/1998	3/27/1998
TPH	<1	<1	<1	<1	**4.2**	**8.7**	<1	<1	**8.6**	<5.3	**15**

Units in mg/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	SB03-016	SB03-016	SB03-017	SB03-017	SB03-017A	SB03-018	SB03-018	SB03-019	SB03-019	SB03-019	SB03-020
SAMPLE NAME	S316@0.5-1	S316@4-5	S317@1.5-2	S317@4-5	S317A@9-9.5	S318@2-3	S318@5-6	S319@0.5-1	S319@0.5-1D	S319@4-5	S320@1-1.5
SAMPLING DATE	3/25/1998	3/25/1998	3/25/1998	3/25/1998	4/17/1998	3/26/1998	3/26/1998	3/25/1998	3/25/1998	3/25/1998	3/25/1998
TPH	**2.2**	**1.7**	**41**	**3.1**	**4.8**	<1	<1	**4.4**	**7.7**	**1.4**	**1.6**

Units in mg/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	SB03-020	SB03-021	SB03-021	SB03-022	SB03-022	SB03-022	SB03-023	SB03-023	SB03-023	SB03-023	SB03-024
SAMPLE NAME	S320@4-5	S321@0.5-1	S321@4-5	S322@0.5-1	S322@4-5	S322@7-7.5	S323@0.5-1	S323@0.5-1D	S323@3.5-4.5	S323@5.5-6	S324@0.5-1
SAMPLING DATE	3/25/1998	3/25/1998	3/25/1998	3/26/1998	3/26/1998	3/26/1998	3/26/1998	3/26/1998	3/26/1998	3/26/1998	3/27/1998
TPH	**4.5**	**6.9**	**3.5**	<1	<1	<1	<1	<1	<1	<1	<1.6

Units in mg/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	SB03-024	SB03-024A	SB03-024A	SB04-001	SB04-001	SB04-002	SB04-002	SB04-003	SB04-003	SB04-004	SB04-004
SAMPLE NAME	S324@5.5-6.5	S324A@1-1.5	S324A@4.5-5	S401@0.5-1	S401@4-5	S402@0.5-1	S402@4-5	S403@0.5-1	S403@4-5	S404@0.5-1	S404@4-5
SAMPLING DATE	3/27/1998	4/17/1998	4/17/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/25/1998
TPH	**23**	**9.4**	**1.5**	**1.8**	**2.2**	**190**	**2.7**	**5.6**	**0.99 J**	**12**	**3.5**

Units in mg/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	SB04-005	SB04-005	SB04-005	SB04-006	SB04-006	SB04-007	SB04-007	SB04-008	SB04-008	SB04-009	SB04-009
SAMPLE NAME	S405@0-1	S405@0-1D	S405@5-6	S406@0.5-1	S406@4-5	S407@0.5-1	S407@4-5	S408@0.5-1	S408@4-5	S409@0.5-1	S409@4-5
SAMPLING DATE	3/25/1998	3/25/1998	3/25/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998
TPH	**1.7**	**3.7**	**0.6 J**	**21**	**130**	**2.4**	**26**	**9.7**	**7.7**	**96**	**2.2**

Units in mg/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	SB04-010	SB04-010	SB04-011	SB04-011	SB04-012	SB04-012	SB04-013	SB04-013	SB04-014	SB04-014	SB04-015
SAMPLE NAME	S410@0-1	S410@5-6	S411@0.5-1	S411@4-5	S412@0.5-1	S412@4-5	S413@0.5-1	S413@4-5	S414@0.5-1	S414@4-5	S415@0.5-1
SAMPLING DATE	3/25/1998	3/25/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998
TPH	**16**	**59**	**270**	**10**	**13**	**0.93 J**	**18**	**1.5**	**1.2**	**1**	**1.1**

Units in mg/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	SB04-015	SB05-001	SB05-001	SB05-001	SB05-002	SB05-002	SB05-003	SB05-003	SB05-004	SB05-004	SB05-004
SAMPLE NAME	S415@4-5	S501@0.5-1	S501@0.5-1D	S501@4-5	S502@0.5-1	S502@4-5	S503@0.5-1	S503@4-5	S504@0.5-1D	S504@0-1	S504@10-11
SAMPLING DATE	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/19/1998	3/19/1998	3/18/1998	3/18/1998	3/24/1998	3/24/1998	3/24/1998
TPH	<1	**1.1**	**1.2**	**1.4**	**0.8 J**	**1.7**	<1	**1.7**	**2.9**	**2.7**	**1.8**

Units in mg/kg
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-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	SB05-004	SB05-005	SB05-005	SB05-006	SB05-006	SB05-007	SB05-007	SB05-008	SB05-009	SB05-009	SB05-010
SAMPLE NAME	S504@5-6	S505@0.5-1	S505@4-5	S506@0.5-1	S506@4-5	S507@0.5-1	S507@4-5	S508@4-5	S509@0.5-1	S509@4-5	S510@0.5-1
SAMPLING DATE	3/24/1998	3/18/1998	3/18/1998	3/18/1998	3/18/1998	3/19/1998	3/19/1998	3/23/1998	3/19/1998	3/19/1998	3/19/1998
TPH	**2.4**	<1	<1	**9.5**	<1	**0.73 J**	**0.62 J**	**0.9 J**	**2.7**	<0.05	**0.88 J**

Units in mg/kg
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-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	SB05-010	SB05-010	SB05-011	SB05-011	SB05-012	SB05-012	SB05-013	SB05-013	SB05-014	SB05-014	SB05-015
SAMPLE NAME	S510@0.5-1D	S510@4-5	S511@0.5-1	S511@4-5	S512@0.5-1	S512@4-5	S513@0.5-1	S513@4-5	S514@0.5-1	S514@4-5	S515@0-1
SAMPLING DATE	3/19/1998	3/19/1998	3/18/1998	3/18/1998	3/18/1998	3/18/1998	3/18/1998	3/18/1998	3/18/1998	3/18/1998	3/24/1998
TPH	**1.5**	<0.05	**7.7**	**1.1**	<1	<1	**0.78 J**	<1	**26**	**0.61 J**	**1.7**

Units in mg/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	SB05-015	SB05-015	SB05-016	SB05-016	SB05-017	SB05-017	SB05-018	SB05-018	SB05-019	SB05-019	SB05-019
SAMPLE NAME	S515@10-11	S515@5-6	S516@0.5-1	S516@4-5	S517@0.5-1	S517@4-5	S518@0-1	S518@5-6	S519@0.5-1	S519@0.5-1D	S519@4-5
SAMPLING DATE	3/24/1998	3/24/1998	3/19/1998	3/19/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/18/1998	3/18/1998	3/18/1998
TPH	**2.8**	**1.6**	<0.05	<0.05	**1.2**	<1	**220**	**3.2**	<1	**0.79 J**	<1

Units in mg/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	SB05-020	SB05-020	SB05-021	SB05-021	SB05-022	SB05-022	SB05-023	SB05-023	SB05-024	SB05-024	SB05-025
SAMPLE NAME	S520@0.5-1	S520@4-5	S521@0.5-1	S521@4-5	S522@0.5-1	S522@4-5	S523@0-1	S523@4-5	S524@0.5-1	S524@4-5	S525@0.5-1
SAMPLING DATE	3/18/1998	3/18/1998	3/19/1998	3/19/1998	3/19/1998	3/19/1998	3/23/1998	3/23/1998	3/19/1998	3/19/1998	3/19/1998
TPH	**1.2**	**0.7 J**	**0.79 J**	<0.05	**0.71 J**	<0.05	**2.1**	**9.9**	**0.95 J**	**0.75 J**	**0.79 J**

Units in mg/kg
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-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	SB05-025	SB05-026	SB05-026	SB05-026	SB05-027	SB05-027	SB05-027	SB05-028	SB05-028	SB05-029	SB05-029
SAMPLE NAME	S525@4-5	S526@0.5-1	S526@14-15	S526@5-6	S527@0.5-1	S527@10-11	S527@5-6	S528@0.5-1	S528@4-5	S529@0-1	S529@10-11
SAMPLING DATE	3/19/1998	3/17/1998	3/17/1998	3/17/1998	3/16/1998	3/16/1998	3/16/1998	3/19/1998	3/19/1998	3/23/1998	3/23/1998
TPH	**0.62 J**	**2.6**	**1.5**	**2**	**2.9**	**1.9**	**2.5**	**0.76 J**	**0.8 J**	**2.5**	**1.6**

Units in mg/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	SB05-029	SB05-030	SB05-030	SB05-031	SB05-031	SB05-032	SB05-032	SB05-033	SB05-033	SB05-034	SB05-034
SAMPLE NAME	S529@5-6	S530@0.5-1	S530@4-5	S531@0.5-1	S531@4-5	S532@0.5-1	S532@4-5	S533@0.5-1	S533@4-5	S534@0.5-1	S534@4-5
SAMPLING DATE	3/23/1998	3/20/1998	3/20/1998	3/18/1998	3/18/1998	3/19/1998	3/19/1998	3/19/1998	3/19/1998	3/20/1998	3/20/1998
TPH	**2.1**	**2.5**	**1.6**	<1	**1.9**	**3.1**	**2**	**52**	**2.6**	**1.2**	<1

Units in mg/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	SB05-035	SB05-035	SB05-036	SB05-036	SB05-037	SB05-037	SB05-038	SB05-038	SB05-038	SB05-039	SB05-039
SAMPLE NAME	S535@0.5-1	S535@4-5	S536@0.5-1	S536@4-5	S537@0.5-1	S537@4-5	S538@0-1	S538@10-11	S538@5-6	S539@0.5-1	S539@4-5
SAMPLING DATE	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/19/1998	3/19/1998	3/24/1998	3/24/1998	3/24/1998	3/20/1998	3/20/1998
TPH	**1.8**	**1.6**	**3.2**	**1.7**	**2.1**	**1.2**	**3.5**	<1	**0.68 J**	**2**	<1

Units in mg/kg
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-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	SB05-040	SB05-040	SB05-040	SB05-041	SB05-041	SB05-041	SB05-041A	SB05-041A	SB05-042	SB05-042
SAMPLE NAME	S540@0-1	S540@10-11	S540@5-6	S541@0.5-1	S541@4-5	S541@4-5D	S541A@9.5-10	S541A@9.5-10D	S542@0.5-1	S542@0.5-1D
SAMPLING DATE	3/24/1998	3/24/1998	3/24/1998	3/20/1998	3/20/1998	3/20/1998	4/16/1998	4/16/1998	3/20/1998	3/20/1998
TPH	**0.74 J**	<1	<1	**1**	**1.6**	**3.7**	**2.5**	**4.3**	**2.2**	**3**

Units in mg/kg
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-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	SB05-042	SB05-043	SB05-043	SB05-043	SB05-043A	SB05-044	SB05-044	SB05-045	SB05-045	SB05-046	SB05-046
SAMPLE NAME	S542@4-5	S543@0-1	S543@10-11	S543@4-4.5	S543A@10.5-11	S544@0.5-1	S544@4-5	S545@0-1	S545@4-5	S546@0-1	S546@4-5
SAMPLING DATE	3/20/1998	3/20/1998	3/20/1998	3/20/1998	4/16/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998
TPH	**1.7**	**1.4**	**1.3**	**1.1**	**2.3**	**48**	**1.2**	**120**	**2.2**	**1.2**	**3.9**

Units in mg/kg
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-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	SB05-047	SB05-047	SB05-048	SB05-048	SB05-049	SB05-049
SAMPLE NAME	S547@0.5-1	S547@4-5	S548@0.5-1	S548@4-5	S549@0.5-1	S549@4-5
SAMPLING DATE	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998
TPH	**2**	**1.5**	**1.4**	**1.6**	**3.7**	**3**

Units in mg/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	SB05-050	SB05-050	SB05-051	SB05-051	SB05-052	SB05-052	SB05-052	SB05-053	SB05-053	SB05-054	SB05-054
SAMPLE NAME	S550@0.5-1	S550@4-5	S551@0.5-1	S551@4-5	S552@0.5-1	S552@10-11	S552@4-5	S553@0.5-1	S553@4-5	S554@0.5-1	S554@0.5-1D
SAMPLING DATE	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/23/1998	3/23/1998	3/24/1998	3/24/1998
TPH	**2.1**	**0.91 J**	**3.9**	**1.8**	**2.4**	**1.4**	**1.2**	**1.7**	**1.3**	**1.7**	<1

Units in mg/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	SB05-054	SB05-054	SB05-055	SB05-055	SB05-056	SB05-056	SB05-057	SB05-057	SB05-058	SB05-058	SB05-059
SAMPLE NAME	S554@10-11	S554@4-5	S555@0.5-1	S555@4-5	S556@0.5-1	S556@4-5	S557@0.5-1	S557@3-3.5	S558@0.5-1	S558@4-5	S559@0-1
SAMPLING DATE	3/24/1998	3/24/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/23/1998
TPH	<1	<1	**44**	**1.7**	**4.8**	**36**	**9.4**	**6.9**	**1.1**	**9.6**	**1.4**

Units in mg/kg
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-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	SB05-059	SB05-059	SB05-060	SB05-060	SB05-061	SB05-061	SB05-062	SB05-062	SB05-062	SB05-063	SB05-063
SAMPLE NAME	S559@0-1D	S559@4-5	S560@0.5-1	S560@4-5	S561@0.5-1	S561@4-5	S562@0.5-1	S562@12-13	S562@4-5	S563@0.5-1	S563@4-5
SAMPLING DATE	3/23/1998	3/23/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/25/1998	3/25/1998	3/25/1998	3/24/1998	3/24/1998
TPH	**0.89 J**	**1.9**	**5.1**	**2.7**	**1.7**	**3.6**	**3**	**3.5**	**2**	**9.9**	**1.6**

Units in mg/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	SB05-064	SB05-064	SB05-065	SB05-065	SB05-066	SB05-066	SB05-066	SB05-066	SB05-067	SB05-067	SB05-068
SAMPLE NAME	S564@0.5-1	S564@4-5	S565@0.5-1	S565@4-5	S566@0.5-1	S566@0.5-1D	S566@14-15	S566@4-5	S567@0.5-1	S567@4-5	S568@0.5-1
SAMPLING DATE	3/23/1998	3/23/1998	3/24/1998	3/24/1998	3/25/1998	3/25/1998	3/25/1998	3/25/1998	3/24/1998	3/24/1998	3/23/1998
TPH	**1.1**	**0.85 J**	**7.7**	**2**	**2.9**	**2.5**	**0.53 J**	**0.95 J**	**7.5**	**2.4**	**3**

Units in mg/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	SB05-068	SB05-069	SB05-069	SB05-070	SB05-070	SB05-070	SB05-071	SB05-071	SB05-072	SB05-072	SB05-073
SAMPLE NAME	S568@4-5	S569@0.5-1	S569@4-5	S570@0.5-1	S570@0.5-1D	S570@4-5	S571@0.5-1	S571@4-5	S572@0.5-1	S572@4-5	S573@0.5-1
SAMPLING DATE	3/23/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998
TPH	**1**	**3**	**4.6**	**4**	**6**	**2.1**	**0.95 J**	**1.2**	**1.1**	**1.6**	**1.4**

Units in mg/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	SB05-073	SB05-074	SB05-074	SB05-075	SB05-075	SB05-075	SB05-076	SB05-076	SB05-077	SB05-077	SB05-078
SAMPLE NAME	S573@4-5	S574@0.5-1	S574@4-5	S575@0.5-1	S575@10-11	S575@4-5	S576@0.5-1	S576@4-5	S577@0.5-1	S577@4-5	S578@0.5-1
SAMPLING DATE	3/23/1998	3/23/1998	3/23/1998	3/20/1998	3/20/1998	3/20/1998	3/23/1998	3/23/1998	3/24/1998	3/24/1998	3/25/1998
TPH	**0.56 J**	<1	**2.6**	**0.77 J**	<0.05	**0.92 J**	**1.1**	**0.76 J**	**3.5**	**4.6**	**0.83 J**

Units in mg/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	SB05-078	SB05-079	SB05-079	SB05-079	SB05-080	SB05-080	SB05-081	SB05-081	SB05-081	SB05-082	SB05-082
SAMPLE NAME	S578@4-5	S579@0.5-1	S579@10-11	S579@4-5	S580@0.5-1	S580@4-5	S581@0.5-1	S581@0.5-1D	S581@4-5	S582@0.5-1	S582@4-5
SAMPLING DATE	3/25/1998	3/20/1998	3/20/1998	3/20/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998
TPH	**0.83 J**	**5.8**	<0.05	<0.05	**0.83 J**	**0.79 J**	**0.74 J**	**1.9**	**1.5**	**3.1**	**1.9**

Units in mg/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	SB05-083	SB05-083	SB05-084	SB05-084	SB05-085	SB05-085	SB05-085	SB05-086	SB05-086	SB05-086	SB05-087
SAMPLE NAME	S583@0.5-1	S583@4-5	S584@0.5-1	S584@4-5	S585@0.5-1	S585@0.5-1D	S585@4-5	S586@0.5-1	S586@10-11	S586@4-5	S587@0.5-1
SAMPLING DATE	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/24/1998	3/24/1998	3/24/1998	3/23/1998	3/23/1998	3/23/1998	3/24/1998
TPH	**1.2**	**1.1**	**49**	**2.2**	**2.9**	**5.2**	**1.8**	**4.8**	**1.2**	**1.4**	**8.7**

Units in mg/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	SB05-087	SB05-088	SB05-088	SB05-089	SB05-089	SB05-090	SB05-090	SB05-091	SB05-091	SB05-092	SB05-092
SAMPLE NAME	S587@4-5	S588@0.5-1	S588@4-5	S589@0.5-1	S589@4-5	S590@1.5-2	S590@4-5	S591@0.5-1	S591@4-5	S592@0.5-1	S592@4-5
SAMPLING DATE	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998
TPH	**2.2**	**14**	**1.3**	**14**	**5.6**	**6.7**	**2.2**	**1**	**0.6 J**	**74**	**2.1**

Units in mg/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
TPH COMPOUNDS BY 8015M

LOCATION	SB05-093	SB05-093	SB05-094	SB05-094	SB05-094	SB05-094
SAMPLE NAME	S593@0.5-1	S593@4-5	S594@0.5-1	S594@10-11	S594@4-5	S594@4-5D
SAMPLING DATE	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998
TPH	**1.5**	**1.5**	**16**	**1.9**	**1.6**	**2.6**

Units in mg/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
VOC COMPOUNDS BY 8260/8260B

LOCATION	JF-02	SB03-001	SB03-001	SB03-002	SB03-002	SB03-003	SB03-003	SB03-003A
SAMPLE NAME	JF-02-9	S301@0.5-1	S301@4-5	S302@0.5-1	S302@4-5	S303@0.5-1	S303@4-5	S303A@8-8.5
SAMPLING DATE	2/8/2001	3/25/1998	3/25/1998	3/25/1998	3/25/1998	3/26/1998	3/26/1998	4/16/1998
1,1,1,2-TETRACHLOROETHANE	<50	<5	<5	<5	<5	<5	<5	<5
1,1,1-TRICHLOROETHANE	<50	<5	<5	<5	<5	<5	<5	<5
1,1,2,2-TETRACHLOROETHANE	<50	<5	<5	<5	<5	<5	<5	<5
1,1,2-TRICHLOROETHANE	<50	<5	<5	<5	<5	<5	<5	<5
1,1-DICHLOROETHANE	<50	<5	<5	<5	<5	<5	<5	<5
1,1-DICHLOROETHENE	<50	<5	<5	<5	<5	<5	<5	<5
1,1-DICHLOROPROPENE	--	<5	<5	<5	<5	<5	<5	<5
1,2,3-TRICHLOROBENZENE	<50	<5	<5	<5	<5	<5	<5	<5
1,2,3-TRICHLOROPROPANE	<50	<5	<5	<5	<5	<5	<5	<5
1,2,3-TRICHLOROPROPENE	<50	--	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	<50	<5	<5	<5	<5	<5	<5	<5
1,2,4-TRIMETHYLBENZENE	**19400**	<5	<5	<5	<5	<5	<5	<5
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	<250	<5	<5	<5	<5	<5	<5	<5
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	<50	<5	<5	<5	<5	<5	<5	<5
1,2-DICHLOROBENZENE	<50	<10	<10	<10	<10	<10	<10	<10
1,2-DICHLOROETHANE	<50	<5	<5	<5	<5	<5	<5	<5
1,2-DICHLOROPROPANE	<50	<5	<5	<5	<5	<5	<5	<5
1,3,5-TRIMETHYLBENZENE	<50	<5	<5	<5	<5	<5	<5	<5
1,3-DICHLOROBENZENE	<50	<10	<10	<10	<10	<10	<10	<10
1,3-DICHLOROPROPANE	<50	<5	<5	<5	<5	<5	<5	<5
1,4-DICHLOROBENZENE	<50	<10	<10	<10	<10	<10	<10	<10
2,2-DICHLOROPROPANE	<50	<5	<5	<5	<5	<5	<5	<5
2-CHLOROETHYL VINYL ETHER	<250	--	--	--	--	--	--	--
2-CHLOROTOLUENE	<50	<5	<5	<5	<5	<5	<5	<5
4-CHLOROTOLUENE	<50	<5	<5	<5	<5	<5	<5	<5
4-ISOPROPYLTOLUENE	<50	<5	<5	<5	<5	<5	<5	<5
ACETONE	<250	--	--	--	--	--	--	--
ACRYLONITRILE	<50	--	--	--	--	--	--	--
BENZENE	<10	<5	<5	<5	<5	<5	<5	<5
BROMOBENZENE	<50	<5	<5	<5	<5	<5	<5	<5
BROMODICHLOROMETHANE	<50	<5	<5	<5	<5	<5	<5	<5
BROMOFORM	<250	<5	<5	<5	<5	<5	<5	<5
BROMOMETHANE	<150	<10	<10	<10	<10	<10	<10	<10

Units in ug/kg
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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
VOC COMPOUNDS BY 8260/8260B

LOCATION	JF-02	SB03-001	SB03-001	SB03-002	SB03-002	SB03-003	SB03-003	SB03-003A
SAMPLE NAME	JF-02-9	S301@0.5-1	S301@4-5	S302@0.5-1	S302@4-5	S303@0.5-1	S303@4-5	S303A@8-8.5
SAMPLING DATE	2/8/2001	3/25/1998	3/25/1998	3/25/1998	3/25/1998	3/26/1998	3/26/1998	4/16/1998
CARBON DISULFIDE	<250	--	--	--	--	--	--	--
CARBON TETRACHLORIDE	<50	<5	<5	<5	<5	<5	<5	<5
CHLOROBENZENE	<50	<5	<5	<5	<5	<5	<5	<5
CHLOROBROMOMETHANE	--	<5	<5	<5	<5	<5	<5	<5
CHLOROETHANE	<150	<10	<10	<10	<10	<10	<10	<10
CHLOROFORM	<50	<5	<5	<5	<5	<5	<5	<5
CHLOROMETHANE	<150	<10	<10	<10	<10	<10	<10	<10
CIS-1,2-DICHLOROETHENE	<50	<5	<5	<5	<5	<5	<5	<5
DIBROMOCHLOROMETHANE	--	<5	<5	<5	<5	<5	<5	<5
DIBROMOMETHANE	<50	<5	<5	<5	<5	<5	<5	<5
DICHLORODIFLUOROMETHANE (CFC-12)	<150	<10	<10	<10	<10	<10	<10	<10
ETHYLBENZENE	**1770**	<5	<5	<5	<5	<5	<5	<5
HEXACHLOROBUTADIENE	<150	<5	<5	<5	<5	<5	<5	<5
ISOPROPYLBENZENE	<50	<5	<5	<5	<5	<5	<5	<5
METHYLENE CHLORIDE	<50	<10	<10	<10	<10	<10	<10	<10
NAPHTHALENE	**5700**	<5	<5	<5	<5	<5	<5	<5
N-BUTYLBENZENE	**5450**	<5	<5	<5	<5	<5	<5	<5
N-PROPYLBENZENE	**4230**	<5	<5	<5	<5	<5	<5	<5
SEC-BUTYLBENZENE	**4530**	<5	<5	<5	<5	<5	<5	<5
STYRENE	<50	<5	<5	<5	<5	<5	<5	<5
TERT-BUTYLBENZENE	<50	<5	<5	<5	<5	<5	<5	<5
TETRACHLOROETHENE	<50	<5	<5	<5	<5	<5	<5	<5
TETRAHYDROFURAN	<50	--	--	--	--	--	--	--
TOLUENE	<50	<5	<5	<5	<5	<5	<5	<5
TOLUENE DIISOCYANATE (MIXED ISOMERS)	<50	--	--	--	--	--	--	--
TOLUENE-2,6-DIISOCYANATE	<50	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	<50	<5	<5	<5	<5	<5	<5	<5
TRICHLOROETHENE	<50	<5	<5	<5	<5	<5	<5	<5
TRICHLOROFLUOROMETHANE (CFC-11)	<50	<5	<5	<5	<5	<5	<5	<5
VINYL ACETATE	<250	--	--	--	--	--	--	--
VINYL CHLORIDE	<150	<3	<3	<3	<3	<3	<3	<3
XYLENES (TOTAL)	--	<5	<5	<5	<5	<5	<5	<5

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
VOC COMPOUNDS BY 8260/8260B

LOCATION	SB03-004	SB03-004	SB03-005	SB03-005	SB03-006	SB03-006	SB03-007	SB03-007
SAMPLE NAME	S304@1.5-2	S304@4-5	S305@1.5-2	S305@4-5	S306@0.5-1	S306@4-5	S307@0.5-1	S307@4-5
SAMPLING DATE	3/26/1998	3/26/1998	3/26/1998	3/26/1998	3/25/1998	3/25/1998	3/24/1998	3/24/1998
1,1,1,2-TETRACHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,1,1-TRICHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,1,2,2-TETRACHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,1,2-TRICHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,1-DICHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,1-DICHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
1,1-DICHLOROPROPENE	<5	<5	<5	<5	<5	<5	<5	<5
1,2,3-TRICHLOROBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
1,2,3-TRICHLOROPROPANE	<5	<5	<5	<5	<5	<5	<5	<5
1,2,3-TRICHLOROPROPENE	--	--	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
1,2,4-TRIMETHYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	<5	<5	<5	<5	<5	<5	<5	<5
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	<5	<5	<5	<5	<5	<5	<5	<5
1,2-DICHLOROBENZENE	<10	<10	<10	<10	<10	<10	<10	<10
1,2-DICHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,2-DICHLOROPROPANE	<5	<5	<5	<5	<5	<5	<5	<5
1,3,5-TRIMETHYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
1,3-DICHLOROBENZENE	<10	<10	<10	<10	<10	<10	<10	<10
1,3-DICHLOROPROPANE	<5	<5	<5	<5	<5	<5	<5	<5
1,4-DICHLOROBENZENE	<10	<10	<10	<10	<10	<10	<10	<10
2,2-DICHLOROPROPANE	<5	<5	<5	<5	<5	<5	<5	<5
2-CHLOROETHYL VINYL ETHER	--	--	--	--	--	--	--	--
2-CHLOROTOLUENE	<5	<5	<5	<5	<5	<5	<5	<5
4-CHLOROTOLUENE	<5	<5	<5	<5	<5	<5	<5	<5
4-ISOPROPYLTOLUENE	<5	<5	<5	<5	<5	<5	<5	<5
ACETONE	--	--	--	--	--	--	--	--
ACRYLONITRILE	--	--	--	--	--	--	--	--
BENZENE	<5	<5	<5	<5	<5	<5	<5	<5
BROMOBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
BROMODICHLOROMETHANE	<5	<5	<5	<5	<5	<5	<5	<5
BROMOFORM	<5	<5	<5	<5	<5	<5	<5	<5
BROMOMETHANE	<10	<10	<10	<10	<10	<10	<10	<10

Units in ug/kg
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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
VOC COMPOUNDS BY 8260/8260B

LOCATION	SB03-004	SB03-004	SB03-005	SB03-005	SB03-006	SB03-006	SB03-007	SB03-007
SAMPLE NAME	S304@1.5-2	S304@4-5	S305@1.5-2	S305@4-5	S306@0.5-1	S306@4-5	S307@0.5-1	S307@4-5
SAMPLING DATE	3/26/1998	3/26/1998	3/26/1998	3/26/1998	3/25/1998	3/25/1998	3/24/1998	3/24/1998
CARBON DISULFIDE	--	--	--	--	--	--	--	--
CARBON TETRACHLORIDE	<5	<5	<5	<5	<5	<5	<5	<5
CHLOROBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
CHLOROBROMOMETHANE	<5	<5	<5	<5	<5	<5	<5	<5
CHLOROETHANE	<10	<10	<10	<10	<10	<10	<10	<10
CHLOROFORM	<5	<5	<5	<5	<5	<5	<5	<5
CHLOROMETHANE	<10	<10	<10	<10	<10	<10	<10	<10
CIS-1,2-DICHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
DIBROMOCHLOROMETHANE	<5	<5	<5	<5	<5	<5	<5	<5
DIBROMOMETHANE	<5	<5	<5	<5	<5	<5	<5	<5
DICHLORODIFLUOROMETHANE (CFC-12)	<10	<10	<10	<10	<10	<10	<10	<10
ETHYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
HEXACHLOROBUTADIENE	<5	<5	<5	<5	<5	<5	<5	<5
ISOPROPYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
METHYLENE CHLORIDE	<10	<10	<10	<10	<10	<10	<10	<10
NAPHTHALENE	<5	<5	<5	<5	<5	<5	<5	<5
N-BUTYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
N-PROPYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
SEC-BUTYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
STYRENE	<5	<5	<5	<5	<5	<5	<5	<5
TERT-BUTYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
TETRACHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
TETRAHYDROFURAN	--	--	--	--	--	--	--	--
TOLUENE	<5	<5	<5	<5	<5	<5	<5	<5
TOLUENE DIISOCYANATE (MIXED ISOMERS)	--	--	--	--	--	--	--	--
TOLUENE-2,6-DIISOCYANATE	--	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
TRICHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
TRICHLOROFLUOROMETHANE (CFC-11)	<5	<5	<5	<5	<5	<5	<5	<5
VINYL ACETATE	--	--	--	--	--	--	--	--
VINYL CHLORIDE	<3	<3	<3	<3	<3	<3	<3	<3
XYLENES (TOTAL)	<5	<5	<5	<5	<5	<5	<5	<5

Units in ug/kg
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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
VOC COMPOUNDS BY 8260/8260B

LOCATION	SB03-007	SB03-008	SB03-008	SB03-008	SB03-008	SB03-009	SB03-009	SB03-010
SAMPLE NAME	S307@8-9	S308@0.5-1	S308@0.5-1D	S308@4-5	S308@9-10	S309@0.5-1	S309@4-5	S310@0.5-1
SAMPLING DATE	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/26/1998	3/26/1998	3/26/1998
1,1,1,2-TETRACHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,1,1-TRICHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,1,2,2-TETRACHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,1,2-TRICHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,1-DICHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,1-DICHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
1,1-DICHLOROPROPENE	<5	<5	<5	<5	<5	<5	<5	<5
1,2,3-TRICHLOROBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
1,2,3-TRICHLOROPROPANE	<5	<5	<5	<5	<5	<5	<5	<5
1,2,3-TRICHLOROPROPENE	--	--	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
1,2,4-TRIMETHYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	<5	<5	<5	<5	<5	<5	<5	<5
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	<5	<5	<5	<5	<5	<5	<5	<5
1,2-DICHLOROBENZENE	<10	<10	<10	<10	<10	<10	<10	<10
1,2-DICHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,2-DICHLOROPROPANE	<5	<5	<5	<5	<5	<5	<5	<5
1,3,5-TRIMETHYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
1,3-DICHLOROBENZENE	<10	<10	<10	<10	<10	<10	<10	<10
1,3-DICHLOROPROPANE	<5	<5	<5	<5	<5	<5	<5	<5
1,4-DICHLOROBENZENE	<10	<10	<10	<10	<10	<10	<10	<10
2,2-DICHLOROPROPANE	<5	<5	<5	<5	<5	<5	<5	<5
2-CHLOROETHYL VINYL ETHER	--	--	--	--	--	--	--	--
2-CHLOROTOLUENE	<5	<5	<5	<5	<5	<5	<5	<5
4-CHLOROTOLUENE	<5	<5	<5	<5	<5	<5	<5	<5
4-ISOPROPYLTOLUENE	<5	<5	<5	<5	<5	<5	<5	<5
ACETONE	--	--	--	--	--	--	--	--
ACRYLONITRILE	--	--	--	--	--	--	--	--
BENZENE	<5	<5	<5	<5	<5	<5	<5	<5
BROMOBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
BROMODICHLOROMETHANE	<5	<5	<5	<5	<5	<5	<5	<5
BROMOFORM	<5	<5	<5	<5	<5	<5	<5	<5
BROMOMETHANE	<10	<10	<10	<10	<10	<10	<10	<10

Units in ug/kg
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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
VOC COMPOUNDS BY 8260/8260B

LOCATION	SB03-007	SB03-008	SB03-008	SB03-008	SB03-008	SB03-009	SB03-009	SB03-010
SAMPLE NAME	S307@8-9	S308@0.5-1	S308@0.5-1D	S308@4-5	S308@9-10	S309@0.5-1	S309@4-5	S310@0.5-1
SAMPLING DATE	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/26/1998	3/26/1998	3/26/1998
CARBON DISULFIDE	--	--	--	--	--	--	--	--
CARBON TETRACHLORIDE	<5	<5	<5	<5	<5	<5	<5	<5
CHLOROBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
CHLOROBROMOMETHANE	<5	<5	<5	<5	<5	<5	<5	<5
CHLOROETHANE	<10	<10	<10	<10	<10	<10	<10	<10
CHLOROFORM	<5	<5	<5	<5	<5	<5	<5	<5
CHLOROMETHANE	<10	<10	<10	<10	<10	<10	<10	<10
CIS-1,2-DICHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
DIBROMOCHLOROMETHANE	<5	<5	<5	<5	<5	<5	<5	<5
DIBROMOMETHANE	<5	<5	<5	<5	<5	<5	<5	<5
DICHLORODIFLUOROMETHANE (CFC-12)	<10	<10	<10	<10	<10	<10	<10	<10
ETHYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
HEXACHLOROBUTADIENE	<5	<5	<5	<5	<5	<5	<5	<5
ISOPROPYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
METHYLENE CHLORIDE	<10	<10	<10	<10	<10	<10	<10	<10
NAPHTHALENE	<5	<5	<5	<5	<5	<5	<5	<5
N-BUTYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
N-PROPYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
SEC-BUTYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
STYRENE	<5	<5	<5	<5	<5	<5	<5	<5
TERT-BUTYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
TETRACHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
TETRAHYDROFURAN	--	--	--	--	--	--	--	--
TOLUENE	<5	<5	<5	<5	<5	<5	<5	<5
TOLUENE DIISOCYANATE (MIXED ISOMERS)	--	--	--	--	--	--	--	--
TOLUENE-2,6-DIISOCYANATE	--	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
TRICHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
TRICHLOROFLUOROMETHANE (CFC-11)	<5	<5	<5	<5	<5	<5	<5	<5
VINYL ACETATE	--	--	--	--	--	--	--	--
VINYL CHLORIDE	<3	<3	<3	<3	<3	<3	<3	<3
XYLENES (TOTAL)	<5	<5	<5	<5	<5	<5	<5	<5

Units in ug/kg
< = Not Detected at indicated reporting limit
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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
VOC COMPOUNDS BY 8260/8260B

LOCATION SAMPLE NAME SAMPLING DATE	SB03-010 S310@4-5 3/26/1998	SB03-011 S311@0-1 3/26/1998	SB03-011 S311@4-5 3/26/1998	SB03-012 S312@0.5-1 3/25/1998	SB03-012 S312@4-5 3/25/1998	SB03-013 S313@0.5-1 3/26/1998	SB03-013 S313@3-3.5 3/26/1998	SB03-014 S314@1-1.5 3/27/1998
1,1,1,2-TETRACHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,1,1-TRICHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,1,2,2-TETRACHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,1,2-TRICHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,1-DICHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,1-DICHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
1,1-DICHLOROPROPENE	<5	<5	<5	<5	<5	<5	<5	<5
1,2,3-TRICHLOROBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
1,2,3-TRICHLOROPROPANE	<5	<5	<5	<5	<5	<5	<5	<5
1,2,3-TRICHLOROPROPENE	--	--	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
1,2,4-TRIMETHYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	<5	<5	<5	<5	<5	<5	<5	<5
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	<5	<5	<5	<5	<5	<5	<5	<5
1,2-DICHLOROBENZENE	<10	<10	<10	<10	<10	<10	<10	<10
1,2-DICHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,2-DICHLOROPROPANE	<5	<5	<5	<5	<5	<5	<5	<5
1,3,5-TRIMETHYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
1,3-DICHLOROBENZENE	<10	<10	<10	<10	<10	<10	<10	<10
1,3-DICHLOROPROPANE	<5	<5	<5	<5	<5	<5	<5	<5
1,4-DICHLOROBENZENE	<10	<10	<10	<10	<10	<10	<10	<10
2,2-DICHLOROPROPANE	<5	<5	<5	<5	<5	<5	<5	<5
2-CHLOROETHYL VINYL ETHER	--	--	--	--	--	--	--	--
2-CHLOROTOLUENE	<5	<5	<5	<5	<5	<5	<5	<5
4-CHLOROTOLUENE	<5	<5	<5	<5	<5	<5	<5	<5
4-ISOPROPYLTOLUENE	<5	<5	<5	<5	<5	<5	<5	<5
ACETONE	--	--	--	--	--	--	--	--
ACRYLONITRILE	--	--	--	--	--	--	--	--
BENZENE	<5	<5	<5	<5	<5	<5	<5	<5
BROMOBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
BROMODICHLOROMETHANE	<5	<5	<5	<5	<5	<5	<5	<5
BROMOFORM	<5	<5	<5	<5	<5	<5	<5	<5
BROMOMETHANE	<10	<10	<10	<10	<10	<10	<10	<10

Units in ug/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
VOC COMPOUNDS BY 8260/8260B

LOCATION	SB03-010	SB03-011	SB03-011	SB03-012	SB03-012	SB03-013	SB03-013	SB03-014
SAMPLE NAME	S310@4-5	S311@0-1	S311@4-5	S312@0.5-1	S312@4-5	S313@0.5-1	S313@3-3.5	S314@1-1.5
SAMPLING DATE	3/26/1998	3/26/1998	3/26/1998	3/25/1998	3/25/1998	3/26/1998	3/26/1998	3/27/1998
CARBON DISULFIDE	--	--	--	--	--	--	--	--
CARBON TETRACHLORIDE	<5	<5	<5	<5	<5	<5	<5	<5
CHLOROBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
CHLOROBROMOMETHANE	<5	<5	<5	<5	<5	<5	<5	--
CHLOROETHANE	<10	<10	<10	<10	<10	<10	<10	<10
CHLOROFORM	<5	<5	<5	<5	<5	<5	<5	<5
CHLOROMETHANE	<10	<10	<10	<10	<10	<10	<10	<10
CIS-1,2-DICHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
DIBROMOCHLOROMETHANE	<5	<5	<5	<5	<5	<5	<5	<5
DIBROMOMETHANE	<5	<5	<5	<5	<5	<5	<5	<5
DICHLORODIFLUOROMETHANE (CFC-12)	<10	<10	<10	<10	<10	<10	<10	<10
ETHYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
HEXACHLOROBUTADIENE	<5	<5	<5	<5	<5	<5	<5	<5
ISOPROPYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
METHYLENE CHLORIDE	<10	<10	<10	<10	<10	<10	<10	<10
NAPHTHALENE	<5	<5	<5	<5	<5	<5	<5	<5
N-BUTYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
N-PROPYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
SEC-BUTYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
STYRENE	<5	<5	<5	<5	<5	<5	<5	<5
TERT-BUTYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
TETRACHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
TETRAHYDROFURAN	--	--	--	--	--	--	--	--
TOLUENE	<5	<5	<5	<5	<5	<5	<5	<5
TOLUENE DIISOCYANATE (MIXED ISOMERS)	--	--	--	--	--	--	--	--
TOLUENE-2,6-DIISOCYANATE	--	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
TRICHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
TRICHLOROFLUOROMETHANE (CFC-11)	<5	<5	<5	<5	<5	<5	<5	<5
VINYL ACETATE	--	--	--	--	--	--	--	--
VINYL CHLORIDE	<3	<3	<3	<3	<3	<3	<3	<3
XYLENES (TOTAL)	<5	<5	<5	<5	<5	<5	<5	<5

Units in ug/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
VOC COMPOUNDS BY 8260/8260B

LOCATION	SB03-014	SB03-014	SB03-016	SB03-016	SB03-017	SB03-017	SB03-017A	SB03-018
SAMPLE NAME	S314@1-1.5D	S314@5-5.5	S316@0.5-1	S316@4-5	S317@1.5-2	S317@4-5	S317A@9-9.5	S318@2-3
SAMPLING DATE	3/27/1998	3/27/1998	3/25/1998	3/25/1998	3/25/1998	3/25/1998	4/17/1998	3/26/1998
1,1,1,2-TETRACHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,1,1-TRICHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,1,2,2-TETRACHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,1,2-TRICHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,1-DICHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,1-DICHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
1,1-DICHLOROPROPENE	<5	<5	<5	<5	<5	<5	<5	<5
1,2,3-TRICHLOROBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
1,2,3-TRICHLOROPROPANE	<5	<5	<5	<5	<5	<5	<5	<5
1,2,3-TRICHLOROPROPENE	--	--	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
1,2,4-TRIMETHYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	<5	<5	<5	<5	<5	<5	<5	<5
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	<5	<5	<5	<5	<5	<5	<5	<5
1,2-DICHLOROBENZENE	<10	<10	<10	<10	<10	<10	<10	<10
1,2-DICHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,2-DICHLOROPROPANE	<5	<5	<5	<5	<5	<5	<5	<5
1,3,5-TRIMETHYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
1,3-DICHLOROBENZENE	<10	<10	<10	<10	<10	<10	<10	<10
1,3-DICHLOROPROPANE	<5	<5	<5	<5	<5	<5	<5	<5
1,4-DICHLOROBENZENE	<10	<10	<10	<10	<10	<10	<10	<10
2,2-DICHLOROPROPANE	<5	<5	<5	<5	<5	<5	<5	<5
2-CHLOROETHYL VINYL ETHER	--	--	--	--	--	--	--	--
2-CHLOROTOLUENE	<5	<5	<5	<5	<5	<5	<5	<5
4-CHLOROTOLUENE	<5	<5	<5	<5	<5	<5	<5	<5
4-ISOPROPYLTOLUENE	<5	<5	<5	<5	<5	<5	<5	<5
ACETONE	--	--	--	--	--	--	--	--
ACRYLONITRILE	--	--	--	--	--	--	--	--
BENZENE	<5	<5	<5	<5	<5	<5	<5	<5
BROMOBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
BROMODICHLOROMETHANE	<5	<5	<5	<5	<5	<5	<5	<5
BROMOFORM	<5	<5	<5	<5	<5	<5	<5	<5
BROMOMETHANE	<10	<10	<10	<10	<10	<10	<10	<10

Units in ug/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
VOC COMPOUNDS BY 8260/8260B

LOCATION	SB03-014	SB03-014	SB03-016	SB03-016	SB03-017	SB03-017	SB03-017A	SB03-018
SAMPLE NAME	S314@1-1.5D	S314@5-5.5	S316@0.5-1	S316@4-5	S317@1.5-2	S317@4-5	S317A@9-9.5	S318@2-3
SAMPLING DATE	3/27/1998	3/27/1998	3/25/1998	3/25/1998	3/25/1998	3/25/1998	4/17/1998	3/26/1998
CARBON DISULFIDE	--	--	--	--	--	--	--	--
CARBON TETRACHLORIDE	<5	<5	<5	<5	<5	<5	<5	<5
CHLOROBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
CHLOROBROMOMETHANE	--	--	<5	<5	<5	<5	<5	<5
CHLOROETHANE	<10	<10	<10	<10	<10	<10	<10	<10
CHLOROFORM	<5	<5	<5	<5	<5	<5	<5	<5
CHLOROMETHANE	<10	<10	<10	<10	<10	<10	<10	<10
CIS-1,2-DICHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
DIBROMOCHLOROMETHANE	<5	<5	<5	<5	<5	<5	<5	<5
DIBROMOMETHANE	<5	<5	<5	<5	<5	<5	<5	<5
DICHLORODIFLUOROMETHANE (CFC-12)	<10	<10	<10	<10	<10	<10	<10	<10
ETHYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
HEXACHLOROBUTADIENE	<5	<5	<5	<5	<5	<5	<5	<5
ISOPROPYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
METHYLENE CHLORIDE	<6.7	<10	<10	<10	<10	<10	<10	<10
NAPHTHALENE	<5	<5	<5	<5	<5	<5	<5	<5
N-BUTYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
N-PROPYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
SEC-BUTYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
STYRENE	<5	<5	<5	<5	<5	<5	<5	<5
TERT-BUTYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
TETRACHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
TETRAHYDROFURAN	--	--	--	--	--	--	--	--
TOLUENE	<5	<5	<5	<5	<5	<5	<5	<5
TOLUENE DIISOCYANATE (MIXED ISOMERS)	--	--	--	--	--	--	--	--
TOLUENE-2,6-DIISOCYANATE	--	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
TRICHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
TRICHLOROFLUOROMETHANE (CFC-11)	<5	<5	<5	<5	<5	<5	<5	<5
VINYL ACETATE	--	--	--	--	--	--	--	--
VINYL CHLORIDE	<3	<3	<3	<3	<3	<3	<3	<3
XYLENES (TOTAL)	<5	<5	<5	<5	<5	<5	<5	<5

Units in ug/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
VOC COMPOUNDS BY 8260/8260B

LOCATION	SB03-018	SB03-019	SB03-019	SB03-019	SB03-020	SB03-020	SB03-022	SB03-022
SAMPLE NAME	S318@5-6	S319@0.5-1	S319@0.5-1D	S319@4-5	S320@1-1.5	S320@4-5	S322@0.5-1	S322@4-5
SAMPLING DATE	3/26/1998	3/25/1998	3/25/1998	3/25/1998	3/25/1998	3/25/1998	3/26/1998	3/26/1998
1,1,1,2-TETRACHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,1,1-TRICHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,1,2,2-TETRACHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,1,2-TRICHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,1-DICHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,1-DICHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
1,1-DICHLOROPROPENE	<5	<5	<5	<5	<5	<5	<5	<5
1,2,3-TRICHLOROBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
1,2,3-TRICHLOROPROPANE	<5	<5	<5	<5	<5	<5	<5	<5
1,2,3-TRICHLOROPROPENE	--	--	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
1,2,4-TRIMETHYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	<5	<5	<5	<5	<5	<5	<5	<5
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	<5	<5	<5	<5	<5	<5	<5	<5
1,2-DICHLOROBENZENE	<10	<10	<10	<10	<10	<10	<10	<10
1,2-DICHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,2-DICHLOROPROPANE	<5	<5	<5	<5	<5	<5	<5	<5
1,3,5-TRIMETHYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
1,3-DICHLOROBENZENE	<10	<10	<10	<10	<10	<10	<10	<10
1,3-DICHLOROPROPANE	<5	<5	<5	<5	<5	<5	<5	<5
1,4-DICHLOROBENZENE	<10	<10	<10	<10	<10	<10	<10	<10
2,2-DICHLOROPROPANE	<5	<5	<5	<5	<5	<5	<5	<5
2-CHLOROETHYL VINYL ETHER	--	--	--	--	--	--	--	--
2-CHLOROTOLUENE	<5	<5	<5	<5	<5	<5	<5	<5
4-CHLOROTOLUENE	<5	<5	<5	<5	<5	<5	<5	<5
4-ISOPROPYLTOLUENE	<5	<5	<5	<5	<5	<5	<5	<5
ACETONE	--	--	--	--	--	--	--	--
ACRYLONITRILE	--	--	--	--	--	--	--	--
BENZENE	<5	<5	<5	<5	<5	<5	<5	<5
BROMOBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
BROMODICHLOROMETHANE	<5	<5	<5	<5	<5	<5	<5	<5
BROMOFORM	<5	<5	<5	<5	<5	<5	<5	<5
BROMOMETHANE	<10	<10	<10	<10	<10	<10	<10	<10

Units in ug/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
VOC COMPOUNDS BY 8260/8260B

LOCATION	SB03-018	SB03-019	SB03-019	SB03-019	SB03-020	SB03-020	SB03-022	SB03-022
SAMPLE NAME	S318@5-6	S319@0.5-1	S319@0.5-1D	S319@4-5	S320@1-1.5	S320@4-5	S322@0.5-1	S322@4-5
SAMPLING DATE	3/26/1998	3/25/1998	3/25/1998	3/25/1998	3/25/1998	3/25/1998	3/26/1998	3/26/1998
CARBON DISULFIDE	--	--	--	--	--	--	--	--
CARBON TETRACHLORIDE	<5	<5	<5	<5	<5	<5	<5	<5
CHLOROBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
CHLOROBROMOMETHANE	<5	<5	<5	<5	<5	<5	<5	<5
CHLOROETHANE	<10	<10	<10	<10	<10	<10	<10	<10
CHLOROFORM	<5	<5	<5	<5	<5	<5	<5	<5
CHLOROMETHANE	<10	<10	<10	<10	<10	<10	<10	<10
CIS-1,2-DICHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
DIBROMOCHLOROMETHANE	<5	<5	<5	<5	<5	<5	<5	<5
DIBROMOMETHANE	<5	<5	<5	<5	<5	<5	<5	<5
DICHLORODIFLUOROMETHANE (CFC-12)	<10	<10	<10	<10	<10	<10	<10	<10
ETHYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
HEXACHLOROBUTADIENE	<5	<5	<5	<5	<5	<5	<5	<5
ISOPROPYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
METHYLENE CHLORIDE	<10	<10	<10	<10	<10	<10	<10	<10
NAPHTHALENE	<5	<5	<5	<5	<5	<5	<5	<5
N-BUTYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
N-PROPYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
SEC-BUTYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
STYRENE	<5	<5	<5	<5	<5	<5	<5	<5
TERT-BUTYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
TETRACHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
TETRAHYDROFURAN	--	--	--	--	--	--	--	--
TOLUENE	<5	<5	<5	<5	<5	<5	<5	<5
TOLUENE DIISOCYANATE (MIXED ISOMERS)	--	--	--	--	--	--	--	--
TOLUENE-2,6-DIISOCYANATE	--	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
TRICHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
TRICHLOROFLUOROMETHANE (CFC-11)	<5	<5	<5	<5	<5	<5	<5	<5
VINYL ACETATE	--	--	--	--	--	--	--	--
VINYL CHLORIDE	<3	<3	<3	<3	<3	<3	<3	<3
XYLENES (TOTAL)	<5	<5	<5	<5	<5	<5	<5	<5

Units in ug/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
VOC COMPOUNDS BY 8260/8260B

LOCATION	SB03-022	SB03-024	SB03-024	SB03-024A	SB03-024A	SB04-001	SB04-001	SB04-002
SAMPLE NAME	S322@7-7.5	S324@0.5-1	S324@5.5-6.5	S324A@1-1.5	S324A@4.5-5	S401@0.5-1	S401@4-5	S402@0.5-1
SAMPLING DATE	3/26/1998	3/27/1998	3/27/1998	4/17/1998	4/17/1998	3/24/1998	3/24/1998	3/24/1998
1,1,1,2-TETRACHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,1,1-TRICHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,1,2,2-TETRACHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,1,2-TRICHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,1-DICHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,1-DICHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
1,1-DICHLOROPROPENE	<5	<5	<5	<5	<5	<5	<5	<5
1,2,3-TRICHLOROBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
1,2,3-TRICHLOROPROPANE	<5	<5	<5	<5	<5	<5	<5	<5
1,2,3-TRICHLOROPROPENE	--	--	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
1,2,4-TRIMETHYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	<5	<5	<5	<5	<5	<5	<5	<5
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	<5	<5	<5	<5	<5	<5	<5	<5
1,2-DICHLOROBENZENE	<10	<10	<10	<10	<10	<10	<10	<10
1,2-DICHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,2-DICHLOROPROPANE	<5	<5	<5	<5	<5	<5	<5	<5
1,3,5-TRIMETHYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
1,3-DICHLOROBENZENE	<10	<10	<10	<10	<10	<10	<10	<10
1,3-DICHLOROPROPANE	<5	<5	<5	<5	<5	<5	<5	<5
1,4-DICHLOROBENZENE	<10	<10	<10	<10	<10	<10	<10	<10
2,2-DICHLOROPROPANE	<5	<5	<5	<5	<5	<5	<5	<5
2-CHLOROETHYL VINYL ETHER	--	--	--	--	--	--	--	--
2-CHLOROTOLUENE	<5	<5	<5	<5	<5	<5	<5	<5
4-CHLOROTOLUENE	<5	<5	<5	<5	<5	<5	<5	<5
4-ISOPROPYLTOLUENE	<5	<5	<5	<5	<5	<5	<5	<5
ACETONE	--	--	--	--	--	--	--	--
ACRYLONITRILE	--	--	--	--	--	--	--	--
BENZENE	<5	<5	<5	<5	<5	<5	<5	<5
BROMOBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
BROMODICHLOROMETHANE	<5	<5	<5	<5	<5	<5	<5	<5
BROMOFORM	<5	<5	<5	<5	<5	<5	<5	<5
BROMOMETHANE	<10	<10	<10	<10	<10	<10	<10	<10

Units in ug/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
VOC COMPOUNDS BY 8260/8260B

LOCATION	SB03-022	SB03-024	SB03-024	SB03-024A	SB03-024A	SB04-001	SB04-001	SB04-002
SAMPLE NAME	S322@7-7.5	S324@0.5-1	S324@5.5-6.5	S324A@1-1.5	S324A@4.5-5	S401@0.5-1	S401@4-5	S402@0.5-1
SAMPLING DATE	3/26/1998	3/27/1998	3/27/1998	4/17/1998	4/17/1998	3/24/1998	3/24/1998	3/24/1998
CARBON DISULFIDE	--	--	--	--	--	--	--	--
CARBON TETRACHLORIDE	<5	<5	<5	<5	<5	<5	<5	<5
CHLOROBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
CHLOROBROMOMETHANE	<5	--	--	<5	<5	<5	<5	<5
CHLOROETHANE	<10	<10	<10	<10	<10	<10	<10	<10
CHLOROFORM	<5	<5	<5	<5	<5	<5	<5	<5
CHLOROMETHANE	<10	<10	<10	<10	<10	<10	<10	<10
CIS-1,2-DICHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
DIBROMOCHLOROMETHANE	<5	<5	<5	<5	<5	<5	<5	<5
DIBROMOMETHANE	<5	<5	<5	<5	<5	<5	<5	<5
DICHLORODIFLUOROMETHANE (CFC-12)	<10	<10	<10	<10	<10	<10	<10	<10
ETHYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
HEXACHLOROBUTADIENE	<5	<5	<5	<5	<5	<5	<5	<5
ISOPROPYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
METHYLENE CHLORIDE	<10	<10	<10	<10	<10	<10	<10	<10
NAPHTHALENE	<5	<5	<5	<5	<5	<5	<5	<5
N-BUTYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
N-PROPYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
SEC-BUTYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
STYRENE	<5	<5	<5	<5	<5	<5	<5	<5
TERT-BUTYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
TETRACHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
TETRAHYDROFURAN	--	--	--	--	--	--	--	--
TOLUENE	<5	<5	<5	<5	<5	<5	<5	<5
TOLUENE DIISOCYANATE (MIXED ISOMERS)	--	--	--	--	--	--	--	--
TOLUENE-2,6-DIISOCYANATE	--	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
TRICHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
TRICHLOROFLUOROMETHANE (CFC-11)	<5	<5	<5	<5	<5	<5	<5	<5
VINYL ACETATE	--	--	--	--	--	--	--	--
VINYL CHLORIDE	<3	<3	<3	<3	<3	<3	<3	<3
XYLENES (TOTAL)	<5	<5	<5	<5	<5	<5	<5	<5

Units in ug/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
VOC COMPOUNDS BY 8260/8260B

LOCATION	SB04-002	SB04-003	SB04-003	SB04-004	SB04-004	SB04-005	SB04-005	SB04-005
SAMPLE NAME	S402@4-5	S403@0.5-1	S403@4-5	S404@0.5-1	S404@4-5	S405@0-1	S405@0-1D	S405@5-6
SAMPLING DATE	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/25/1998	3/25/1998	3/25/1998	3/25/1998
1,1,1,2-TETRACHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,1,1-TRICHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,1,2,2-TETRACHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,1,2-TRICHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,1-DICHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,1-DICHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
1,1-DICHLOROPROPENE	<5	<5	<5	<5	<5	<5	<5	<5
1,2,3-TRICHLOROBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
1,2,3-TRICHLOROPROPANE	<5	<5	<5	<5	<5	<5	<5	<5
1,2,3-TRICHLOROPROPENE	--	--	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
1,2,4-TRIMETHYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	<5	<5	<5	<5	<5	<5	<5	<5
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	<5	<5	<5	<5	<5	<5	<5	<5
1,2-DICHLOROBENZENE	<10	<10	<10	<10	<10	<10	<10	<10
1,2-DICHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,2-DICHLOROPROPANE	<5	<5	<5	<5	<5	<5	<5	<5
1,3,5-TRIMETHYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
1,3-DICHLOROBENZENE	<10	<10	<10	<10	<10	<10	<10	<10
1,3-DICHLOROPROPANE	<5	<5	<5	<5	<5	<5	<5	<5
1,4-DICHLOROBENZENE	<10	<10	<10	<10	<10	<10	<10	<10
2,2-DICHLOROPROPANE	<5	<5	<5	<5	<5	<5	<5	<5
2-CHLOROETHYL VINYL ETHER	--	--	--	--	--	--	--	--
2-CHLOROTOLUENE	<5	<5	<5	<5	<5	<5	<5	<5
4-CHLOROTOLUENE	<5	<5	<5	<5	<5	<5	<5	<5
4-ISOPROPYLTOLUENE	<5	<5	<5	<5	<5	<5	<5	<5
ACETONE	--	--	--	--	--	--	--	--
ACRYLONITRILE	--	--	--	--	--	--	--	--
BENZENE	<5	<5	<5	<5	<5	<5	<5	<5
BROMOBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
BROMODICHLOROMETHANE	<5	<5	<5	<5	<5	<5	<5	<5
BROMOFORM	<5	<5	<5	<5	<5	<5	<5	<5
BROMOMETHANE	<10	<10	<10	<10	<10	<10	<10	<10

Units in ug/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
VOC COMPOUNDS BY 8260/8260B

LOCATION	SB04-002	SB04-003	SB04-003	SB04-004	SB04-004	SB04-005	SB04-005	SB04-005
SAMPLE NAME	S402@4-5	S403@0.5-1	S403@4-5	S404@0.5-1	S404@4-5	S405@0-1	S405@0-1D	S405@5-6
SAMPLING DATE	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/25/1998	3/25/1998	3/25/1998	3/25/1998
CARBON DISULFIDE	--	--	--	--	--	--	--	--
CARBON TETRACHLORIDE	<5	<5	<5	<5	<5	<5	<5	<5
CHLOROBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
CHLOROBROMOMETHANE	<5	<5	<5	<5	<5	<5	<5	<5
CHLOROETHANE	<10	<10	<10	<10	<10	<10	<10	<10
CHLOROFORM	<5	<5	<5	<5	<5	<5	<5	<5
CHLOROMETHANE	<10	<10	<10	<10	<10	<10	<10	<10
CIS-1,2-DICHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
DIBROMOCHLOROMETHANE	<5	<5	<5	<5	<5	<5	<5	<5
DIBROMOMETHANE	<5	<5	<5	<5	<5	<5	<5	<5
DICHLORODIFLUOROMETHANE (CFC-12)	<10	<10	<10	<10	<10	<10	<10	<10
ETHYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
HEXACHLOROBUTADIENE	<5	<5	<5	<5	<5	<5	<5	<5
ISOPROPYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
METHYLENE CHLORIDE	<10	<10	<10	<10	<10	<10	<10	<10
NAPHTHALENE	<5	<5	<5	<5	<5	<5	<5	<5
N-BUTYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
N-PROPYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
SEC-BUTYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
STYRENE	<5	<5	<5	<5	<5	<5	<5	<5
TERT-BUTYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
TETRACHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
TETRAHYDROFURAN	--	--	--	--	--	--	--	--
TOLUENE	<5	<5	<5	<5	<5	<5	<5	<5
TOLUENE DIISOCYANATE (MIXED ISOMERS)	--	--	--	--	--	--	--	--
TOLUENE-2,6-DIISOCYANATE	--	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
TRICHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
TRICHLOROFLUOROMETHANE (CFC-11)	<5	<5	<5	<5	<5	<5	<5	<5
VINYL ACETATE	--	--	--	--	--	--	--	--
VINYL CHLORIDE	<3	<3	<3	<3	<3	<3	<3	<3
XYLENES (TOTAL)	<5	<5	<5	<5	<5	<5	<5	<5

Units in ug/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
VOC COMPOUNDS BY 8260/8260B

LOCATION	SB04-006	SB04-006	SB04-007	SB04-007	SB04-008	SB04-008	SB04-009	SB04-009
SAMPLE NAME	S406@0.5-1	S406@4-5	S407@0.5-1	S407@4-5	S408@0.5-1	S408@4-5	S409@0.5-1	S409@4-5
SAMPLING DATE	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998
1,1,1,2-TETRACHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,1,1-TRICHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,1,2,2-TETRACHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,1,2-TRICHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,1-DICHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,1-DICHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
1,1-DICHLOROPROPENE	<5	<5	<5	<5	<5	<5	<5	<5
1,2,3-TRICHLOROBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
1,2,3-TRICHLOROPROPANE	<5	<5	<5	<5	<5	<5	<5	<5
1,2,3-TRICHLOROPROPENE	--	--	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
1,2,4-TRIMETHYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	<5	<5	<5	<5	<5	<5	<5	<5
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	<5	<5	<5	<5	<5	<5	<5	<5
1,2-DICHLOROBENZENE	<10	<10	<10	<10	<10	<10	<10	<10
1,2-DICHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,2-DICHLOROPROPANE	<5	<5	<5	<5	<5	<5	<5	<5
1,3,5-TRIMETHYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
1,3-DICHLOROBENZENE	<10	<10	<10	<10	<10	<10	<10	<10
1,3-DICHLOROPROPANE	<5	<5	<5	<5	<5	<5	<5	<5
1,4-DICHLOROBENZENE	<10	<10	<10	<10	<10	<10	<10	<10
2,2-DICHLOROPROPANE	<5	<5	<5	<5	<5	<5	<5	<5
2-CHLOROETHYL VINYL ETHER	--	--	--	--	--	--	--	--
2-CHLOROTOLUENE	<5	<5	<5	<5	<5	<5	<5	<5
4-CHLOROTOLUENE	<5	<5	<5	<5	<5	<5	<5	<5
4-ISOPROPYLTOLUENE	<5	<5	<5	<5	<5	<5	<5	<5
ACETONE	--	--	--	--	--	--	--	--
ACRYLONITRILE	--	--	--	--	--	--	--	--
BENZENE	<5	<5	<5	<5	<5	<5	<5	<5
BROMOBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
BROMODICHLOROMETHANE	<5	<5	<5	<5	<5	<5	<5	<5
BROMOFORM	<5	<5	<5	<5	<5	<5	<5	<5
BROMOMETHANE	<10	<10	<10	<10	<10	<10	<10	<10

Units in ug/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
VOC COMPOUNDS BY 8260/8260B

LOCATION	SB04-006	SB04-006	SB04-007	SB04-007	SB04-008	SB04-008	SB04-009	SB04-009
SAMPLE NAME	S406@0.5-1	S406@4-5	S407@0.5-1	S407@4-5	S408@0.5-1	S408@4-5	S409@0.5-1	S409@4-5
SAMPLING DATE	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998
CARBON DISULFIDE	--	--	--	--	--	--	--	--
CARBON TETRACHLORIDE	<5	<5	<5	<5	<5	<5	<5	<5
CHLOROBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
CHLOROBROMOMETHANE	<5	<5	<5	<5	<5	<5	<5	<5
CHLOROETHANE	<10	<10	<10	<10	<10	<10	<10	<10
CHLOROFORM	<5	<5	<5	<5	<5	<5	<5	<5
CHLOROMETHANE	<10	<10	<10	<10	<10	<10	<10	<10
CIS-1,2-DICHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
DIBROMOCHLOROMETHANE	<5	<5	<5	<5	<5	<5	<5	<5
DIBROMOMETHANE	<5	<5	<5	<5	<5	<5	<5	<5
DICHLORODIFLUOROMETHANE (CFC-12)	<10	<10	<10	<10	<10	<10	<10	<10
ETHYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
HEXACHLOROBUTADIENE	<5	<5	<5	<5	<5	<5	<5	<5
ISOPROPYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
METHYLENE CHLORIDE	<10	<10	<10	<10	<10	<10	<10	<10
NAPHTHALENE	<5	<5	<5	<5	<5	<5	<5	<5
N-BUTYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
N-PROPYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
SEC-BUTYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
STYRENE	<5	<5	<5	<5	<5	<5	<5	<5
TERT-BUTYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
TETRACHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
TETRAHYDROFURAN	--	--	--	--	--	--	--	--
TOLUENE	<5	<5	<5	<5	<5	<5	<5	<5
TOLUENE DIISOCYANATE (MIXED ISOMERS)	--	--	--	--	--	--	--	--
TOLUENE-2,6-DIISOCYANATE	--	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
TRICHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
TRICHLOROFLUOROMETHANE (CFC-11)	<5	<5	<5	<5	<5	<5	<5	<5
VINYL ACETATE	--	--	--	--	--	--	--	--
VINYL CHLORIDE	<3	<3	<3	<3	<3	<3	<3	<3
XYLENES (TOTAL)	<5	<5	<5	<5	<5	<5	<5	<5

Units in ug/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
VOC COMPOUNDS BY 8260/8260B

LOCATION	SB04-010	SB04-010	SB04-011	SB04-011	SB04-012	SB04-012	SB04-013	SB04-013
SAMPLE NAME	S410@0-1	S410@5-6	S411@0.5-1	S411@4-5	S412@0.5-1	S412@4-5	S413@0.5-1	S413@4-5
SAMPLING DATE	3/25/1998	3/25/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998
1,1,1,2-TETRACHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,1,1-TRICHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,1,2,2-TETRACHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,1,2-TRICHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,1-DICHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,1-DICHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
1,1-DICHLOROPROPENE	<5	<5	<5	<5	<5	<5	<5	<5
1,2,3-TRICHLOROBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
1,2,3-TRICHLOROPROPANE	<5	<5	<5	<5	<5	<5	<5	<5
1,2,3-TRICHLOROPROPENE	--	--	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
1,2,4-TRIMETHYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	<5	<5	<5	<5	<5	<5	<5	<5
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	<5	<5	<5	<5	<5	<5	<5	<5
1,2-DICHLOROBENZENE	<10	<10	<10	<10	<10	<10	<10	<10
1,2-DICHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,2-DICHLOROPROPANE	<5	<5	<5	<5	<5	<5	<5	<5
1,3,5-TRIMETHYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
1,3-DICHLOROBENZENE	<10	<10	<10	<10	<10	<10	<10	<10
1,3-DICHLOROPROPANE	<5	<5	<5	<5	<5	<5	<5	<5
1,4-DICHLOROBENZENE	<10	<10	<10	<10	<10	<10	<10	<10
2,2-DICHLOROPROPANE	<5	<5	<5	<5	<5	<5	<5	<5
2-CHLOROETHYL VINYL ETHER	--	--	--	--	--	--	--	--
2-CHLOROTOLUENE	<5	<5	<5	<5	<5	<5	<5	<5
4-CHLOROTOLUENE	<5	<5	<5	<5	<5	<5	<5	<5
4-ISOPROPYLTOLUENE	<5	<5	<5	<5	<5	<5	<5	<5
ACETONE	--	--	--	--	--	--	--	--
ACRYLONITRILE	--	--	--	--	--	--	--	--
BENZENE	<5	<5	<5	<5	<5	<5	<5	<5
BROMOBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
BROMODICHLOROMETHANE	<5	<5	<5	<5	<5	<5	<5	<5
BROMOFORM	<5	<5	<5	<5	<5	<5	<5	<5
BROMOMETHANE	<10	<10	<10	<10	<10	<10	<10	<10

Units in ug/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
VOC COMPOUNDS BY 8260/8260B

LOCATION SAMPLE NAME SAMPLING DATE	SB04-010 S410@0-1 3/25/1998	SB04-010 S410@5-6 3/25/1998	SB04-011 S411@0.5-1 3/23/1998	SB04-011 S411@4-5 3/23/1998	SB04-012 S412@0.5-1 3/23/1998	SB04-012 S412@4-5 3/23/1998	SB04-013 S413@0.5-1 3/23/1998	SB04-013 S413@4-5 3/23/1998
CARBON DISULFIDE	--	--	--	--	--	--	--	--
CARBON TETRACHLORIDE	<5	<5	<5	<5	<5	<5	<5	<5
CHLOROBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
CHLOROBROMOMETHANE	<5	<5	<5	<5	<5	<5	<5	<5
CHLOROETHANE	<10	<10	<10	<10	<10	<10	<10	<10
CHLOROFORM	<5	<5	<5	<5	<5	<5	<5	<5
CHLOROMETHANE	<10	<10	<10	<10	<10	<10	<10	<10
CIS-1,2-DICHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
DIBROMOCHLOROMETHANE	<5	<5	<5	<5	<5	<5	<5	<5
DIBROMOMETHANE	<5	<5	<5	<5	<5	<5	<5	<5
DICHLORODIFLUOROMETHANE (CFC-12)	<10	<10	<10	<10	<10	<10	<10	<10
ETHYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
HEXACHLOROBUTADIENE	<5	<5	<5	<5	<5	<5	<5	<5
ISOPROPYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
METHYLENE CHLORIDE	<10	<10	<10	<10	<10	<10	<10	<10
NAPHTHALENE	<5	<5	<5	<5	<5	<5	<5	<5
N-BUTYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
N-PROPYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
SEC-BUTYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
STYRENE	<5	<5	<5	<5	<5	<5	<5	<5
TERT-BUTYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
TETRACHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
TETRAHYDROFURAN	--	--	--	--	--	--	--	--
TOLUENE	<5	<5	<5	<5	<5	<5	<5	<5
TOLUENE DIISOCYANATE (MIXED ISOMERS)	--	--	--	--	--	--	--	--
TOLUENE-2,6-DIISOCYANATE	--	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
TRICHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
TRICHLOROFLUOROMETHANE (CFC-11)	<5	<5	<5	<5	<5	<5	<5	<5
VINYL ACETATE	--	--	--	--	--	--	--	--
VINYL CHLORIDE	<3	<3	<3	<3	<3	<3	<3	<3
XYLENES (TOTAL)	<5	<5	<5	<5	<5	<5	<5	<5

Units in ug/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
VOC COMPOUNDS BY 8260/8260B

LOCATION	SB04-014	SB04-014	SB04-015	SB04-015	SB05-008	SB05-017	SB05-017	SB05-018
SAMPLE NAME	S414@0.5-1	S414@4-5	S415@0.5-1	S415@4-5	S508@4-5	S517@0.5-1	S517@4-5	S518@0-1
SAMPLING DATE	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998
1,1,1,2-TETRACHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,1,1-TRICHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,1,2,2-TETRACHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,1,2-TRICHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,1-DICHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,1-DICHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
1,1-DICHLOROPROPENE	<5	<5	<5	<5	<5	<5	<5	<5
1,2,3-TRICHLOROBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
1,2,3-TRICHLOROPROPANE	<5	<5	<5	<5	<5	<5	<5	<5
1,2,3-TRICHLOROPROPENE	--	--	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
1,2,4-TRIMETHYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	<5	<5	<5	<5	<5	<5	<5	<5
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	<5	<5	<5	<5	<5	<5	<5	<5
1,2-DICHLOROBENZENE	<10	<10	<10	<10	<10	<10	<10	<10
1,2-DICHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,2-DICHLOROPROPANE	<5	<5	<5	<5	<5	<5	<5	<5
1,3,5-TRIMETHYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
1,3-DICHLOROBENZENE	<10	<10	<10	<10	<10	<10	<10	<10
1,3-DICHLOROPROPANE	<5	<5	<5	<5	<5	<5	<5	<5
1,4-DICHLOROBENZENE	<10	<10	<10	<10	<10	<10	<10	<10
2,2-DICHLOROPROPANE	<5	<5	<5	<5	<5	<5	<5	<5
2-CHLOROETHYL VINYL ETHER	--	--	--	--	--	--	--	--
2-CHLOROTOLUENE	<5	<5	<5	<5	<5	<5	<5	<5
4-CHLOROTOLUENE	<5	<5	<5	<5	<5	<5	<5	<5
4-ISOPROPYLTOLUENE	<5	<5	<5	<5	<5	<5	<5	<5
ACETONE	--	--	--	--	--	--	--	--
ACRYLONITRILE	--	--	--	--	--	--	--	--
BENZENE	<5	<5	<5	<5	<5	<5	<5	<5
BROMOBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
BROMODICHLOROMETHANE	<5	<5	<5	<5	<5	<5	<5	<5
BROMOFORM	<5	<5	<5	<5	<5	<5	<5	<5
BROMOMETHANE	<10	<10	<10	<10	<10	<10	<10	<10

Units in ug/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
VOC COMPOUNDS BY 8260/8260B

LOCATION SAMPLE NAME SAMPLING DATE	SB04-014 S414@0.5-1 3/23/1998	SB04-014 S414@4-5 3/23/1998	SB04-015 S415@0.5-1 3/23/1998	SB04-015 S415@4-5 3/23/1998	SB05-008 S508@4-5 3/23/1998	SB05-017 S517@0.5-1 3/23/1998	SB05-017 S517@4-5 3/23/1998	SB05-018 S518@0-1 3/23/1998
CARBON DISULFIDE	--	--	--	--	--	--	--	--
CARBON TETRACHLORIDE	<5	<5	<5	<5	<5	<5	<5	<5
CHLOROBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
CHLOROBROMOMETHANE	<5	<5	<5	<5	<5	<5	<5	<5
CHLOROETHANE	<10	<10	<10	<10	<10	<10	<10	<10
CHLOROFORM	<5	<5	<5	<5	<5	<5	<5	<5
CHLOROMETHANE	<10	<10	<10	<10	<10	<10	<10	<10
CIS-1,2-DICHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
DIBROMOCHLOROMETHANE	<5	<5	<5	<5	<5	<5	<5	<5
DIBROMOMETHANE	<5	<5	<5	<5	<5	<5	<5	<5
DICHLORODIFLUOROMETHANE (CFC-12)	<10	<10	<10	<10	<10	<10	<10	<10
ETHYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
HEXACHLOROBUTADIENE	<5	<5	<5	<5	<5	<5	<5	<5
ISOPROPYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
METHYLENE CHLORIDE	<10	<10	<10	<10	<10	<10	<10	<10
NAPHTHALENE	<5	<5	<5	<5	<5	<5	<5	<5
N-BUTYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
N-PROPYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
SEC-BUTYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
STYRENE	<5	<5	<5	<5	<5	<5	<5	<5
TERT-BUTYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
TETRACHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
TETRAHYDROFURAN	--	--	--	--	--	--	--	--
TOLUENE	<5	<5	<5	<5	<5	<5	<5	<5
TOLUENE DIISOCYANATE (MIXED ISOMERS)	--	--	--	--	--	--	--	--
TOLUENE-2,6-DIISOCYANATE	--	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
TRICHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
TRICHLOROFLUOROMETHANE (CFC-11)	<5	<5	<5	<5	<5	<5	<5	<5
VINYL ACETATE	--	--	--	--	--	--	--	--
VINYL CHLORIDE	<3	<3	<3	<3	<3	<3	<3	<3
XYLENES (TOTAL)	<5	<5	<5	<5	<5	<5	<5	<5

Units in ug/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
VOC COMPOUNDS BY 8260/8260B

LOCATION	SB05-018	SB05-023	SB05-023	SB05-041A	SB05-041A	SB05-043A
SAMPLE NAME	S518@5-6	S523@0-1	S523@4-5	S541A@9.5-10	S541A@9.5-10D	S543A@10.5-11
SAMPLING DATE	3/23/1998	3/23/1998	3/23/1998	4/16/1998	4/16/1998	4/16/1998
1,1,1,2-TETRACHLOROETHANE	<5	<5	<5	<5	<5	<5
1,1,1-TRICHLOROETHANE	<5	<5	<5	<5	<5	<5
1,1,2,2-TETRACHLOROETHANE	<5	<5	<5	<5	<5	<5
1,1,2-TRICHLOROETHANE	<5	<5	<5	<5	<5	<5
1,1-DICHLOROETHANE	<5	<5	<5	<5	<5	<5
1,1-DICHLOROETHENE	<5	<5	<5	<5	<5	<5
1,1-DICHLOROPROPENE	<5	<5	<5	<5	<5	<5
1,2,3-TRICHLOROBENZENE	<5	<5	<5	<5	<5	<5
1,2,3-TRICHLOROPROPANE	<5	<5	<5	<5	<5	<5
1,2,3-TRICHLOROPROPENE	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	<5	<5	<5	<5	<5	<5
1,2,4-TRIMETHYLBENZENE	<5	<5	<5	<5	<5	<5
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	<5	<5	<5	<5	<5	<5
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	<5	<5	<5	<5	<5	<5
1,2-DICHLOROBENZENE	<10	<10	<10	<10	<10	<10
1,2-DICHLOROETHANE	<5	<5	<5	<5	<5	<5
1,2-DICHLOROPROPANE	<5	<5	<5	<5	<5	<5
1,3,5-TRIMETHYLBENZENE	<5	<5	<5	<5	<5	<5
1,3-DICHLOROBENZENE	<10	<10	<10	<10	<10	<10
1,3-DICHLOROPROPANE	<5	<5	<5	<5	<5	<5
1,4-DICHLOROBENZENE	<10	<10	<10	<10	<10	<10
2,2-DICHLOROPROPANE	<5	<5	<5	<5	<5	<5
2-CHLOROETHYL VINYL ETHER	--	--	--	--	--	--
2-CHLOROTOLUENE	<5	<5	<5	<5	<5	<5
4-CHLOROTOLUENE	<5	<5	<5	<5	<5	<5
4-ISOPROPYLTOLUENE	<5	<5	<5	<5	<5	<5
ACETONE	--	--	--	--	--	--
ACRYLONITRILE	--	--	--	--	--	--
BENZENE	<5	<5	<5	<5	<5	<5
BROMOBENZENE	<5	<5	<5	<5	<5	<5
BROMODICHLOROMETHANE	<5	<5	<5	<5	<5	<5
BROMOFORM	<5	<5	<5	<5	<5	<5
BROMOMETHANE	<10	<10	<10	<10	<10	<10

Units in ug/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
VOC COMPOUNDS BY 8260/8260B

LOCATION	SB05-018	SB05-023	SB05-023	SB05-041A	SB05-041A	SB05-043A
SAMPLE NAME	S518@5-6	S523@0-1	S523@4-5	S541A@9.5-10	S541A@9.5-10D	S543A@10.5-11
SAMPLING DATE	3/23/1998	3/23/1998	3/23/1998	4/16/1998	4/16/1998	4/16/1998
CARBON DISULFIDE	--	--	--	--	--	--
CARBON TETRACHLORIDE	<5	<5	<5	<5	<5	<5
CHLOROBENZENE	<5	<5	<5	<5	<5	<5
CHLOROBROMOMETHANE	<5	<5	<5	<5	<5	<5
CHLOROETHANE	<10	<10	<10	<10	<10	<10
CHLOROFORM	<5	<5	<5	<5	<5	<5
CHLOROMETHANE	<10	<10	<10	<10	<10	<10
CIS-1,2-DICHLOROETHENE	<5	<5	<5	<5	<5	<5
DIBROMOCHLOROMETHANE	<5	<5	<5	<5	<5	<5
DIBROMOMETHANE	<5	<5	<5	<5	<5	<5
DICHLORODIFLUOROMETHANE (CFC-12)	<10	<10	<10	<10	<10	<10
ETHYLBENZENE	<5	<5	<5	<5	<5	<5
HEXACHLOROBUTADIENE	<5	<5	<5	<5	<5	<5
ISOPROPYLBENZENE	<5	<5	<5	<5	<5	<5
METHYLENE CHLORIDE	<10	<10	<10	<10	<10	<10
NAPHTHALENE	<5	<5	<5	<5	<5	<5
N-BUTYLBENZENE	<5	<5	<5	<5	<5	<5
N-PROPYLBENZENE	<5	<5	<5	<5	<5	<5
SEC-BUTYLBENZENE	<5	<5	<5	<5	<5	<5
STYRENE	<5	<5	<5	<5	<5	<5
TERT-BUTYLBENZENE	<5	<5	<5	<5	<5	<5
TETRACHLOROETHENE	<5	<5	<5	<5	<5	<5
TETRAHYDROFURAN	--	--	--	--	--	--
TOLUENE	<5	<5	<5	<5	<5	<5
TOLUENE DIISOCYANATE (MIXED ISOMERS)	--	--	--	--	--	--
TOLUENE-2,6-DIISOCYANATE	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	<5	<5	<5	<5	<5	<5
TRICHLOROETHENE	<5	<5	<5	<5	<5	<5
TRICHLOROFLUOROMETHANE (CFC-11)	<5	<5	<5	<5	<5	<5
VINYL ACETATE	--	--	--	--	--	--
VINYL CHLORIDE	<3	<3	<3	<3	<3	<3
XYLENES (TOTAL)	<5	<5	<5	<5	<5	<5

Units in ug/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
SVOC COMPOUNDS BY 8270

LOCATION	SB04-011	SB04-011	SB04-012	SB04-012	SB04-013	SB04-013	SB04-014	SB04-014	SB04-015
SAMPLE NAME	S411@0.5-1	S411@4-5	S412@0.5-1	S412@4-5	S413@0.5-1	S413@4-5	S414@0.5-1	S414@4-5	S415@0.5-1
SAMPLING DATE	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998
1,2,4-TRICHLOROBENZENE	<2000	<100	<100	<100	<1000	<100	<100	<100	<100
1,2-DICHLOROBENZENE	<2000	<100	<100	<100	<1000	<100	<100	<100	<100
1,3-DICHLOROBENZENE	<2000	<100	<100	<100	<1000	<100	<100	<100	<100
1,4-DICHLOROBENZENE	<2000	<100	<100	<100	<1000	<100	<100	<100	<100
2,2-OXYBIS(1-CHLOROPROPANE)	<2000	<100	<100	<100	<1000	<100	<100	<100	<100
2,4,5-TRICHLOROPHENOL	<3000	<150	<150	<150	<1500	<150	<150	<150	<150
2,4,6-TRICHLOROPHENOL	<3000	<150	<150	<150	<1500	<150	<150	<150	<150
2,4-DICHLOROPHENOL	<2000	<100	<100	<100	<1000	<100	<100	<100	<100
2,4-DIMETHYLPHENOL	<5000	<250	<250	<250	<2500	<250	<250	<250	<250
2,4-DINITROPHENOL	<5000	<250	<250	<250	<2500	<250	<250	<250	<250
2,4-DINITROTOLUENE	<2000	<100	<100	<100	<1000	<100	<100	<100	<100
2,6-DINITROTOLUENE	<2000	<100	<100	<100	<1000	<100	<100	<100	<100
2-CHLORONAPHTHALENE	<2000	<100	<100	<100	<1000	<100	<100	<100	<100
2-CHLOROPHENOL	<5000	<250	<250	<250	<2500	<250	<250	<250	<250
2-METHYLNAPHTHALENE	<2000	<100	<100	<100	<1000	<100	<100	<100	<100
2-METHYLPHENOL	<3000	<150	<150	<150	<1500	<150	<150	<150	<150
2-NITROANILINE	<4000	<200	<200	<200	<2000	<200	<200	<200	<200
2-NITROPHENOL	<2000	<100	<100	<100	<1000	<100	<100	<100	<100
3,3-DICHLOROBENZIDINE	<10000	<500	<500	<500	<5000	<500	<500	<500	<500
3-NITROANILINE	<4000	<200	<200	<200	<2000	<200	<200	<200	<200
4,6-DINITRO-2-METHYLPHENOL	<5000	<250	<250	<250	<2500	<250	<250	<250	<250
4-BROMOPHENYL PHENYL ETHER	<3000	<150	<150	<150	<1500	<150	<150	<150	<150
4-CHLORO-3-METHYLPHENOL	<2000	<100	<100	<100	<1000	<100	<100	<100	<100
4-CHLOROANILINE	<2000	<100	<100	<100	<1000	<100	<100	<100	<100
4-CHLOROPHENYL PHENYL ETHER	<2000	<100	<100	<100	<1000	<100	<100	<100	<100
4-METHYLPHENOL	<3000	<150	<150	<150	<1500	<150	<150	<150	<150
4-NITROANILINE	<10000	<500	<500	<500	<5000	<500	<500	<500	<500
4-NITROPHENOL	<10000	<500	<500	<500	<5000	<500	<500	<500	<500
ACENAPHTHENE	<2000	<100	<100	<100	<1000	<100	<100	<100	<100
ACENAPHTHYLENE	<2000	<100	<100	<100	<1000	<100	<100	<100	<100
ANILINE	<3000	<150	<150	<150	<1500	<150	<150	<150	<150
ANTHRACENE	<2000	<100	<100	<100	<1000	<100	<100	<100	<100
AZOBENZENE	<3000	<150	<150	<150	<1500	<150	<150	<150	<150

Units in ug/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
SVOC COMPOUNDS BY 8270

LOCATION	SB04-011	SB04-011	SB04-012	SB04-012	SB04-013	SB04-013	SB04-014	SB04-014	SB04-015
SAMPLE NAME	S411@0.5-1	S411@4-5	S412@0.5-1	S412@4-5	S413@0.5-1	S413@4-5	S414@0.5-1	S414@4-5	S415@0.5-1
SAMPLING DATE	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998
BENZIDINE	<20000	<1000	<1000	<1000	<10000	<1000	<1000	<1000	<1000
BENZO(A)ANTHRACENE	<2000	<100	<100	<100	<1000	<100	<100	<100	<100
BENZO(A)PYRENE	<4000	<200	<200	<200	<2000	<200	<200	<200	<200
BENZO(B)FLUORANTHENE	<4000	<200	<200	<200	<2000	<200	<200	<200	<200
BENZO(G,H,I)PERYLENE	<3000	<150	<150	<150	<1500	<150	<150	<150	<150
BENZO(K)FLUORANTHENE	<4000	<200	<200	<200	<2000	<200	<200	<200	<200
BENZOIC ACID	<10000	<500	<500	<500	<5000	<500	<500	<500	<500
BENZYL ALCOHOL	<4000	<200	<200	<200	<2000	<200	<200	<200	<200
BIS(2-CHLOROETHOXY)METHANE	<2000	<100	<100	<100	<1000	<100	<100	<100	<100
BIS(2-CHLOROETHYL)ETHER	<2000	<100	<100	<100	<1000	<100	<100	<100	<100
BIS(2-ETHYLHEXYL)PHTHALATE	<20000	<1000	<1000	<1000	<10000	<1000	<1000	<1000	<1000
BUTYL BENZYL PHTHALATE	<10000	<500	<500	<500	<5000	<500	<500	<500	<500
CHRYSENE	<2000	<100	<100	<100	<1000	<100	<100	<100	<100
DIBENZ(A,H)ANTHRACENE	<5000	<250	<250	<250	<2500	<250	<250	<250	<250
DIBENZOFURAN	<2000	<100	<100	<100	<1000	<100	<100	<100	<100
DIETHYL PHTHALATE	<2000	<100	<100	<100	<1000	<100	<100	<100	<100
DIMETHYL PHTHALATE	<2000	<100	<100	<100	<1000	<100	<100	<100	<100
DI-N-BUTYLPHTHALATE	<5000	<250	<250	<250	<2500	<250	<250	<250	<250
DI-N-OCTYL PHTHALATE	<10000	<500	<500	<500	<5000	<500	<500	<500	<500
FLUORANTHENE	<2000	<100	<100	<100	<1000	<100	<100	<100	<100
FLUORENE	<2000	<100	<100	<100	<1000	<100	<100	<100	<100
HEXACHLOROBENZENE	<2000	<100	<100	<100	<1000	<100	<100	<100	<100
HEXACHLOROBUTADIENE	<2000	<100	<100	<100	<1000	<100	<100	<100	<100
HEXACHLOROCYCLOPENTADIENE	<10000	<500	<500	<500	<5000	<500	<500	<500	<500
HEXACHLOROETHANE	<4000	<200	<200	<200	<2000	<200	<200	<200	<200
INDENO(1,2,3-CD)PYRENE	<4000	<200	<200	<200	<2000	<200	<200	<200	<200
ISOPHORONE	<2000	<100	<100	<100	<1000	<100	<100	<100	<100
NAPHTHALENE	<3000	<150	<150	<150	<1500	<150	<150	<150	<150
NITROBENZENE	<10000	<500	<500	<500	<5000	<500	<500	<500	<500
N-NITROSODI-N-PROPYLAMINE	<3000	<150	<150	<150	<1500	<150	<150	<150	<150
N-NITROSODIPHENYLAMINE	<4000	<200	<200	<200	<2000	<200	<200	<200	<200
PENTACHLOROPHENOL	<10000	<500	<500	<500	<5000	<500	<500	<500	<500
PHENANTHRENE	<2000	<100	<100	<100	<1000	<100	<100	<100	<100
PHENOL	<3000	<150	<150	<150	<1500	<150	<150	<150	<150
PYRENE	<3000	<150	<150	<150	<1500	<150	<150	<150	<150

Units in ug/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
SVOC COMPOUNDS BY 8270

LOCATION	SB04-015
SAMPLE NAME	S415@4-5
SAMPLING DATE	3/23/1998
1,2,4-TRICHLOROBENZENE	<100
1,2-DICHLOROBENZENE	<100
1,3-DICHLOROBENZENE	<100
1,4-DICHLOROBENZENE	<100
2,2-OXYBIS(1-CHLOROPROPANE)	<100
2,4,5-TRICHLOROPHENOL	<150
2,4,6-TRICHLOROPHENOL	<150
2,4-DICHLOROPHENOL	<100
2,4-DIMETHYLPHENOL	<250
2,4-DINITROPHENOL	<250
2,4-DINITROTOLUENE	<100
2,6-DINITROTOLUENE	<100
2-CHLORONAPHTHALENE	<100
2-CHLOROPHENOL	<250
2-METHYLNAPHTHALENE	<100
2-METHYLPHENOL	<150
2-NITROANILINE	<200
2-NITROPHENOL	<100
3,3-DICHLOROBENZIDINE	<500
3-NITROANILINE	<200
4,6-DINITRO-2-METHYLPHENOL	<250
4-BROMOPHENYL PHENYL ETHER	<150
4-CHLORO-3-METHYLPHENOL	<100
4-CHLOROANILINE	<100
4-CHLOROPHENYL PHENYL ETHER	<100
4-METHYLPHENOL	<150
4-NITROANILINE	<500
4-NITROPHENOL	<500
ACENAPHTHENE	<100
ACENAPHTHYLENE	<100
ANILINE	<150
ANTHRACENE	<100
AZOBENZENE	<150

Units in ug/kg
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-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
SVOC COMPOUNDS BY 8270

LOCATION	SB04-015
SAMPLE NAME	S415@4-5
SAMPLING DATE	3/23/1998
BENZIDINE	<1000
BENZO(A)ANTHRACENE	<100
BENZO(A)PYRENE	<200
BENZO(B)FLUORANTHENE	<200
BENZO(G,H,I)PERYLENE	<150
BENZO(K)FLUORANTHENE	<200
BENZOIC ACID	<500
BENZYL ALCOHOL	<200
BIS(2-CHLOROETHOXY)METHANE	<100
BIS(2-CHLOROETHYL)ETHER	<100
BIS(2-ETHYLHEXYL)PHTHALATE	**1100**
BUTYL BENZYL PHTHALATE	<500
CHRYSENE	<100
DIBENZ(A,H)ANTHRACENE	<250
DIBENZOFURAN	<100
DIETHYL PHTHALATE	<100
DIMETHYL PHTHALATE	<100
DI-N-BUTYLPHTHALATE	<250
DI-N-OCTYL PHTHALATE	<500
FLUORANTHENE	<100
FLUORENE	<100
HEXACHLOROBENZENE	<100
HEXACHLOROBUTADIENE	<100
HEXACHLOROCYCLOPENTADIENE	<500
HEXACHLOROETHANE	<200
INDENO(1,2,3-CD)PYRENE	<200
ISOPHORONE	<100
NAPHTHALENE	<150
NITROBENZENE	<500
N-NITROSODI-N-PROPYLAMINE	<150
N-NITROSODIPHENYLAMINE	<200
PENTACHLOROPHENOL	<500
PHENANTHRENE	<100
PHENOL	<150
PYRENE	<150

Units in ug/kg
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-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
PAH COMPOUNDS BY 8310

LOCATION	SB01-003A	SB01-015A	SB01-015A	SB01-027	SB01-036	SB01-038A	SB01-038A	SB01-070	SB01-070A
SAMPLE NAME	S103A@16-16.5	S115A@0.5-1	S115A@4.5-5	S127@0-1	S136@0-1	S138A@0.5-1	S138A@4.5-5	S170@9-10	S170A@8.5-9
SAMPLING DATE	4/17/1998	4/16/1998	4/16/1998	3/19/1998	3/18/1998	4/17/1998	4/17/1998	3/24/1998	4/20/1998
ACENAPHTHENE	<100	<100	<100	<100	<100	<100	<100	<100	<100
ACENAPHTHYLENE	<2000	<2000	<2000	<2000	<2000	<2000	<2000	<2000	<2000
ANTHRACENE	<100	<100	<100	<100	<100	<100	<100	<100	<100
BENZO(A)ANTHRACENE	<100	<100	<100	<100	<100	<100	<100	<100	<100
BENZO(A)PYRENE	<50	<50	<50	<50	<50	<50	<50	<50	<50
BENZO(B)FLUORANTHENE	<100	<100	<100	<100	<100	<100	<100	<100	<100
BENZO(G,H,I)PERYLENE	<100	<100	<100	<100	<100	<100	<100	<100	<100
BENZO(K)FLUORANTHENE	<100	<100	<100	<100	<100	<100	<100	<100	<100
CHRYSENE	<100	<100	<100	<100	<100	<100	<100	<100	<100
DIBENZ(A,H)ANTHRACENE	<50	<50	<50	<50	<50	<50	<50	<50	<50
FLUORANTHENE	<100	<100	<100	<100	<100	<100	<100	<100	<100
FLUORENE	<100	<100	<100	<100	<100	<100	<100	<100	<100
INDENO(1,2,3-CD)PYRENE	<60	<60	<60	<60	<60	<60	<60	<60	<60
NAPHTHALENE	<100	<100	<100	<100	<100	<100	<100	**160**	**160**
PHENANTHRENE	<100	<100	<100	<100	<100	<100	<100	<100	<100
PYRENE	<100	<100	<100	<100	<100	<100	<100	<100	<100

Units in ug/kg
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-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
PAH COMPOUNDS BY 8310

LOCATION	SB01-070B	SB01-070C	SB01-070C	SB01-070C	SB01-070D	SB01-070D	SB02-005	SB02-005
SAMPLE NAME	S170B@10.5-11	S170B@6-6.5	S170C@10-11	S170C@10-11D	S170D@10-10.5	S170D@6-6.5	S205@2.5-3	S205@4-5
SAMPLING DATE	4/17/1998	4/17/1998	4/20/1998	4/20/1998	4/20/1998	4/20/1998	3/23/1998	3/26/1998
ACENAPHTHENE	<100	<100	<100	<100	<100	<100	<1000	<1000
ACENAPHTHYLENE	<2000	<2000	<2000	<2000	<2000	<2000	<20000	<20000
ANTHRACENE	<100	<100	<100	<100	<100	<100	<1000	<1000
BENZO(A)ANTHRACENE	<100	<100	<100	<100	<100	<100	<1000	<1000
BENZO(A)PYRENE	<50	<50	<50	<50	<50	<50	<500	<500
BENZO(B)FLUORANTHENE	<100	<100	<100	<100	<100	<100	<1000	<1000
BENZO(G,H,I)PERYLENE	<100	<100	<100	<100	<100	<100	<1000	<1000
BENZO(K)FLUORANTHENE	<100	<100	<100	<100	<100	<100	<1000	<1000
CHRYSENE	<100	<100	<100	<100	<100	<100	<1000	<1000
DIBENZ(A,H)ANTHRACENE	<50	<50	<50	<50	<50	<50	<500	<500
FLUORANTHENE	<100	<100	<100	<100	<100	<100	<1000	<1000
FLUORENE	<100	<100	<100	<100	<100	<100	<1000	<1000
INDENO(1,2,3-CD)PYRENE	<60	<60	<60	<60	<60	<60	<600	<600
NAPHTHALENE	<100	<100	<100	<100	<100	<100	<1000	<1000
PHENANTHRENE	<100	<100	<100	<100	<100	<100	<1000	<1000
PYRENE	<100	<100	<100	<100	<100	<100	<1000	<1000

Units in ug/kg
< = Not Detected at indicated reporting limit
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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
PAH COMPOUNDS BY 8310

LOCATION	SB03-003A	SB03-017A	SB03-023	SB03-024A	SB03-024A	SB04-002	SB04-006	SB04-011	SB05-018
SAMPLE NAME	S303A@8-8.5	S317A@9-9.5	S323@3.5-4.5	S324A@1-1.5	S324A@4.5-5	S402@0.5-1	S406@4-5	S411@0.5-1	S518@0-1
SAMPLING DATE	4/16/1998	4/17/1998	3/26/1998	4/17/1998	4/17/1998	3/24/1998	3/24/1998	3/23/1998	3/23/1998
ACENAPHTHENE	<100	<100	**230**	<100	<100	<100	<100	<1000	<1000
ACENAPHTHYLENE	<2000	<2000	<2000	<2000	<2000	<2000	<2000	<20000	<20000
ANTHRACENE	<100	<100	<100	<100	<100	<100	<100	<1000	<1000
BENZO(A)ANTHRACENE	<100	<100	<100	<100	<100	<100	<100	<1000	<1000
BENZO(A)PYRENE	<50	<50	<50	<50	<50	<50	<50	<500	<500
BENZO(B)FLUORANTHENE	<100	<100	<100	<100	<100	<100	<100	<1000	<1000
BENZO(G,H,I)PERYLENE	<100	<100	<100	<100	<100	<100	<100	<1000	<1000
BENZO(K)FLUORANTHENE	<100	<100	<100	<100	<100	<100	<100	<1000	<1000
CHRYSENE	<100	<100	<100	<100	<100	<100	<100	<1000	<1000
DIBENZ(A,H)ANTHRACENE	<50	<50	<50	<50	<50	<50	<50	<500	<500
FLUORANTHENE	<100	<100	<100	<100	<100	<100	<100	<1000	<1000
FLUORENE	<100	<100	<100	<100	<100	<100	<100	<1000	<1000
INDENO(1,2,3-CD)PYRENE	<60	<60	<60	<60	<60	<60	<60	<600	<600
NAPHTHALENE	<100	<100	**100**	<100	<100	<100	<100	<1000	<1000
PHENANTHRENE	<100	<100	<100	<100	<100	<100	<100	<1000	<1000
PYRENE	<100	<100	<100	<100	<100	<100	<100	<1000	<1000

Units in ug/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
PAH COMPOUNDS BY 8310

LOCATION	SB05-041A	SB05-041A	SB05-043A	SB05-045	SB06-006	SB06-014	SB06-016
SAMPLE NAME	S541A@9.5-10	S541A@9.5-10D	S543A@10.5-11	S545@0-1	S606@4-5	S614@4-5	S616@0.5
SAMPLING DATE	4/16/1998	4/16/1998	4/16/1998	3/20/1998	3/26/1998	3/26/1998	3/26/1998
ACENAPHTHENE	<100	<100	<100	<100	<100	**1100**	<100
ACENAPHTHYLENE	<2000	<2000	<2000	<2000	<2000	<20000	<2000
ANTHRACENE	<100	<100	<100	<100	<100	<1000	<100
BENZO(A)ANTHRACENE	<100	<100	<100	<100	<100	<1000	<100
BENZO(A)PYRENE	<50	<50	<50	<50	<50	<500	<50
BENZO(B)FLUORANTHENE	<100	<100	<100	<100	<100	<1000	<100
BENZO(G,H,I)PERYLENE	<100	<100	<100	<100	<100	<1000	<100
BENZO(K)FLUORANTHENE	<100	<100	<100	<100	<100	<1000	<100
CHRYSENE	<100	<100	<100	<100	<100	**2000**	<100
DIBENZ(A,H)ANTHRACENE	<50	<50	<50	<50	<50	<500	<50
FLUORANTHENE	<100	<100	<100	<100	<100	<1000	<100
FLUORENE	<100	<100	<100	<100	<100	<1000	<100
INDENO(1,2,3-CD)PYRENE	<60	<60	<60	<60	<60	<600	<60
NAPHTHALENE	<100	<100	<100	<100	<100	<1000	<100
PHENANTHRENE	<100	<100	<100	<100	<100	<1000	<100
PYRENE	<100	<100	<100	<100	<100	**2300**	<100

Units in ug/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
PCB COMPOUNDS BY 8081/8080

LOCATION	SB02-004	SB02-004	SB03-001	SB03-001	SB03-002	SB03-002	SB03-003	SB03-003	SB03-004	SB03-004	SB03-005
SAMPLE NAME	S204@0.5-1	S204@4-5	S301@0.5-1	S301@4-5	S302@0.5-1	S302@4-5	S303@0.5-1	S303@4-5	S304@1.5-2	S304@4-5	S305@1.5-2
SAMPLING DATE	3/27/1998	3/27/1998	3/25/1998	3/25/1998	3/25/1998	3/25/1998	3/26/1998	3/26/1998	3/26/1998	3/26/1998	3/26/1998
AROCLOR 1016	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1221	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80
AROCLOR 1232	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1242	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1248	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1254	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1260	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50

Units in ug/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
PCB COMPOUNDS BY 8081/8080

LOCATION	SB03-005	SB03-006	SB03-006	SB03-007	SB03-007	SB03-007	SB03-008	SB03-008	SB03-008	SB03-008	SB03-009
SAMPLE NAME	S305@4-5	S306@0.5-1	S306@4-5	S307@0.5-1	S307@4-5	S307@8-9	S308@0.5-1	S308@0.5-1D	S308@4-5	S308@9-10	S309@0.5-1
SAMPLING DATE	3/26/1998	3/25/1998	3/25/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/26/1998
AROCLOR 1016	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1221	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80
AROCLOR 1232	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1242	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1248	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1254	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1260	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50

Units in ug/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
PCB COMPOUNDS BY 8081/8080

LOCATION	SB03-009	SB03-010	SB03-010	SB03-011	SB03-011	SB03-012	SB03-012	SB03-013	SB03-013	SB03-014	SB03-014
SAMPLE NAME	S309@4-5	S310@0.5-1	S310@4-5	S311@0-1	S311@4-5	S312@0.5-1	S312@4-5	S313@0.5-1	S313@3-3.5	S314@1-1.5	S314@1-1.5.D
SAMPLING DATE	3/26/1998	3/26/1998	3/26/1998	3/26/1998	3/26/1998	3/25/1998	3/25/1998	3/26/1998	3/26/1998	3/27/1998	3/27/1998
AROCLOR 1016	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1221	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80
AROCLOR 1232	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1242	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1248	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1254	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1260	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50

Units in ug/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
PCB COMPOUNDS BY 8081/8080

LOCATION	SB03-014	SB03-016	SB03-016	SB03-017	SB03-017	SB03-018	SB03-018	SB03-019	SB03-019	SB03-019	SB03-020
SAMPLE NAME	S314@5-5.5	S316@0.5-1	S316@4-5	S317@1.5-2	S317@4-5	S318@2-3	S318@5-6	S319@0.5-1	S319@0.5-1D	S319@4-5	S320@1-1.5
SAMPLING DATE	3/27/1998	3/25/1998	3/25/1998	3/25/1998	3/25/1998	3/26/1998	3/26/1998	3/25/1998	3/25/1998	3/25/1998	3/25/1998
AROCLOR 1016	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1221	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80
AROCLOR 1232	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1242	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1248	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1254	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1260	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50

Units in ug/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
PCB COMPOUNDS BY 8081/8080

LOCATION	SB03-020	SB03-021	SB03-021	SB03-022	SB03-022	SB03-022	SB03-023	SB03-023	SB03-023	SB03-023	SB03-024
SAMPLE NAME	S320@4-5	S321@0.5-1	S321@4-5	S322@0.5-1	S322@4-5	S322@7-7.5	S323@0.5-1	S323@0.5-1D	S323@3.5-4.5	S323@5.5-6	S324@0.5-1
SAMPLING DATE	3/25/1998	3/25/1998	3/25/1998	3/26/1998	3/26/1998	3/26/1998	3/26/1998	3/26/1998	3/26/1998	3/26/1998	3/27/1998
AROCLOR 1016	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1221	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80
AROCLOR 1232	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1242	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1248	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1254	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1260	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50

Units in ug/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
PCB COMPOUNDS BY 8081/8080

LOCATION	SB03-024
SAMPLE NAME	S324@5.5-6.5
SAMPLING DATE	3/27/1998
AROCLOR 1016	<50
AROCLOR 1221	<80
AROCLOR 1232	<50
AROCLOR 1242	<50
AROCLOR 1248	<50
AROCLOR 1254	<50
AROCLOR 1260	<50

Units in ug/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
PCB COMPOUNDS BY 8081/8080

LOCATION	SB04-001	SB04-001	SB04-002	SB04-002	SB04-003	SB04-003	SB04-004	SB04-004	SB04-005	SB04-005	SB04-005
SAMPLE NAME	S401@0.5-1	S401@4-5	S402@0.5-1	S402@4-5	S403@0.5-1	S403@4-5	S404@0.5-1	S404@4-5	S405@0-1	S405@0-1D	S405@5-6
SAMPLING DATE	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/25/1998	3/25/1998	3/25/1998	3/25/1998
AROCLOR 1016	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1221	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80
AROCLOR 1232	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1242	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1248	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1254	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1260	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50

Units in ug/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
PCB COMPOUNDS BY 8081/8080

LOCATION	SB04-006	SB04-006	SB04-007	SB04-007	SB04-008	SB04-008	SB04-009	SB04-009	SB04-010	SB04-011	SB04-011
SAMPLE NAME	S406@0.5-1	S406@4-5	S407@0.5-1	S407@4-5	S408@0.5-1	S408@4-5	S409@0.5-1	S409@4-5	S410@0-1	S411@0.5-1	S411@4-5
SAMPLING DATE	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/25/1998	3/23/1998	3/23/1998
AROCLOR 1016	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1221	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80
AROCLOR 1232	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1242	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1248	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1254	<50	**28 J**	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1260	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50

Units in ug/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
PCB COMPOUNDS BY 8081/8080

LOCATION	SB04-012	SB04-012	SB04-013	SB04-013	SB04-014	SB04-014	SB04-015	SB04-015	SB05-001	SB05-001	SB05-001
SAMPLE NAME	S412@0.5-1	S412@4-5	S413@0.5-1	S413@4-5	S414@0.5-1	S414@4-5	S415@0.5-1	S415@4-5	S501@0.5-1	S501@0.5-1D	S501@4-5
SAMPLING DATE	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998
AROCLOR 1016	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1221	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80
AROCLOR 1232	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1242	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1248	<50	<50	**25 J**	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1254	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1260	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50

Units in ug/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
PCB COMPOUNDS BY 8081/8080

LOCATION	SB05-002	SB05-002	SB05-003	SB05-003	SB05-004	SB05-004	SB05-004	SB05-004	SB05-005	SB05-005	SB05-006
SAMPLE NAME	S502@0.5-1	S502@4-5	S503@0.5-1	S503@4-5	S504@0.5-1D	S504@0-1	S504@10-11	S504@5-6	S505@0.5-1	S505@4-5	S506@0.5-1
SAMPLING DATE	3/19/1998	3/19/1998	3/18/1998	3/18/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/18/1998	3/18/1998	3/18/1998
AROCLOR 1016	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1221	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80
AROCLOR 1232	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1242	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1248	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1254	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1260	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50

Units in ug/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
PCB COMPOUNDS BY 8081/8080

LOCATION	SB05-006	SB05-007	SB05-007	SB05-009	SB05-009	SB05-010	SB05-010	SB05-010	SB05-011	SB05-011	SB05-012
SAMPLE NAME	S506@4-5	S507@0.5-1	S507@4-5	S509@0.5-1	S509@4-5	S510@0.5-1	S510@0.5-1D	S510@4-5	S511@0.5-1	S511@4-5	S512@0.5-1
SAMPLING DATE	3/18/1998	3/19/1998	3/19/1998	3/19/1998	3/19/1998	3/19/1998	3/19/1998	3/19/1998	3/18/1998	3/18/1998	3/18/1998
AROCLOR 1016	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1221	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80
AROCLOR 1232	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1242	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1248	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1254	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1260	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50

Units in ug/kg
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-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
PCB COMPOUNDS BY 8081/8080

LOCATION	SB05-012	SB05-013	SB05-013	SB05-014	SB05-014	SB05-015	SB05-015	SB05-015	SB05-016	SB05-016	SB05-018
SAMPLE NAME	S512@4-5	S513@0.5-1	S513@4-5	S514@0.5-1	S514@4-5	S515@0-1	S515@10-11	S515@5-6	S516@0.5-1	S516@4-5	S518@5-6
SAMPLING DATE	3/18/1998	3/18/1998	3/18/1998	3/18/1998	3/18/1998	3/24/1998	3/24/1998	3/24/1998	3/19/1998	3/19/1998	3/23/1998
AROCLOR 1016	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1221	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80
AROCLOR 1232	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1242	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1248	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1254	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1260	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50

Units in ug/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
PCB COMPOUNDS BY 8081/8080

LOCATION	SB05-019	SB05-019	SB05-019	SB05-020	SB05-020	SB05-021	SB05-021	SB05-022	SB05-022	SB05-024	SB05-024
SAMPLE NAME	S519@0.5-1	S519@0.5-1D	S519@4-5	S520@0.5-1	S520@4-5	S521@0.5-1	S521@4-5	S522@0.5-1	S522@4-5	S524@0.5-1	S524@4-5
SAMPLING DATE	3/18/1998	3/18/1998	3/18/1998	3/18/1998	3/18/1998	3/19/1998	3/19/1998	3/19/1998	3/19/1998	3/19/1998	3/19/1998
AROCLOR 1016	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1221	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80
AROCLOR 1232	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1242	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1248	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1254	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1260	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50

Units in ug/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
PCB COMPOUNDS BY 8081/8080

LOCATION	SB05-025	SB05-025	SB05-026	SB05-026	SB05-026	SB05-027	SB05-027	SB05-027	SB05-028	SB05-028	SB05-029
SAMPLE NAME	S525@0.5-1	S525@4-5	S526@0.5-1	S526@14-15	S526@5-6	S527@0.5-1	S527@10-11	S527@5-6	S528@0.5-1	S528@4-5	S529@0-1
SAMPLING DATE	3/19/1998	3/19/1998	3/17/1998	3/17/1998	3/17/1998	3/16/1998	3/16/1998	3/16/1998	3/19/1998	3/19/1998	3/23/1998
AROCLOR 1016	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1221	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80
AROCLOR 1232	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1242	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1248	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1254	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1260	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50

Units in ug/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
PCB COMPOUNDS BY 8081/8080

LOCATION	SB05-029	SB05-029	SB05-030	SB05-030	SB05-031	SB05-031	SB05-032	SB05-032	SB05-033	SB05-033	SB05-034
SAMPLE NAME	S529@10-11	S529@5-6	S530@0.5-1	S530@4-5	S531@0.5-1	S531@4-5	S532@0.5-1	S532@4-5	S533@0.5-1	S533@4-5	S534@0.5-1
SAMPLING DATE	3/23/1998	3/23/1998	3/20/1998	3/20/1998	3/18/1998	3/18/1998	3/19/1998	3/19/1998	3/19/1998	3/19/1998	3/20/1998
AROCLOR 1016	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1221	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80
AROCLOR 1232	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1242	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1248	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1254	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1260	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50

Units in ug/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
PCB COMPOUNDS BY 8081/8080

LOCATION	SB05-034	SB05-035	SB05-035	SB05-036	SB05-036	SB05-037	SB05-037	SB05-038	SB05-038	SB05-038	SB05-039
SAMPLE NAME	S534@4-5	S535@0.5-1	S535@4-5	S536@0.5-1	S536@4-5	S537@0.5-1	S537@4-5	S538@0-1	S538@10-11	S538@5-6	S539@0.5-1
SAMPLING DATE	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/19/1998	3/19/1998	3/24/1998	3/24/1998	3/24/1998	3/20/1998
AROCLOR 1016	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1221	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80
AROCLOR 1232	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1242	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1248	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1254	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1260	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50

Units in ug/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
PCB COMPOUNDS BY 8081/8080

LOCATION	SB05-039	SB05-040	SB05-040	SB05-040	SB05-041	SB05-041	SB05-041	SB05-042	SB05-042	SB05-042	SB05-043
SAMPLE NAME	S539@4-5	S540@0-1	S540@10-11	S540@5-6	S541@0.5-1	S541@4-5	S541@4-5D	S542@0.5-1	S542@0.5-1D	S542@4-5	S543@0-1
SAMPLING DATE	3/20/1998	3/24/1998	3/24/1998	3/24/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998
AROCLOR 1016	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1221	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80
AROCLOR 1232	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1242	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1248	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1254	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1260	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50

Units in ug/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
PCB COMPOUNDS BY 8081/8080

LOCATION	SB05-043	SB05-043	SB05-044	SB05-044	SB05-045	SB05-045	SB05-046	SB05-046	SB05-047	SB05-047	SB05-048
SAMPLE NAME	S543@10-11	S543@4-4.5	S544@0.5-1	S544@4-5	S545@0-1	S545@4-5	S546@0-1	S546@4-5	S547@0.5-1	S547@4-5	S548@0.5-1
SAMPLING DATE	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998
AROCLOR 1016	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1221	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80
AROCLOR 1232	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1242	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1248	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1254	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1260	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50

Units in ug/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
PCB COMPOUNDS BY 8081/8080

LOCATION	SB05-048	SB05-049	SB05-049	SB05-050	SB05-050	SB05-051	SB05-051	SB05-052	SB05-052	SB05-052	SB05-053
SAMPLE NAME	S548@4-5	S549@0.5-1	S549@4-5	S550@0.5-1	S550@4-5	S551@0.5-1	S551@4-5	S552@0.5-1	S552@10-11	S552@4-5	S553@0.5-1
SAMPLING DATE	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/23/1998
AROCLOR 1016	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1221	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80
AROCLOR 1232	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1242	<50	<50	**88**	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1248	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1254	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1260	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50

Units in ug/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
PCB COMPOUNDS BY 8081/8080

LOCATION	SB05-053	SB05-054	SB05-054	SB05-054	SB05-054	SB05-055	SB05-055	SB05-056	SB05-056	SB05-057	SB05-057
SAMPLE NAME	S553@4-5	S554@0.5-1	S554@0.5-1D	S554@10-11	S554@4-5	S555@0.5-1	S555@4-5	S556@0.5-1	S556@4-5	S557@0.5-1	S557@3-3.5
SAMPLING DATE	3/23/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998
AROCLOR 1016	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1221	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80
AROCLOR 1232	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1242	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1248	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1254	<50	<50	<50	<50	<50	<50	<50	<50	**26 J**	<50	<50
AROCLOR 1260	<50	<50	<50	<50	<50	<50	<50	<50	<50	**46 J**	<50

Units in ug/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
PCB COMPOUNDS BY 8081/8080

LOCATION	SB05-058	SB05-058	SB05-059	SB05-059	SB05-059	SB05-060	SB05-060	SB05-061	SB05-061	SB05-062	SB05-062
SAMPLE NAME	S558@0.5-1	S558@4-5	S559@0-1	S559@0-1D	S559@4-5	S560@0.5-1	S560@4-5	S561@0.5-1	S561@4-5	S562@0.5-1	S562@12-13
SAMPLING DATE	3/20/1998	3/20/1998	3/23/1998	3/23/1998	3/23/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/25/1998	3/25/1998
AROCLOR 1016	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1221	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80
AROCLOR 1232	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1242	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1248	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1254	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1260	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50

Units in ug/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
PCB COMPOUNDS BY 8081/8080

LOCATION	SB05-062	SB05-063	SB05-063	SB05-064	SB05-064	SB05-065	SB05-065	SB05-066	SB05-066	SB05-066	SB05-066
SAMPLE NAME	S562@4-5	S563@0.5-1	S563@4-5	S564@0.5-1	S564@4-5	S565@0.5-1	S565@4-5	S566@0.5-1	S566@0.5-1D	S566@14-15	S566@4-5
SAMPLING DATE	3/25/1998	3/24/1998	3/24/1998	3/23/1998	3/23/1998	3/24/1998	3/24/1998	3/25/1998	3/25/1998	3/25/1998	3/25/1998
AROCLOR 1016	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1221	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80
AROCLOR 1232	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1242	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1248	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1254	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1260	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50

Units in ug/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
PCB COMPOUNDS BY 8081/8080

LOCATION	SB05-067	SB05-067	SB05-068	SB05-068	SB05-069	SB05-069	SB05-070	SB05-070	SB05-070	SB05-071	SB05-071
SAMPLE NAME	S567@0.5-1	S567@4-5	S568@0.5-1	S568@4-5	S569@0.5-1	S569@4-5	S570@0.5-1	S570@0.5-1D	S570@4-5	S571@0.5-1	S571@4-5
SAMPLING DATE	3/24/1998	3/24/1998	3/23/1998	3/23/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/23/1998	3/23/1998
AROCLOR 1016	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1221	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80
AROCLOR 1232	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1242	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1248	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1254	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1260	<50	<50	<50	<50	<50	<50	<50	<50	<50	**46 J**	<50

Units in ug/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
PCB COMPOUNDS BY 8081/8080

LOCATION	SB05-072	SB05-072	SB05-073	SB05-073	SB05-074	SB05-074	SB05-075	SB05-075	SB05-075	SB05-076	SB05-076
SAMPLE NAME	S572@0.5-1	S572@4-5	S573@0.5-1	S573@4-5	S574@0.5-1	S574@4-5	S575@0.5-1	S575@10-11	S575@4-5	S576@0.5-1	S576@4-5
SAMPLING DATE	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/20/1998	3/20/1998	3/20/1998	3/23/1998	3/23/1998
AROCLOR 1016	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1221	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80
AROCLOR 1232	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1242	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1248	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1254	<50	**26 J**	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1260	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50

Units in ug/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
PCB COMPOUNDS BY 8081/8080

LOCATION	SB05-077	SB05-077	SB05-078	SB05-078	SB05-079	SB05-079	SB05-079	SB05-080	SB05-080	SB05-081	SB05-081
SAMPLE NAME	S577@0.5-1	S577@4-5	S578@0.5-1	S578@4-5	S579@0.5-1	S579@10-11	S579@4-5	S580@0.5-1	S580@4-5	S581@0.5-1	S581@0.5-1D
SAMPLING DATE	3/24/1998	3/24/1998	3/25/1998	3/25/1998	3/20/1998	3/20/1998	3/20/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998
AROCLOR 1016	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1221	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80
AROCLOR 1232	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1242	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1248	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1254	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1260	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50

Units in ug/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
PCB COMPOUNDS BY 8081/8080

LOCATION	SB05-081	SB05-082	SB05-082	SB05-083	SB05-083	SB05-084	SB05-084	SB05-085	SB05-085	SB05-085	SB05-086
SAMPLE NAME	S581@4-5	S582@0.5-1	S582@4-5	S583@0.5-1	S583@4-5	S584@0.5-1	S584@4-5	S585@0.5-1	S585@0.5-1D	S585@4-5	S586@0.5-1
SAMPLING DATE	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/24/1998	3/24/1998	3/24/1998	3/23/1998
AROCLOR 1016	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1221	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80
AROCLOR 1232	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1242	**88**	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1248	<50	<50	**25 J**	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1254	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1260	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50

Units in ug/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
PCB COMPOUNDS BY 8081/8080

LOCATION	SB05-086	SB05-086	SB05-087	SB05-087	SB05-088	SB05-088	SB05-089	SB05-089	SB05-090	SB05-090	SB05-091
SAMPLE NAME	S586@10-11	S586@4-5	S587@0.5-1	S587@4-5	S588@0.5-1	S588@4-5	S589@0.5-1	S589@4-5	S590@1.5-2	S590@4-5	S591@0.5-1
SAMPLING DATE	3/23/1998	3/23/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/23/1998
AROCLOR 1016	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1221	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80
AROCLOR 1232	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1242	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1248	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1254	<50	<50	<50	<50	<50	<50	<50	<50	**171**	<50	<50
AROCLOR 1260	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50

Units in ug/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
PCB COMPOUNDS BY 8081/8080

LOCATION	SB05-091	SB05-092	SB05-092	SB05-093	SB05-093	SB05-094	SB05-094	SB05-094	SB05-094
SAMPLE NAME	S591@4-5	S592@0.5-1	S592@4-5	S593@0.5-1	S593@4-5	S594@0.5-1	S594@10-11	S594@4-5	S594@4-5D
SAMPLING DATE	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998
AROCLOR 1016	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1221	<80	<80	<80	<80	<80	<80	<80	<80	<80
AROCLOR 1232	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1242	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1248	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1254	<50	<50	<50	<50	<50	<50	<50	<50	<50
AROCLOR 1260	<50	<50	<50	<50	<50	<50	<50	<50	<50

Units in ug/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
BTEX COMPOUNDS BY 8020/8020A/8021

LOCATION	JF-01	JF-02	JF-02	JF-03	JF-04	JF-05	SB01-003A	SB01-015A	SB01-015A	SB01-027	SB01-036
SAMPLE NAME	JF-01-9	JF-02-5	JF-02-9	JF-03-9	JF-04-9	JF-05-9	S103A@16-16.5	S115A@0.5-1	S115A@4.5-5	S127@0-1	S136@0-1
SAMPLING DATE	2/7/2001	2/8/2001	2/8/2001	1/2/2001	1/2/2001	1/2/2001	4/17/1998	4/16/1998	4/16/1998	3/19/1998	3/18/1998
BENZENE	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<0.005	<5	<5	<5	<5
TOLUENE	<2.5	**24**	<2.5	<2.5	**6.2**	<2.5	<0.005	<5	<5	<5	<5
ETHYLBENZENE	<2.5	**250**	**2480**	<2.5	<2.5	<2.5	<0.005	<5	<5	**2.8 J**	<5
XYLENES (TOTAL)	<5	**2040**	**4770**	**44**	**6.7 J**	<5	<0.015	<15	<15	**19**	<15

Units in ug/kg
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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
BTEX COMPOUNDS BY 8020/8020A/8021

LOCATION	SB01-038A	SB01-038A	SB01-070A	SB01-070B	SB01-070C	SB01-070C	SB01-070C	SB01-070D	SB02-005
SAMPLE NAME	S138A@0.5-1	S138A@4.5-5	S170A@8.5-9	S170B@10.5-11	S170B@6-6.5	S170C@10-11	S170C@10-11D	S170D@10-10.5	S205@4-5
SAMPLING DATE	4/17/1998	4/17/1998	4/20/1998	4/17/1998	4/17/1998	4/20/1998	4/20/1998	4/20/1998	3/26/1998
BENZENE	<5	<5	<0.4	<0.005	<0.005	<0.005	<0.005	<0.005	<5
TOLUENE	<5	<5	<0.4	<0.005	<0.005	<0.005	<0.005	<0.005	<5
ETHYLBENZENE	<5	<5	**3.5**	<0.005	<0.005	<0.005	<0.005	<0.005	<5
XYLENES (TOTAL)	<15	<15	**7.5**	**0.013 J**	<0.015	<0.015	<0.015	<0.015	<15

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
BTEX COMPOUNDS BY 8020/8020A/8021

LOCATION	SB03-023	SB05-045
SAMPLE NAME	S323@3.5-4.5	S545@0-1
SAMPLING DATE	3/26/1998	3/20/1998
BENZENE	<100	<5
TOLUENE	<100	<5
ETHYLBENZENE	<100	<5
XYLENES (TOTAL)	<300	<15

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	B-01	B-01	B-01	B-02	B-02	B-02	B-03	B-03	B-03	B-04	B-04	B-04
SAMPLE NAME	B1-10	B1-12	B1-8	B2-12	B2-14	B2-9	B3-11	B3-13	B3-8	B4-11	B4-13	B4-9
SAMPLING DATE	11/7/1996	11/7/1996	11/7/1996	11/7/1996	11/7/1996	11/7/1996	11/7/1996	11/7/1996	11/7/1996	11/7/1996	11/7/1996	11/7/1996
ANTIMONY	19	12	31	14	8.5	17	<5	17	11	12	9.3	14
ARSENIC	<3	<3	44	2.9	<3	<3	<3	<3	<3	<3	<3	6.9
BARIUM	110	18	81	41	140	26	15	64	95	59	110	49
BERYLLIUM	<1	<1	1.5	<1	<1	<1	<1	<1	<1	<1	<1	<1
CADMIUM	1.3	1.7	<1	1.2	1.5	1.2	1.9	1	1.5	1.3	1.5	1.5
CHROMIUM	280	2.5	2700	5	1.2	7.2	<1	7.1	2.5	7.6	1.9	8.3
COBALT	20	5.2	120	5	3.8	5	1.2	5.4	3.8	4.2	3.6	5.3
COPPER	49	5.6	260	4.9	3.6	5.4	2.7	6.8	5.3	10	3.9	12
LEAD	20	2.9	83	8.4	<5	<5	<5	7.8	8.8	15	8.3	12
MERCURY	0.47	<0.05	0.39	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.15	<0.5	1.2
MOLYBDENUM	1.4	<1	8.7	<1	<1	<1	<1	<1	<1	<1	<1	<1
NICKEL	160	<1	2220	<1	<1	<1	<1	<1	<1	<1	<1	14
SELENIUM	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
SILVER	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
THALLIUM	5.1	<5	<5	6.1	<5	<5	<5	4.6	6	<5	5.1	4.5
VANADIUM	120	120	730	36	28	38	15	36	23	30	27	57
ZINC	81	81	810	27	16	29	13	28	21	28	20	46

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	B-05	B-05	B-05	B-06	B-06	B-06	B-07	B-07	B-07	B-08	B-08	B-08
SAMPLE NAME	B5-12	B5-7.5	B5-9	B6-14	B6-7	B6-9	B7-10	B7-12	B7-8	B8-10	B8-12	B8-7.5
SAMPLING DATE	11/7/1996	11/7/1996	11/7/1996	11/7/1996	11/7/1996	11/7/1996	11/7/1996	11/7/1996	11/7/1996	11/7/1996	11/7/1996	11/7/1996
ANTIMONY	13	19	16	13	15	20	5.1	5.3	17	5.1	<5	<5
ARSENIC	<3	16	4.9	12	<3	14	7.9	8.4	6.2	9.6	<3	3.2
BARIUM	64	130	63	93	79	110	62	84	200	100	39	39
BERYLLIUM	<1	1.4	<1	<1	<1	1.3	<1	<1	<1	<1	<1	<1
CADMIUM	1.2	1.1	1.3	<1	1.2	<1	1.6	1.6	<1	1.4	1.4	2
CHROMIUM	5.2	180	65	8	16	750	1.8	4.8	12	3.2	<1	2
COBALT	5.5	23	9.6	5.2	5.5	40	3	4.1	7.2	3.8	3.6	3.1
COPPER	12	93	34	7.5	13	150	3.1	6.3	8.7	4.6	2.7	3.8
LEAD	6.8	67	11	<5	14	53	<5	5.1	<5	<5	<5	<5
MERCURY	<0.05	0.13	<0.05	<0.05	<0.05	0.33	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
MOLYBDENUM	<1	3.6	<1	<1	<1	6.8	<1	<1	<1	<1	<1	<1
NICKEL	<1	330	64	<1	15	630	<1	<1	2.3	<1	<1	<1
SELENIUM	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
SILVER	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
THALLIUM	4.7	<5	<5	<5	<5	5.6	<5	<5	<5	<5	<5	<5
VANADIUM	26	880	67	36	53	900	15	17	33	18	11	21
ZINC	40	83	100	33	57	130	20	24	35	20	12	29

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	B-09	B-09	B-09	B-09	B-10	B-10	B-11	B-11	B-12	B-13	B-13
SAMPLE NAME	B9-13A	B9-6	B9-8	B9-9	B10-10	B10-7.5	B11-6	B11-9	B12-9	B13-8.5	B13-9.0
SAMPLING DATE	11/10/1997	11/10/1997	11/10/1997	11/10/1997	11/10/1997	11/10/1997	11/10/1997	11/10/1997	11/10/1997	11/10/1997	11/10/1997
ANTIMONY	--	--	--	--	--	--	--	--	--	--	--
ARSENIC	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BARIUM	--	--	--	--	--	--	--	--	--	--	--
BERYLLIUM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CADMIUM	--	--	--	--	--	--	--	--	--	--	--
CHROMIUM	**9**	**8.3**	**26**	**7.1**	**9.3**	**8.8**	**7.1**	**3.1**	**5**	**36**	**37**
COBALT	--	--	--	--	--	--	--	--	--	--	--
COPPER	--	--	--	--	--	--	--	--	--	--	--
LEAD	<0.5	**5.6**	**5.8**	**0.84**	**0.66**	<0.5	**0.79**	<0.5	**2.6**	**7.2**	**5.4**
MERCURY	--	--	--	--	--	--	--	--	--	--	--
MOLYBDENUM	--	--	--	--	--	--	--	--	--	--	--
NICKEL	**4.8**	**11**	**21**	**8.4**	**4.8**	**4**	**3.4**	**2.1**	**3.4**	**30**	**39**
SELENIUM	--	--	--	--	--	--	--	--	--	--	--
SILVER	--	--	--	--	--	--	--	--	--	--	--
THALLIUM	--	--	--	--	--	--	--	--	--	--	--
VANADIUM	**21**	**28**	**24**	**11**	**20**	**24**	**16**	**7.9**	**13**	**55**	**56**
ZINC	--	--	--	--	--	--	--	--	--	--	--

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	B-13	B-14	B-15	B-16	B-16	B-17	B-17	B-17	B-18	B-18	B-19
SAMPLE NAME	B13-9.5	B14-8.0	B15-8	B16-8	B16-9	B17-10	B17-7.5	B17-8	B18-6	B18-8	B19-10
SAMPLING DATE	11/10/1997	11/10/1997	11/10/1997	11/10/1997	11/10/1997	11/10/1997	11/10/1997	11/10/1997	11/10/1997	11/10/1997	11/10/1997
ANTIMONY	--	--	--	--	--	--	--	--	--	--	--
ARSENIC	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BARIUM	--	--	--	--	--	--	--	--	--	--	--
BERYLLIUM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CADMIUM	--	--	--	--	--	--	--	--	--	--	--
CHROMIUM	**8.3**	**7**	**7**	**110**	**23**	**6.9**	**5.4**	**4.8**	**12**	**12**	**4.1**
COBALT	--	--	--	--	--	--	--	--	--	--	--
COPPER	--	--	--	--	--	--	--	--	--	--	--
LEAD	**1.5**	<0.5	**2.4**	**12**	**4.9**	<0.5	**0.89**	<0.5	**1.7**	<0.5	<0.5
MERCURY	--	--	--	--	--	--	--	--	--	--	--
MOLYBDENUM	--	--	--	--	--	--	--	--	--	--	--
NICKEL	**6.1**	**5.3**	**4.5**	**89**	**24**	**3.7**	**4**	**2.5**	**12**	**5.5**	**1.8**
SELENIUM	--	--	--	--	--	--	--	--	--	--	--
SILVER	--	--	--	--	--	--	--	--	--	--	--
THALLIUM	--	--	--	--	--	--	--	--	--	--	--
VANADIUM	**18**	**15**	**16**	**120**	**34**	**15**	**12**	**13**	**35**	**26**	**11**
ZINC	--	--	--	--	--	--	--	--	--	--	--

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	B-19	B-20	B-20	B-21	B-21	B-21	B-22	B-22	B-23	B-23	FI-01
SAMPLE NAME	B19-8	B20-10	B20-8	B21-10	B21-11	B21-11.5	B22-12	B22-9	B23-11	B23-9.5	FI-1-10
SAMPLING DATE	11/10/1997	11/10/1997	11/10/1997	11/10/1997	11/10/1997	11/10/1997	11/10/1997	11/10/1997	11/10/1997	11/10/1997	1/2/2001
ANTIMONY	--	--	--	--	--	--	--	--	--	--	<5
ARSENIC	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5
BARIUM	--	--	--	--	--	--	--	--	--	--	**46.1**
BERYLLIUM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.3
CADMIUM	--	--	--	--	--	--	--	--	--	--	<1.3
CHROMIUM	**6.1**	**14**	**20**	**7.5**	**7.6**	**11**	**7.8**	**11**	**9.9**	**9.8**	**9.9**
COBALT	--	--	--	--	--	--	--	--	--	--	**3.7**
COPPER	--	--	--	--	--	--	--	--	--	--	**18.1**
LEAD	<0.5	**2.5**	**16**	**1.2**	<0.5	**0.97**	**1.3**	<0.5	**0.88**	**1.2**	<2.5
MERCURY	--	--	--	--	--	--	--	--	--	--	<0.1
MOLYBDENUM	--	--	--	--	--	--	--	--	--	--	<2.5
NICKEL	**3.1**	**11**	**11**	**4.5**	**3.8**	**5.6**	**3.4**	**6**	**4.7**	**5.3**	**4.5**
SELENIUM	--	--	--	--	--	--	--	--	--	--	<5
SILVER	--	--	--	--	--	--	--	--	--	--	<2.5
THALLIUM	--	--	--	--	--	--	--	--	--	--	<5
VANADIUM	**16**	**31**	**28**	**36**	**32**	**18**	**19**	**22**	**22**	**21**	**30.1**
ZINC	--	--	--	--	--	--	--	--	--	--	**26**

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	FI-01	FI-01	FI-02	FI-02	FI-02	FI-03	FI-03	FI-03	FI-04	FI-04	FI-04	FI-05	FI-05
SAMPLE NAME	FI-1-4	FI-1-8	FI-2-10	FI-2-4	FI-2-8	FI-3-10	FI-3-4	FI-3-8	FI-4-10	FI-4-4	FI-4-8	FI-5-10	FI-5-4
SAMPLING DATE	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001
ANTIMONY	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
ARSENIC	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
BARIUM	**56.3**	**64.5**	**52.2**	**71.8**	**76.8**	**93.2**	**61.2**	**34.8**	**62.6**	**48.7**	**93.6**	**59.5**	**105**
BERYLLIUM	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3
CADMIUM	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3
CHROMIUM	**13**	**29**	**5.8**	**78.1**	**8**	**7.4**	**7.3**	**4.1**	**5.8**	**10.6**	**8.5**	**6.9**	**9.1**
COBALT	**4.6**	**5.1**	**3.3**	**8.5**	**4.7**	**5.6**	**5**	<2.5	**3.5**	**6.4**	**9.7**	**5.2**	**5.8**
COPPER	**7.5**	**23.6**	**12.8**	**101**	**11.1**	**17.6**	**8.7**	**3**	**7.6**	**11.9**	**7.9**	**11.3**	**6.7**
LEAD	**5.5**	**7.9**	**2.9**	**18.8**	**3.7**	**3.5**	**3**	**3.4**	**3.8**	**4.3**	**5**	**4.7**	**4.6**
MERCURY	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MOLYBDENUM	**8.9**	<2.5	<2.5	**3.8**	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
NICKEL	**9**	**28.9**	**2.8**	**73.8**	**3.9**	**5.8**	**4.2**	<2.5	**2.7**	**5.3**	**4.9**	**3.4**	**4.2**
SELENIUM	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
SILVER	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
THALLIUM	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
VANADIUM	**29.4**	**47.4**	**15.8**	**115**	**21.7**	**17.8**	**23.4**	**11.4**	**16.7**	**35**	**30.5**	**22.6**	**39.4**
ZINC	**22.3**	**31.7**	**28.7**	**109**	**26.8**	**27.5**	**25.2**	**9**	**19.6**	**31**	**32.6**	**25.9**	**29.2**

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	FI-05	FI-06	FI-06	FI-07	FI-08	FI-08	FI-09	FI-09	FI-10	FI-10	FI-10	FI-11	FI-11
SAMPLE NAME	FI-5-8	FI-6-10	FI-6-5	FI-7-10	FI-8-10	FI-8-8	FI-9-10	FI-9-8	FI-10-2	FI-10-4	FI-10-6	FI-11-2	FI-11-4
SAMPLING DATE	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001
ANTIMONY	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
ARSENIC	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
BARIUM	**105**	**26.2**	**43.9**	**55.3**	**61.3**	**52.7**	**14.3**	**30.5**	**37.9**	**32.5**	**60.6**	**64**	**22.7**
BERYLLIUM	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3
CADMIUM	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3
CHROMIUM	**9.1**	**10.8**	**8**	**12.5**	**7.8**	**9**	**3.7**	**2.9**	**7.1**	**83.8**	**7**	**64.7**	<2.5
COBALT	**5.8**	**2.9**	**4.8**	**3.6**	**3.9**	**5.6**	<2.5	<2.5	**12.5**	**10.1**	**4.7**	**7.9**	<2.5
COPPER	**6.7**	**5.16**	**9.8**	**32.9**	**5.8**	**6.7**	<2.5	<2.5	**7.9**	**50.8**	**3.4**	**42.5**	<2.5
LEAD	**2.5**	**5.8**	**13.6**	**2.6**	**3.9**	<2.5	**2.7**	<2.5	**4.4**	**22.7**	**3.1**	**14.8**	<2.5
MERCURY	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**0.1**	<0.1	<0.1	<0.1
MOLYBDENUM	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	**8.3**	<2.5	**4.3**	<2.5
NICKEL	**5.6**	**18.2**	**31.1**	**18.2**	**4.1**	**5.8**	<2.5	<2.5	**42.5**	**72.3**	**4**	**58.2**	<2.5
SELENIUM	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
SILVER	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
THALLIUM	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
VANADIUM	**23.3**	**25.7**	**48.9**	**23.3**	**19**	**23.2**	**9.8**	**9.3**	**46.5**	**121**	**21.3**	**88.5**	**8.2**
ZINC	**39.8**	**21.3**	**36.6**	**38.5**	**20.2**	**27**	**7.3**	**9.8**	**48.4**	**132**	**14.9**	**68.1**	**11.6**

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	FI-11	FI-12	FI-12	FI-12	FI-13	FI-13	FI-13	FI-14	FI-14	FI-14	FI-15	FI-15	FI-15
SAMPLE NAME	FI-11-6	FI-12-2	FI-12-4	FI-12-6	FI-13-2	FI-13-4	FI-13-6	FI-14-2	FI-14-4	FI-14-6	FI-15-2	FI-15-4	FI-15-6
SAMPLING DATE	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001
ANTIMONY	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
ARSENIC	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
BARIUM	**23**	**85.9**	**96.4**	**46.4**	**84**	**74.1**	**33**	**75.3**	**65.8**	**39.3**	**117**	**62.4**	**76.2**
BERYLLIUM	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3
CADMIUM	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3
CHROMIUM	**24.2**	**27.6**	**9.4**	**5.2**	**118**	**8.8**	**9.1**	**31.3**	**5.9**	**7.2**	**5.9**	**8.1**	**7.1**
COBALT	<2.5	**6.5**	**7**	**2.9**	**7.4**	**3.2**	**4.3**	**5.9**	**4.6**	**2.8 J**	**5.7**	**4.9**	**4.1**
COPPER	**4.2**	**16.6**	**4.6**	**3.4**	**29.6**	**3.6**	**6**	**13.6**	**4.7**	**3.3 J**	**4.4**	**4.4**	**4.1**
LEAD	**3.3**	**11.7**	**4.8**	**3.2**	**16.2**	**3.9**	**8.5**	**13.6**	**4.5**	**4.4 J**	**6.1**	<2.5	**3.6**
MERCURY	<0.1	<0.1	<0.1	<0.1	**0.15**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MOLYBDENUM	**9.4**	<2.5	<2.5	<2.5	**5.3**	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
NICKEL	**5.3**	**25.3**	**6.2**	**3**	**56.1**	**3.3**	**4.6**	**34.3**	**2.8**	<2.5	**3.2**	**4.5**	**4**
SELENIUM	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
SILVER	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
THALLIUM	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
VANADIUM	**10**	**54.7**	**26.5**	**18**	**72**	**26**	**21.6**	**62.7**	**41.6**	**19.9**	**39.9**	**26.3**	**27.4**
ZINC	**16.7**	**57.2**	**22.7**	**17.7**	**83.7**	**15.8**	**18.4**	**34.3**	**31**	**15.4**	**34.4**	**19.1**	**17.5**

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	FI-16	FI-16	FI-16	FI-17	FI-17	FI-17	FI-18	FI-18	FI-18	FI-19	FI-19	FI-19	FI-20
SAMPLE NAME	FI-16-2	FI-16-4	FI-16-6	FI-17-2	FI-17-4	FI-17-6	FI-18-2	FI-18-4	FI-18-6	FI-19-2	FI-19-4	FI-19-6	FI-20-2
SAMPLING DATE	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001
ANTIMONY	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
ARSENIC	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	**8.3**
BARIUM	**90.2**	**64.6**	**58.3**	**86.1**	**91.8**	**71.3**	**74.3**	**56.8**	**59.5**	**71.9**	**66.1**	**48.5**	**80.8**
BERYLLIUM	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3
CADMIUM	<1.3	<1.3	<2.5	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3
CHROMIUM	**147**	**7.7**	**7.9**	**28.8**	**2.76**	**41.3**	**37.3**	**20.6**	**24**	**69.3**	**61**	**81.2**	**96**
COBALT	**17**	**5**	**4.4**	**5.6**	**13.2**	**5.9**	**6.6**	**6.1**	**7.7**	**7.5**	**9.6**	**4.1**	**10.7**
COPPER	**36**	**3.7**	**4.4**	**30.5**	**120**	**13.7**	**22.9**	**24.2**	**47.3**	**51.4**	**23.1**	**55.2**	**61.8**
LEAD	**18.5**	**3.7**	**3.6**	**14**	**29.6**	**6.9**	**12.8**	**16.2**	**31.5**	**28.7**	**23.4**	**15.5**	**25.1**
MERCURY	<0.1	<0.1	<2.5	<0.1	**0.3**	<0.1	<0.1	<0.1	<0.1	**0.1**	**0.1**	**0.25**	**0.1**
MOLYBDENUM	**4.4**	<2.5	<2.5	**4.6**	**7.8**	<2.5	<2.5	**5.2**	**12.7**	**10.2**	<2.5	**3.8**	**9.3**
NICKEL	**156**	**4.5**	**4**	**33.1**	**138**	**24.7**	**35**	**34.8**	**28.6**	**54.5**	**84.9**	**22.1**	**88.2**
SELENIUM	<5	<5	<2.5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
SILVER	<2.5	<2.5	<5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
THALLIUM	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
VANADIUM	**166**	**24.9**	**24.5**	**50.5**	**207**	**60.7**	**61**	**47.9**	**49.6**	**128**	**95.6**	**54.4**	**159**
ZINC	**73.2**	**17.3**	**22.9**	**75.1**	**130**	**29.1**	**71.5**	**85.8**	**184**	**134**	**52.3**	**42.3**	**125**

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SAN DIEGO GAS & ELECTRIC
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LOCATION	FI-20	FI-20	FI-21	FI-21	FI-21	SB01-001	SB01-001	SB01-002	SB01-002	SB01-002	SB01-003	SB01-003
SAMPLE NAME	FI-20-4	FI-20-6	FI-21-2	FI-21-4	FI-21-6	S101@0.5-1	S101@5-6	S102@0.5-1	S102@14-15	S102@5-6	S103@0.5-1	S103@0.5-1D
SAMPLING DATE	1/2/2001	1/2/2001	1/2/2001	1/2/2001	1/2/2001	3/17/1998	3/19/1998	3/17/1998	3/17/1998	3/17/1998	3/18/1998	3/18/1998
ANTIMONY	<5	<5	<5	<5	<5	<6	<6	<6	<6	<6	<6	<6
ARSENIC	<5	<5	<5	**7.4**	<5	**12**	--	**2.3**	**2.3**	**2.6**	**1.9**	**1.8**
BARIUM	**40.9**	**37**	**83.1**	**61.9**	**53.9**	**60**	**18 J**	**190**	**37**	**69**	**95**	**51**
BERYLLIUM	<1.3	<1.3	<1.3	<1.3	<1.3	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5
CADMIUM	<1.3	<1.3	<1.3	<1.3	<1.3	<2	<2	<2	<2	<2	<2	<2
CHROMIUM	**26.6**	**8**	**13.6**	**183**	**7.4**	**9.4**	--	**17**	**11**	**16**	**9.7**	**9.3**
COBALT	**4.7**	**4.3**	**4.5**	**17.1**	**3.1**	**4.6 J**	<5	**6.8**	**6.4**	**6.3**	**3.7 J**	<5
COPPER	**13.2**	**7.2**	**7.1**	**33.6**	**3.8**	**5.6**	--	**7.3**	**5**	**6**	**3.4**	**5.1**
LEAD	**16.4**	**7.2**	**8.3**	**18.5**	**4.4**	**10**	**0.81**	**6.8**	**3.7**	**6.7**	**2.8**	**3.6**
MERCURY	**0.1**	<0.1	<0.1	**0.25**	<0.1	**0.052**	<0.05	<0.05	<0.05	**0.032 J**	<0.05	<0.05
MOLYBDENUM	<2.5	<2.5	<2.5	<2.5	<2.5	<10	--	<10	<10	<10	<10	<10
NICKEL	**44**	**8.8**	**7**	**180**	**3.9**	**28**	**2.1 J**	**15**	**10**	**14**	**8.1**	**8**
SELENIUM	<5	<5	<5	<5	<5	<1	--	<1	<1	<1	<1	<1
SILVER	<2.5	<2.5	<2.5	<2.5	<2.5	<2	<2	<2	<2	<2	<2	<2
THALLIUM	<5	<5	<5	<5	<5	<1	--	<1	<1	<1	<1	<1
VANADIUM	**57.1**	**28**	**37.4**	**126**	**26.7**	**46**	**9**	**31**	**26**	**34**	**24**	**24**
ZINC	**37.2**	**17.6**	**24.3**	**96.6**	**16.1**	**32**	--	**35**	**20**	**30**	**20**	**24**

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
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METAL COMPOUNDS BY 6010/7471

LOCATION	SB01-003	SB01-003	SB01-003A	SB01-004	SB01-004	SB01-004	SB01-005	SB01-005	SB01-005	SB01-006
SAMPLE NAME	S103@14-15	S103@4-5	S103A@16-16.5	S104@0.5-1	S104@14-15	S104@4-5	S105@0.5-1	S105@14-15	S105@4-5	S106@0.5-1
SAMPLING DATE	3/18/1998	3/18/1998	4/17/1998	3/18/1998	3/18/1998	3/18/1998	3/18/1998	3/18/1998	3/18/1998	3/18/1998
ANTIMONY	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
ARSENIC	**2**	**1.4**	**1.2**	**1.1**	**2.2**	**1.5**	**1.5**	**1.8**	**0.54**	**2.1**
BARIUM	**330**	**30**	**29**	**20**	**19 J**	**16 J**	**22**	**140**	**20**	**78**
BERYLLIUM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.25 J**	<0.5	<0.5
CADMIUM	<2	<2	<02	<2	<2	<2	<2	<2	<2	<2
CHROMIUM	**6.8**	**7.2**	**12**	**7**	**8.9**	**10**	**8**	**11**	**4.7**	**11**
COBALT	**1.3**	**2.9 J**	**4.3 J**	**3.5 J**	**2.6 J**	**4.7 J**	**3.2 J**	**5.5**	**2.6 J**	**4 J**
COPPER	**1.9 J**	**3.5**	**5.9**	**3.1**	**3.3**	**2.8**	**3.6**	**3.7**	**3.4**	**4.8**
LEAD	**2**	**2.9**	**4.9**	**3**	**3.6**	**3.6**	**3.4**	**3.8**	**1.9**	**4.4**
MERCURY	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	**0.039 J**	<0.05	<0.05
MOLYBDENUM	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
NICKEL	**5.7**	**6.3**	**12**	**6.1**	**7.9**	**8.2**	**6.6**	**10**	**3.9 J**	**9.6**
SELENIUM	<1	<1	<01	<1	<1	<1	<1	<1	<1	<1
SILVER	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
THALLIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
VANADIUM	**23**	**20**	**31**	**18**	**28**	**25**	**21**	**34**	**13**	**27**
ZINC	**15**	**15**	**22**	**14**	**20**	**22**	**16**	**23**	**11**	**24**

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METAL COMPOUNDS BY 6010/7471

LOCATION	SB01-006	SB01-006	SB01-007	SB01-007	SB01-008	SB01-008	SB01-008	SB01-009	SB01-009	SB01-009	SB01-010
SAMPLE NAME	S106@14-15	S106@4-5	S107@0-1	S107@5-6	S108@0.5-1	S108@14-15	S108@4-5	S109@0-1	S109@10-11	S109@5-6	S110@0-1
SAMPLING DATE	3/18/1998	3/18/1998	3/19/1998	3/19/1998	3/18/1998	3/18/1998	3/18/1998	3/19/1998	3/19/1998	3/19/1998	3/19/1998
ANTIMONY	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
ARSENIC	**0.94**	**1.5**	**2.1**	**0.65**	**1.5**	**1.7**	**1.1**	**2.4**	**1.9**	**1.9**	**2.3**
BARIUM	**14 J**	**52**	**90**	**14 J**	**51**	<20	**34**	**93**	**86**	**60**	**120**
BERYLLIUM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CADMIUM	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
CHROMIUM	**7.7**	**6.3**	**14**	**3.2**	**8.8**	**4.7**	**7.6**	**17**	**13**	**9.1**	**14**
COBALT	**2.7 J**	**2.6 J**	**5.7**	<5	**3.7 J**	<5	**2.8 J**	**5.4**	**4.2 J**	**3.6 J**	**5.2**
COPPER	**3.9**	**3.1**	**6.3**	<2.5	**4.1**	**1.3 J**	**2.6**	**6.7**	**5.4**	**4.1**	**6**
LEAD	**3**	**2.7**	**6.5**	**0.59**	**3.5**	**1.5**	**2.7**	**6.1**	**3.1**	**3.6**	**8**
MERCURY	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	**0.03 J**	<0.05	<0.05
MOLYBDENUM	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
NICKEL	**6.3**	**5.2**	**13**	**2.3 J**	**7.8**	**4.2**	**6.9**	**15**	**10**	**7.8**	**15**
SELENIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
SILVER	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
THALLIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
VANADIUM	**19**	**19**	**23**	**6.5**	**24**	**21**	**21**	**32**	**29**	**23**	**30**
ZINC	**16**	**13**	**32**	**5**	**20**	**9.5**	**16**	**37**	**28**	**19**	**32**

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LOCATION	SB01-011	SB01-011	SB01-011	SB01-012	SB01-012	SB01-013	SB01-013	SB01-014	SB01-014	SB01-014	SB01-014	SB01-015
SAMPLE NAME	S111@0-1	S111@10-11	S111@5-6	S112@0-1	S112@5-6	S113@0-1	S113@5-6	S114@0-1	S114@0-1D	S114@10-11	S114@5-6	S115@0-1
SAMPLING DATE	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/19/1998	3/19/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/18/1998
ANTIMONY	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
ARSENIC	**2.2**	**3**	**1.5**	**2**	**1.6**	--	**1.4**	**2.1**	**2.5**	**2.6**	**2.1**	**1.5**
BARIUM	**61**	**16 J**	**20**	**81**	**42**	**30**	**71**	**83**	**170**	**240**	**92**	**78**
BERYLLIUM	<0.5	<0.5	<0.5	<0.5	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CADMIUM	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
CHROMIUM	**9.6**	**6.9**	**7.9**	**15**	**6.2**	--	**6.2**	**15**	**13**	**11**	**8.1**	**11**
COBALT	**3.7 J**	**2.6 J**	**3.3 J**	**4 J**	<5	**2.5 J**	<5	**4.8 J**	**5.4**	**3.6 J**	**5.9**	**3.7 J**
COPPER	**10**	**3**	**2.7**	**5.5**	**2.5**	--	**2.2 J**	**7.6**	**7.1**	**3.4**	**5**	**5**
LEAD	**4.7**	**1.9**	**2.8**	**5.5**	**2.1**	**2.2**	**2.6**	**4.6**	**5.7**	**2.7**	**5.1**	**4.2**
MERCURY	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
MOLYBDENUM	<10	<10	<10	<10	<10	--	<10	<10	<10	<10	<10	<10
NICKEL	**9.2**	**5.3**	**6.3**	**12**	**4.9**	**6**	**5.6**	**13**	**11**	**8**	**8.4**	**9**
SELENIUM	<1	<1	<1	<1	<1	--	<1	<1	<1	<1	<1	<1
SILVER	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
THALLIUM	<1	<1	<1	<1	<1	--	<1	<1	<1	<1	<1	<1
VANADIUM	**27**	**22**	**27**	**29**	**19**	**20**	**14**	**25**	**22**	**33**	**17**	**26**
ZINC	**31**	**15**	**15**	**34**	**12**	--	**16**	**34**	**32**	**19**	**20**	**24**

Units in mg/kg
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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	SB01-015	SB01-015A	SB01-015A	SB01-016	SB01-016	SB01-017	SB01-017	SB01-018	SB01-018	SB01-018	SB01-019
SAMPLE NAME	S115@5-6	S115A@0.5-1	S115A@4.5-5	S116@0-1	S116@5-6	S117@0-1	S117@5-6	S118@0-1	S118@10-11	S118@4-5	S119@0-1
SAMPLING DATE	3/18/1998	4/16/1998	4/16/1998	3/17/1998	3/17/1998	3/17/1998	3/17/1998	3/17/1998	3/17/1998	3/17/1998	3/18/1998
ANTIMONY	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
ARSENIC	**2**	**1**	**0.9**	**2.7**	**3.7**	**3**	**2.6**	**2.7**	**2.5**	**0.89**	**2.7**
BARIUM	**51**	**130**	**67**	**82**	**51**	**100**	**27**	**47**	**150**	**18**	**140**
BERYLLIUM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.3 J**
CADMIUM	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
CHROMIUM	**11**	**20**	**6.9**	**10**	**11**	**13**	**11**	**9.9**	**11**	**4.8**	**15**
COBALT	**3.8 J**	**8.2**	**2.8 J**	**6.4**	**4.6 J**	**5.9**	**4.3 J**	**4.7 J**	**3.3 J**	**3.3 J**	**5.6**
COPPER	**4.3**	**9.1**	**3.4**	**6.5**	**7.4**	**9.7**	**5.4**	**4.3**	**2.7**	**3.3**	**6.9**
LEAD	**4.7**	**7.6**	**3.3**	**5.2**	**2.4**	**8.4**	**3.1**	**4.6**	**2.8**	**1.7**	**6.6**
MERCURY	<0.05	<0.1	<0.1	<0.05	<0.05	**0.033 J**	<0.05	<0.05	**0.057**	<0.05	<0.05
MOLYBDENUM	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
NICKEL	**9.2**	**23**	**8.3**	**9.9**	**8.6**	**13**	**9.2**	**8.8**	**7.5**	**3.6 J**	**14**
SELENIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
SILVER	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
THALLIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
VANADIUM	**23**	**44**	**18**	**22**	**32**	**26**	**28**	**28**	**24**	**14**	**28**
ZINC	**24**	**40**	**15**	**25**	**25**	**33**	**23**	**21**	**18**	**9.2**	**35**

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	SB01-019	SB01-019	SB01-020	SB01-020	SB01-020	SB01-020	SB01-021	SB01-021	SB01-022	SB01-022	SB01-023
SAMPLE NAME	S119@0-1D	S119@5-6	S120@0-1	S120@0-1D	S120@14-15	S120@5-6	S121@0-1	S121@4-5	S122@0.5-1	S122@4-5	S123@0.5-1
SAMPLING DATE	3/18/1998	3/18/1998	3/16/1998	3/16/1998	3/16/1998	3/16/1998	3/17/1998	3/17/1998	3/17/1998	3/17/1998	3/17/1998
ANTIMONY	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
ARSENIC	**1.9**	**1**	**3.9**	**4**	**2**	**1.1**	**2.6**	**1.5**	**2.9**	**2.7**	**3**
BARIUM	**140**	**59**	**53**	**59**	**82**	**25**	**120**	**23**	**80**	**38**	**54**
BERYLLIUM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CADMIUM	<2	<2	<2	<2	<2	<2	<2	<2	<2	**8.7**	<2
CHROMIUM	**11**	**3.3**	**7.5**	**9.3**	**14**	**8.3**	**10**	**6.1**	**12**	**4.2**	**7.6**
COBALT	**4.3 J**	<5	**3.7**	**4.3**	**7.1**	**4.7**	**7.1**	**3.1 J**	**5.5**	**4**	**3.7 J**
COPPER	**5.3**	<2.5	**3.7**	**6.1**	**8.3**	**5.9**	**6.6**	**7**	**5.2**	**3**	**3.6**
LEAD	**5**	**1.4**	**5.7**	**7.3**	**3.7**	**3.6**	**6.8**	**25**	**5.8**	<0.4	**3.3**
MERCURY	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	**0.036 J**	<0.05	<0.05	<0.05
MOLYBDENUM	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
NICKEL	**10**	**2.3 J**	**7.1**	**8**	**11**	**5.8**	**11**	**5.2**	**10**	**7.5**	**6.9**
SELENIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
SILVER	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
THALLIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
VANADIUM	**25**	**9.1**	**22**	**23**	**46**	**18**	**23**	**15**	**30**	**23**	**22**
ZINC	**27**	**5.8**	**23**	**26**	**33**	**18**	**27**	**63**	**27**	**16**	**24**

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	SB01-023	SB01-024	SB01-024	SB01-024	SB01-025	SB01-025	SB01-026	SB01-026	SB01-027	SB01-027	SB01-028
SAMPLE NAME	S123@4-5	S124@0.5-1	S124@10-11	S124@5-6	S125@0-1	S125@4-5	S126@0-1	S126@4-5	S127@0-1	S127@0-1D	S128@0-1
SAMPLING DATE	3/17/1998	3/19/1998	3/19/1998	3/19/1998	3/17/1998	3/17/1998	3/17/1998	3/17/1998	3/19/1998	3/19/1998	3/19/1998
ANTIMONY	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
ARSENIC	**1.1**	**1.5**	**1.2**	**2.5**	**2.8**	**2.5**	**3**	**1.9**	**3.4**	**3.3**	**1.4**
BARIUM	**21**	**59**	**20**	**83**	**66**	**71**	**94**	**88**	**37**	**45**	**23**
BERYLLIUM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CADMIUM	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
CHROMIUM	**5.3**	**8.5**	**4.8**	**9.4**	**11**	**14**	**16**	**14**	**8.1**	**9.9**	**11**
COBALT	**3.3 J**	**4.2 J**	**3.1 J**	**4.2 J**	**4.7 J**	**5.5**	**6.8**	**4.2 J**	<5	**2.9 J**	**3.1 J**
COPPER	**4**	**5**	**3.1**	**4.8**	**5.5**	**5.8**	**11**	**5.8**	**14**	**17**	**4.3**
LEAD	**2.4**	**3.5**	**1.7**	**3.6**	**4.9**	**4.9**	**10**	**4.4**	**7.3**	**7.4**	**1.7**
MERCURY	<0.05	**0.58**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	**0.68**	**0.71**	<0.05
MOLYBDENUM	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
NICKEL	**4.1**	**7.5**	**3.7 J**	**8.3**	**11**	**12**	**16**	**11**	**9.9**	**11**	**7.9**
SELENIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
SILVER	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
THALLIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
VANADIUM	**15**	**22**	**16**	**23**	**28**	**24**	**42**	**26**	**24**	**28**	**37**
ZINC	**11**	**19**	**9.4**	**22**	**24**	**30**	**42**	**29**	**25**	**24**	**19**

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	SB01-028	SB01-029	SB01-029	SB01-030	SB01-030	SB01-030	SB01-031	SB01-031	SB01-032	SB01-032	SB01-033
SAMPLE NAME	S128@3-3.5	S129@0-1	S129@2.5-3	S130@0-1	S130@0-1D	S130@4.5-5	S131@0-1	S131@4-5	S132@0-1	S132@4.5-5.5	S133@0-1
SAMPLING DATE	3/19/1998	3/19/1998	3/19/1998	3/16/1998	3/16/1998	3/16/1998	3/17/1998	3/18/1998	3/18/1998	3/18/1998	3/18/1998
ANTIMONY	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
ARSENIC	**3**	**2.6**	**1.8**	**1.6**	**1.2**	**4.3**	**3.3**	**2.9**	**3.8**	**1.8**	**3.2**
BARIUM	**88**	**87**	**17**	**120**	**99**	**61**	**110**	**31**	**67**	<20	**77**
BERYLLIUM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CADMIUM	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
CHROMIUM	**14**	**16**	**7.3**	**20**	**16**	**10**	**14**	**13**	**14**	**6.9**	**12**
COBALT	**5.6**	**5.5**	**3.2 J**	**11**	**9.3**	**5.5**	**5.7**	**4.9 J**	<5	<5	<5
COPPER	**5.9**	**6.6**	**3.1**	**15**	**13**	**5.4**	**8.2**	**7**	**12**	**3.7**	**6.7**
LEAD	**5.2**	**5.5**	**0.83**	**5.9**	**4.7**	**3.7**	**7.2**	**2**	**150**	**1**	**40**
MERCURY	<0.05	<0.05	<0.05	<0.05	<0.05	**0.034 J**	<0.05	<0.05	**0.37**	**0.11**	<0.05
MOLYBDENUM	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
NICKEL	**13**	**13**	**5.6**	**15**	**12**	**9.6**	**12**	**9.4**	**9.7**	**5.4**	**9.4**
SELENIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
SILVER	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
THALLIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
VANADIUM	**32**	**25**	**16**	**67**	**52**	**31**	**33**	**26**	**37**	**16**	**28**
ZINC	**32**	**34**	**14**	**40**	**37**	**24**	**32**	**24**	**42**	**14**	**26**

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	SB01-033	SB01-034	SB01-034	SB01-035	SB01-035	SB01-035	SB01-036	SB01-036	SB01-037	SB01-037	SB01-038
SAMPLE NAME	S133@3-3.5	S134@0-1	S134@3-3.5	S135@0-1	S135@5.5-6	S135@6.5-7	S136@0-1	S136@4.5-5	S137@0-1	S137@3-3.5	S138@0-1
SAMPLING DATE	3/18/1998	3/18/1998	3/18/1998	3/19/1998	3/19/1998	3/19/1998	3/18/1998	3/18/1998	3/18/1998	3/18/1998	3/19/1998
ANTIMONY	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
ARSENIC	**3.7**	**2.4**	**2.7**	**2.5**	**2.5**	**2.5**	**0.75**	**2.8**	**1.9**	**1.9**	**1.4**
BARIUM	**43**	**120**	**29**	**64**	**130**	**150**	**74**	**29**	**53**	<20	**26**
BERYLLIUM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CADMIUM	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
CHROMIUM	**18**	**16**	**10**	**15**	**11**	**12**	**190**	**12**	**12**	**6**	**12**
COBALT	**6.2**	**5.9**	<5	**5.4**	**4.8 J**	**5.1**	<5	<5	<5	<5	**2.9 J**
COPPER	**9.4**	**7.9**	**8.3**	**7.7**	**6.1**	**6.3**	**9.6**	**5.5**	**4.2**	**2.5**	**4.4**
LEAD	**2.5**	**4.2**	**3.3**	**5.3**	**5.4**	**6.4**	**30**	**1.8**	**28**	**0.71**	**6.5**
MERCURY	<0.05	<0.05	<0.05	<0.05	**0.26**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
MOLYBDENUM	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
NICKEL	**11**	**11**	**7.8**	**15**	**10**	**12**	**22**	**7.9**	**6.1**	**4**	**8.3**
SELENIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
SILVER	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
THALLIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
VANADIUM	**37**	**38**	**24**	**34**	**27**	**28**	**45**	**24**	**21**	**13**	**27**
ZINC	**37**	**35**	**27**	**35**	**28**	**30**	**29**	**23**	**20**	**12**	**24**

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	SB01-038	SB01-038A	SB01-038A	SB01-039	SB01-039	SB01-040	SB01-040	SB01-041	SB01-041	SB01-042	SB01-042
SAMPLE NAME	S138@5-5.5	S138A@0.5-1	S138A@4.5-5	S139@0.5-1	S139@4.5-5	S140@0.5-1	S140@3-3.5	S141@0-1	S141@5-5.5	S142@0-1	S142@0-1D
SAMPLING DATE	3/19/1998	4/17/1998	4/17/1998	3/19/1998	3/19/1998	3/19/1998	3/19/1998	3/18/1998	3/18/1998	3/18/1998	3/18/1998
ANTIMONY	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
ARSENIC	**1.7**	**1.7**	**0.69**	**2.7**	**2.8**	**2.7**	**3.3**	**2**	**1.8**	**2.3**	**1.7**
BARIUM	**66**	**35**	**73**	**83**	**52**	**54**	**37**	**46**	**91**	**78**	**47**
BERYLLIUM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CADMIUM	<2	<2	<2	<2	**1.2 J**	**1 J**	**1.5 J**	<2	<2	<2	<2
CHROMIUM	**8.8**	**9.3**	**9.6**	**11**	**15**	**15**	**22**	**40**	**11**	**10**	**7.4**
COBALT	**4.4 J**	**3.3 J**	**4.4 J**	**4.7 J**	**5.9**	**5.7**	**7.6**	<5	<5	<5	<5
COPPER	**5.9**	**6**	**8.9**	**6.3**	**8.2**	**7.4**	**11**	**4.6**	**6.8**	**5**	**2.9**
LEAD	**3.6**	**8.7**	**10**	**19**	**3.9**	**5.8**	**4.4**	**4.9**	**13**	**36**	**3.8**
MERCURY	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
MOLYBDENUM	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
NICKEL	**9.1**	**9.4**	**16**	**13**	**12**	**13**	**17**	**8.3**	**10**	**8.7**	**6.2**
SELENIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
SILVER	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
THALLIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
VANADIUM	**26**	**29**	**36**	**27**	**35**	**35**	**45**	**26**	**40**	**28**	**20**
ZINC	**20**	**25**	**25**	**32**	**33**	**30**	**41**	**19**	**27**	**38**	**14**

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	SB01-042	SB01-043	SB01-043	SB01-044	SB01-044	SB01-044	SB01-045	SB01-045	SB01-046	SB01-046	SB01-046
SAMPLE NAME	S142@3-3.5	S143@0-1	S143@2.5-3	S144@0.5-1	S144@14-15	S144@4-5	S145@0.5-1	S145@4-5	S146@0-1	S146@10-11	S146@5-6
SAMPLING DATE	3/18/1998	3/19/1998	3/19/1998	3/20/1998	3/20/1998	3/20/1998	3/18/1998	3/18/1998	3/18/1998	3/18/1998	3/18/1998
ANTIMONY	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
ARSENIC	**2.3**	**1.7**	**2.4**	**2.2**	<0.5	**1.2**	**5.1**	**1.6**	**2.5**	**1.5**	**2.2**
BARIUM	**70**	**61**	**32**	**70**	**30**	**23**	**120**	**56**	**61**	**37**	**56**
BERYLLIUM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CADMIUM	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
CHROMIUM	**13**	**12**	**11**	**11**	<3	**12**	**15**	**8.8**	**10**	**7**	**12**
COBALT	**5.3**	**5.2**	**4 J**	**4.2 J**	<5	<5	**3.8 J**	**3.4 J**	**4.1 J**	<5	**3.6 J**
COPPER	**7.9**	**16**	**6.6**	**5.6**	**2.1 J**	**2 J**	**88**	**5.5**	**5.9**	**3.2**	**5.5**
LEAD	**4.8**	**38**	**3.7**	**4.2**	**1.7**	**0.89**	**36**	**6.3**	**5**	**2.8**	**4.3**
MERCURY	<0.05	**0.095**	<0.05	**0.03 J**	**0.069**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
MOLYBDENUM	<10	<10	<10	<10	<10	<10	**24**	<10	<10	<10	<10
NICKEL	**10**	**12**	**9.4**	**10**	**4.8**	**7.2**	**9.2**	**8.1**	**9.3**	**5.8**	**9.3**
SELENIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
SILVER	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
THALLIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
VANADIUM	**31**	**39**	**28**	**26**	**13**	**24**	**35**	**26**	**24**	**22**	**25**
ZINC	**30**	**43**	**24**	**24**	**8.5**	**11**	**120**	**23**	**25**	**15**	**25**

Units in mg/kg
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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	SB01-047	SB01-047	SB01-048	SB01-048	SB01-049	SB01-049
SAMPLE NAME	S147@0-1	S147@2.5-3	S148@0-1	S148@3-3.5	S149@0-1	S149@3.5-4
SAMPLING DATE	3/18/1998	3/18/1998	3/18/1998	3/18/1998	3/18/1998	3/18/1998
ANTIMONY	<6	<6	<6	<6	<6	<6
ARSENIC	**3.5**	**3.9**	**4**	**3.1**	**1.9**	**4.9**
BARIUM	**91**	**55**	**65**	**35**	**55**	**60**
BERYLLIUM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CADMIUM	<2	<2	<2	<2	<2	<2
CHROMIUM	**16**	**19**	**11**	**13**	**41**	**20**
COBALT	**5.4**	**5.8**	<5	<5	<5	**7.4**
COPPER	**17**	**10**	**110**	**7.4**	**12**	**12**
LEAD	**25**	**3**	**20**	**1.8**	**16**	**3.5**
MERCURY	**0.1**	<0.05	<0.05	<0.05	**0.056**	<0.05
MOLYBDENUM	<10	<10	<10	<10	<10	<10
NICKEL	**28**	**11**	**13**	**8.1**	**12**	**13**
SELENIUM	<1	<1	<1	<1	<1	<1
SILVER	<2	<2	<2	<2	<2	<2
THALLIUM	<1	<1	<1	<1	<1	<1
VANADIUM	**66**	**38**	**30**	**27**	**35**	**43**
ZINC	**96**	**37**	**58**	**27**	**40**	**40**

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	SB01-050	SB01-050	SB01-051	SB01-051	SB01-052	SB01-052	SB01-053	SB01-053	SB01-054	SB01-054
SAMPLE NAME	S150@0.5-1	S150@4.5-5	S151@0.5-1	S151@4.5-5	S152@0.5-1	S152@3.5-4	S153@0.5-1	S153@4.5-5	S154@0.5-1	S154@0.5-1D
SAMPLING DATE	3/19/1998	3/19/1998	3/19/1998	3/19/1998	3/19/1998	3/19/1998	3/19/1998	3/19/1998	3/19/1998	3/19/1998
ANTIMONY	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
ARSENIC	**1.8**	**3.1**	**3.1**	<0.5	**3.1**	<0.5	**3.1**	**5.3**	**2.3**	**2**
BARIUM	**64**	**53**	**67**	<20	**100**	<20	**53**	**46**	**69**	**49**
BERYLLIUM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CADMIUM	<2	**1.3 J**	<2	<2	<2	<2	**1.3 J**	**2.1**	<2	<2
CHROMIUM	**10**	**16**	**9.7**	<3	**14**	**1.5 J**	**16**	**25**	**11**	**8.3**
COBALT	**4.1 J**	**5.6**	**7**	<5	**6.2**	<5	**5.6**	**10**	**4.6 J**	**3 J**
COPPER	**4.5**	**11**	**7.3**	**1.6 J**	**15**	**1.8 J**	**11**	**12**	**5.7**	**7.6**
LEAD	**4.1**	**9.1**	**10**	<0.4	**15**	<0.4	**9.1**	**5.6**	**5.2**	**4.2**
MERCURY	<0.05	**0.11**	<0.05	<0.05	**0.032 J**	**0.16**	<0.05	<0.05	<0.05	<0.05
MOLYBDENUM	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
NICKEL	**9.9**	**14**	**11**	<4	**15**	<4	**14**	**20**	**13**	**9.5**
SELENIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
SILVER	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
THALLIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
VANADIUM	**27**	**35**	**29**	<5	**44**	<5	**35**	**55**	**32**	**25**
ZINC	**22**	**44**	**27**	**2.3**	**45**	**3**	**44**	**48**	**23**	**20**

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	SB01-054	SB01-055	SB01-055	SB01-055	SB01-056	SB01-056	SB01-057	SB01-057	SB01-058	SB01-058
SAMPLE NAME	S154@4.5-5	S155@0.5-1.5	S155@0.5-1.5D	S155@5-6	S156@0.5-1.0	S156@5-6	S157@0.5-1.5	S157@2.5-3.5	S158@0.5-1.5	S158@5-6
SAMPLING DATE	3/19/1998	3/16/1998	3/16/1998	3/17/1998	3/17/1998	3/17/1998	3/17/1998	3/17/1998	3/17/1998	3/17/1998
ANTIMONY	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
ARSENIC	**0.61**	**2.4**	**4.1**	**2.5**	**2.5**	**3**	**2.1**	**2.3**	**2.5**	**2.6**
BARIUM	<20	**64**	**61**	**80**	**76**	**29**	**63**	**21**	**59**	**38**
BERYLLIUM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CADMIUM	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
CHROMIUM	**2.4 J**	**22**	**11**	**13**	**33**	**11**	**13**	**10**	**15**	**11**
COBALT	<5	**4.8 J**	**4.6 J**	**4.5 J**	**5**	**4.5 J**	**6.2**	**2.7 J**	**4.6 J**	**4.4 J**
COPPER	**1.6 J**	**5.7**	**11**	**5.2**	**8.4**	**5.7**	**8.4**	**4.2**	**9.1**	**5.4**
LEAD	**0.58**	**5.9**	**4.3**	**4.2**	**4.8**	**1.4**	**6.6**	**2.4**	**13**	**2.9**
MERCURY	<0.05	<0.05	**0.029 J**	<0.05	<0.05	<0.05	**0.28**	**0.067**	**0.13**	<0.05
MOLYBDENUM	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
NICKEL	<4	**15**	**10**	**17**	**13**	**8**	**13**	**8.3**	**19**	**8**
SELENIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
SILVER	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
THALLIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
VANADIUM	**5.7**	**27**	**25**	**28**	**34**	**23**	**39**	**23**	**39**	**24**
ZINC	**4.2**	**22**	**23**	**24**	**29**	**23**	**30**	**19**	**38**	**19**

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	SB01-059	SB01-059	SB01-060	SB01-060	SB01-061	SB01-061	SB01-062	SB01-062	SB01-062	SB01-063	SB01-063
SAMPLE NAME	S159@0-1	S159@5-5.5	S160@0-1	S160@4.5-5	S161@0-1	S161@4-4.5	S162@0.5-1	S162@10-11	S162@4-5	S163@0.5-1	S163@5-6
SAMPLING DATE	3/17/1998	3/17/1998	3/17/1998	3/17/1998	3/17/1998	3/17/1998	3/20/1998	3/20/1998	3/20/1998	3/19/1998	3/19/1998
ANTIMONY	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
ARSENIC	**1.9**	**1.3**	**3**	**3.1**	**2.4**	**1.1**	**1.8**	**1.5**	**2.2**	**3.3**	**1.6**
BARIUM	**36**	**39**	**97**	**79**	**71**	**23**	**50**	**29**	**54**	**61**	**38**
BERYLLIUM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CADMIUM	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
CHROMIUM	**8.2**	**4.3**	**14**	**14**	**9.1**	**4.6**	**7.4**	**9.3**	<3	**9.5**	**5.4**
COBALT	**13**	**3.5 J**	**5.9**	**6.1**	**3.7 J**	<5	**3.9 J**	**3.7 J**	**4.4 J**	**3.6 J**	<5
COPPER	**6.8**	**3.5**	**9.1**	**14**	**6.1**	**2.4 J**	**3.6**	**3.5**	**5.2**	**5.4**	**2.4 J**
LEAD	**4.2**	**1.8**	**10**	**22**	**5**	**1.6**	**3.7**	**3.2**	**3.1**	**4.3**	**2**
MERCURY	**0.19**	**0.028 J**	**0.087**	**0.041 J**	<0.05	<0.05	**0.038 J**	<0.05	<0.05	<0.05	<0.05
MOLYBDENUM	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
NICKEL	**8**	**3.5 J**	**14**	**14**	**9.1**	**3.4 J**	<4	**8.2**	**9.2**	**8.3**	**4.3**
SELENIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
SILVER	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
THALLIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
VANADIUM	**25**	**14**	**38**	**36**	**24**	**12**	**20**	**19**	**25**	**36**	**14**
ZINC	**17**	**8.6**	**40**	**47**	**23**	**9.1**	**17**	**18**	**22**	**25**	**12**

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	SB01-064	SB01-064	SB01-064	SB01-065	SB01-065	SB01-066	SB01-066	SB01-066	SB01-067	SB01-067	SB01-068
SAMPLE NAME	S164@0.5-1	S164@13-14	S164@4-5	S165@0.5-1	S165@4-5	S166@0.5-1	S166@4-5	S166@9.5-10	S167@0-1	S167@4-5	S168@0-1
SAMPLING DATE	3/20/1998	3/20/1998	3/20/1998	3/18/1998	3/18/1998	3/23/1998	3/23/1998	3/23/1998	3/17/1998	3/17/1998	3/23/1998
ANTIMONY	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
ARSENIC	**1.7**	**0.97**	**2.8**	**3**	**2.1**	**3**	**1.9**	**2.2**	**17**	**1.8**	**2.4**
BARIUM	**53**	**22**	**55**	**74**	**56**	**47**	**64**	**47**	**91**	**39**	**43**
BERYLLIUM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CADMIUM	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
CHROMIUM	**9.7**	**5.7**	<3	**14**	**10**	**6**	**9.2**	**9.2**	**15**	**9.2**	**9.5**
COBALT	**3.5 J**	<5	<5	**2.3 J**	**3.4 J**	**2.8 J**	**3.3 J**	**5.1**	**5.9**	**3.1 J**	**4.5 J**
COPPER	**3.6**	**1.8 J**	**5.3**	**6.4**	**11**	**4.3**	**4.7**	**4.5**	**7.2**	**4**	**4.4**
LEAD	**3.5**	**1.9**	<0.4	**10**	**5.1**	**3.9**	**4**	**3.6**	**7.3**	**2.7**	**3.8**
MERCURY	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
MOLYBDENUM	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
NICKEL	**8.7**	**4.9**	**9.4**	**9.5**	**8.3**	**6.3**	**9.8**	**6.8**	**13**	**6.7**	**7.8**
SELENIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
SILVER	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
THALLIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
VANADIUM	**26**	**15**	**26**	**38**	**23**	**21**	**25**	**24**	**35**	**19**	**26**
ZINC	**20**	**11**	**23**	**23**	**23**	**24**	**21**	**19**	**42**	**19**	**19**

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	SB01-068	SB01-068	SB01-069	SB01-069	SB01-069	SB01-070	SB01-070	SB01-070	SB01-070	SB01-070A
SAMPLE NAME	S168@10-11	S168@5-6	S169@0.5-1	S169@11-12	S169@4.5-5	S170@0.5-1	S170@0.5-1D	S170@4-5	S170@9-10	S170A@8.5-9
SAMPLING DATE	3/23/1998	3/23/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	4/20/1998
ANTIMONY	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
ARSENIC	**2.2**	**2**	**8.4**	**1.9**	**1.7**	**21**	**9**	**2**	**3.5**	<0.5
BARIUM	**39**	**79**	**74**	**55**	**97**	**92**	**130**	**100**	**140**	**61**
BERYLLIUM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CADMIUM	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
CHROMIUM	**11**	**12**	**9.4**	**9.7**	**18**	**15**	**17**	**11**	**17**	**4.6**
COBALT	**3.8 J**	**9.3**	**5**	**3.8 J**	**7.5**	**5.8**	**7.3**	**5.5**	**7.7**	<5
COPPER	**5**	**5.2**	**6.6**	**3.5**	**8.4**	**9**	**8**	**5.2**	**7.1**	**1.7 J**
LEAD	**3.2**	**4.1**	**11**	**3**	**5.2**	**10**	**8.4**	**4.8**	**6.5**	**2**
MERCURY	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
MOLYBDENUM	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
NICKEL	**11**	**12**	**21**	**7.9**	**15**	**19**	**17**	**9.3**	**15**	**5.3**
SELENIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
SILVER	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
THALLIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
VANADIUM	**32**	**34**	**40**	**26**	**33**	**37**	**39**	**28**	**40**	**15**
ZINC	**25**	**26**	**43**	**19**	**39**	**38**	**41**	**24**	**37**	**9.3**

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	SB01-070B	SB01-070C	SB01-070C	SB01-070C	SB01-070D	SB01-070D	SB01-071	SB01-071	SB01-072	SB01-072
SAMPLE NAME	S170B@10.5-11	S170B@6-6.5	S170C@10-11	S170C@10-11D	S170D@10-10.5	S170D@6-6.5	S171@0.5-1	S171@4-5	S172@0-1	S172@4-5
SAMPLING DATE	4/17/1998	4/17/1998	4/20/1998	4/20/1998	4/20/1998	4/20/1998	3/19/1998	3/19/1998	3/17/1998	3/17/1998
ANTIMONY	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
ARSENIC	**0.87**	**1**	**1.1**	**1**	**1.6**	**2.3**	**2.1**	**2.3**	**1.5**	**1.7**
BARIUM	**12 J**	**59**	**71**	**32**	**46**	**77**	**56**	**34**	**97**	**46**
BERYLLIUM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CADMIUM	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
CHROMIUM	**3.4**	**11**	**13**	**12**	**9.3**	**14**	**11**	**11**	**15**	**10**
COBALT	<5	**4.6 J**	**3.4 J**	**3.3 J**	**5.3**	**5.8**	**4.5 J**	**4.2 J**	**7.4**	**4.3 J**
COPPER	**3.1**	**5.5**	**4.9**	**5.9**	**4.8**	**5.6**	**6.1**	**4.8**	**11**	**4.8**
LEAD	**1.8**	**4.7**	**4.6**	**4.4**	**4.8**	**5**	**4.3**	**2.1**	**6.1**	**4.4**
MERCURY	<0.05	**0.28**	**0.051**	**0.061**	<0.05	<0.05	<0.05	<0.05	<0.05	**0.18**
MOLYBDENUM	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
NICKEL	**4**	**12**	**10**	**10**	**10**	**16**	**10**	**8.6**	**13**	**25**
SELENIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
SILVER	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
THALLIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
VANADIUM	**10**	**28**	**21**	**21**	**22**	**41**	**29**	**24**	**47**	**46**
ZINC	**8.4**	**23**	**21**	**21**	**18**	**29**	**24**	**22**	**48**	**37**

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SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	SB02-001	SB02-001	SB02-002	SB02-002	SB02-003	SB02-003	SB02-004	SB02-004	SB02-005	SB02-005	SB02-005
SAMPLE NAME	S201@0-1	S201@5-6	S202@0-1	S202@5-6	S203@0.5-1	S203@4-5	S204@0.5-1	S204@4-5	S205@0.5-1	S205@2.5-3	S205@4-5
SAMPLING DATE	3/25/1998	3/25/1998	3/25/1998	3/25/1998	3/24/1998	3/24/1998	3/27/1998	3/27/1998	3/23/1998	3/23/1998	3/26/1998
ANTIMONY	<6	<6	<6	<6	<6	<6	<6	<6	**3.4 J**	**3.4 J**	<6
ARSENIC	**2.4**	**1.6**	**2.7**	**1.5**	**2.5**	**1.4**	**3**	**1.4**	**5.5**	**7.8**	**5.6**
BARIUM	**38**	**19**	**35**	**66**	**43**	**27**	**48**	**35**	**89**	**84**	**78**
BERYLLIUM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CADMIUM	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
CHROMIUM	**12**	**7.5**	**7.8**	**11**	**13**	**12**	**8**	**11**	**72**	**58**	**100**
COBALT	**3.6**	**4.5 J**	**3 J**	**3.4 J**	**3.9 J**	**3.6 J**	**3.7**	**3.8**	**8**	**6.9**	**9.2**
COPPER	**140**	**3.5**	**33**	**2.7**	**13**	**1.3 J**	**13**	**3**	**28**	**29**	**47**
LEAD	**5.1**	**2.9**	**2.6**	**3**	**2.7**	**0.75**	**5.5**	**3.3**	**16**	**16**	**15**
MERCURY	**0.48**	**0.058**	**0.49**	**0.038 J**	<0.05	<0.05	**0.031**	<0.05	<0.05	**0.074**	**0.12**
MOLYBDENUM	<10	<10	<10	<10	<10	<10	<10	<10	<10	**5.3 J**	<10
NICKEL	**27**	**7.1**	**11**	**8.7**	**11**	**8.1**	**10**	**10**	**60**	**53**	**89**
SELENIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
SILVER	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
THALLIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
VANADIUM	**29**	**21**	**28**	**25**	**29**	**28**	**29**	**30**	**83**	**74**	**100**
ZINC	**29**	**14**	**19**	**20**	**31**	**13**	**34**	**28**	**71**	**89**	**72**

Units in mg/kg
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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	SB02-006	SB02-006	SB02-007	SB02-008	SB02-008	SB02-008	SB03-001	SB03-001	SB03-002	SB03-002	SB03-003
SAMPLE NAME	S206@0.5-1	S206@4-5	S207@0.5-1	S208@0.5-1	S208@10-11	S208@4-5	S301@0.5-1	S301@4-5	S302@0.5-1	S302@4-5	S303@0.5-1
SAMPLING DATE	3/23/1998	3/26/1998	3/25/1998	3/25/1998	3/25/1998	3/25/1998	3/25/1998	3/25/1998	3/25/1998	3/25/1998	3/26/1998
ANTIMONY	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
ARSENIC	**9.4**	**1.9**	**8.9**	**1.9**	**2.6**	**3.1**	**2.3**	**1.4**	**16**	**1.5**	**3.1**
BARIUM	**120**	**64**	**97**	**48**	**68**	**46**	**54**	**38**	**45**	**52**	**59**
BERYLLIUM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CADMIUM	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
CHROMIUM	**7.2**	**12**	**25**	**7.8**	**11**	**11**	**7.2**	**5.6**	**8.2**	**8.8**	**13**
COBALT	**3.5 J**	**4.6 J**	**5.3**	**2.9 J**	**3.7 J**	**5.6**	**3.5 J**	<5	**3.6 J**	**4.1 J**	**5.1**
COPPER	**7.7**	**4.8**	**19**	**5.1**	**7.2**	**4.9**	**4.7**	**2.6**	**3.2**	**3.8**	**7.2**
LEAD	**8.6**	**3.7**	**12**	**7.9**	**6.8**	**5.7**	**6**	**2.4**	**3.8**	**3.6**	**10**
MERCURY	<0.05	<0.05	<0.05	**0.027 J**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	**0.031 J**
MOLYBDENUM	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
NICKEL	**16**	**9.9**	**28**	**6.9**	**9.7**	**11**	**9.6**	**5.2**	**8.5**	**8.1**	**22**
SELENIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
SILVER	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
THALLIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
VANADIUM	**27**	**34**	**42**	**21**	**24**	**31**	**27**	**18**	**26**	**26**	**40**
ZINC	**33**	**25**	**55**	**19**	**30**	**26**	**20**	**13**	**21**	**19**	**40**

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	SB03-003	SB03-003A	SB03-004	SB03-004	SB03-005	SB03-005	SB03-006	SB03-006	SB03-007	SB03-007	SB03-007
SAMPLE NAME	S303@4-5	S303A@8-8.5	S304@1.5-2	S304@4-5	S305@1.5-2	S305@4-5	S306@0.5-1	S306@4-5	S307@0.5-1	S307@4-5	S307@8-9
SAMPLING DATE	3/26/1998	4/16/1998	3/26/1998	3/26/1998	3/26/1998	3/26/1998	3/25/1998	3/25/1998	3/24/1998	3/24/1998	3/24/1998
ANTIMONY	<6	<06	<6	<06	<06	<6	<6	<6	<6	<6	<6
ARSENIC	**3.5**	**0.55**	**0.5**	**1.8**	**1**	**1.1**	**1.7**	**2.1**	**2.3**	**1.5**	**1.7**
BARIUM	**50**	**24**	**26**	**43**	**43**	**39**	**36**	**48**	**90**	**74**	**71**
BERYLLIUM	<0.5	<0.5	<0.5	<01	<01	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CADMIUM	<2	<2	<02	<02	<2	<2	<2	<2	<2	<2	<2
CHROMIUM	**14**	**8.1**	**5.4**	**11**	**7.1**	**5**	**5.1**	**6.4**	**15**	**12**	**13**
COBALT	**5.1**	**3.3 J**	**2.8 J**	**3.7 J**	<5	**2.7 J**	**2.9 J**	**2.9 J**	**8.3**	**6.5**	**6.2**
COPPER	**9.2**	**5.4**	**2 J**	**3.6**	**2.3 J**	**2.2 J**	**1.8 J**	**2.7**	**5.6**	**4.4**	**5.2**
LEAD	**12**	**3.4**	**2.3**	**3.5**	**3**	**2.7**	**2.4**	**1.9**	**6.7**	**4.7**	**5**
MERCURY	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	**0.032 J**
MOLYBDENUM	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
NICKEL	**30**	**9.5**	**4.9**	**10**	**6.3**	**5.2**	**4.7**	**5.2**	**15**	**11**	**13**
SELENIUM	<1	<1	<01	<01	<1	<1	<1	<1	<1	<1	<1
SILVER	<2	<2	<02	<02	<2	<2	<2	<2	<2	<2	<2
THALLIUM	<1	<1	<01	<01	<1	<1	<1	<1	<1	<1	<1
VANADIUM	**47**	**23**	**15**	**27**	**21**	**19**	**22**	**22**	**34**	**32**	**34**
ZINC	**42**	**17**	**11**	**22**	**17**	**11**	**10**	**14**	**33**	**27**	**45**

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	SB03-008	SB03-008	SB03-008	SB03-008	SB03-009	SB03-009	SB03-010	SB03-010	SB03-011	SB03-011	SB03-012
SAMPLE NAME	S308@0.5-1	S308@0.5-1D	S308@4-5	S308@9-10	S309@0.5-1	S309@4-5	S310@0.5-1	S310@4-5	S311@0-1	S311@4-5	S312@0.5-1
SAMPLING DATE	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/26/1998	3/26/1998	3/26/1998	3/26/1998	3/26/1998	3/26/1998	3/25/1998
ANTIMONY	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
ARSENIC	**5.8**	**6.2**	**1**	**2.1**	**1.3**	**1.8**	**0.59**	**1.2**	**3.8**	**1.2**	**3.1**
BARIUM	**53**	**63**	**32**	<20	**65**	**61**	**21**	**51**	**48**	**39**	**60**
BERYLLIUM	<0.5	<0.5	<0.5	**68**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CADMIUM	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
CHROMIUM	**12**	**14**	**6.2**	**12**	**8.9**	**8.8**	**6.6**	**6.5**	**26**	**8.7**	**6.2**
COBALT	**5.9**	**6.8**	**3.4 J**	**5.1**	**4.2 J**	**3.6 J**	**3.3 J**	**3 J**	**4 J**	**3.5 J**	**3.7 J**
COPPER	**15**	**46**	**5.3**	**5.5**	**4.2**	**3.1**	**2.8**	**2.9**	**11**	**3.6**	**3.7**
LEAD	**6**	**10**	**4.5**	**4.3**	**5**	**3.2**	**2.8**	**2.7**	**58**	**3.2**	**5.7**
MERCURY	<0.05	**0.035 J**	**0.23**	<0.05	<0.05	<0.05	<0.05	<0.05	**0.062**	**0.041 J**	<0.05
MOLYBDENUM	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
NICKEL	**33**	**53**	**5.4**	**11**	**8.5**	**8.3**	**5.8**	**5.9**	**26**	**8.3**	**14**
SELENIUM	<1	<1	<1	<1	<01	<1	<1	<1	<1	<1	<1
SILVER	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
THALLIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
VANADIUM	**69**	**94**	**19**	**30**	**23**	**26**	**18**	**22**	**44**	**23**	**33**
ZINC	**32**	**54**	**31**	**27**	**21**	**19**	**12**	**13**	**72**	**18**	**21**

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	SB03-012	SB03-013	SB03-013	SB03-014	SB03-014	SB03-014	SB03-016	SB03-016	SB03-017	SB03-017	SB03-017A
SAMPLE NAME	S312@4-5	S313@0.5-1	S313@3-3.5	S314@1-1.5	S314@1-1.5D	S314@5-5.5	S316@0.5-1	S316@4-5	S317@1.5-2	S317@4-5	S317A@9-9.5
SAMPLING DATE	3/25/1998	3/26/1998	3/26/1998	3/27/1998	3/27/1998	3/27/1998	3/25/1998	3/25/1998	3/25/1998	3/25/1998	4/17/1998
ANTIMONY	<6	<6	<6	<6	**3**	<6	<6	<6	<6	<6	<6
ARSENIC	**1.9**	**1.5**	**1.8**	**1.6**	**2.2**	**2.8**	**1.7**	**1.3**	**1.9**	**2.3**	**0.74**
BARIUM	**46**	**46**	**56**	**50**	**88**	**61**	**65**	**78**	**80**	**100**	**85**
BERYLLIUM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CADMIUM	<2	<2	<2	<2	**1.4**	<2	<2	<2	<2	<2	<2
CHROMIUM	**9.9**	**7.5**	**11**	**7.8**	**13**	**15**	**9.7**	**9.3**	**9.2**	**11**	**10**
COBALT	**3.5**	**2.9 J**	**3.6**	**3.3**	**5.9**	**5.7**	**4.2 J**	**4.4 J**	**4 J**	**4.8 J**	**4 J**
COPPER	**11**	**3.5**	**2.9**	**5.1**	**11**	**17**	**5.2**	**6.9**	**5.3**	**5.3**	**6.7**
LEAD	**9.9**	**2.9**	**3.1**	**3.7**	**5.2**	**18**	**5.9**	**2.2**	**4.7**	**5**	**5.2**
MERCURY	**0.23**	<0.05	<0.05	<0.05	<0.05	**0.096**	<0.05	<0.05	<0.05	<0.05	<0.05
MOLYBDENUM	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
NICKEL	**18**	**6.1**	**9**	**7.6**	**12**	**31**	**8.8**	**9.1**	**9**	**11**	**11**
SELENIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
SILVER	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
THALLIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
VANADIUM	**38**	**23**	**27**	**20**	**30**	**42**	**25**	**29**	**23**	**25**	**28**
ZINC	**24**	**18**	**18**	**34**	**58**	**47**	**25**	**23**	**23**	**26**	**23**

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	SB03-018	SB03-018	SB03-019	SB03-019	SB03-019	SB03-020	SB03-020	SB03-021	SB03-021	SB03-022	SB03-022
SAMPLE NAME	S318@2-3	S318@5-6	S319@0.5-1	S319@0.5-1D	S319@4-5	S320@1-1.5	S320@4-5	S321@0.5-1	S321@4-5	S322@0.5-1	S322@4-5
SAMPLING DATE	3/26/1998	3/26/1998	3/25/1998	3/25/1998	3/25/1998	3/25/1998	3/25/1998	3/25/1998	3/25/1998	3/26/1998	3/26/1998
ANTIMONY	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
ARSENIC	**2**	**1.4**	**3.2**	**3.4**	**1.4**	**1.3**	**2.7**	**3.4**	**1.9**	**1.3**	**1.6**
BARIUM	**45**	**48**	**59**	**60**	**36**	**25**	**56**	**110**	**64**	**51**	**62**
BERYLLIUM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CADMIUM	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
CHROMIUM	**7.7**	**8.5**	**10**	**13**	**8.1**	**8**	**13**	**10**	**8.4**	**11**	**9.6**
COBALT	**3.1 J**	**2.8 J**	**4.2 J**	**4.9 J**	**3.5 J**	**2.8 J**	**4**	**4.4**	**3 J**	**3.8**	**3.2 J**
COPPER	**3.2**	**3.1**	**8.8**	**9.9**	**3.1**	**4.7**	**4.3**	**6**	**2.9**	**3.8**	**4.2**
LEAD	**3.4**	**2.5**	**5.1**	**6.3**	**3.1**	**3.6**	**4**	**5.6**	**2.5**	**4.3**	**3.1**
MERCURY	<0.05	<0.05	<0.05	**0.026 J**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
MOLYBDENUM	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
NICKEL	**6.8**	**6.9**	**14**	**15**	**6.8**	**5.7**	**10**	**11**	**7.3**	**9.3**	**7.5**
SELENIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
SILVER	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
THALLIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
VANADIUM	**22**	**22**	**33**	**43**	**22**	**16**	**23**	**22**	**26**	**26**	**29**
ZINC	**18**	**17**	**24**	**31**	**15**	**14**	**25**	**31**	**17**	**24**	**19**

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	SB03-022	SB03-023	SB03-023	SB03-023	SB03-023	SB03-024	SB03-024	SB03-024A	SB03-024A	SB04-001
SAMPLE NAME	S322@7-7.5	S323@0.5-1	S323@0.5-1D	S323@3.5-4.5	S323@5.5-6	S324@0.5-1	S324@5.5-6.5	S324A@1-1.5	S324A@4.5-5	S401@0.5-1
SAMPLING DATE	3/26/1998	3/26/1998	3/26/1998	3/26/1998	3/26/1998	3/27/1998	3/27/1998	4/17/1998	4/17/1998	3/24/1998
ANTIMONY	<06	<6	<6	<6	<6	<6	<6	<6	<6	<6
ARSENIC	**1.5**	**2.3**	**1.4**	**2.1**	**1.7**	**1.2**	**1.4**	**1.1**	<0.5	**2.2**
BARIUM	**45**	**120**	**110**	**110**	**89**	**34**	**52**	**29**	**26**	**30**
BERYLLIUM	<01	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CADMIUM	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
CHROMIUM	**6.6**	**16**	**15**	**11**	**11**	**7.4**	**7.8**	**4.8**	**3**	**12**
COBALT	**3.4 J**	**6.2**	**5.2**	**4.1 J**	**5.4**	**2.8**	**3.1**	**2.5 J**	<5	**3.2 J**
COPPER	**3.1**	**7.2**	**6.6**	**4.5**	**4.1**	**5.3**	**5.2**	**3**	**2 J**	**2.2 J**
LEAD	**2.3**	**5.9**	**4.8**	**3.7**	**3.2**	**5**	**3.1**	**3**	**0.8**	**1.6**
MERCURY	<0.05	<0.05	<0.05	<0.05	<0.05	**0.041**	<0.05	<0.05	<0.05	<0.05
MOLYBDENUM	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
NICKEL	**5.7**	**14**	**13**	**8.8**	**9**	**8.8**	**6.7**	**5.4**	**3.2 J**	**8.6**
SELENIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
SILVER	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
THALLIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
VANADIUM	**24**	**32**	**29**	**25**	**28**	**21**	**22**	**14**	**12**	**25**
ZINC	**14**	**36**	**32**	**22**	**22**	**23**	**23**	**12**	**8.4**	**18**

Units in mg/kg
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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	SB04-001	SB04-002	SB04-002	SB04-003	SB04-003	SB04-004	SB04-004	SB04-005	SB04-005	SB04-005	SB04-006
SAMPLE NAME	S401@4-5	S402@0.5-1	S402@4-5	S403@0.5-1	S403@4-5	S404@0.5-1	S404@4-5	S405@0-1	S405@0-1D	S405@5-6	S406@0.5-1
SAMPLING DATE	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/25/1998	3/25/1998	3/25/1998	3/25/1998	3/24/1998
ANTIMONY	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
ARSENIC	**1.6**	**2.8**	**0.85**	**1.9**	**1.2**	**10**	**1.8**	**5**	**3.9**	**1.3**	**2.2**
BARIUM	**30**	**80**	**48**	**51**	**14 J**	**56**	**43**	**25**	**28**	**37**	**51**
BERYLLIUM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CADMIUM	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
CHROMIUM	**26**	**18**	**12**	**9.7**	**3.8**	**13**	**6**	**11**	**9.8**	**8.6**	**18**
COBALT	**5.6**	**5.2**	**2.7 J**	**4.6 J**	<5	**5.1**	<5	**5**	**3.5 J**	**3.2 J**	**4.5 J**
COPPER	**3.7**	**3.3**	**1.5 J**	**3.9**	**1.6 J**	**8.7**	**3**	**2.1 J**	**2.5**	**3.7**	**17**
LEAD	**3.8**	**4**	**1.9**	**3.9**	**1.8**	**5.5**	**1.7**	**1**	**1.2**	**4.6**	**5.2**
MERCURY	<0.05	<0.05	<0.05	<0.05	<0.05	**0.12**	**0.4**	<0.05	**0.038 J**	**0.032 J**	<0.05
MOLYBDENUM	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
NICKEL	**16**	**15**	**7.6**	**8.3**	**3.6 J**	**12**	**5.4**	**7.7**	**7.3**	**8.2**	**13**
SELENIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
SILVER	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
THALLIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
VANADIUM	**34**	**28**	**16**	**26**	**16**	**28**	**18**	**40**	**35**	**21**	**30**
ZINC	**25**	**24**	**8.6**	**20**	**7.7**	**36**	**19**	**22**	**18**	**17**	**34**

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	SB04-006	SB04-007	SB04-007	SB04-008	SB04-008	SB04-009	SB04-009	SB04-010	SB04-010	SB04-011	SB04-011
SAMPLE NAME	S406@4-5	S407@0.5-1	S407@4-5	S408@0.5-1	S408@4-5	S409@0.5-1	S409@4-5	S410@0-1	S410@5-6	S411@0.5-1	S411@4-5
SAMPLING DATE	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/25/1998	3/25/1998	3/23/1998	3/23/1998
ANTIMONY	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
ARSENIC	**1.9**	**0.65**	**1.8**	**2.5**	**4**	**4.4**	**1.2**	**2.9**	**1.3**	**5.8**	**0.53**
BARIUM	**54**	**45**	**39**	**49**	**110**	**45**	**28**	**50**	**32**	**83**	**37**
BERYLLIUM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CADMIUM	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
CHROMIUM	**17**	**9.1**	**13**	**16**	**13**	**14**	**14**	**10**	**12**	**24**	**3.6**
COBALT	**4.2 J**	**2.8 J**	**3.9 J**	**3.8 J**	**3.6 J**	**3.5 J**	**3.3 J**	**3.8 J**	**3.9 J**	**6.2**	<5
COPPER	**9.9**	**2.2 J**	**4.5**	**25**	**82**	**11**	**1.3 J**	**25**	**3.9**	**23**	**2.6**
LEAD	**3.5**	**1.1**	**4**	**3.9**	**4.5**	**3**	<0.4	**3.6**	**2.4**	**13**	**2.6**
MERCURY	<0.05	<0.05	<0.05	**0.03 J**	**0.039 J**	<0.05	<0.05	**0.16**	**0.043 J**	**0.036 J**	<0.05
MOLYBDENUM	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
NICKEL	**12**	**6.5**	**10**	**12**	**19**	**11**	**8.8**	**11**	**8**	**37**	**4.3**
SELENIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
SILVER	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
THALLIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
VANADIUM	**30**	**18**	**27**	**26**	**22**	**25**	**23**	**27**	**31**	**51**	**11**
ZINC	**22**	**13**	**23**	**30**	**22**	**18**	**12**	**21**	**23**	**77**	**10**

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	SB04-012	SB04-012	SB04-013	SB04-013	SB04-014	SB04-014	SB04-015	SB04-015	SB05-001	SB05-001	SB05-001
SAMPLE NAME	S412@0.5-1	S412@4-5	S413@0.5-1	S413@4-5	S414@0.5-1	S414@4-5	S415@0.5-1	S415@4-5	S501@0.5-1	S501@0.5-1D	S501@4-5
SAMPLING DATE	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998
ANTIMONY	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
ARSENIC	**2.7**	**2.6**	**3.9**	**2.5**	**1.7**	**0.75**	**2.8**	**2**	**2.4**	**2.1**	**1.5**
BARIUM	**76**	**150**	**60**	**110**	**47**	**39**	**180**	**130**	**53**	**77**	**48**
BERYLLIUM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CADMIUM	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
CHROMIUM	**12**	**15**	**12**	**13**	**8.9**	**11**	**18**	**17**	**12**	**10**	**9.8**
COBALT	**5.3**	**8.5**	**4.4**	**6.4**	**3.7 J**	**2.9 J**	**7.8**	**6.4**	**4 J**	**5.4**	**4.3**
COPPER	**5.8**	**6.5**	**10**	**5.4**	**4**	**3.5**	**7.9**	**6.7**	**4.5**	**3.5**	**3.8**
LEAD	**5.3**	**5.8**	**10**	**5.7**	**4**	**3.3**	**6.8**	**5.8**	**4.4**	**4.1**	**3.5**
MERCURY	<0.05	<0.05	**0.19**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
MOLYBDENUM	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
NICKEL	**11**	**13**	**14**	**12**	**7.9**	**9.1**	**17**	**15**	**9.6**	**8.8**	**8.6**
SELENIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
SILVER	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
THALLIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
VANADIUM	**32**	**38**	**34**	**29**	**23**	**26**	**38**	**29**	**29**	**25**	**26**
ZINC	**30**	**31**	**35**	**29**	**19**	**21**	**42**	**36**	**25**	**20**	**21**

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	SB05-002	SB05-002	SB05-003	SB05-003	SB05-004	SB05-004	SB05-004	SB05-004	SB05-005	SB05-005	SB05-006
SAMPLE NAME	S502@0.5-1	S502@4-5	S503@0.5-1	S503@4-5	S504@0.5-1D	S504@0-1	S504@10-11	S504@5-6	S505@0.5-1	S505@4-5	S506@0.5-1
SAMPLING DATE	3/19/1998	3/19/1998	3/18/1998	3/18/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/18/1998	3/18/1998	3/18/1998
ANTIMONY	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
ARSENIC	**1.8**	**2.1**	**1.6**	**2.7**	**1.8**	**2.2**	**3.3**	**1.1**	**1.4**	**2.1**	**1.7**
BARIUM	**63**	**29**	**33**	**22**	**32**	**48**	**220**	**47**	**26**	**52**	**42**
BERYLLIUM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CADMIUM	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
CHROMIUM	**8.5**	**6**	**10**	**5.1**	**7.6**	**8.7**	**8.8**	**15**	**7.4**	**8.2**	**18**
COBALT	**2.8 J**	<5	**4.3 J**	<5	**3.6 J**	**3.5 J**	**3.1 J**	**7.6**	**3.6 J**	**2.8 J**	**3.5 J**
COPPER	**2.6**	**2.1 J**	**6**	**3.6**	**2.9**	**3.2**	**6.7**	**3.6**	**6.1**	**1.9 J**	**5.4**
LEAD	**4**	**2.6**	**4**	**2.5**	**3.5**	**3.7**	**2.8**	**5.7**	**6**	**2.7**	**5**
MERCURY	<0.05	**0.035 J**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	**2.4**	<0.05
MOLYBDENUM	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
NICKEL	**7.1**	**5.2**	**8.4**	**4.9**	**6.7**	**7.5**	**6.9**	**13**	**6**	**7**	**13**
SELENIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
SILVER	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
THALLIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
VANADIUM	**25**	**21**	**26**	**22**	**26**	**27**	**29**	**28**	**21**	**31**	**25**
ZINC	**17**	**20**	**19**	**11**	**17**	**17**	**22**	**31**	**19**	**14**	**26**

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	SB05-006	SB05-007	SB05-007	SB05-008	SB05-009	SB05-009	SB05-010	SB05-010	SB05-010	SB05-011	SB05-011
SAMPLE NAME	S506@4-5	S507@0.5-1	S507@4-5	S508@4-5	S509@0.5-1	S509@4-5	S510@0.5-1	S510@0.5-1D	S510@4-5	S511@0.5-1	S511@4-5
SAMPLING DATE	3/18/1998	3/19/1998	3/19/1998	3/23/1998	3/19/1998	3/19/1998	3/19/1998	3/19/1998	3/19/1998	3/18/1998	3/18/1998
ANTIMONY	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
ARSENIC	**1.4**	**8.9**	**1.6**	**1.6**	**15**	**1.1**	**1.6**	**1.5**	**2.6**	**2.2**	**1.9**
BARIUM	**62**	**27**	**60**	**24**	**68**	**20**	**62**	**22**	**140**	**44**	**28**
BERYLLIUM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CADMIUM	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
CHROMIUM	**6.8**	**13**	**5.8**	**5.2**	**5.7**	**4.1**	**7**	**10**	**9.8**	**10**	**14**
COBALT	**2.7 J**	**4.4 J**	<5	<5	**3.5 J**	<5	**3.1 J**	**3.9 J**	**4.8 J**	**4.2 J**	**4.8 J**
COPPER	**2.6**	**3.8**	**1.9 J**	**1.6 J**	**5.6**	<2.5	**4**	**4.1**	**3.3**	**4.6**	**4**
LEAD	**2.7**	**3.9**	**2.4**	**1.8**	**11**	**1.1**	**4.1**	**4**	**3.9**	**4.1**	**4**
MERCURY	<0.05	<0.05	**0.21**	**0.25**	**0.053**	<0.05	<0.05	<0.05	<0.05	**0.034 J**	**0.027 J**
MOLYBDENUM	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
NICKEL	**5.9**	**10**	**4.8**	**4.3**	**11**	**3.2 J**	**6.4**	**8.7**	**8.4**	**19**	**12**
SELENIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
SILVER	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
THALLIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
VANADIUM	**24**	**35**	**21**	**20**	**22**	**18**	**23**	**25**	**32**	**43**	**33**
ZINC	**13**	**25**	**12**	**9.9**	**42**	**7.4**	**16**	**20**	**20**	**22**	**26**

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	SB05-012	SB05-012	SB05-013	SB05-013	SB05-014	SB05-014	SB05-015	SB05-015	SB05-015	SB05-016	SB05-016
SAMPLE NAME	S512@0.5-1	S512@4-5	S513@0.5-1	S513@4-5	S514@0.5-1	S514@4-5	S515@0-1	S515@10-11	S515@5-6	S516@0.5-1	S516@4-5
SAMPLING DATE	3/18/1998	3/18/1998	3/18/1998	3/18/1998	3/18/1998	3/18/1998	3/24/1998	3/24/1998	3/24/1998	3/19/1998	3/19/1998
ANTIMONY	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
ARSENIC	**2.5**	**1.4**	**1**	**1.7**	**2.8**	**2.2**	**2.2**	**1.8**	**1.5**	**3.5**	**1.5**
BARIUM	**25**	**27**	**29**	**79**	**73**	**89**	**23**	**68**	**88**	**110**	**59**
BERYLLIUM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CADMIUM	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
CHROMIUM	**5.5**	**8.6**	**7.2**	**9.7**	**11**	**15**	**8.1**	**14**	**6.6**	**9.4**	**5.1**
COBALT	**2.5 J**	**3.3 J**	**3.8 J**	**3.1 J**	**5.8**	**5.7**	**4.3 J**	**9**	**6.4**	**4.9 J**	<5
COPPER	**3.9**	**2.4 J**	**3.5**	**2.8**	**4.1**	**5.1**	**2.7**	**7.9**	**2.5**	**5.1**	**1.9 J**
LEAD	**5.9**	**3.1**	**2.3**	**3.5**	**4.7**	**5.1**	**3.5**	**4.7**	**3.1**	**4.8**	**2.1**
MERCURY	<0.05	<0.05	<0.05	<0.05	**0.035 J**	**0.037 J**	<0.05	<0.05	<0.05	<0.05	<0.05
MOLYBDENUM	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
NICKEL	**5.4**	**7.4**	**5.4**	**8.1**	**10**	**14**	**6.7**	**13**	**5.9**	**9.5**	**4.5**
SELENIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
SILVER	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
THALLIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
VANADIUM	**17**	**27**	**18**	**28**	**28**	**40**	**21**	**40**	**22**	**27**	**18**
ZINC	**20**	**16**	**12**	**19**	**25**	**28**	**16**	**32**	**14**	**22**	**10**

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	SB05-017	SB05-017	SB05-018	SB05-018	SB05-019	SB05-019	SB05-019	SB05-020	SB05-020
SAMPLE NAME	S517@0.5-1	S517@4-5	S518@0-1	S518@5-6	S519@0.5-1	S519@0.5-1D	S519@4-5	S520@0.5-1	S520@4-5
SAMPLING DATE	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/18/1998	3/18/1998	3/18/1998	3/18/1998	3/18/1998
ANTIMONY	<6	<6	<6	<6	<6	<6	<6	<6	<6
ARSENIC	**3.3**	**1.3**	**1.6**	**1.2**	**1.1**	**1.1**	**1.8**	**1.1**	**2.8**
BARIUM	**59**	**59**	**53**	**19 J**	**29**	**28**	**42**	**27**	**76**
BERYLLIUM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CADMIUM	<2	<2	<2	<2	<2	<2	<2	<2	<2
CHROMIUM	**6.9**	**7.5**	**7.7**	**6.9**	**7.3**	**6.6**	**9.1**	**5.8**	**11**
COBALT	**3.6 J**	**3.1 J**	**5.1**	**2.6 J**	**3.8 J**	**3.8 J**	**3.9 J**	**3.1 J**	**4.4 J**
COPPER	**2.5**	**2.1**	**4.7**	**2.5**	**3.4**	**4.8**	**3.7**	**4.6**	**3.3**
LEAD	**3.4**	**2.2**	**4.9**	**2.4**	**2.6**	**2.7**	**3.1**	**3.3**	**3.9**
MERCURY	<0.05	<0.05	<0.05	<0.05	**0.054**	**0.032 J**	<0.05	<0.05	**0.05**
MOLYBDENUM	<10	<10	<10	<10	<10	<10	<10	<10	<10
NICKEL	**6**	**5.7**	**7.7**	**5.2**	**5.8**	**5.3**	**7.2**	**4.9**	**8.9**
SELENIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1
SILVER	<2	<2	<2	<2	<2	<2	<2	<2	<2
THALLIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1
VANADIUM	**22**	**25**	**26**	**21**	**20**	**19**	**24**	**16**	**32**
ZINC	**14**	**13**	**19**	**16**	**13**	**12**	**16**	**12**	**20**

Units in mg/kg
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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	SB05-021	SB05-021	SB05-022	SB05-022	SB05-023	SB05-023	SB05-024	SB05-024	SB05-025	SB05-025	SB05-026
SAMPLE NAME	S521@0.5-1	S521@4-5	S522@0.5-1	S522@4-5	S523@0-1	S523@4-5	S524@0.5-1	S524@4-5	S525@0.5-1	S525@4-5	S526@0.5-1
SAMPLING DATE	3/19/1998	3/19/1998	3/19/1998	3/19/1998	3/23/1998	3/23/1998	3/19/1998	3/19/1998	3/19/1998	3/19/1998	3/17/1998
ANTIMONY	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
ARSENIC	**2.9**	**1.8**	**3.9**	**1.9**	**1.4**	**1.2**	**14**	**1.3**	**1**	**1.7**	**1.2**
BARIUM	**22**	**60**	**44**	**30**	**39**	**26**	**75**	**36**	**26**	**32**	**28**
BERYLLIUM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CADMIUM	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
CHROMIUM	**7.6**	**5.5**	**6.1**	**3.3**	**11**	**3.7**	**10**	**3.7**	**5.5**	**8.1**	**6.3**
COBALT	**3.7 J**	**3.1 J**	**2.7 J**	<5	**3.9 J**	**2.6 J**	**3.9 J**	<5	**3.6 J**	**3.3 J**	**3.8 J**
COPPER	**2.4 J**	**1.8 J**	**4.6**	**1.6 J**	**3.1**	**1.3 J**	**3.5**	**1.3 J**	**3.2**	**3.1**	**3.7**
LEAD	**3.4**	**2.7**	**3.9**	**1.9**	**3**	**1.4**	**5.8**	**1.6**	**2.8**	**3.1**	**2.3**
MERCURY	<0.05	**1**	**0.03 J**	<0.05	<0.05	<0.05	**0.041 J**	<0.05	<0.05	**0.29**	<0.05
MOLYBDENUM	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
NICKEL	**6.9**	**5**	**6.9**	**3.3 J**	**8.9**	**3.3**	**11**	**3.5 J**	**4.5**	**6.7**	**5.5**
SELENIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
SILVER	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
THALLIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
VANADIUM	**20**	**21**	**23**	**16**	**29**	**15**	**33**	**14**	**16**	**26**	**17**
ZINC	**14**	**10**	**16**	**7.4**	**19**	**7.2**	**20**	**6.4**	**10**	**15**	**12**

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	SB05-026	SB05-026	SB05-027	SB05-027	SB05-027	SB05-028	SB05-028	SB05-029	SB05-029	SB05-029	SB05-030
SAMPLE NAME	S526@14-15	S526@5-6	S527@0.5-1	S527@10-11	S527@5-6	S528@0.5-1	S528@4-5	S529@0-1	S529@10-11	S529@5-6	S530@0.5-1
SAMPLING DATE	3/17/1998	3/17/1998	3/16/1998	3/16/1998	3/16/1998	3/19/1998	3/19/1998	3/23/1998	3/23/1998	3/23/1998	3/20/1998
ANTIMONY	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
ARSENIC	**0.57**	**2.9**	**1.5**	**0.73**	**2**	**2.6**	**1.8**	**1.3**	**1.5**	**2.7**	**1.3**
BARIUM	**310**	**71**	**38**	**66**	**54**	**33**	**69**	**28**	**200**	**49**	**21**
BERYLLIUM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CADMIUM	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
CHROMIUM	**6.2**	**10**	**8.4**	**26**	**8.8**	**7.6**	**6.2**	**7.4**	**18**	**15**	**5.9**
COBALT	**5.9**	**4.6 J**	**5.6**	**9.6**	**4.2 J**	**3.5 J**	**2.9 J**	**4.9 J**	**9.7**	**7**	**4.1 J**
COPPER	**9.7**	**3.6**	**4.4**	**10**	**2.9**	**3.3**	**2 J**	**6.1**	**7.5**	**7.4**	**5**
LEAD	**3.9**	**3.6**	**2.8**	**4.5**	**3.2**	**3.8**	**2.4**	**3.3**	**5.2**	**6.5**	**3.3**
MERCURY	**0.093**	<0.05	<0.05	<0.05	<0.05	**0.043 J**	<0.05	<0.05	<0.05	<0.05	**0.072**
MOLYBDENUM	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
NICKEL	**11**	**9.5**	**6.4**	**21**	**7.2**	**8.7**	**5.6**	**5.4**	**17**	**14**	**4.6**
SELENIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
SILVER	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
THALLIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
VANADIUM	**28**	**32**	**22**	**50**	**26**	**23**	**19**	**20**	**41**	**36**	**16**
ZINC	**22**	**20**	**14**	**47**	**16**	**16**	**12**	**13**	**37**	**38**	**12**

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	SB05-030	SB05-031	SB05-031	SB05-032	SB05-032	SB05-033	SB05-033	SB05-034	SB05-034	SB05-035	SB05-035
SAMPLE NAME	S530@4-5	S531@0.5-1	S531@4-5	S532@0.5-1	S532@4-5	S533@0.5-1	S533@4-5	S534@0.5-1	S534@4-5	S535@0.5-1	S535@4-5
SAMPLING DATE	3/20/1998	3/18/1998	3/18/1998	3/19/1998	3/19/1998	3/19/1998	3/19/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998
ANTIMONY	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
ARSENIC	**1.6**	**8.3**	**2.1**	**1.9**	**1.8**	**1.4**	**1.1**	**1.5**	**1.2**	**0.73**	**1.7**
BARIUM	**50**	**26**	**51**	**54**	**78**	**25**	**21**	**25**	**49**	**21**	**41**
BERYLLIUM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CADMIUM	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
CHROMIUM	**9.5**	**7.1**	**8.9**	**8**	**12**	**6.4**	**6.3**	**8.6**	**7.6**	**4.5**	**7.8**
COBALT	**4.4 J**	**3.3 J**	**2.7 J**	**3.7 J**	**3.7 J**	**3.1 J**	**4.7 J**	**4.1 J**	**3.6 J**	**3.3 J**	**3.7 J**
COPPER	**2.9**	**5.8**	**2.2 J**	**2.8**	**3.6**	**5.4**	**4.5**	**7**	**2.4 J**	**2.4 J**	**2.1 J**
LEAD	**3.3**	**7.9**	**2.8**	**3.1**	**4**	**5.3**	**2.5**	**5.5**	**3.3**	**2.1**	**2.7**
MERCURY	**0.16**	<0.05	<0.05	**0.04 J**	<0.05	<0.05	<0.05	**0.066**	<0.05	**0.13**	**0.062**
MOLYBDENUM	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
NICKEL	**8.3**	**9.5**	**7**	**7.1**	**11**	**5**	**4.7**	**4.9**	**6.2**	**3.4**	**6.5**
SELENIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
SILVER	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
THALLIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
VANADIUM	**26**	**24**	**33**	**24**	**30**	**20**	**17**	**18**	**23**	**13**	**26**
ZINC	**18**	**19**	**15**	**16**	**23**	**16**	**11**	**16**	**14**	**8.2**	**15**

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	SB05-036	SB05-036	SB05-037	SB05-037	SB05-038	SB05-038	SB05-038	SB05-039	SB05-039	SB05-040	SB05-040
SAMPLE NAME	S536@0.5-1	S536@4-5	S537@0.5-1	S537@4-5	S538@0-1	S538@10-11	S538@5-6	S539@0.5-1	S539@4-5	S540@0-1	S540@10-11
SAMPLING DATE	3/20/1998	3/20/1998	3/19/1998	3/19/1998	3/24/1998	3/24/1998	3/24/1998	3/20/1998	3/20/1998	3/24/1998	3/24/1998
ANTIMONY	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
ARSENIC	<0.5	**2.1**	**1.6**	**2.8**	**3.7**	**1.3**	**1.7**	**1.6**	**1.1**	**1.6**	**1.6**
BARIUM	**19**	**100**	**97**	**43**	**82**	**120**	**44**	**25**	**32**	**24**	**73**
BERYLLIUM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CADMIUM	<2	<2	<2	**1.3 J**	<2	<2	<2	<2	<2	<2	<2
CHROMIUM	**5.2**	**11**	**11**	**18**	**11**	**8.6**	**9.8**	**6.1**	**7**	**8**	**15**
COBALT	**3.7 J**	**4.9 J**	**4.5 J**	**6.1**	**4.9 J**	<5	**3.6 J**	**3.4 J**	**3.8 J**	**4.4 J**	**6.4**
COPPER	**3.8**	**3.1**	**4.8**	**6**	**5.9**	**3.2**	**2.6**	**2.7**	**2.5**	**3.5**	**5.5**
LEAD	**4.4**	**3.6**	**5.1**	**4.9**	**6.1**	**3.4**	**7.7**	**2.1**	**2.8**	**3.1**	**4.6**
MERCURY	**0.45**	**0.083**	<0.05	<0.05	<0.05	<0.05	<0.05	**0.046 J**	<0.05	<0.05	<0.05
MOLYBDENUM	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
NICKEL	**3.8 J**	**9**	**10**	**15**	**12**	**6.1**	**3.1 J**	**3.8 J**	**5.9**	**6.6**	**12**
SELENIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
SILVER	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
THALLIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
VANADIUM	**14**	**32**	**20**	**44**	**30**	**22**	**25**	**14**	**19**	**20**	**34**
ZINC	**14**	**22**	**26**	**34**	**27**	**17**	**17**	**9**	**15**	**16**	**31**

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	SB05-040	SB05-041	SB05-041	SB05-041	SB05-041A	SB05-041A	SB05-042	SB05-042	SB05-042	SB05-043
SAMPLE NAME	S540@5-6	S541@0.5-1	S541@4-5	S541@4-5D	S541A@9.5-10	S541A@9.5-10D	S542@0.5-1	S542@0.5-1D	S542@4-5	S543@0-1
SAMPLING DATE	3/24/1998	3/20/1998	3/20/1998	3/20/1998	4/16/1998	4/16/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998
ANTIMONY	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
ARSENIC	**2.2**	**3.9**	**1.4**	**1.4**	**2.2**	**1.3**	**4.2**	**2.2**	**2**	**5**
BARIUM	**36**	**34**	**55**	**83**	**75**	**59**	**52**	**56**	**63**	**62**
BERYLLIUM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CADMIUM	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
CHROMIUM	**12**	**6.5**	**6.4**	**6.9**	**9.4**	**9.7**	**8.1**	**6.9**	**9.6**	**11**
COBALT	**5.4**	**3.8 J**	**3.2 J**	**3.2 J**	**11**	**5.8**	**3.3 J**	**3.5 J**	**3.5 J**	**3.9 J**
COPPER	**4.2**	**3**	**2.2 J**	**2.3 J**	**4.5**	**3.9**	**4.1**	**4**	**4.1**	**5.1**
LEAD	**4.7**	**4.4**	**2.6**	**2.5**	**4.7**	**4.8**	**5.6**	**4.7**	**3.7**	**3.8**
MERCURY	<0.05	<0.05	<0.05	**0.062**	<0.05	<0.05	**0.041 J**	**0.036 J**	**0.039 J**	<0.05
MOLYBDENUM	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
NICKEL	**10**	**6.9**	**5.5**	**5.5**	**13**	**9.9**	**8.2**	**7.1**	**9**	**9.4**
SELENIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
SILVER	<2	<2	<2	<2	<2	**1.1 J**	<2	<2	<2	<2
THALLIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
VANADIUM	**25**	**21**	**21**	**23**	**36**	**25**	**22**	**18**	**23**	**28**
ZINC	**26**	**14**	**12**	**21**	**20**	**16**	**22**	**17**	**21**	**25**

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	SB05-043	SB05-043	SB05-043A	SB05-044	SB05-044	SB05-045	SB05-045	SB05-046	SB05-046	SB05-047	SB05-047
SAMPLE NAME	S543@10-11	S543@4-4.5	S543A@10.5-11	S544@0.5-1	S544@4-5	S545@0-1	S545@4-5	S546@0-1	S546@4-5	S547@0.5-1	S547@4-5
SAMPLING DATE	3/20/1998	3/20/1998	4/16/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998
ANTIMONY	<6	<6	<06	<6	<6	<6	<6	<6	<6	<6	<6
ARSENIC	**0.96**	**2.4**	**0.93**	**1.8**	**1.5**	**2**	**2.8**	**1.7**	**3**	**2**	**1.5**
BARIUM	**71**	**100**	**160**	**52**	**41**	**44**	**140**	**38**	**62**	**61**	**39**
BERYLLIUM	<0.5	<0.5	<01	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CADMIUM	<2	<2	<02	<2	<2	<2	<2	<2	<2	<2	<2
CHROMIUM	**11**	**12**	**15**	**9.2**	**12**	**9.4**	**14**	**6.6**	**12**	**7.3**	**6.3**
COBALT	<5	**4.3 J**	**5.1**	**4.9 J**	**4.8 J**	**3.9 J**	**5.1**	**3 J**	**5.8**	**3.8 J**	**2.7 J**
COPPER	**3.7**	**5.6**	**9.2**	**4.8**	**3.6**	**4**	**5**	**3.3**	**5.8**	**4.2**	**4.9**
LEAD	**3.2**	**4**	**5**	**5.3**	**3.7**	**3.2**	**4.5**	**4.1**	**5.6**	**5.9**	**7**
MERCURY	**0.22**	**0.035 J**	<0.05	<0.05	**0.029 J**	<0.05	<0.05	<0.05	**0.062**	**0.074**	<0.05
MOLYBDENUM	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
NICKEL	**8.6**	**11**	**14**	**10**	**10**	**8.4**	**11**	**5.8**	**11**	**9.3**	**5.9**
SELENIUM	<1	<1	<01	<1	<1	<1	<1	<1	<1	<1	<1
SILVER	<2	<2	<02	<2	<2	<2	<2	<2	<2	<2	<2
THALLIUM	<1	<1	<01	<1	<1	<1	<1	<1	<1	<1	<1
VANADIUM	**18**	**29**	**29**	**27**	**25**	**28**	**36**	**20**	**30**	**25**	**16**
ZINC	**23**	**29**	**25**	**21**	**21**	**20**	**28**	**16**	**30**	**33**	**19**

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	SB05-048	SB05-048	SB05-049	SB05-049	SB05-050	SB05-050	SB05-051	SB05-051	SB05-052	SB05-052	SB05-052
SAMPLE NAME	S548@0.5-1	S548@4-5	S549@0.5-1	S549@4-5	S550@0.5-1	S550@4-5	S551@0.5-1	S551@4-5	S552@0.5-1	S552@10-11	S552@4-5
SAMPLING DATE	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998
ANTIMONY	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
ARSENIC	**1.6**	**1.4**	**3.8**	**4.9**	**6.6**	**2.7**	**2.1**	**1.9**	**1.8**	**0.99**	**1.4**
BARIUM	**52**	**57**	**53**	**66**	**40**	**120**	**120**	**60**	**55**	**69**	**48**
BERYLLIUM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CADMIUM	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
CHROMIUM	**6.8**	**7.5**	**8.5**	**11**	**6.3**	**9.8**	**15**	**9.9**	**9.2**	**7.9**	**10**
COBALT	<5	**3.2 J**	**4.4 J**	**5.1**	**3.9 J**	**3.2 J**	**5.9**	**3.4 J**	**4 J**	**3.1 J**	**4.1 J**
COPPER	**1.8 J**	**3.6**	**4.3**	**7.6**	**8.9**	**3.2**	**7.4**	**4.8**	**4.1**	**3.8**	**3.8**
LEAD	**2.1**	**4.1**	**5.2**	**11**	**13**	**3.5**	**6.6**	**5.5**	**4.9**	**3.5**	**4**
MERCURY	<0.05	<0.05	**0.059**	**0.057**	<0.05	**0.029 J**	<0.05	<0.05	<0.05	<0.05	<0.05
MOLYBDENUM	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
NICKEL	**7**	**8**	**8**	**14**	**24**	**8.6**	**15**	**11**	**8.9**	**7.9**	**10**
SELENIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
SILVER	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
THALLIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
VANADIUM	**21**	**22**	**23**	**34**	**43**	**26**	**32**	**22**	**27**	**19**	**25**
ZINC	**14**	**17**	**26**	**65**	**73**	**23**	**35**	**25**	**19**	**19**	**20**

Units in mg/kg
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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	SB05-053	SB05-053	SB05-054	SB05-054	SB05-054	SB05-054	SB05-055	SB05-055	SB05-056	SB05-056	SB05-057
SAMPLE NAME	S553@0.5-1	S553@4-5	S554@0.5-1	S554@0.5-1D	S554@10-11	S554@4-5	S555@0.5-1	S555@4-5	S556@0.5-1	S556@4-5	S557@0.5-1
SAMPLING DATE	3/23/1998	3/23/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998
ANTIMONY	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
ARSENIC	**4.8**	**2.2**	**3.9**	**3.6**	**1.2**	**3.2**	**2**	**1.4**	**2.4**	**4.4**	**1.8**
BARIUM	**130**	**120**	**33**	**33**	**77**	**83**	**68**	**50**	**80**	**58**	**51**
BERYLLIUM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CADMIUM	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
CHROMIUM	**15**	**38**	**12**	**13**	**13**	**16**	**12**	**6.8**	**13**	**9.3**	**10**
COBALT	**5.8**	**5.1**	**4.8 J**	**5.8**	**6.3**	**8.4**	**4.1 J**	**2.6 J**	**4.8 J**	**4.7 J**	**4.8 J**
COPPER	**10**	**5.5**	**4.7**	**4.8**	**7.5**	**6.1**	**7.7**	**3**	**7.2**	**56**	**18**
LEAD	**5.6**	**4**	**4.3**	**4.5**	**2.3**	**5.9**	**5.3**	**2.7**	**5**	**24**	**5**
MERCURY	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	**0.037 J**	<0.05	**0.026 J**	**0.079**	**0.39**
MOLYBDENUM	<10	<10	<10	<10	<10	<10	<10	<10	<10	**5.7 J**	<10
NICKEL	**13**	**21**	**10**	**11**	**12**	**14**	**10**	**5.7**	**12**	**21**	**12**
SELENIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
SILVER	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
THALLIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
VANADIUM	**41**	**36**	**37**	**40**	**40**	**43**	**27**	**17**	**29**	**39**	**29**
ZINC	**44**	**27**	**34**	**27**	**29**	**35**	**33**	**14**	**33**	**190**	**32**

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	SB05-057	SB05-058	SB05-058	SB05-059	SB05-059	SB05-059	SB05-060	SB05-060	SB05-061	SB05-061	SB05-062
SAMPLE NAME	S557@3-3.5	S558@0.5-1	S558@4-5	S559@0-1	S559@0-1D	S559@4-5	S560@0.5-1	S560@4-5	S561@0.5-1	S561@4-5	S562@0.5-1
SAMPLING DATE	3/20/1998	3/20/1998	3/20/1998	3/23/1998	3/23/1998	3/23/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/25/1998
ANTIMONY	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
ARSENIC	**3**	**1.7**	**1.2**	**3.3**	**3.2**	**2.2**	**1.9**	**4.7**	**1.8**	**0.71**	**1.4**
BARIUM	**63**	**71**	**61**	**74**	**69**	**110**	**66**	**93**	**94**	**33**	**38**
BERYLLIUM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CADMIUM	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
CHROMIUM	**13**	**15**	**18**	**12**	**12**	**11**	**34**	**26**	**47**	**34**	**7.9**
COBALT	**4.7 J**	**6**	**8.4**	**4.9 J**	**4.9 J**	**5**	**4.7 J**	**6.4**	**9.4**	**4.6 J**	**4.8 J**
COPPER	**15**	**6.8**	**10**	**7.9**	**8.4**	**6.9**	**5**	**9.8**	**9.4**	**5**	**5.4**
LEAD	**15**	**3.5**	**4.3**	**6.4**	**6.5**	**6**	**5.1**	**6.5**	**5.5**	**3.3**	**3.5**
MERCURY	**0.029 J**	<0.05	**0.031 J**	**0.03 J**	<0.05	<0.05	<0.05	<0.05	**0.21**	**0.046 J**	**0.078**
MOLYBDENUM	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
NICKEL	**19**	**11**	**17**	**13**	**11**	**10**	**23**	**21**	**28**	**17**	**6.7**
SELENIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
SILVER	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
THALLIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
VANADIUM	**34**	**34**	**42**	**33**	**31**	**26**	**27**	**44**	**43**	**16**	**20**
ZINC	**46**	**29**	**40**	**35**	**34**	**29**	**25**	**36**	**42**	**16**	**16**

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	SB05-062	SB05-062	SB05-063	SB05-063	SB05-064	SB05-064	SB05-065	SB05-065	SB05-066	SB05-066	SB05-066
SAMPLE NAME	S562@12-13	S562@4-5	S563@0.5-1	S563@4-5	S564@0.5-1	S564@4-5	S565@0.5-1	S565@4-5	S566@0.5-1	S566@0.5-1D	S566@14-15
SAMPLING DATE	3/25/1998	3/25/1998	3/24/1998	3/24/1998	3/23/1998	3/23/1998	3/24/1998	3/24/1998	3/25/1998	3/25/1998	3/25/1998
ANTIMONY	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
ARSENIC	**2.4**	**1.8**	**2.8**	**0.84**	**5**	**1.4**	**3.8**	**1.8**	**1.9**	**1.8**	**2**
BARIUM	**53**	**39**	**60**	**40**	**56**	**53**	**62**	**110**	**72**	**72**	**60**
BERYLLIUM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CADMIUM	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
CHROMIUM	**11**	**5.6**	**8.5**	**21**	**11**	**54**	**12**	**23**	**12**	**15**	**9.2**
COBALT	**4.5 J**	<5	**3.4 J**	**5.1**	**3.9 J**	<5	**4.1 J**	**6.9**	**5.1**	**6**	**5**
COPPER	**4.3**	**1.7 J**	**4.7**	**4.6**	**13**	**2.6**	**7.8**	**7.2**	**5.8**	**6**	**5.1**
LEAD	**1.6**	**2.1**	**6.3**	**3.1**	**7.6**	**3.8**	**10**	**3.9**	**4.5**	**4.5**	**1.5**
MERCURY	**0.036 J**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
MOLYBDENUM	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
NICKEL	**8.6**	**4.8**	**7.9**	**13**	**9.2**	**4.4**	**13**	**17**	**11**	**13**	**9**
SELENIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
SILVER	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
THALLIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
VANADIUM	**38**	**21**	**32**	**18**	**26**	**14**	**28**	**42**	**29**	**33**	**41**
ZINC	**22**	**10**	**19**	**16**	**61**	**14**	**37**	**33**	**28**	**30**	**21**

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	SB05-066	SB05-067	SB05-067	SB05-068	SB05-068	SB05-069	SB05-069	SB05-070	SB05-070	SB05-070	SB05-071
SAMPLE NAME	S566@4-5	S567@0.5-1	S567@4-5	S568@0.5-1	S568@4-5	S569@0.5-1	S569@4-5	S570@0.5-1	S570@0.5-1D	S570@4-5	S571@0.5-1
SAMPLING DATE	3/25/1998	3/24/1998	3/24/1998	3/23/1998	3/23/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/23/1998
ANTIMONY	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
ARSENIC	**2.7**	**1.7**	**2.1**	**1.2**	**1.3**	**2**	<0.5	**1**	**0.94**	**1.1**	**1.7**
BARIUM	**83**	**72**	**63**	**22**	**24**	**88**	**76**	**51**	**31**	**29**	**64**
BERYLLIUM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CADMIUM	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
CHROMIUM	**12**	**19**	**25**	**7.3**	**6.4**	**22**	**22**	**24**	**23**	**14**	**9.8**
COBALT	**4.5 J**	**5.1**	**5**	**4.5 J**	**3.1 J**	**5.7**	**7.1**	**3.9**	**3.6 J**	**2.7 J**	**3.9 J**
COPPER	**5.8**	**5**	**4**	**4.9**	**2.3 J**	**7.9**	**8.1**	**3.8**	**3.4**	**2.9**	**5**
LEAD	**3.8**	**5.3**	**3.9**	**2.6**	**2.4**	**5.1**	**4.3**	**2.4**	**2.1**	**1.5**	**3.6**
MERCURY	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
MOLYBDENUM	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
NICKEL	**10**	**14**	**17**	**5.4**	**5.9**	**16**	**19**	**13**	**12**	**8.2**	**8.5**
SELENIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
SILVER	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
THALLIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
VANADIUM	**33**	**26**	**32**	**17**	**18**	**28**	**51**	**28**	**26**	**29**	**21**
ZINC	**28**	**24**	**29**	**13**	**13**	**29**	**33**	**17**	**14**	**12**	**22**

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	SB05-071	SB05-072	SB05-072	SB05-073	SB05-073	SB05-074	SB05-074	SB05-075	SB05-075	SB05-075	SB05-076
SAMPLE NAME	S571@4-5	S572@0.5-1	S572@4-5	S573@0.5-1	S573@4-5	S574@0.5-1	S574@4-5	S575@0.5-1	S575@10-11	S575@4-5	S576@0.5-1
SAMPLING DATE	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/20/1998	3/20/1998	3/20/1998	3/23/1998
ANTIMONY	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
ARSENIC	**1.4**	**2.6**	**1.9**	**2.7**	**0.85**	**2.3**	**3.2**	**1.8**	**2.2**	**1.4**	**2**
BARIUM	**18 J**	**84**	**32**	**64**	**27**	**81**	**110**	**32**	**110**	**25**	**45**
BERYLLIUM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CADMIUM	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
CHROMIUM	**40**	**12**	**14**	**12**	**6.2**	**8.8**	**12**	**7**	**15**	**11**	**11**
COBALT	**3.3 J**	**5.2**	**4.2 J**	**5.2**	**5.1**	**4.5 J**	**5.6**	<5	<5	**7.1**	**4 J**
COPPER	**3.7**	**6.9**	**4**	**7.5**	**3.8**	**5.9**	**7.7**	<2.5	**6.2**	**5.3**	**5**
LEAD	**3.5**	**8.6**	**4.5**	**5.3**	**3**	**4**	**3.2**	**4.5**	**4.2**	**5.2**	**3.1**
MERCURY	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	**0.12**	<0.05	**0.06**	<0.05
MOLYBDENUM	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
NICKEL	**19**	**13**	**12**	**11**	**5.2**	**7.9**	**10**	**7.1**	**13**	**8.2**	**8.7**
SELENIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
SILVER	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
THALLIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
VANADIUM	**22**	**33**	**30**	**36**	**17**	**33**	**42**	**20**	**37**	**22**	**25**
ZINC	**23**	**30**	**28**	**25**	**11**	**21**	**27**	**18**	**30**	**19**	**22**

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	SB05-076	SB05-077	SB05-077	SB05-078	SB05-078	SB05-079	SB05-079	SB05-079	SB05-080	SB05-080	SB05-081
SAMPLE NAME	S576@4-5	S577@0.5-1	S577@4-5	S578@0.5-1	S578@4-5	S579@0.5-1	S579@10-11	S579@4-5	S580@0.5-1	S580@4-5	S581@0.5-1
SAMPLING DATE	3/23/1998	3/24/1998	3/24/1998	3/25/1998	3/25/1998	3/20/1998	3/20/1998	3/20/1998	3/23/1998	3/23/1998	3/23/1998
ANTIMONY	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
ARSENIC	**1.2**	**2.3**	**2.1**	**2.8**	**1.9**	**3.3**	**1.1**	**2.7**	**1.8**	**1**	**3.7**
BARIUM	**25**	**69**	**88**	**95**	**29**	**83**	**51**	**70**	**29**	**25**	**48**
BERYLLIUM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CADMIUM	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
CHROMIUM	**8.1**	**24**	**12**	**9.5**	**12**	**12**	**6.9**	**11**	**6.1**	**7.2**	**18**
COBALT	**3.2 J**	**5**	**6.8**	**3.9 J**	**3.3 J**	**4.1 J**	<5	**4.5 J**	**2.7 J**	**5.6**	**6**
COPPER	**4.6**	**8.5**	**6.2**	**5**	**5.3**	**9.2**	**2.5**	**5.6**	**7**	**4.3**	**8.6**
LEAD	**3.6**	**9.7**	**6.1**	**5**	**4**	**8.2**	**2.4**	**3.4**	**3.4**	**3.4**	**6.3**
MERCURY	<0.05	**0.046 J**	**0.24**	<0.05	<0.05	**0.12**	**0.066**	**0.028 J**	<0.05	<0.05	<0.05
MOLYBDENUM	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
NICKEL	**7**	**20**	**11**	**9.2**	**8.8**	**11**	**5.9**	**9.3**	**5.6**	**6.9**	**14**
SELENIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
SILVER	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
THALLIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
VANADIUM	**22**	**32**	**28**	**26**	**27**	**32**	**18**	**25**	**24**	**19**	**36**
ZINC	**19**	**33**	**30**	**24**	**21**	**43**	**13**	**24**	**17**	**15**	**36**

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	SB05-081	SB05-081	SB05-082	SB05-082	SB05-083	SB05-083	SB05-084	SB05-084	SB05-085	SB05-085	SB05-085
SAMPLE NAME	S581@0.5-1D	S581@4-5	S582@0.5-1	S582@4-5	S583@0.5-1	S583@4-5	S584@0.5-1	S584@4-5	S585@0.5-1	S585@0.5-1D	S585@4-5
SAMPLING DATE	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/24/1998	3/24/1998	3/24/1998
ANTIMONY	<6	<6	<6	**3.3 J**	<6	<6	<6	<6	<6	<6	<6
ARSENIC	**3.7**	**2.1**	**19**	**2.8**	**6.1**	**2.1**	**2.3**	**1.8**	**6.9**	**7.2**	**1.8**
BARIUM	**44**	**100**	**160**	**83**	**77**	**110**	**85**	**38**	**150**	**150**	**54**
BERYLLIUM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CADMIUM	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
CHROMIUM	**18**	**32**	**26**	**14**	**9.3**	**15**	**13**	**7.2**	**15**	**14**	**17**
COBALT	**6.1**	**5.7**	**9.4**	**5.9**	**4.5 J**	**6.6**	**4.9 J**	**2.7 J**	**4.8 J**	**4.9 J**	**5.1**
COPPER	**8.6**	**8.5**	**320**	**10**	**14**	**16**	**5.8**	**29**	**7.4**	**7.2**	**5**
LEAD	**5.6**	**6.3**	**58**	**4.1**	**8.2**	**4.6**	**5.6**	**6.3**	**7.9**	**8**	**4**
MERCURY	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	**0.22**	<0.05	<0.05	**0.1**	<0.05
MOLYBDENUM	<10	<10	**190**	<10	<10	<10	<10	<10	<10	<10	<10
NICKEL	**14**	**26**	**17**	**12**	**11**	**13**	**11**	**6.9**	**12**	**13**	**13**
SELENIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
SILVER	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
THALLIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
VANADIUM	**36**	**29**	**20**	**45**	**26**	**41**	**29**	**19**	**27**	**29**	**29**
ZINC	**36**	**33**	**140**	**32**	**34**	**41**	**28**	**55**	**30**	**33**	**22**

Units in mg/kg
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	SB05-086	SB05-086	SB05-086	SB05-087	SB05-087	SB05-088	SB05-088	SB05-089	SB05-089	SB05-090	SB05-090
SAMPLE NAME	S586@0.5-1	S586@10-11	S586@4-5	S587@0.5-1	S587@4-5	S588@0.5-1	S588@4-5	S589@0.5-1	S589@4-5	S590@1.5-2	S590@4-5
SAMPLING DATE	3/23/1998	3/23/1998	3/23/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998
ANTIMONY	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
ARSENIC	**6.1**	**1.9**	**1.4**	**2.8**	**1.8**	**2.5**	**1.6**	**1.8**	**1.8**	**2.2**	**2**
BARIUM	**110**	**100**	**83**	**130**	**100**	**36**	**66**	**93**	**36**	**82**	**64**
BERYLLIUM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CADMIUM	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
CHROMIUM	**9.5**	**13**	**12**	**20**	**21**	**13**	**13**	**16**	**6**	**15**	**13**
COBALT	**4.4 J**	**4 J**	**6.1**	**6.1**	**6.6**	**4.9 J**	**3.8 J**	**5.8**	<5	**17**	**4.9 J**
COPPER	**7.4**	**4.2**	**4.9**	**5.6**	**7.7**	**2.9**	**2.9**	**6.4**	**1.4 J**	**3.8**	**3.4**
LEAD	**6.2**	**3.5**	**4.4**	**5.5**	**5.6**	**6.3**	**3.4**	**5.2**	**2.8**	**5.6**	**3.3**
MERCURY	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	**0.046 J**	<0.05	**0.13**	<0.05	<0.05
MOLYBDENUM	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
NICKEL	**11**	**10**	**12**	**16**	**16**	**10**	**10**	**13**	**4.1**	**13**	**10**
SELENIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
SILVER	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
THALLIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
VANADIUM	**29**	**29**	**30**	**32**	**29**	**26**	**24**	**26**	**13**	**31**	**27**
ZINC	**81**	**22**	**26**	**33**	**33**	**19**	**18**	**31**	**7.1**	**24**	**20**

Units in mg/kg
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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	SB05-091	SB05-091	SB05-092	SB05-092	SB05-093	SB05-093	SB05-094	SB05-094	SB05-094	SB05-094	T-01
SAMPLE NAME	S591@0.5-1	S591@4-5	S592@0.5-1	S592@4-5	S593@0.5-1	S593@4-5	S594@0.5-1	S594@10-11	S594@4-5	S594@4-5D	T1-2.5
SAMPLING DATE	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	11/10/1997
ANTIMONY	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	--
ARSENIC	**2.1**	**2.2**	**4.6**	**1.7**	**3.2**	**2.1**	**5.8**	**1.4**	**1.8**	**0.96**	<1
BARIUM	**76**	**110**	**57**	**43**	**66**	**64**	**57**	**50**	**38**	**29**	--
BERYLLIUM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CADMIUM	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	--
CHROMIUM	**11**	**15**	**9.6**	**7.4**	**8.4**	**10**	**13**	**7.2**	**9.8**	**3.4**	**13**
COBALT	**4.5 J**	**6.2**	**3.8 J**	**2.7 J**	**4.2 J**	**3.5 J**	**4.6 J**	**4.2 J**	**4 J**	<5	--
COPPER	**5.2**	**6.6**	**11**	**3.5**	**5.6**	**3.7**	**12**	**3**	**5**	**2.4 J**	--
LEAD	**4.8**	**5**	**5.7**	**3.1**	**5.6**	**3.1**	**17**	**3.1**	**3.8**	**4.2**	**2.2**
MERCURY	<0.05	<0.05	**0.19**	<0.05	<0.05	**1.1**	**0.1**	<0.05	<0.05	**0.044 J**	--
MOLYBDENUM	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	--
NICKEL	**11**	**13**	**13**	**6**	**12**	**7.7**	**15**	**6.5**	**8.3**	**3.5 J**	**12**
SELENIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
SILVER	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	--
THALLIUM	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
VANADIUM	**29**	**35**	**25**	**19**	**29**	**27**	**42**	**17**	**27**	**9.9**	**27**
ZINC	**27**	**32**	**42**	**15**	**33**	**19**	**51**	**14**	**20**	**9.6**	--

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	T-01	T-02	T-02	T-03	T-03	T-03	T-04	T-04	T-05	T-05	T-06
SAMPLE NAME	T1-5	T2-6	T2-8	T3-4.5	T3-8A	T3-8B	T4-5	T4-7.5	T5-2.5	T5-5.5	T6-4.5
SAMPLING DATE	11/10/1997	11/10/1997	11/10/1997	11/10/1997	11/10/1997	11/10/1997	11/10/1997	11/10/1997	11/10/1997	11/10/1997	11/10/1997
ANTIMONY	--	--	--	--	--	--	--	--	--	--	--
ARSENIC	<1	<1	<1	<1	<1	**32**	<1	<1	<1	<1	<1
BARIUM	--	--	--	--	--	--	--	--	--	--	--
BERYLLIUM	<0.5	<0.5	<0.5	**5.2**	<0.5	**8.2**	**0.72**	<0.5	<0.5	<0.5	<0.5
CADMIUM	--	--	--	--	--	--	--	--	--	--	--
CHROMIUM	**7.4**	**8.6**	**9.1**	**4100** ****	**7**	**1000**	**1300**	**6.9**	**21**	**8.5**	**6.2**
COBALT	--	--	--	--	--	--	--	--	--	--	--
COPPER	--	--	--	--	--	--	--	--	--	--	--
LEAD	<0.5	<0.5	<1	**150**	**0.83**	**190**	**25**	<0.5	**0.96**	<0.5	**4.1**
MERCURY	--	--	--	--	--	--	--	--	--	--	--
MOLYBDENUM	--	--	--	--	--	--	--	--	--	--	--
NICKEL	**3.8**	**4.1**	**4.7**	**730**	**3.3**	**1100**	**230**	**3.3**	**14**	**19**	**4.3**
SELENIUM	--	--	--	--	--	--	--	--	--	--	--
SILVER	--	--	--	--	--	--	--	--	--	--	--
THALLIUM	--	--	--	--	--	--	--	--	--	--	--
VANADIUM	**17**	**22**	**21**	**1200**	**16**	**2100**	**130**	**16**	**38**	**20**	**14**
ZINC	--	--	--	--	--	--	--	--	--	--	--

Units in mg/kg
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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
SOIL MATRIX ANALYTICAL DATA
METAL COMPOUNDS BY 6010/7471

LOCATION	T-06	T-07-E	T-07-E	T-07-M	T-07-W	T-07-W
SAMPLE NAME	T6-5.75	T7E-6	T7E-8	T7M-4	T7W-4	T7W-7
SAMPLING DATE	11/10/1997	11/10/1997	11/10/1997	11/10/1997	11/10/1997	11/10/1997
ANTIMONY	--	--	--	--	--	--
ARSENIC	<1	<1	<1	<1	<1	<1
BARIUM	--	--	--	--	--	--
BERYLLIUM	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CADMIUM	--	--	--	--	--	--
CHROMIUM	**9.4**	**13**	**5.7**	**19**	**9.4**	**7.5**
COBALT	--	--	--	--	--	--
COPPER	--	--	--	--	--	--
LEAD	<0.5	**3.1**	<0.5	**4.1**	<0.5	<0.5
MERCURY	--	--	--	--	--	--
MOLYBDENUM	--	--	--	--	--	--
NICKEL	**4.7**	**12**	**2.8**	**15**	**8.9**	**3.5**
SELENIUM	--	--	--	--	--	--
SILVER	--	--	--	--	--	--
THALLIUM	--	--	--	--	--	--
VANADIUM	**20**	**24**	**15**	**34**	**34**	**17**
ZINC	--	--	--	--	--	--

Units in mg/kg
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APPENDIX B

Groundwater Analytical Data

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
VOC COMPOUNDS BY 8260/8260B

LOCATION	HM-001	HM-002	HM-003	IT-01	IT-02	IT-03	IT-04	IT-05
SAMPLE NAME	HM-001-GW	HM-002-GW	HM-003-GW	IT-1	IT-2	IT-3	IT-4	IT-5
SAMPLING DATE	10/13/1998	10/13/1998	10/7/1998	2/12/2001	2/12/2001	2/12/2001	2/12/2001	2/12/2001
1,1,1,2-TETRACHLOROETHANE	<1	<1	<1	--	--	--	--	--
1,1,1-TRICHLOROETHANE	<1	<1	<1	--	--	--	--	--
1,1,2,2-TETRACHLOROETHANE	<1	<1	<1	--	--	--	--	--
1,1,2-TRICHLOROETHANE	<1	<1	<1	--	--	--	--	--
1,1-DICHLOROETHANE	<1	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHENE	<1	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	<1	<1	<1	--	--	--	--	--
1,2,3-TRICHLOROBENZENE	<1	<1	<1	--	--	--	--	--
1,2,3-TRICHLOROPROPANE	<1	<1	<1	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	<1	<1	<1	--	--	--	--	--
1,2,4-TRIMETHYLBENZENE	<1	<1	<1	--	--	--	--	--
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	<5	<5	<5	--	--	--	--	--
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	<1	<1	<1	--	--	--	--	--
1,2-DICHLOROBENZENE	<1	<1	<1	--	--	--	--	--
1,2-DICHLOROETHANE	<1	<1	<1	--	--	--	--	--
1,2-DICHLOROPROPANE	<1	<1	<1	--	--	--	--	--
1,3,5-TRIMETHYLBENZENE	<1	<1	<1	--	--	--	--	--
1,3-DICHLOROBENZENE	<1	<1	<1	--	--	--	--	--
1,3-DICHLOROPROPANE	<1	<1	<1	--	--	--	--	--
1,4-DICHLOROBENZENE	<1	<1	<1	--	--	--	--	--
2,2-DICHLOROPROPANE	<1	<1	<1	--	--	--	--	--
2-CHLOROTOLUENE	<1	<1	<1	--	--	--	--	--
4-CHLOROTOLUENE	<1	<1	<1	--	--	--	--	--
4-ISOPROPYLTOLUENE	<1	<1	<1	--	--	--	--	--
ACETONE	--	--	--	<5	<5	<5	<5	<5
BENZENE	<1	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.5
BROMOBENZENE	<1	<1	<1	--	--	--	--	--
BROMODICHLOROMETHANE	<1	<1	<1	--	--	--	--	--
BROMOFORM	<1	<1	<1	--	--	--	--	--
BROMOMETHANE	<1	<1	<1	--	--	--	--	--
CARBON TETRACHLORIDE	<1	<1	<1	--	--	--	--	--
CHLOROBENZENE	<1	<1	<1	--	--	--	--	--
CHLOROBROMOMETHANE	<1	<1	<1	--	--	--	--	--

Units in ug/l
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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
VOC COMPOUNDS BY 8260/8260B

LOCATION	HM-001	HM-002	HM-003	IT-01	IT-02	IT-03	IT-04	IT-05
SAMPLE NAME	HM-001-GW	HM-002-GW	HM-003-GW	IT-1	IT-2	IT-3	IT-4	IT-5
SAMPLING DATE	10/13/1998	10/13/1998	10/7/1998	2/12/2001	2/12/2001	2/12/2001	2/12/2001	2/12/2001
CHLOROETHANE	<5	<5	<5	--	--	--	--	--
CHLOROFORM	<1	<1	<1	**48.4**	**0.6 J**	<0.5	**29.1**	<0.5
CHLOROMETHANE	<5	<5	<5	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	<1	<1	<1	**4.2**	**8.7**	**7.8**	**4.4**	**4.8**
DIBROMOCHLOROMETHANE	<1	<1	<1	--	--	--	--	--
DIBROMOMETHANE	<1	<1	<1	--	--	--	--	--
DICHLORODIFLUOROMETHANE (CFC-12)	<1	<1	<1	--	--	--	--	--
ETHYLBENZENE	<1	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.5
HEXACHLOROBUTADIENE	<1	<1	<1	--	--	--	--	--
ISOPROPYLBENZENE	<1	<1	<1	--	--	--	--	--
METHYLENE CHLORIDE	<1	<1	<1	--	--	--	--	--
NAPHTHALENE	<1	<1	<1	--	--	--	--	--
N-BUTYLBENZENE	<1	<1	<1	--	--	--	--	--
N-PROPYLBENZENE	<1	<1	<1	--	--	--	--	--
SEC-BUTYLBENZENE	<1	<1	<1	--	--	--	--	--
STYRENE	<1	<1	<1	--	--	--	--	--
TERT-BUTYLBENZENE	<1	<1	<1	--	--	--	--	--
TETRACHLOROETHENE	<1	<1	<1	--	--	--	--	--
TOLUENE	<1	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	<1	<1	<1	--	--	--	--	--
TRICHLOROETHENE	<1	<1	<1	**14.9**	**31.6**	**27.7**	**14.2**	**24.2**
TRICHLOROFLUOROMETHANE (CFC-11)	<5	<5	<5	--	--	--	--	--
VINYL CHLORIDE	<5	<5	<5	--	--	--	--	--
XYLENES (TOTAL)	--	--	--	<0.5	<0.5	<0.5	<0.5	<0.5

Units in ug/l
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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
VOC COMPOUNDS BY 8260/8260B

LOCATION	IT-06	IT-07	IT-07	IT-08	MW-02	MW-03	MW-04	MW-05	SB01-003
SAMPLE NAME	IT-6	IT-7	IT-7_1	IT-8	MW-2	MW-3	MW-4	MW-5	SB01-003-GW
SAMPLING DATE	2/12/2001	2/12/2001	4/17/2001	4/17/2001	3/31/1998	3/31/1998	3/31/1998	3/31/1998	10/7/1998
1,1,1,2-TETRACHLOROETHANE	--	--	--	--	<5	<5	<25	<5	<1
1,1,1-TRICHLOROETHANE	--	--	--	--	<5	<5	<25	<5	<1
1,1,2,2-TETRACHLOROETHANE	--	--	--	--	<5	<5	<25	<5	<1
1,1,2-TRICHLOROETHANE	--	--	--	--	<5	<5	<25	<5	<1
1,1-DICHLOROETHANE	<0.5	<0.5	<0.5	<0.5	<5	<5	<25	<5	<1
1,1-DICHLOROETHENE	<0.5	<0.5	<0.5	<0.5	<5	<5	<25	<5	<1
1,1-DICHLOROPROPENE	--	--	--	--	<5	<5	<25	<5	<1
1,2,3-TRICHLOROBENZENE	--	--	--	--	<5	<5	<25	<5	<1
1,2,3-TRICHLOROPROPANE	--	--	--	--	<5	<5	<25	<5	<1
1,2,4-TRICHLOROBENZENE	--	--	--	--	<5	<5	<25	<5	<1
1,2,4-TRIMETHYLBENZENE	--	--	--	--	<5	<5	<25	<5	<1
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	--	--	--	--	<5	<5	<25	<5	<5
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	--	--	--	--	<5	<5	<25	<5	<1
1,2-DICHLOROBENZENE	--	--	--	--	<10	<10	<50	<10	<1
1,2-DICHLOROETHANE	--	--	--	--	<5	<5	<25	<5	<1
1,2-DICHLOROPROPANE	--	--	--	--	<5	<5	<25	<5	<1
1,3,5-TRIMETHYLBENZENE	--	--	--	--	<5	<5	<25	<5	<1
1,3-DICHLOROBENZENE	--	--	--	--	<10	<10	<50	<10	<1
1,3-DICHLOROPROPANE	--	--	--	--	<5	<5	<25	<5	<1
1,4-DICHLOROBENZENE	--	--	--	--	<5	<5	<25	<5	<1
2,2-DICHLOROPROPANE	--	--	--	--	<5	<5	<25	<5	<1
2-CHLOROTOLUENE	--	--	--	--	<5	<5	<25	<5	<1
4-CHLOROTOLUENE	--	--	--	--	<5	<5	<25	<5	<1
4-ISOPROPYLTOLUENE	--	--	--	--	<5	<5	<25	<5	<1
ACETONE	<5	<5	<5	--	--	--	--	--	--
BENZENE	<0.5	<0.5	<0.5	<0.5	<5	<5	**460**	<5	<1
BROMOBENZENE	--	--	--	--	<5	<5	<25	<5	<1
BROMODICHLOROMETHANE	--	--	--	--	<5	<5	<25	<5	<1
BROMOFORM	--	--	--	--	<5	<5	<25	<5	<1
BROMOMETHANE	--	--	--	--	<10	<10	<50	<10	<1
CARBON TETRACHLORIDE	--	--	--	--	<5	<5	<25	<5	<1
CHLOROBENZENE	--	--	--	--	<5	<5	<25	<5	<1
CHLOROBROMOMETHANE	--	--	--	--	<5	<5	<25	<5	<1

Units in ug/l
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
VOC COMPOUNDS BY 8260/8260B

LOCATION SAMPLE NAME SAMPLING DATE	IT-06 IT-6 2/12/2001	IT-07 IT-7 2/12/2001	IT-07 IT-7_1 4/17/2001	IT-08 IT-8 4/17/2001	MW-02 MW-2 3/31/1998	MW-03 MW-3 3/31/1998	MW-04 MW-4 3/31/1998	MW-05 MW-5 3/31/1998	SB01-003 SB01-003-GW 10/7/1998
CHLOROETHANE	--	--	--	--	<5	<5	<25	<5	<5
CHLOROFORM	**25.5**	<0.5	<0.5	<0.5	<5	<5	<25	<5	<1
CHLOROMETHANE	--	--	--	--	<5	<5	<25	<5	<5
CIS-1,2-DICHLOROETHENE	**2.2**	**8.6**	**7.7**	<0.5	<5	<5	<25	<5	<1
DIBROMOCHLOROMETHANE	--	--	--	--	<5	<5	<25	<5	<1
DIBROMOMETHANE	--	--	--	--	<5	<5	<25	<5	<1
DICHLORODIFLUOROMETHANE (CFC-12)	--	--	--	--	<10	<10	<50	<10	<1
ETHYLBENZENE	<0.5	<0.5	<0.5	<0.5	<5	<5	**38**	<5	<1
HEXACHLOROBUTADIENE	--	--	--	--	<5	<5	<25	<5	<1
ISOPROPYLBENZENE	--	--	--	--	<5	<5	<25	<5	<1
METHYLENE CHLORIDE	--	--	--	--	<5	<5	<25	<5	<1
NAPHTHALENE	--	--	--	--	<5	<5	<25	<5	<1
N-BUTYLBENZENE	--	--	--	--	<5	<5	<25	<5	<1
N-PROPYLBENZENE	--	--	--	--	<5	<5	<25	<5	<1
SEC-BUTYLBENZENE	--	--	--	--	<5	<5	<25	<5	<1
STYRENE	--	--	--	--	<5	<5	<25	<5	<1
TERT-BUTYLBENZENE	--	--	--	--	<5	<5	<25	<5	<1
TETRACHLOROETHENE	--	--	--	--	<5	<5	<25	<5	<1
TOLUENE	<0.5	<0.5	<0.5	<0.5	<5	<5	**26**	<5	<1
TRANS-1,2-DICHLOROETHENE	--	--	--	--	<5	<5	<25	<5	<1
TRICHLOROETHENE	**7.4**	**29**	**28.9**	<0.5	<5	<5	<25	<5	<1
TRICHLOROFLUOROMETHANE (CFC-11)	--	--	--	--	<5	<5	<25	<5	<5
VINYL CHLORIDE	--	--	--	--	<3	**3**	<15	<3	<5
XYLENES (TOTAL)	<0.5	<0.5	<0.5	<0.5	<5	<5	<25	<5	--

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
VOC COMPOUNDS BY 8260/8260B

LOCATION	SB01-038A	SB01-038A	SB01-060	SB01-068	SB01-068	SB01-070D	SB02-002	SB02-002
SAMPLE NAME	S138A@4.5-5R	S138AT	S160WT	S168@4-5R	S168T	S170D	S202	S202@4-5R
SAMPLING DATE	4/17/1998	4/17/1998	3/26/1998	3/23/1998	3/23/1998	1/9/2001	3/1/1998	3/25/1998
1,1,1,2-TETRACHLOROETHANE	<5	<5	<5	<5	<5	--	--	<5
1,1,1-TRICHLOROETHANE	<5	<5	<5	<5	<5	--	--	<5
1,1,2,2-TETRACHLOROETHANE	<5	<5	<5	<5	<5	--	--	<5
1,1,2-TRICHLOROETHANE	<5	<5	<5	<5	<5	--	--	<5
1,1-DICHLOROETHANE	<5	<5	<5	<5	<5	**12.4**	<5	<5
1,1-DICHLOROETHENE	<5	<5	<5	<5	<5	**1.4**	<5	<5
1,1-DICHLOROPROPENE	<5	<5	<5	<5	<5	--	--	<5
1,2,3-TRICHLOROBENZENE	<5	<5	<5	<5	<5	--	--	<5
1,2,3-TRICHLOROPROPANE	<5	<5	<5	<5	<5	--	--	<5
1,2,4-TRICHLOROBENZENE	<5	<5	<5	<5	<5	--	--	<5
1,2,4-TRIMETHYLBENZENE	<5	<5	<5	<5	<5	--	--	<5
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	<5	<5	<5	<5	<5	--	--	<5
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	<5	<5	<5	<5	<5	--	--	<5
1,2-DICHLOROBENZENE	<10	<10	<10	<10	<10	--	--	<10
1,2-DICHLOROETHANE	<5	<5	<5	<5	<5	--	--	<5
1,2-DICHLOROPROPANE	<5	<5	<5	<5	<5	--	--	<5
1,3,5-TRIMETHYLBENZENE	<5	<5	<5	<5	<5	--	--	<5
1,3-DICHLOROBENZENE	<10	<10	<10	<10	<10	--	--	<10
1,3-DICHLOROPROPANE	<5	<5	<5	<5	<5	--	--	<5
1,4-DICHLOROBENZENE	<5	<5	<5	<5	<5	--	--	<5
2,2-DICHLOROPROPANE	<5	<5	<5	<5	<5	--	--	<5
2-CHLOROTOLUENE	<5	<5	<5	<5	<5	--	--	<5
4-CHLOROTOLUENE	<5	<5	<5	<5	<5	--	--	<5
4-ISOPROPYLTOLUENE	<5	<5	<5	<5	<5	--	--	<5
ACETONE	--	--	--	--	--	--	<5	--
BENZENE	<5	<5	<5	<5	<5	--	<5	<5
BROMOBENZENE	<5	<5	<5	<5	<5	--	--	<5
BROMODICHLOROMETHANE	<5	<5	<5	<5	<5	--	--	<5
BROMOFORM	<5	<5	<5	<5	<5	--	--	<5
BROMOMETHANE	<10	<10	<10	<10	<10	--	--	<10
CARBON TETRACHLORIDE	<5	<5	<5	<5	<5	--	--	<5
CHLOROBENZENE	<5	<5	<5	<5	<5	--	--	<5
CHLOROBROMOMETHANE	<5	<5	<5	<5	<5	--	--	<5

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
VOC COMPOUNDS BY 8260/8260B

LOCATION SAMPLE NAME SAMPLING DATE	SB01-038A S138A@4.5-5R 4/17/1998	SB01-038A S138AT 4/17/1998	SB01-060 S160WT 3/26/1998	SB01-068 S168@4-5R 3/23/1998	SB01-068 S168T 3/23/1998	SB01-070D S170D 1/9/2001	SB02-002 S202 3/1/1998	SB02-002 S202@4-5R 3/25/1998
CHLOROETHANE	<5	<5	<5	<5	<5	--	--	<5
CHLOROFORM	<5	<5	<5	<5	<5	--	<5	<5
CHLOROMETHANE	<5	<5	<5	<5	<5	--	--	<5
CIS-1,2-DICHLOROETHENE	<5	<5	<5	<5	<5	<0.5	<5	<5
DIBROMOCHLOROMETHANE	<5	<5	<5	<5	<5	--	--	<5
DIBROMOMETHANE	<5	<5	<5	<5	<5	--	--	<5
DICHLORODIFLUOROMETHANE (CFC-12)	<10	<10	<10	<10	<10	--	--	<10
ETHYLBENZENE	<5	<5	<5	<5	<5	--	<5	<5
HEXACHLOROBUTADIENE	<5	<5	<5	<5	<5	--	--	<5
ISOPROPYLBENZENE	<5	<5	<5	<5	<5	--	--	<5
METHYLENE CHLORIDE	<5	<5	<5	<5	<5	--	--	<5
NAPHTHALENE	<5	<5	<5	<5	<5	--	--	<5
N-BUTYLBENZENE	<5	<5	<5	<5	<5	--	--	<5
N-PROPYLBENZENE	<5	<5	<5	<5	<5	--	--	<5
SEC-BUTYLBENZENE	<5	<5	<5	<5	<5	--	--	<5
STYRENE	<5	<5	<5	<5	<5	--	--	<5
TERT-BUTYLBENZENE	<5	<5	<5	<5	<5	--	--	<5
TETRACHLOROETHENE	<5	<5	<5	<5	<5	--	--	<5
TOLUENE	<5	<5	<5	<5	<5	--	<5	<5
TRANS-1,2-DICHLOROETHENE	<5	<5	<5	<5	<5	--	--	<5
TRICHLOROETHENE	<5	<5	<5	<5	<5	<0.5	<5	<5
TRICHLOROFLUOROMETHANE (CFC-11)	<5	<5	<5	<5	<5	--	--	<5
VINYL CHLORIDE	<3	<3	<3	<3	<3	--	--	<3
XYLENES (TOTAL)	<5	<5	<5	<5	<5	--	<5	<5

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
VOC COMPOUNDS BY 8260/8260B

LOCATION SAMPLE NAME SAMPLING DATE	SB02-002 S202T 3/25/1998	SB02-002 S202W 3/30/1998	SB03-003A S303A 4/1/1998	SB03-003A S303AW 4/20/1998	SB03-007 S307W 3/30/1998	SB03-009 S309@4-5R 3/26/1998	SB03-009 S309T 3/26/1998	SB03-011 S311@4-5R 3/26/1998	SB03-011 S311T 3/26/1998
1,1,1,2-TETRACHLOROETHANE	<5	<5	--	<5	<5	<5	<5	<5	<5
1,1,1-TRICHLOROETHANE	<5	<5	--	<5	<5	<5	<5	<5	<5
1,1,2,2-TETRACHLOROETHANE	<5	<5	--	<5	<5	<5	<5	<5	<5
1,1,2-TRICHLOROETHANE	<5	<5	--	<5	<5	<5	<5	<5	<5
1,1-DICHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,1-DICHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,1-DICHLOROPROPENE	<5	<5	--	<5	<5	<5	<5	<5	<5
1,2,3-TRICHLOROBENZENE	<5	<5	--	<5	<5	<5	<5	<5	<5
1,2,3-TRICHLOROPROPANE	<5	<5	--	<5	<5	<5	<5	<5	<5
1,2,4-TRICHLOROBENZENE	<5	<5	--	<5	<5	<5	<5	<5	<5
1,2,4-TRIMETHYLBENZENE	<5	<5	--	<5	<5	<5	<5	<5	<5
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	<5	<5	--	<5	<5	<5	<5	<5	<5
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	<5	<5	--	<5	<5	<5	<5	<5	<5
1,2-DICHLOROBENZENE	<10	<10	--	<10	<10	<10	<10	<10	<10
1,2-DICHLOROETHANE	<5	<5	--	<5	<5	<5	<5	<5	<5
1,2-DICHLOROPROPANE	<5	<5	--	<5	<5	<5	<5	<5	<5
1,3,5-TRIMETHYLBENZENE	<5	<5	--	<5	<5	<5	<5	<5	<5
1,3-DICHLOROBENZENE	<10	<10	--	<10	<10	<10	<10	<10	<10
1,3-DICHLOROPROPANE	<5	<5	--	<5	<5	<5	<5	<5	<5
1,4-DICHLOROBENZENE	<5	<5	--	<5	<5	<5	<5	<5	<5
2,2-DICHLOROPROPANE	<5	<5	--	<5	<5	<5	<5	<5	<5
2-CHLOROTOLUENE	<5	<5	--	<5	<5	<5	<5	<5	<5
4-CHLOROTOLUENE	<5	<5	--	<5	<5	<5	<5	<5	<5
4-ISOPROPYLTOLUENE	<5	<5	--	<5	<5	<5	<5	<5	<5
ACETONE	--	--	<5	--	--	--	--	--	--
BENZENE	<5	<5	<5	<5	<5	<5	<5	<5	<5
BROMOBENZENE	<5	<5	--	<5	<5	<5	<5	<5	<5
BROMODICHLOROMETHANE	<5	<5	--	<5	<5	<5	<5	<5	<5
BROMOFORM	<5	<5	--	<5	<5	<5	<5	<5	<5
BROMOMETHANE	<10	<10	--	<10	<10	<10	<10	<10	<10
CARBON TETRACHLORIDE	<5	<5	--	<5	<5	<5	<5	<5	<5
CHLOROBENZENE	<5	<5	--	<5	<5	<5	<5	<5	<5
CHLOROBROMOMETHANE	<5	<5	--	<5	<5	<5	<5	<5	<5

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
VOC COMPOUNDS BY 8260/8260B

LOCATION SAMPLE NAME SAMPLING DATE	SB02-002 S202T 3/25/1998	SB02-002 S202W 3/30/1998	SB03-003A S303A 4/1/1998	SB03-003A S303AW 4/20/1998	SB03-007 S307W 3/30/1998	SB03-009 S309@4-5R 3/26/1998	SB03-009 S309T 3/26/1998	SB03-011 S311@4-5R 3/26/1998	SB03-011 S311T 3/26/1998
CHLOROETHANE	<5	<5	--	<5	<5	<5	<5	<5	<5
CHLOROFORM	<5	<5	**3.6**	**3.6**	<5	<5	<5	<5	<5
CHLOROMETHANE	<5	<5	--	<5	<5	<5	<5	<5	<5
CIS-1,2-DICHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5	<5
DIBROMOCHLOROMETHANE	<5	<5	--	<5	<5	<5	<5	<5	<5
DIBROMOMETHANE	<5	<5	--	<5	<5	<5	<5	<5	<5
DICHLORODIFLUOROMETHANE (CFC-12)	<10	<10	--	<10	<10	<10	<10	<10	<10
ETHYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5	<5
HEXACHLOROBUTADIENE	<5	<5	--	<5	<5	<5	<5	<5	<5
ISOPROPYLBENZENE	<5	<5	--	<5	<5	<5	<5	<5	<5
METHYLENE CHLORIDE	<5	<5	--	<5	<5	<5	<5	<5	<5
NAPHTHALENE	<5	<5	--	<5	<5	<5	<5	<5	<5
N-BUTYLBENZENE	<5	<5	--	<5	<5	<5	<5	<5	<5
N-PROPYLBENZENE	<5	<5	--	<5	<5	<5	<5	<5	<5
SEC-BUTYLBENZENE	<5	<5	--	<5	<5	<5	<5	<5	<5
STYRENE	<5	<5	--	<5	<5	<5	<5	<5	<5
TERT-BUTYLBENZENE	<5	<5	--	<5	<5	<5	<5	<5	<5
TETRACHLOROETHENE	<5	<5	--	<5	<5	<5	<5	<5	<5
TOLUENE	<5	<5	<5	<5	<5	<5	<5	<5	<5
TRANS-1,2-DICHLOROETHENE	<5	<5	--	<5	<5	<5	<5	<5	<5
TRICHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5	<5
TRICHLOROFLUOROMETHANE (CFC-11)	<5	<5	--	<5	<5	<5	<5	<5	<5
VINYL CHLORIDE	<3	<3	--	<3	<3	<3	<3	<3	<3
XYLENES (TOTAL)	<5	<5	<5	<5	<5	<5	<5	<5	<5

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
VOC COMPOUNDS BY 8260/8260B

LOCATION	SB03-014	SB03-014	SB03-017A	SB03-017A	SB03-017A	SB03-018	SB03-018	SB03-020
SAMPLE NAME	S314	S314W	S317A@9-9.5R	S317AT	S317AW	S318	S318W	S320@4-5R
SAMPLING DATE	3/1/1998	3/31/1998	4/17/1998	4/17/1998	4/21/1998	3/1/1998	3/30/1998	3/25/1998
1,1,1,2-TETRACHLOROETHANE	--	<5	<5	<5	<5	--	<5	<5
1,1,1-TRICHLOROETHANE	--	<5	<5	<5	<5	--	<5	<5
1,1,2,2-TETRACHLOROETHANE	--	<5	<5	<5	<5	--	<5	<5
1,1,2-TRICHLOROETHANE	--	<5	<5	<5	<5	--	<5	<5
1,1-DICHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
1,1-DICHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
1,1-DICHLOROPROPENE	--	<5	<5	<5	<5	--	<5	<5
1,2,3-TRICHLOROBENZENE	--	<5	<5	<5	<5	--	<5	<5
1,2,3-TRICHLOROPROPANE	--	<5	<5	<5	<5	--	<5	<5
1,2,4-TRICHLOROBENZENE	--	<5	<5	<5	<5	--	<5	<5
1,2,4-TRIMETHYLBENZENE	--	<5	<5	<5	<5	--	<5	<5
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	--	<5	<5	<5	<5	--	<5	<5
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	--	<5	<5	<5	<5	--	<5	<5
1,2-DICHLOROBENZENE	--	<10	<10	<10	<10	--	<10	<10
1,2-DICHLOROETHANE	--	<5	<5	<5	<5	--	<5	<5
1,2-DICHLOROPROPANE	--	<5	<5	<5	<5	--	<5	<5
1,3,5-TRIMETHYLBENZENE	--	<5	<5	<5	<5	--	<5	<5
1,3-DICHLOROBENZENE	--	<10	<10	<10	<10	--	<10	<10
1,3-DICHLOROPROPANE	--	<5	<5	<5	<5	--	<5	<5
1,4-DICHLOROBENZENE	--	<5	<5	<5	<5	--	<5	<5
2,2-DICHLOROPROPANE	--	<5	<5	<5	<5	--	<5	<5
2-CHLOROTOLUENE	--	<5	<5	<5	<5	--	<5	<5
4-CHLOROTOLUENE	--	<5	<5	<5	<5	--	<5	<5
4-ISOPROPYLTOLUENE	--	<5	<5	<5	<5	--	<5	<5
ACETONE	<5	--	--	--	--	<5	--	--
BENZENE	<5	<5	<5	<5	<5	<5	<5	<5
BROMOBENZENE	--	<5	<5	<5	<5	--	<5	<5
BROMODICHLOROMETHANE	--	<5	<5	<5	<5	--	<5	<5
BROMOFORM	--	<5	<5	<5	<5	--	<5	<5
BROMOMETHANE	--	<10	<10	<10	<10	--	<10	<10
CARBON TETRACHLORIDE	--	<5	<5	<5	<5	--	<5	<5
CHLOROBENZENE	--	<5	<5	<5	<5	--	<5	<5
CHLOROBROMOMETHANE	--	<5	<5	<5	<5	--	<5	<5

Units in ug/l
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
VOC COMPOUNDS BY 8260/8260B

LOCATION SAMPLE NAME SAMPLING DATE	SB03-014 S314 3/1/1998	SB03-014 S314W 3/31/1998	SB03-017A S317A@9-9.5R 4/17/1998	SB03-017A S317AT 4/17/1998	SB03-017A S317AW 4/21/1998	SB03-018 S318 3/1/1998	SB03-018 S318W 3/30/1998	SB03-020 S320@4-5R 3/25/1998
CHLOROETHANE	--	<5	<5	<5	<5	--	<5	<5
CHLOROFORM	<5	<5	<5	<5	<5	<5	<5	<5
CHLOROMETHANE	--	<5	<5	<5	<5	--	<5	<5
CIS-1,2-DICHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
DIBROMOCHLOROMETHANE	--	<5	<5	<5	<5	--	<5	<5
DIBROMOMETHANE	--	<5	<5	<5	<5	--	<5	<5
DICHLORODIFLUOROMETHANE (CFC-12)	--	<10	<10	<10	<10	--	<10	<10
ETHYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5
HEXACHLOROBUTADIENE	--	<5	<5	<5	<5	--	<5	<5
ISOPROPYLBENZENE	--	<5	<5	<5	<5	--	<5	<5
METHYLENE CHLORIDE	--	<5	<5	<5	<5	--	<5	<5
NAPHTHALENE	--	<5	<5	<5	<5	--	<5	<5
N-BUTYLBENZENE	--	<5	<5	<5	<5	--	<5	<5
N-PROPYLBENZENE	--	<5	<5	<5	<5	--	<5	<5
SEC-BUTYLBENZENE	--	<5	<5	<5	<5	--	<5	<5
STYRENE	--	<5	<5	<5	<5	--	<5	<5
TERT-BUTYLBENZENE	--	<5	<5	<5	<5	--	<5	<5
TETRACHLOROETHENE	--	<5	<5	<5	<5	--	<5	<5
TOLUENE	<5	<5	<5	<5	<5	<5	<5	<5
TRANS-1,2-DICHLOROETHENE	--	<5	<5	<5	<5	--	<5	<5
TRICHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5
TRICHLOROFLUOROMETHANE (CFC-11)	--	<5	<5	<5	<5	--	<5	<5
VINYL CHLORIDE	--	<3	<3	<3	<3	--	<3	<3
XYLENES (TOTAL)	<5	<5	<5	<5	<5	<5	<5	<5

Units in ug/l
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
VOC COMPOUNDS BY 8260/8260B

LOCATION SAMPLE NAME SAMPLING DATE	SB03-020 S320T 3/25/1998	SB03-022 S322W 3/31/1998	SB03-024 S324 3/1/1998	SB03-024 S324W 3/30/1998	SB04-005 S405W 3/30/1998	SB04-010 S410 3/1/1998	SB04-010 S410W 3/30/1998	SB04-011 S411W 3/26/1998	SB04-013 S413@4-5R 3/23/1998
1,1,1,2-TETRACHLOROETHANE	<5	<5	--	<5	<5	--	<5	<5	<5
1,1,1-TRICHLOROETHANE	<5	<5	--	<5	<5	--	<5	<5	<5
1,1,2,2-TETRACHLOROETHANE	<5	<5	--	<5	<5	--	<5	<5	<5
1,1,2-TRICHLOROETHANE	<5	<5	--	<5	<5	--	<5	<5	<5
1,1-DICHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,1-DICHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,1-DICHLOROPROPENE	<5	<5	--	<5	<5	--	<5	<5	<5
1,2,3-TRICHLOROBENZENE	<5	<5	--	<5	<5	--	<5	<5	<5
1,2,3-TRICHLOROPROPANE	<5	<5	--	<5	<5	--	<5	<5	<5
1,2,4-TRICHLOROBENZENE	<5	<5	--	<5	<5	--	<5	<5	<5
1,2,4-TRIMETHYLBENZENE	<5	<5	--	<5	<5	--	<5	<5	<5
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	<5	<5	--	<5	<5	--	<5	<5	<5
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	<5	<5	--	<5	<5	--	<5	<5	<5
1,2-DICHLOROBENZENE	<10	<10	--	<10	<10	--	<10	<10	<10
1,2-DICHLOROETHANE	<5	<5	--	<5	<5	--	<5	<5	<5
1,2-DICHLOROPROPANE	<5	<5	--	<5	<5	--	<5	<5	<5
1,3,5-TRIMETHYLBENZENE	<5	<5	--	<5	<5	--	<5	<5	<5
1,3-DICHLOROBENZENE	<10	<10	--	<10	<10	--	<10	<10	<10
1,3-DICHLOROPROPANE	<5	<5	--	<5	<5	--	<5	<5	<5
1,4-DICHLOROBENZENE	<5	<5	--	<5	<5	--	<5	<5	<5
2,2-DICHLOROPROPANE	<5	<5	--	<5	<5	--	<5	<5	<5
2-CHLOROTOLUENE	<5	<5	--	<5	<5	--	<5	<5	<5
4-CHLOROTOLUENE	<5	<5	--	<5	<5	--	<5	<5	<5
4-ISOPROPYLTOLUENE	<5	<5	--	<5	<5	--	<5	<5	<5
ACETONE	--	--	<5	--	--	<5	--	--	--
BENZENE	<5	<5	<5	<5	<5	<5	<5	<5	<5
BROMOBENZENE	<5	<5	--	<5	<5	--	<5	<5	<5
BROMODICHLOROMETHANE	<5	<5	--	<5	<5	--	<5	<5	<5
BROMOFORM	<5	<5	--	<5	<5	--	<5	<5	<5
BROMOMETHANE	<10	<10	--	<10	<10	--	<10	<10	<10
CARBON TETRACHLORIDE	<5	<5	--	<5	<5	--	<5	<5	<5
CHLOROBENZENE	<5	<5	--	<5	<5	--	<5	<5	<5
CHLOROBROMOMETHANE	<5	<5	--	<5	<5	--	<5	<5	<5

Units in ug/l
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
VOC COMPOUNDS BY 8260/8260B

LOCATION SAMPLE NAME SAMPLING DATE	SB03-020 S320T 3/25/1998	SB03-022 S322W 3/31/1998	SB03-024 S324 3/1/1998	SB03-024 S324W 3/30/1998	SB04-005 S405W 3/30/1998	SB04-010 S410 3/1/1998	SB04-010 S410W 3/30/1998	SB04-011 S411W 3/26/1998	SB04-013 S413@4-5R 3/23/1998
CHLOROETHANE	<5	<5	--	<5	<5	--	<5	<5	<5
CHLOROFORM	<5	<5	<5	<5	<5	<5	<5	<5	<5
CHLOROMETHANE	<5	<5	--	<5	<5	--	<5	<5	<5
CIS-1,2-DICHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<5	<5
DIBROMOCHLOROMETHANE	<5	<5	--	<5	<5	--	<5	<5	<5
DIBROMOMETHANE	<5	<5	--	<5	<5	--	<5	<5	<5
DICHLORODIFLUOROMETHANE (CFC-12)	<10	<10	--	<10	<10	--	<10	<10	<10
ETHYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<5	<5
HEXACHLOROBUTADIENE	<5	<5	--	<5	<5	--	<5	<5	<5
ISOPROPYLBENZENE	<5	<5	--	<5	<5	--	<5	<5	<5
METHYLENE CHLORIDE	<5	<5	--	<5	<5	--	<5	<5	<5
NAPHTHALENE	<5	<5	--	<5	<5	--	<5	<5	<5
N-BUTYLBENZENE	<5	<5	--	<5	<5	--	<5	<5	<5
N-PROPYLBENZENE	<5	<5	--	<5	<5	--	<5	<5	<5
SEC-BUTYLBENZENE	<5	<5	--	<5	<5	--	<5	<5	<5
STYRENE	<5	<5	--	<5	<5	--	<5	<5	<5
TERT-BUTYLBENZENE	<5	<5	--	<5	<5	--	<5	<5	<5
TETRACHLOROETHENE	**4.8 J**	<5	--	<5	<5	--	<5	<5	<5
TOLUENE	<5	<5	<5	<5	<5	<5	<5	<5	<5
TRANS-1,2-DICHLOROETHENE	<5	<5	--	<5	<5	--	<5	<5	<5
TRICHLOROETHENE	**4.5 J**	<5	<5	<5	<5	<5	<5	<5	<5
TRICHLOROFLUOROMETHANE (CFC-11)	<5	<5	--	<5	<5	--	<5	<5	<5
VINYL CHLORIDE	<3	<3	--	<3	<3	--	<3	<3	<3
XYLENES (TOTAL)	<5	<5	<5	<5	<5	<5	<5	<5	<5

Units in ug/l
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
VOC COMPOUNDS BY 8260/8260B

LOCATION SAMPLE NAME SAMPLING DATE	SB04-013 S413T 3/23/1998	SB05-015 S515W 4/16/1998	SB05-018 S518W 3/26/1998	SB05-018 S518WT 4/16/1998	SB05-026 S526W 3/24/1998	SB05-029 S529 3/1/1998	SB05-029 S529W 3/26/1998	SB05-036 S536 7/13/2001	SB05-038 S538 3/1/1998
1,1,1,2-TETRACHLOROETHANE	<5	<5	<5	<5	<5	--	<5	--	--
1,1,1-TRICHLOROETHANE	<5	<5	<5	<5	<5	--	<5	--	--
1,1,2,2-TETRACHLOROETHANE	<5	<5	<5	<5	<5	--	<5	--	--
1,1,2-TRICHLOROETHANE	<5	<5	<5	<5	<5	--	<5	--	--
1,1-DICHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
1,1-DICHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
1,1-DICHLOROPROPENE	<5	<5	<5	<5	<5	--	<5	--	--
1,2,3-TRICHLOROBENZENE	<5	<5	<5	<5	<5	--	<5	--	--
1,2,3-TRICHLOROPROPANE	<5	<5	<5	<5	<5	--	<5	--	--
1,2,4-TRICHLOROBENZENE	<5	<5	<5	<5	<5	--	<5	--	--
1,2,4-TRIMETHYLBENZENE	<5	<5	<5	<5	<5	--	<5	--	--
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	<5	<5	<5	<5	<5	--	<5	--	--
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	<5	<5	<5	<5	<5	--	<5	--	--
1,2-DICHLOROBENZENE	<10	<10	<10	<10	<10	--	<10	--	--
1,2-DICHLOROETHANE	<5	<5	<5	<5	<5	--	<5	--	--
1,2-DICHLOROPROPANE	<5	<5	<5	<5	<5	--	<5	--	--
1,3,5-TRIMETHYLBENZENE	<5	<5	<5	<5	<5	--	<5	--	--
1,3-DICHLOROBENZENE	<10	<10	<10	<10	<10	--	<10	--	--
1,3-DICHLOROPROPANE	<5	<5	<5	<5	<5	--	<5	--	--
1,4-DICHLOROBENZENE	<5	<5	<5	<5	<5	--	<5	--	--
2,2-DICHLOROPROPANE	<5	<5	<5	<5	<5	--	<5	--	--
2-CHLOROTOLUENE	<5	<5	<5	<5	<5	--	<5	--	--
4-CHLOROTOLUENE	<5	<5	<5	<5	<5	--	<5	--	--
4-ISOPROPYLTOLUENE	<5	<5	<5	<5	<5	--	<5	--	--
ACETONE	--	--	--	--	--	<5	--	<5	<5
BENZENE	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
BROMOBENZENE	<5	<5	<5	<5	<5	--	<5	--	--
BROMODICHLOROMETHANE	<5	<5	<5	<5	<5	--	<5	--	--
BROMOFORM	<5	<5	<5	<5	<5	--	<5	--	--
BROMOMETHANE	<10	<10	<10	<10	<10	--	<10	--	--
CARBON TETRACHLORIDE	<5	<5	<5	<5	<5	--	<5	--	--
CHLOROBENZENE	<5	<5	<5	<5	<5	--	<5	--	--
CHLOROBROMOMETHANE	<5	<5	<5	<5	<5	--	<5	--	--

Units in ug/l
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
VOC COMPOUNDS BY 8260/8260B

LOCATION SAMPLE NAME SAMPLING DATE	SB04-013 S413T 3/23/1998	SB05-015 S515W 4/16/1998	SB05-018 S518W 3/26/1998	SB05-018 S518WT 4/16/1998	SB05-026 S526W 3/24/1998	SB05-029 S529 3/1/1998	SB05-029 S529W 3/26/1998	SB05-036 S536 7/13/2001	SB05-038 S538 3/1/1998
CHLOROETHANE	<5	<5	<5	<5	<5	--	<5	--	--
CHLOROFORM	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
CHLOROMETHANE	<5	<5	<5	<5	<5	--	<5	--	--
CIS-1,2-DICHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<0.5	**5.8**
DIBROMOCHLOROMETHANE	<5	<5	<5	<5	<5	--	<5	--	--
DIBROMOMETHANE	<5	<5	<5	<5	<5	--	<5	--	--
DICHLORODIFLUOROMETHANE (CFC-12)	<10	<10	<10	<10	<10	--	<10	--	--
ETHYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
HEXACHLOROBUTADIENE	<5	<5	<5	<5	<5	--	<5	--	--
ISOPROPYLBENZENE	<5	<5	<5	<5	<5	--	<5	--	--
METHYLENE CHLORIDE	<5	<5	<5	<5	<5	--	<5	--	--
NAPHTHALENE	<5	<5	<5	<5	<5	--	<5	--	--
N-BUTYLBENZENE	<5	<5	<5	<5	<5	--	<5	--	--
N-PROPYLBENZENE	<5	<5	<5	<5	<5	--	<5	--	--
SEC-BUTYLBENZENE	<5	<5	<5	<5	<5	--	<5	--	--
STYRENE	<5	<5	<5	<5	<5	--	<5	--	--
TERT-BUTYLBENZENE	<5	<5	<5	<5	<5	--	<5	--	--
TETRACHLOROETHENE	<5	<5	<5	<5	<5	--	<5	--	--
TOLUENE	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
TRANS-1,2-DICHLOROETHENE	<5	<5	<5	<5	<5	--	<5	--	--
TRICHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	**0.55 J**	**9.1**
TRICHLOROFLUOROMETHANE (CFC-11)	<5	<5	<5	<5	<5	--	<5	--	--
VINYL CHLORIDE	<3	<3	<3	<3	<3	--	<3	--	--
XYLENES (TOTAL)	<5	<5	<5	<5	<5	<5	<5	<0.5	<5

Units in ug/l
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
VOC COMPOUNDS BY 8260/8260B

LOCATION SAMPLE NAME SAMPLING DATE	SB05-038 S538_1 4/1/1998	SB05-038 S538W 4/10/1998	SB05-040 S540 3/1/1998	SB05-040 S540_1 4/1/1998	SB05-040 S540W 4/10/1998	SB05-041A S541AW 4/17/1998	SB05-041A S541AWT 4/17/1998	SB05-041A S541AW_1 1/9/2001	SB05-043A S543A 4/1/1998
1,1,1,2-TETRACHLOROETHANE	--	<5	--	--	<5	<5	<5	--	--
1,1,1-TRICHLOROETHANE	--	<5	--	--	<5	<5	<5	--	--
1,1,2,2-TETRACHLOROETHANE	--	<5	--	--	<5	<5	<5	--	--
1,1,2-TRICHLOROETHANE	--	<5	--	--	<5	<5	<5	--	--
1,1-DICHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
1,1-DICHLOROETHENE	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
1,1-DICHLOROPROPENE	--	<5	--	--	<5	<5	<5	--	--
1,2,3-TRICHLOROBENZENE	--	<5	--	--	<5	<5	<5	--	--
1,2,3-TRICHLOROPROPANE	--	<5	--	--	<5	<5	<5	--	--
1,2,4-TRICHLOROBENZENE	--	<5	--	--	<5	<5	<5	--	--
1,2,4-TRIMETHYLBENZENE	--	<5	--	--	<5	<5	<5	--	--
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	--	<5	--	--	<5	<5	<5	--	--
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	--	<5	--	--	<5	<5	<5	--	--
1,2-DICHLOROBENZENE	--	<10	--	--	<10	<10	<10	--	--
1,2-DICHLOROETHANE	--	<5	--	--	<5	<5	<5	--	--
1,2-DICHLOROPROPANE	--	<5	--	--	<5	<5	<5	--	--
1,3,5-TRIMETHYLBENZENE	--	<5	--	--	<5	<5	<5	--	--
1,3-DICHLOROBENZENE	--	<10	--	--	<10	<10	<10	--	--
1,3-DICHLOROPROPANE	--	<5	--	--	<5	<5	<5	--	--
1,4-DICHLOROBENZENE	--	<5	--	--	<5	<5	<5	--	--
2,2-DICHLOROPROPANE	--	<5	--	--	<5	<5	<5	--	--
2-CHLOROTOLUENE	--	<5	--	--	<5	<5	<5	--	--
4-CHLOROTOLUENE	--	<5	--	--	<5	<5	<5	--	--
4-ISOPROPYLTOLUENE	--	<5	--	--	<5	<5	<5	--	--
ACETONE	<5	--	<5	<5	--	--	--	<5	<5
BENZENE	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
BROMOBENZENE	--	<5	--	--	<5	<5	<5	--	--
BROMODICHLOROMETHANE	--	<5	--	--	<5	<5	<5	--	--
BROMOFORM	--	<5	--	--	<5	<5	<5	--	--
BROMOMETHANE	--	<10	--	--	<10	<10	<10	--	--
CARBON TETRACHLORIDE	--	<5	--	--	<5	<5	<5	--	--
CHLOROBENZENE	--	<5	--	--	<5	<5	<5	--	--
CHLOROBROMOMETHANE	--	<5	--	--	<5	<5	<5	--	--

Units in ug/l
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
VOC COMPOUNDS BY 8260/8260B

LOCATION SAMPLE NAME SAMPLING DATE	SB05-038 S538_1 4/1/1998	SB05-038 S538W 4/10/1998	SB05-040 S540 3/1/1998	SB05-040 S540_1 4/1/1998	SB05-040 S540W 4/10/1998	SB05-041A S541AW 4/17/1998	SB05-041A S541AWT 4/17/1998	SB05-041A S541AW_1 1/9/2001	SB05-043A S543A 4/1/1998
CHLOROETHANE	--	<5	--	--	<5	<5	<5	--	--
CHLOROFORM	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
CHLOROMETHANE	--	<5	--	--	<5	<5	<5	--	--
CIS-1,2-DICHLOROETHENE	**7.7**	**7.7**	**8.7**	**3.8**	**3.8 J**	**19**	<5	**15.8**	<5
DIBROMOCHLOROMETHANE	--	<5	--	--	<5	<5	<5	--	--
DIBROMOMETHANE	--	<5	--	--	<5	<5	<5	--	--
DICHLORODIFLUOROMETHANE (CFC-12)	--	<10	--	--	<10	<10	<10	--	--
ETHYLBENZENE	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
HEXACHLOROBUTADIENE	--	<5	--	--	<5	<5	<5	--	--
ISOPROPYLBENZENE	--	<5	--	--	<5	<5	<5	--	--
METHYLENE CHLORIDE	--	<5	--	--	<5	<5	<5	--	--
NAPHTHALENE	--	<5	--	--	<5	<5	<5	--	--
N-BUTYLBENZENE	--	<5	--	--	<5	<5	<5	--	--
N-PROPYLBENZENE	--	<5	--	--	<5	<5	<5	--	--
SEC-BUTYLBENZENE	--	<5	--	--	<5	<5	<5	--	--
STYRENE	--	<5	--	--	<5	<5	<5	--	--
TERT-BUTYLBENZENE	--	<5	--	--	<5	<5	<5	--	--
TETRACHLOROETHENE	--	<5	--	--	<5	<5	<5	--	--
TOLUENE	<5	<5	<5	<5	<5	<5	<5	<0.5	<5
TRANS-1,2-DICHLOROETHENE	--	<5	--	--	<5	<5	<5	--	--
TRICHLOROETHENE	**16**	**16**	**15**	**6.3**	**6.3**	**59**	<5	**53.9**	<5
TRICHLOROFLUOROMETHANE (CFC-11)	--	<5	--	--	<5	<5	<5	--	--
VINYL CHLORIDE	--	<3	--	--	<3	<3	<3	--	--
XYLENES (TOTAL)	<5	<5	<5	<5	<5	<5	<5	<0.5	<5

Units in ug/l
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
VOC COMPOUNDS BY 8260/8260B

LOCATION SAMPLE NAME SAMPLING DATE	SB05-043A S543A@10.5-11R 4/16/1998	SB05-043A S543AT 4/16/1998	SB05-043A S543AW 4/20/1998	SB05-043A S543A_1 1/9/2001	SB05-049 S549 7/15/2001	SB05-052 S552 3/1/1998	SB05-052 S552W 3/24/1998	SB05-052 S552WT 3/24/1998
1,1,1,2-TETRACHLOROETHANE	<5	<5	<5	--	--	--	<5	<5
1,1,1-TRICHLOROETHANE	<5	<5	<5	--	--	--	<5	<5
1,1,2,2-TETRACHLOROETHANE	<5	<5	<5	--	--	--	<5	<5
1,1,2-TRICHLOROETHANE	<5	<5	<5	--	--	--	<5	<5
1,1-DICHLOROETHANE	<5	<5	<5	<0.5	<0.5	<5	<5	<5
1,1-DICHLOROETHENE	<5	<5	<5	<0.5	<0.5	<5	<5	<5
1,1-DICHLOROPROPENE	<5	<5	<5	--	--	--	<5	<5
1,2,3-TRICHLOROBENZENE	<5	<5	<5	--	--	--	<5	<5
1,2,3-TRICHLOROPROPANE	<5	<5	<5	--	--	--	<5	<5
1,2,4-TRICHLOROBENZENE	<5	<5	<5	--	--	--	<5	<5
1,2,4-TRIMETHYLBENZENE	<5	<5	<5	--	--	--	<5	<5
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	<5	<5	<5	--	--	--	<5	<5
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	<5	<5	<5	--	--	--	<5	<5
1,2-DICHLOROBENZENE	<10	<10	<10	--	--	--	<10	<10
1,2-DICHLOROETHANE	<5	<5	<5	--	--	--	<5	<5
1,2-DICHLOROPROPANE	<5	<5	<5	--	--	--	<5	<5
1,3,5-TRIMETHYLBENZENE	<5	<5	<5	--	--	--	<5	<5
1,3-DICHLOROBENZENE	<10	<10	<10	--	--	--	<10	<10
1,3-DICHLOROPROPANE	<5	<5	<5	--	--	--	<5	<5
1,4-DICHLOROBENZENE	<5	<5	<5	--	--	--	<5	<5
2,2-DICHLOROPROPANE	<5	<5	<5	--	--	--	<5	<5
2-CHLOROTOLUENE	<5	<5	<5	--	--	--	<5	<5
4-CHLOROTOLUENE	<5	<5	<5	--	--	--	<5	<5
4-ISOPROPYLTOLUENE	<5	<5	<5	--	--	--	<5	<5
ACETONE	--	--	--	<5	**6.1**	<5	--	--
BENZENE	<5	<5	<5	<0.5	<0.5	<5	<5	<5
BROMOBENZENE	<5	<5	<5	--	--	--	<5	<5
BROMODICHLOROMETHANE	<5	<5	<5	--	--	--	<5	<5
BROMOFORM	<5	<5	<5	--	--	--	<5	<5
BROMOMETHANE	<10	<10	<10	--	--	--	<10	<10
CARBON TETRACHLORIDE	<5	<5	<5	--	--	--	<5	<5
CHLOROBENZENE	<5	<5	<5	--	--	--	<5	<5
CHLOROBROMOMETHANE	<5	<5	<5	--	--	--	<5	<5

Units in ug/l
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-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
VOC COMPOUNDS BY 8260/8260B

LOCATION SAMPLE NAME SAMPLING DATE	SB05-043A S543A@10.5-11R 4/16/1998	SB05-043A S543AT 4/16/1998	SB05-043A S543AW 4/20/1998	SB05-043A S543A_1 1/9/2001	SB05-049 S549 7/15/2001	SB05-052 S552 3/1/1998	SB05-052 S552W 3/24/1998	SB05-052 S552WT 3/24/1998
CHLOROETHANE	<5	<5	<5	--	--	--	<5	<5
CHLOROFORM	<5	<5	<5	<0.5	<0.5	<5	<5	<5
CHLOROMETHANE	<5	<5	<5	--	--	--	<5	<5
CIS-1,2-DICHLOROETHENE	<5	<5	<5	**1.2**	<0.5	<5	<5	<5
DIBROMOCHLOROMETHANE	<5	<5	<5	--	--	--	<5	<5
DIBROMOMETHANE	<5	<5	<5	--	--	--	<5	<5
DICHLORODIFLUOROMETHANE (CFC-12)	<10	<10	<10	--	--	--	<10	<10
ETHYLBENZENE	<5	<5	<5	<0.5	<0.5	<5	<5	<5
HEXACHLOROBUTADIENE	<5	<5	<5	--	--	--	<5	<5
ISOPROPYLBENZENE	<5	<5	<5	--	--	--	<5	<5
METHYLENE CHLORIDE	<5	<5	<5	--	--	--	<5	<5
NAPHTHALENE	<5	<5	<5	--	--	--	<5	<5
N-BUTYLBENZENE	<5	<5	<5	--	--	--	<5	<5
N-PROPYLBENZENE	<5	<5	<5	--	--	--	<5	<5
SEC-BUTYLBENZENE	<5	<5	<5	--	--	--	<5	<5
STYRENE	<5	<5	<5	--	--	--	<5	<5
TERT-BUTYLBENZENE	<5	<5	<5	--	--	--	<5	<5
TETRACHLOROETHENE	<5	<5	<5	--	--	--	<5	<5
TOLUENE	<5	<5	<5	<0.5	<0.5	<5	<5	<5
TRANS-1,2-DICHLOROETHENE	<5	<5	<5	--	--	--	<5	<5
TRICHLOROETHENE	<5	<5	<5	**5**	<0.5	<5	<5	<5
TRICHLOROFLUOROMETHANE (CFC-11)	<5	<5	<5	--	--	--	<5	<5
VINYL CHLORIDE	<3	<3	<3	--	--	--	<3	<3
XYLENES (TOTAL)	<5	<5	<5	<0.5	<0.5	<5	<5	<5

Units in ug/l
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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
VOC COMPOUNDS BY 8260/8260B

LOCATION SAMPLE NAME SAMPLING DATE	SB05-053 S553 7/13/2001	SB05-054 S554W 3/31/1998	SB05-058 S558 7/15/2001	SB05-062 S562W 3/27/1998	SB05-066 S566W 3/27/1998	SB05-075 S575W 3/24/1998	SB05-079 S579W 3/24/1998	SB05-086 S586W 3/26/1998	SB05-094 S594W 3/26/1998
1,1,1,2-TETRACHLOROETHANE	--	<5	--	<5	<5	<5	<5	<5	<5
1,1,1-TRICHLOROETHANE	--	<5	--	<5	<5	<5	<5	<5	<5
1,1,2,2-TETRACHLOROETHANE	--	<5	--	<5	<5	<5	<5	<5	<5
1,1,2-TRICHLOROETHANE	--	<5	--	<5	<5	<5	<5	<5	<5
1,1-DICHLOROETHANE	<0.5	<5	<0.5	<5	<5	<5	<5	<5	**14**
1,1-DICHLOROETHENE	<0.5	<5	<0.5	<5	<5	<5	<5	<5	<5
1,1-DICHLOROPROPENE	--	<5	--	<5	<5	<5	<5	<5	<5
1,2,3-TRICHLOROBENZENE	--	<5	--	<5	<5	<5	<5	<5	<5
1,2,3-TRICHLOROPROPANE	--	<5	--	<5	<5	<5	<5	<5	<5
1,2,4-TRICHLOROBENZENE	--	<5	--	<5	<5	<5	<5	<5	<5
1,2,4-TRIMETHYLBENZENE	--	<5	--	<5	<5	<5	<5	<5	<5
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	--	<5	--	<5	<5	<5	<5	<5	<5
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	--	<5	--	<5	<5	<5	<5	<5	<5
1,2-DICHLOROBENZENE	--	<10	--	<10	<10	<10	<10	<10	<10
1,2-DICHLOROETHANE	--	<5	--	<5	<5	<5	<5	<5	<5
1,2-DICHLOROPROPANE	--	<5	--	<5	<5	<5	<5	<5	<5
1,3,5-TRIMETHYLBENZENE	--	<5	--	<5	<5	<5	<5	<5	<5
1,3-DICHLOROBENZENE	--	<10	--	<10	<10	<10	<10	<10	<10
1,3-DICHLOROPROPANE	--	<5	--	<5	<5	<5	<5	<5	<5
1,4-DICHLOROBENZENE	--	<5	--	<5	<5	<5	<5	<5	<5
2,2-DICHLOROPROPANE	--	<5	--	<5	<5	<5	<5	<5	<5
2-CHLOROTOLUENE	--	<5	--	<5	<5	<5	<5	<5	<5
4-CHLOROTOLUENE	--	<5	--	<5	<5	<5	<5	<5	<5
4-ISOPROPYLTOLUENE	--	<5	--	<5	<5	<5	<5	<5	<5
ACETONE	<5	--	**9.2**	--	--	--	--	--	--
BENZENE	<0.5	<5	<0.5	<5	<5	<5	<5	<5	<5
BROMOBENZENE	--	<5	--	<5	<5	<5	<5	<5	<5
BROMODICHLOROMETHANE	--	<5	--	<5	<5	<5	<5	<5	<5
BROMOFORM	--	<5	--	<5	<5	<5	<5	<5	<5
BROMOMETHANE	--	<10	--	<10	<10	<10	<10	<10	<10
CARBON TETRACHLORIDE	--	<5	--	<5	<5	<5	<5	<5	<5
CHLOROBENZENE	--	<5	--	<5	<5	<5	<5	<5	<5
CHLOROBROMOMETHANE	--	<5	--	<5	<5	<5	<5	<5	<5

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
VOC COMPOUNDS BY 8260/8260B

LOCATION SAMPLE NAME SAMPLING DATE	SB05-053 S553 7/13/2001	SB05-054 S554W 3/31/1998	SB05-058 S558 7/15/2001	SB05-062 S562W 3/27/1998	SB05-066 S566W 3/27/1998	SB05-075 S575W 3/24/1998	SB05-079 S579W 3/24/1998	SB05-086 S586W 3/26/1998	SB05-094 S594W 3/26/1998
CHLOROETHANE	--	<5	--	<5	<5	<5	<5	<5	<5
CHLOROFORM	<0.5	<5	<0.5	<5	<5	<5	<5	<5	<5
CHLOROMETHANE	--	<5	--	<5	<5	<5	<5	<5	<5
CIS-1,2-DICHLOROETHENE	<0.5	<5	<0.5	<5	<5	<5	<5	<5	<5
DIBROMOCHLOROMETHANE	--	<5	--	<5	<5	<5	<5	<5	<5
DIBROMOMETHANE	--	<5	--	<5	<5	<5	<5	<5	<5
DICHLORODIFLUOROMETHANE (CFC-12)	--	<10	--	<10	<10	<10	<10	<10	<10
ETHYLBENZENE	<0.5	<5	<0.5	<5	<5	<5	<5	<5	<5
HEXACHLOROBUTADIENE	--	<5	--	<5	<5	<5	<5	<5	<5
ISOPROPYLBENZENE	--	<5	--	<5	<5	<5	<5	<5	<5
METHYLENE CHLORIDE	--	<5	--	<5	<5	<5	<5	<5	<5
NAPHTHALENE	--	<5	--	<5	<5	<5	<5	<5	<5
N-BUTYLBENZENE	--	<5	--	<5	<5	<5	<5	<5	<5
N-PROPYLBENZENE	--	<5	--	<5	<5	<5	<5	<5	<5
SEC-BUTYLBENZENE	--	<5	--	<5	<5	<5	<5	<5	<5
STYRENE	--	<5	--	<5	<5	<5	<5	<5	<5
TERT-BUTYLBENZENE	--	<5	--	<5	<5	<5	<5	<5	<5
TETRACHLOROETHENE	--	<5	--	<5	<5	<5	<5	<5	<5
TOLUENE	<0.5	<5	<0.5	<5	<5	<5	<5	<5	<5
TRANS-1,2-DICHLOROETHENE	--	<5	--	<5	<5	<5	<5	<5	<5
TRICHLOROETHENE	<0.5	<5	<0.5	<5	<5	<5	<5	<5	<5
TRICHLOROFLUOROMETHANE (CFC-11)	--	<5	--	<5	<5	<5	<5	<5	<5
VINYL CHLORIDE	--	<3	--	<3	<3	<3	<3	<3	<3
XYLENES (TOTAL)	<0.5	<5	<0.5	<5	<5	<5	<5	<5	<5

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
VOC COMPOUNDS BY 8260/8260B

LOCATION	SB06-005	SB06-005	SB06-016	SB06-019	TN-001	TN-002	TN-003	TS-001
SAMPLE NAME	S605@4-5R	S605T	S619T	S619@4-5R	TN-001-GW	TN-002-GW	TN-003-GW	TS-001-GW
SAMPLING DATE	3/26/1998	3/26/1998	3/26/1998	3/26/1998	10/7/1998	10/7/1998	10/7/1998	10/7/1998
1,1,1,2-TETRACHLOROETHANE	<5	<5	<5	<5	<1	<1	<1	<1
1,1,1-TRICHLOROETHANE	<5	<5	<5	<5	<1	<1	<1	<1
1,1,2,2-TETRACHLOROETHANE	<5	<5	<5	<5	<1	<1	<1	<1
1,1,2-TRICHLOROETHANE	<5	<5	<5	<5	<1	<1	<1	<1
1,1-DICHLOROETHANE	<5	<5	<5	<5	<1	<1	<1	<1
1,1-DICHLOROETHENE	<5	<5	<5	<5	<1	<1	<1	<1
1,1-DICHLOROPROPENE	<5	<5	<5	<5	<1	<1	<1	<1
1,2,3-TRICHLOROBENZENE	<5	<5	<5	<5	<1	<1	<1	<1
1,2,3-TRICHLOROPROPANE	<5	<5	<5	<5	<1	<1	<1	<1
1,2,4-TRICHLOROBENZENE	<5	<5	<5	<5	<1	<1	<1	<1
1,2,4-TRIMETHYLBENZENE	<5	<5	<5	<5	<1	<1	<1	<1
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	<5	<5	<5	<5	<5	<5	<5	<5
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	<5	<5	<5	<5	<1	<1	<1	<1
1,2-DICHLOROBENZENE	<10	<10	<10	<10	<1	<1	<1	<1
1,2-DICHLOROETHANE	<5	<5	<5	<5	<1	<1	<1	<1
1,2-DICHLOROPROPANE	<5	<5	<5	<5	<1	<1	<1	<1
1,3,5-TRIMETHYLBENZENE	<5	<5	<5	<5	<1	<1	<1	<1
1,3-DICHLOROBENZENE	<10	<10	<10	<10	<1	<1	<1	<1
1,3-DICHLOROPROPANE	<5	<5	<5	<5	<1	<1	<1	<1
1,4-DICHLOROBENZENE	<5	<5	<5	<5	<1	<1	<1	<1
2,2-DICHLOROPROPANE	<5	<5	<5	<5	<1	<1	<1	<1
2-CHLOROTOLUENE	<5	<5	<5	<5	<1	<1	<1	<1
4-CHLOROTOLUENE	<5	<5	<5	<5	<1	<1	<1	<1
4-ISOPROPYLTOLUENE	<5	<5	<5	<5	<1	<1	<1	<1
ACETONE	--	--	--	--	--	--	--	--
BENZENE	<5	<5	<5	<5	<1	<1	<1	<1
BROMOBENZENE	<5	<5	<5	<5	<1	<1	<1	<1
BROMODICHLOROMETHANE	<5	<5	<5	<5	<1	<1	<1	<1
BROMOFORM	<5	<5	<5	<5	<1	<1	<1	<1
BROMOMETHANE	<10	<10	<10	<10	<1	<1	<1	<1
CARBON TETRACHLORIDE	<5	<5	<5	<5	<1	<1	<1	<1
CHLOROBENZENE	<5	<5	<5	<5	<1	<1	<1	<1
CHLOROBROMOMETHANE	<5	<5	<5	<5	<1	<1	<1	<1

Units in ug/l
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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
VOC COMPOUNDS BY 8260/8260B

LOCATION	SB06-005	SB06-005	SB06-016	SB06-019	TN-001	TN-002	TN-003	TS-001
SAMPLE NAME	S605@4-5R	S605T	S619T	S619@4-5R	TN-001-GW	TN-002-GW	TN-003-GW	TS-001-GW
SAMPLING DATE	3/26/1998	3/26/1998	3/26/1998	3/26/1998	10/7/1998	10/7/1998	10/7/1998	10/7/1998
CHLOROETHANE	<5	<5	<5	<5	<5	<5	<5	<5
CHLOROFORM	<5	<5	<5	<5	<1	<1	<1	<1
CHLOROMETHANE	<5	<5	<5	<5	<5	<5	<5	<5
CIS-1,2-DICHLOROETHENE	<5	<5	<5	<5	<1	<1	<1	<1
DIBROMOCHLOROMETHANE	<5	<5	<5	<5	<1	<1	<1	<1
DIBROMOMETHANE	<5	<5	<5	<5	<1	<1	<1	<1
DICHLORODIFLUOROMETHANE (CFC-12)	<10	<10	<10	<10	<1	<1	<1	<1
ETHYLBENZENE	<5	<5	<5	<5	<1	<1	<1	<1
HEXACHLOROBUTADIENE	<5	<5	<5	<5	<1	<1	<1	<1
ISOPROPYLBENZENE	<5	<5	<5	<5	<1	<1	<1	<1
METHYLENE CHLORIDE	<5	<5	<5	<5	<1	<1	<1	<1
NAPHTHALENE	<5	<5	<5	<5	<1	<1	<1	<1
N-BUTYLBENZENE	<5	<5	<5	<5	<1	<1	<1	<1
N-PROPYLBENZENE	<5	<5	<5	<5	<1	<1	<1	<1
SEC-BUTYLBENZENE	<5	<5	<5	<5	<1	<1	<1	<1
STYRENE	<5	<5	<5	<5	<1	<1	<1	<1
TERT-BUTYLBENZENE	<5	<5	<5	<5	<1	<1	<1	<1
TETRACHLOROETHENE	<5	<5	<5	<5	<1	<1	<1	<1
TOLUENE	<5	<5	<5	<5	<1	<1	<1	<1
TRANS-1,2-DICHLOROETHENE	<5	<5	<5	<5	<1	<1	<1	<1
TRICHLOROETHENE	<5	<5	<5	<5	<1	<1	<1	<1
TRICHLOROFLUOROMETHANE (CFC-11)	<5	<5	<5	<5	<5	<5	<5	<5
VINYL CHLORIDE	<3	<3	<3	<3	<5	<5	<5	<5
XYLENES (TOTAL)	<5	<5	<5	<5	--	--	--	--

Units in ug/l
< = Not Detected at indicated reporting limit
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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
VOC COMPOUNDS BY 8260/8260B

LOCATION	TS-002	TS-003
SAMPLE NAME	TS-002-GW	TS-003-GW
SAMPLING DATE	10/7/1998	10/7/1998
1,1,1,2-TETRACHLOROETHANE	<1	<1
1,1,1-TRICHLOROETHANE	<1	<1
1,1,2,2-TETRACHLOROETHANE	<1	<1
1,1,2-TRICHLOROETHANE	<1	<1
1,1-DICHLOROETHANE	<1	<1
1,1-DICHLOROETHENE	<1	<1
1,1-DICHLOROPROPENE	<1	<1
1,2,3-TRICHLOROBENZENE	<1	<1
1,2,3-TRICHLOROPROPANE	<1	<1
1,2,4-TRICHLOROBENZENE	<1	<1
1,2,4-TRIMETHYLBENZENE	<1	<1
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	<5	<5
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	<1	<1
1,2-DICHLOROBENZENE	<1	<1
1,2-DICHLOROETHANE	<1	<1
1,2-DICHLOROPROPANE	<1	<1
1,3,5-TRIMETHYLBENZENE	<1	<1
1,3-DICHLOROBENZENE	<1	<1
1,3-DICHLOROPROPANE	<1	<1
1,4-DICHLOROBENZENE	<1	<1
2,2-DICHLOROPROPANE	<1	<1
2-CHLOROTOLUENE	<1	<1
4-CHLOROTOLUENE	<1	<1
4-ISOPROPYLTOLUENE	<1	<1
ACETONE	--	--
BENZENE	<1	<1
BROMOBENZENE	<1	<1
BROMODICHLOROMETHANE	<1	<1
BROMOFORM	<1	<1
BROMOMETHANE	<1	<1
CARBON TETRACHLORIDE	<1	<1
CHLOROBENZENE	<1	<1
CHLOROBROMOMETHANE	<1	<1

Units in ug/l
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
VOC COMPOUNDS BY 8260/8260B

LOCATION	TS-002	TS-003
SAMPLE NAME	TS-002-GW	TS-003-GW
SAMPLING DATE	10/7/1998	10/7/1998
CHLOROETHANE	<5	<5
CHLOROFORM	<1	<1
CHLOROMETHANE	<5	<5
CIS-1,2-DICHLOROETHENE	<1	<1
DIBROMOCHLOROMETHANE	<1	<1
DIBROMOMETHANE	<1	<1
DICHLORODIFLUOROMETHANE (CFC-12)	<1	<1
ETHYLBENZENE	<1	<1
HEXACHLOROBUTADIENE	<1	<1
ISOPROPYLBENZENE	<1	<1
METHYLENE CHLORIDE	<1	<1
NAPHTHALENE	<1	<1
N-BUTYLBENZENE	<1	<1
N-PROPYLBENZENE	<1	<1
SEC-BUTYLBENZENE	<1	<1
STYRENE	<1	<1
TERT-BUTYLBENZENE	<1	<1
TETRACHLOROETHENE	<1	<1
TOLUENE	<1	<1
TRANS-1,2-DICHLOROETHENE	<1	<1
TRICHLOROETHENE	<1	<1
TRICHLOROFLUOROMETHANE (CFC-11)	<5	<5
VINYL CHLORIDE	<5	<5
XYLENES (TOTAL)	--	--

Units in ug/l
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
SVOC COMPOUNDS BY 8270

LOCATION	SB04-011	SB04-013	TN-001
SAMPLE NAME	S411W	S413@4-5R	TN-001-GW
SAMPLING DATE	3/26/1998	3/23/1998	10/7/1998
1,2,4-TRICHLOROBENZENE	<10	<10	--
1,2-DICHLOROBENZENE	<10	<10	--
1,3-DICHLOROBENZENE	<10	<10	--
1,4-DICHLOROBENZENE	<10	<10	--
2,2-OXYBIS(1-CHLOROPROPANE)	<10	<10	--
2,4,5-TRICHLOROPHENOL	<20	<20	--
2,4,6-TRICHLOROPHENOL	<20	<20	--
2,4-DICHLOROPHENOL	<10	<10	--
2,4-DIMETHYLPHENOL	<20	<20	--
2,4-DINITROPHENOL	<100	<100	--
2,4-DINITROTOLUENE	<10	<10	--
2,6-DINITROTOLUENE	<10	<10	--
2-CHLORONAPHTHALENE	<10	<10	--
2-CHLOROPHENOL	<10	<10	--
2-METHYLNAPHTHALENE	<10	<10	<10
2-METHYLPHENOL	<10	<10	--
2-NITROANILINE	<20	<20	--
2-NITROPHENOL	<10	<10	--
3,3-DICHLOROBENZIDINE	<40	<40	--
3-NITROANILINE	<20	<20	--
4,6-DINITRO-2-METHYLPHENOL	<40	<40	--
4-BROMOPHENYL PHENYL ETHER	<10	<10	--
4-CHLORO-3-METHYLPHENOL	<20	<20	--
4-CHLOROANILINE	<10	<10	--
4-CHLOROPHENYL PHENYL ETHER	<10	<10	--
4-METHYLPHENOL	<10	<10	--
4-NITROANILINE	<100	<100	--
4-NITROPHENOL	<100	<100	--
ACENAPHTHENE	<10	<10	<10
ACENAPHTHYLENE	<10	<10	<10
ANILINE	<10	<10	--
ANTHRACENE	<10	<10	<10
AZOBENZENE	<20	<20	--

Units in ug/l
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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
SVOC COMPOUNDS BY 8270

LOCATION SAMPLE NAME SAMPLING DATE	SB04-011 S411W 3/26/1998	SB04-013 S413@4-5R 3/23/1998	TN-001 TN-001-GW 10/7/1998
BENZIDINE	<100	<100	--
BENZO(A)ANTHRACENE	<10	<10	<10
BENZO(A)PYRENE	<10	<10	<10
BENZO(B)FLUORANTHENE	<10	<10	<10
BENZO(G,H,I)PERYLENE	<10	<10	--
BENZO(K)FLUORANTHENE	<10	<10	--
BENZOIC ACID	<100	<100	--
BENZYL ALCOHOL	<20	<20	--
BIS(2-CHLOROETHOXY)METHANE	<10	<10	--
BIS(2-CHLOROETHYL)ETHER	<10	<10	--
BIS(2-ETHYLHEXYL)PHTHALATE	<100	<100	--
BUTYL BENZYL PHTHALATE	<20	<20	--
CHRYSENE	<10	<10	<10
DIBENZ(A,H)ANTHRACENE	<20	<20	<10
DIBENZOFURAN	<10	<10	<10
DIETHYL PHTHALATE	<10	<10	--
DIMETHYL PHTHALATE	<10	<10	--
DI-N-BUTYLPHTHALATE	<20	<20	--
DI-N-OCTYL PHTHALATE	<40	<40	--
FLUORANTHENE	<10	<10	<10
FLUORENE	<10	<10	<10
HEXACHLOROBENZENE	<10	<10	--
HEXACHLOROBUTADIENE	<10	<10	--
HEXACHLOROCYCLOPENTADIENE	<40	<40	--
HEXACHLOROETHANE	<10	<10	--
INDENO(1,2,3-CD)PYRENE	<20	<20	<10
ISOPHORONE	<10	<10	--
NAPHTHALENE	<10	<10	<10
NITROBENZENE	<40	<40	--
N-NITROSODI-N-PROPYLAMINE	<10	<10	--
N-NITROSODIPHENYLAMINE	<10	<10	--
PENTACHLOROPHENOL	<40	<40	--
PHENANTHRENE	<10	<10	<10
PHENOL	<10	<10	--
PYRENE	<10	<10	<10

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-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
PAH COMPOUNDS BY 8310

LOCATION	MW-02	MW-03	MW-04	MW-05	SB01-003A	SB01-015A	SB01-020	SB01-032	SB01-035
SAMPLE NAME	MW-2	MW-3	MW-4	MW-5	S103AW	S115A@4.5-5R	S120W	S132W	S135@6.5-7R
SAMPLING DATE	3/31/1998	3/31/1998	3/31/1998	3/31/1998	4/20/1998	4/17/1998	3/25/1998	3/24/1998	3/19/1998
ACENAPHTHENE	<2	<2	<2	<2	<2	<2	<2	<2	<2
ACENAPHTHENE -DISSOLVED	--	--	--	--	--	--	<2	<2	--
ACENAPHTHYLENE	<10	<10	<10	<10	<10	<10	<10	<10	<10
ACENAPHTHYLENE -DISSOLVED	--	--	--	--	--	--	<10	<10	--
ANTHRACENE	<2	<2	<2	<2	<2	<2	<2	<2	<2
ANTHRACENE -DISSOLVED	--	--	--	--	--	--	<2	<2	--
BENZO(A)ANTHRACENE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BENZO(A)ANTHRACENE -DISSOLVED	--	--	--	--	--	--	<0.5	<0.5	--
BENZO(A)PYRENE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.20	<0.2	<0.2	<0.2
BENZO(A)PYRENE -DISSOLVED	--	--	--	--	--	--	<0.2	<0.2	--
BENZO(B)FLUORANTHENE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BENZO(B)FLUORANTHENE -DISSOLVED	--	--	--	--	--	--	<0.5	<0.5	--
BENZO(G,H,I)PERYLENE	<2	<2	<2	<2	<2	<2	<2	<2	<2
BENZO(G,H,I)PERYLENE -DISSOLVED	--	--	--	--	--	--	<2	<2	--
BENZO(K)FLUORANTHENE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BENZO(K)FLUORANTHENE -DISSOLVED	--	--	--	--	--	--	<0.5	<0.5	--
CHRYSENE	<2	<2	<2	<2	<2	<2	<2	<2	<2
CHRYSENE -DISSOLVED	--	--	--	--	--	--	<2	<2	--
DIBENZ(A,H)ANTHRACENE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DIBENZ(A,H)ANTHRACENE -DISSOLVED	--	--	--	--	--	--	<0.5	<0.5	--
FLUORANTHENE	<2	<2	<2	<2	<2	<2	<2	<2	<2
FLUORANTHENE -DISSOLVED	--	--	--	--	--	--	<2	<2	--
FLUORENE	<2	<2	<2	<2	<2	<2	<2	<2	<2
FLUORENE -DISSOLVED	--	--	--	--	--	--	**2.7**	**2.7**	--
INDENO(1,2,3-CD)PYRENE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
INDENO(1,2,3-CD)PYRENE -DISSOLVED	--	--	--	--	--	--	<0.5	<0.5	--
NAPHTHALENE	<2	<2	**4.6**	<2	<2	<2	<2	<2	<2
NAPHTHALENE -DISSOLVED	--	--	--	--	--	--	<2	<2	--
PHENANTHRENE	<2	<2	<2	<2	<2	<2	<2	<2	<2
PHENANTHRENE -DISSOLVED	--	--	--	--	--	--	<2	<2	--
PYRENE	<2	<2	<2	<2	<2	<2	<2	<2	<2
PYRENE -DISSOLVED	--	--	--	--	--	--	<2	<2	--

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< = Not Detected at indicated reporting limit
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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
PAH COMPOUNDS BY 8310

LOCATION	SB01-038A	SB01-043	SB01-049	SB01-060	SB01-060	SB01-061	SB01-061	SB01-063	SB01-067
SAMPLE NAME	S138A@4.5-5R	S143W	S149W	S160W	S160WD	S161W	S161WD	S163W	S167W
SAMPLING DATE	4/17/1998	3/25/1998	3/26/1998	3/26/1998	3/26/1998	3/23/1998	3/23/1998	3/30/1998	3/27/1998
ACENAPHTHENE	<2	<2	<2	<2	<2	<2	<2	<2	<2
ACENAPHTHENE -DISSOLVED	--	<2	<2	<2	<2	<2	<2	<2	<2
ACENAPHTHYLENE	<10	<10	<10	<10	<10	<10	<10	<10	<10
ACENAPHTHYLENE -DISSOLVED	--	<10	<10	<10	<10	<10	<10	<10	<10
ANTHRACENE	<2	<2	<2	<2	<2	<2	<2	<2	<2
ANTHRACENE -DISSOLVED	--	<2	<2	<2	<2	<2	<2	<2	<2
BENZO(A)ANTHRACENE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BENZO(A)ANTHRACENE -DISSOLVED	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BENZO(A)PYRENE	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
BENZO(A)PYRENE -DISSOLVED	--	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
BENZO(B)FLUORANTHENE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BENZO(B)FLUORANTHENE -DISSOLVED	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BENZO(G,H,I)PERYLENE	<2	<2	<2	<2	<2	<2	<2	<2	<2
BENZO(G,H,I)PERYLENE -DISSOLVED	--	<2	<2	<2	<2	<2	<2	<2	<2
BENZO(K)FLUORANTHENE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BENZO(K)FLUORANTHENE -DISSOLVED	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CHRYSENE	<2	<2	<2	<2	<2	<2	<2	<2	<2
CHRYSENE -DISSOLVED	--	<2	<2	<2	<2	<2	<2	<2	<2
DIBENZ(A,H)ANTHRACENE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DIBENZ(A,H)ANTHRACENE -DISSOLVED	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
FLUORANTHENE	<2	<2	<2	<2	<2	<2	<2	<2	<2
FLUORANTHENE -DISSOLVED	--	<2	<2	<2	<2	<2	<2	<2	<2
FLUORENE	<2	<2	<2	<2	<2	<2	<2	<2	<2
FLUORENE -DISSOLVED	--	**2.4**	**2.4**	<2	<2	<2	<2	**3.7**	<2
INDENO(1,2,3-CD)PYRENE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
INDENO(1,2,3-CD)PYRENE -DISSOLVED	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAPHTHALENE	<2	<2	<2	<2	<2	<2	<2	<2	**2.3**
NAPHTHALENE -DISSOLVED	--	<2	<2	<2	<2	<2	<2	<2	<2
PHENANTHRENE	<2	<2	<2	<2	<2	<2	<2	<2	<2
PHENANTHRENE -DISSOLVED	--	<2	<2	<2	<2	<2	<2	<2	<2
PYRENE	<2	<2	<2	<2	<2	<2	<2	<2	<2
PYRENE -DISSOLVED	--	<2	<2	<2	<2	<2	<2	<2	<2

Units in ug/l
< = Not Detected at indicated reporting limit
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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
PAH COMPOUNDS BY 8310

LOCATION	SB01-070A	SB01-070A	SB01-070B	SB01-070C	SB01-070D	SB01-070D	SB01-072	SB02-002	SB02-008
SAMPLE NAME	S170A@8.5-9R	S170AW	S170BW	S170CW	S170DW	S170DWD	S172W	S202W	S208W
SAMPLING DATE	4/20/1998	4/21/1998	4/21/1998	4/21/1998	4/21/1998	4/21/1998	3/27/1998	3/30/1998	3/27/1998
ACENAPHTHENE	<2	<40	<2	<2	<2	<2	<2	<2	<2
ACENAPHTHENE -DISSOLVED	--	--	--	--	--	--	<2	<2	<2
ACENAPHTHYLENE	<10	<200	<10	<10	<10	<10	<10	<10	<10
ACENAPHTHYLENE -DISSOLVED	--	--	--	--	--	--	<10	<10	<10
ANTHRACENE	<2	<40	<2	<2	<2	<2	<2	<2	<2
ANTHRACENE -DISSOLVED	--	--	--	--	--	--	<2	<2	<2
BENZO(A)ANTHRACENE	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BENZO(A)ANTHRACENE -DISSOLVED	--	--	--	--	--	--	<0.5	<0.5	<0.5
BENZO(A)PYRENE	<0.20	<4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
BENZO(A)PYRENE -DISSOLVED	--	--	--	--	--	--	<0.2	<0.2	<0.2
BENZO(B)FLUORANTHENE	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BENZO(B)FLUORANTHENE -DISSOLVED	--	--	--	--	--	--	<0.5	<0.5	<0.5
BENZO(G,H,I)PERYLENE	<2	<40	<2	<2	<2	<2	<2	<2	<2
BENZO(G,H,I)PERYLENE -DISSOLVED	--	--	--	--	--	--	<2	<2	<2
BENZO(K)FLUORANTHENE	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BENZO(K)FLUORANTHENE -DISSOLVED	--	--	--	--	--	--	<0.5	<0.5	<0.5
CHRYSENE	<2	<40	<2	<2	<2	<0.2	<2	<2	<2
CHRYSENE -DISSOLVED	--	--	--	--	--	--	<2	<2	<2
DIBENZ(A,H)ANTHRACENE	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DIBENZ(A,H)ANTHRACENE -DISSOLVED	--	--	--	--	--	--	<0.5	<0.5	<0.5
FLUORANTHENE	<2	<40	<2	<2	<2	<2	<2	<2	<2
FLUORANTHENE -DISSOLVED	--	--	--	--	--	--	<2	<2	<2
FLUORENE	**1.5 J**	<40	<2	<2	<2	<2	<2	<2	<2
FLUORENE -DISSOLVED	--	--	--	--	--	--	**2.7**	**3**	<2
INDENO(1,2,3-CD)PYRENE	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
INDENO(1,2,3-CD)PYRENE -DISSOLVED	--	--	--	--	--	--	<0.5	<0.5	<0.5
NAPHTHALENE	<2	**71**	<2	<2	<2	<2	<2	<2	<2
NAPHTHALENE -DISSOLVED	--	--	--	--	--	--	<2	<2	<2
PHENANTHRENE	<2	<40	<2	<2	<2	<2	<2	<2	<2
PHENANTHRENE -DISSOLVED	--	--	--	--	--	--	<2	<2	<2
PYRENE	<2	<40	<2	<2	<2	<2	<2	<2	<2
PYRENE -DISSOLVED	--	--	--	--	--	--	<2	<2	<2

Units in ug/l
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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
PAH COMPOUNDS BY 8310

LOCATION SAMPLE NAME SAMPLING DATE	SB03-003A S303AW 4/20/1998	SB03-007 S307W 3/30/1998	SB03-009 S309@4-5R 3/26/1998	SB03-014 S314W 3/31/1998	SB03-017A S317A@9-9.5R 4/17/1998	SB03-017A S317AW 4/21/1998	SB03-018 S318W 3/30/1998	SB03-022 S322W 3/31/1998	SB03-024 S324W 3/30/1998
ACENAPHTHENE	<2	<2	<2	<2	<2	<2	<2	<2	<2
ACENAPHTHENE -DISSOLVED	--	<2	--	<2	--	--	<2	<2	<2
ACENAPHTHYLENE	<10	<10	<10	<10	<10	<10	<10	<10	<10
ACENAPHTHYLENE -DISSOLVED	--	<10	--	<10	--	--	<10	<10	<10
ANTHRACENE	<2	<2	<2	<2	<2	<2	<2	<2	<2
ANTHRACENE -DISSOLVED	--	<2	--	<2	--	--	<2	<2	<2
BENZO(A)ANTHRACENE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BENZO(A)ANTHRACENE -DISSOLVED	--	<0.5	--	<0.5	--	--	<0.5	<0.5	<0.5
BENZO(A)PYRENE	<0.2	<0.2	<0.2	<0.2	<0.20	<0.2	<0.2	<0.2	<0.2
BENZO(A)PYRENE -DISSOLVED	--	<0.2	--	<0.2	--	--	<0.2	<0.2	<0.2
BENZO(B)FLUORANTHENE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BENZO(B)FLUORANTHENE -DISSOLVED	--	<0.5	--	<0.5	--	--	<0.5	<0.5	<0.5
BENZO(G,H,I)PERYLENE	<2	<2	<2	<2	<2	<2	<2	<2	<2
BENZO(G,H,I)PERYLENE -DISSOLVED	--	<2	--	<2	--	--	<2	<2	<2
BENZO(K)FLUORANTHENE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BENZO(K)FLUORANTHENE -DISSOLVED	--	<0.5	--	<0.5	--	--	<0.5	<0.5	<0.5
CHRYSENE	<2	<2	<2	<2	<2	<2	<2	<2	<2
CHRYSENE -DISSOLVED	--	<2	--	<2	--	--	<2	<2	<2
DIBENZ(A,H)ANTHRACENE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DIBENZ(A,H)ANTHRACENE -DISSOLVED	--	<0.5	--	<0.5	--	--	<0.5	<0.5	<0.5
FLUORANTHENE	<2	<2	<2	<2	<2	<2	<2	<2	<2
FLUORANTHENE -DISSOLVED	--	<2	--	<2	--	--	<2	<2	<2
FLUORENE	<2	<2	<2	<2	<2	<2	<2	<2	<2
FLUORENE -DISSOLVED	--	**4.6 U**	--	**2.9**	--	--	<2	**2.3**	<2
INDENO(1,2,3-CD)PYRENE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
INDENO(1,2,3-CD)PYRENE -DISSOLVED	--	<0.5	--	<0.5	--	--	<0.5	<0.5	<0.5
NAPHTHALENE	<2	<2	<2	<2	<2	<2	<2	<2	<2
NAPHTHALENE -DISSOLVED	--	<2	--	<2	--	--	<2	<2	<2
PHENANTHRENE	<2	<2	<2	<2	<2	<2	<2	<2	<2
PHENANTHRENE -DISSOLVED	--	<2	--	<2	--	--	<2	<2	<2
PYRENE	<2	<2	<2	<2	<2	<2	<2	<2	<2
PYRENE -DISSOLVED	--	<2	--	<2	--	--	<2	<2	<2

Units in ug/l
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-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
PAH COMPOUNDS BY 8310

LOCATION SAMPLE NAME SAMPLING DATE	SB04-005 S405W 3/30/1998	SB04-010 S410W 3/30/1998	SB04-011 S411W 3/26/1998	SB05-018 S518W 3/26/1998	SB05-026 S526W 3/24/1998	SB05-029 S529W 3/26/1998	SB05-038 S538W 4/10/1998	SB05-040 S540W 4/10/1998	SB05-041A S541AW 4/17/1998
ACENAPHTHENE	<2	<2	<2	<2	<2	--	<2	--	<2
ACENAPHTHENE -DISSOLVED	<2	<2	--	--	--	<2	<2	<2	--
ACENAPHTHYLENE	<10	<10	<10	<10	<10	--	<10	--	<10
ACENAPHTHYLENE -DISSOLVED	<10	<10	--	--	--	<10	<10	<10	--
ANTHRACENE	<2	<2	<2	<2	<2	--	<2	--	<2
ANTHRACENE -DISSOLVED	<2	<2	--	--	--	<2	<2	<2	--
BENZO(A)ANTHRACENE	<0.5	<0.5	<0.5	<0.5	<0.5	--	<0.5	--	<0.5
BENZO(A)ANTHRACENE -DISSOLVED	<0.5	<0.5	--	--	--	<0.5	<0.5	<0.5	--
BENZO(A)PYRENE	<0.2	<0.2	<0.2	<0.2	<0.2	--	<0.2	--	<0.20
BENZO(A)PYRENE -DISSOLVED	<0.2	<0.2	--	--	--	<0.2	<0.2	<0.2	--
BENZO(B)FLUORANTHENE	<0.5	<0.5	<0.5	<0.5	<0.5	--	<0.5	--	<0.5
BENZO(B)FLUORANTHENE -DISSOLVED	<0.5	<0.5	--	--	--	<0.5	<0.5	<0.5	--
BENZO(G,H,I)PERYLENE	<2	<2	<2	<2	<2	--	<2	--	<2
BENZO(G,H,I)PERYLENE -DISSOLVED	<2	<2	--	--	--	<2	<2	<2	--
BENZO(K)FLUORANTHENE	<0.5	<0.5	<0.5	<0.5	<0.5	--	<0.5	--	<0.5
BENZO(K)FLUORANTHENE -DISSOLVED	<0.5	<0.5	--	--	--	<0.5	<0.5	<0.5	--
CHRYSENE	<2	<2	<2	<2	<2	--	<2	--	<2
CHRYSENE -DISSOLVED	<2	<2	--	--	--	<2	<2	<2	--
DIBENZ(A,H)ANTHRACENE	<0.5	<0.5	<0.5	<0.5	<0.5	--	<0.5	--	<0.5
DIBENZ(A,H)ANTHRACENE -DISSOLVED	<0.5	<0.5	--	--	--	<0.5	<0.5	<0.5	--
FLUORANTHENE	<2	<2	<2	<2	<2	--	<2	--	<2
FLUORANTHENE -DISSOLVED	<2	<2	--	--	--	<2	<2	<2	--
FLUORENE	<2	<2	<2	<2	<2	--	<2	--	<2
FLUORENE -DISSOLVED	**3.5**	**3.7**	--	--	--	**3.2**	**8**	<2	--
INDENO(1,2,3-CD)PYRENE	<0.5	<0.5	<0.5	<0.5	<0.5	--	<0.5	--	<0.5
INDENO(1,2,3-CD)PYRENE -DISSOLVED	<0.5	<0.5	--	--	--	<0.5	<0.5	<0.5	--
NAPHTHALENE	<2	<2	<2	<2	<2	--	<2	--	<2
NAPHTHALENE -DISSOLVED	<2	<2	--	--	--	<2	<2	<2	--
PHENANTHRENE	<2	<2	<2	<2	<2	--	<2	--	<2
PHENANTHRENE -DISSOLVED	<2	<2	--	--	--	<2	<2	<2	--
PYRENE	<2	<2	<2	<2	<2	--	<2	--	<2
PYRENE -DISSOLVED	<2	<2	--	--	--	<2	<2	<2	--

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
PAH COMPOUNDS BY 8310

LOCATION SAMPLE NAME SAMPLING DATE	SB05-043A S543A@10.5-11R 4/16/1998	SB05-043A S543AW 4/20/1998	SB05-052 S552@10-11R 3/20/1998	SB05-052 S552W 3/24/1998	SB05-054 S554W 3/31/1998	SB05-062 S562W 3/27/1998	SB05-066 S566W 3/27/1998	SB05-075 S575W 3/24/1998	SB05-079 S579W 3/24/1998
ACENAPHTHENE	<2	<2	<2	<2	<2	<2	<2	<2	<2
ACENAPHTHENE -DISSOLVED	--	--	--	<2	<2	<2	<2	<2	<2
ACENAPHTHYLENE	<10	<10	<10	<10	<10	<10	<10	<10	<10
ACENAPHTHYLENE -DISSOLVED	--	--	--	<10	<10	<10	<10	<10	<10
ANTHRACENE	<2	<2	<2	<2	<2	<2	<2	<2	<2
ANTHRACENE -DISSOLVED	--	--	--	<2	<2	<2	<2	<2	<2
BENZO(A)ANTHRACENE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BENZO(A)ANTHRACENE -DISSOLVED	--	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BENZO(A)PYRENE	<0.20	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
BENZO(A)PYRENE -DISSOLVED	--	--	--	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
BENZO(B)FLUORANTHENE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BENZO(B)FLUORANTHENE -DISSOLVED	--	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BENZO(G,H,I)PERYLENE	**0.71**	<2	<2	<2	<2	<2	<2	<2	<2
BENZO(G,H,I)PERYLENE -DISSOLVED	--	--	--	<2	<2	<2	<2	<2	<2
BENZO(K)FLUORANTHENE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BENZO(K)FLUORANTHENE -DISSOLVED	--	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CHRYSENE	<2	<2	<2	<2	<2	<2	<2	<2	<2
CHRYSENE -DISSOLVED	--	--	--	<2	<2	<2	<2	<2	<2
DIBENZ(A,H)ANTHRACENE	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DIBENZ(A,H)ANTHRACENE -DISSOLVED	--	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
FLUORANTHENE	<2	<2	<2	<2	<2	<2	<2	<2	<2
FLUORANTHENE -DISSOLVED	--	--	--	<2	<2	<2	<2	<2	<2
FLUORENE	<2	<2	<2	<2	<2	<2	<2	<2	<2
FLUORENE -DISSOLVED	--	--	--	**2.4**	**2.2**	**4.8**	<2	**2.3**	**3.8**
INDENO(1,2,3-CD)PYRENE	**0.5**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
INDENO(1,2,3-CD)PYRENE -DISSOLVED	--	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
NAPHTHALENE	<2	<2	<2	<2	<2	<2	<2	<2	<2
NAPHTHALENE -DISSOLVED	--	--	--	<2	<2	<2	<2	<2	<2
PHENANTHRENE	<2	<2	<2	<2	<2	<2	<2	<2	<2
PHENANTHRENE -DISSOLVED	--	--	--	<2	<2	<2	<2	<2	<2
PYRENE	<2	<2	<2	<2	<2	<2	<2	<2	<2
PYRENE -DISSOLVED	--	--	--	<2	<2	<2	<2	<2	<2

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
PAH COMPOUNDS BY 8310

LOCATION	SB05-086	SB06-005	SB06-019
SAMPLE NAME	S586W	S605@4-5R	S619@4-5R
SAMPLING DATE	3/26/1998	3/26/1998	3/26/1998
ACENAPHTHENE	<2	<2	<2
ACENAPHTHENE -DISSOLVED	--	--	--
ACENAPHTHYLENE	<10	<10	<10
ACENAPHTHYLENE -DISSOLVED	--	--	--
ANTHRACENE	<2	<2	<2
ANTHRACENE -DISSOLVED	--	--	--
BENZO(A)ANTHRACENE	<0.5	<0.5	<0.5
BENZO(A)ANTHRACENE -DISSOLVED	--	--	--
BENZO(A)PYRENE	<0.2	<0.2	<0.2
BENZO(A)PYRENE -DISSOLVED	--	--	--
BENZO(B)FLUORANTHENE	<0.5	<0.5	<0.5
BENZO(B)FLUORANTHENE -DISSOLVED	--	--	--
BENZO(G,H,I)PERYLENE	<2	<2	<2
BENZO(G,H,I)PERYLENE -DISSOLVED	--	--	--
BENZO(K)FLUORANTHENE	<0.5	<0.5	<0.5
BENZO(K)FLUORANTHENE -DISSOLVED	--	--	--
CHRYSENE	<2	<2	<2
CHRYSENE -DISSOLVED	--	--	--
DIBENZ(A,H)ANTHRACENE	<0.5	<0.5	<0.5
DIBENZ(A,H)ANTHRACENE -DISSOLVED	--	--	--
FLUORANTHENE	<2	<2	<2
FLUORANTHENE -DISSOLVED	--	--	--
FLUORENE	<2	<2	<2
FLUORENE -DISSOLVED	--	--	--
INDENO(1,2,3-CD)PYRENE	<0.5	<0.5	<0.5
INDENO(1,2,3-CD)PYRENE -DISSOLVED	--	--	--
NAPHTHALENE	<2	<2	<2
NAPHTHALENE -DISSOLVED	--	--	--
PHENANTHRENE	<2	<2	<2
PHENANTHRENE -DISSOLVED	--	--	--
PYRENE	<2	<2	<2
PYRENE -DISSOLVED	--	--	--

Units in ug/l
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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
PCB COMPOUNDS BY 8081/8080

LOCATION	HM-003	SB01-002	SB01-003	SB01-064	SB01-068	SB01-069	SB02-002	SB03-007	SB03-009	SB03-011	SB03-014
SAMPLE NAME	HM-003-GW	S102@5-6R	SB01-003-GW	S164@4-5R	S168@4-5R	S169@4.5-5R	S202@4-5R	S307W	S309@4-5R	S311@4-5R	S314W
SAMPLING DATE	10/7/1998	3/17/1998	10/7/1998	3/20/1998	3/23/1998	3/24/1998	3/25/1998	3/30/1998	3/26/1998	3/26/1998	3/31/1998
AROCLOR 1016	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AROCLOR 1221	<0.5	<2	<0.5	<2	<2	<2	<2	<2	<2	<2	<2
AROCLOR 1232	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AROCLOR 1242	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AROCLOR 1248	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AROCLOR 1254	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AROCLOR 1260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
PCB COMPOUNDS BY 8081/8080

LOCATION	SB03-018	SB03-020	SB03-022	SB03-024	SB04-005	SB04-010	SB04-013	SB05-011	SB05-024	SB05-027	SB05-038
SAMPLE NAME	S318W	S320@4-5R	S322W	S324W	S405W	S410W	S413@4-5R	S511@4-5R	S524@4-5R	S527@10-11R	S538@4-5R
SAMPLING DATE	3/30/1998	3/25/1998	3/31/1998	3/30/1998	3/30/1998	3/30/1998	3/23/1998	3/18/1998	3/19/1998	3/16/1998	3/24/1998
AROCLOR 1016	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AROCLOR 1221	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
AROCLOR 1232	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AROCLOR 1242	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AROCLOR 1248	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AROCLOR 1254	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AROCLOR 1260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
PCB COMPOUNDS BY 8081/8080

LOCATION	SB05-040	SB05-046	SB05-052	SB05-052	SB05-054	SB05-057	SB05-060	SB05-062	SB05-062	SB05-066	SB05-073
SAMPLE NAME	S540W	S546@4-5R	S552@10-11R	S552W	S554W	S557@3-3.5R	S560@4-5R	S562@12-13R	S562W	S566W	S573@4-5R
SAMPLING DATE	4/10/1998	3/20/1998	3/20/1998	3/24/1998	3/31/1998	3/20/1998	3/24/1998	3/25/1998	3/27/1998	3/27/1998	3/23/1998
AROCLOR 1016	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AROCLOR 1221	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
AROCLOR 1232	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AROCLOR 1242	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AROCLOR 1248	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AROCLOR 1254	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AROCLOR 1260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
PCB COMPOUNDS BY 8081/8080

LOCATION	SB05-075	SB05-079	SB05-090	SB05-092	SB05-094	TN-001	TN-002	TN-003	TS-001
SAMPLE NAME	S575W	S579W	S590@4-5R	S592@4-5R	S594W	TN-001-GW	TN-002-GW	TN-003-GW	TS-001-GW
SAMPLING DATE	3/24/1998	3/24/1998	3/24/1998	3/23/1998	3/26/1998	10/7/1998	10/7/1998	10/7/1998	10/7/1998
AROCLOR 1016	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AROCLOR 1221	<2	<2	<2	<2	<2	<0.5	<0.5	<0.5	<0.5
AROCLOR 1232	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AROCLOR 1242	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AROCLOR 1248	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AROCLOR 1254	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
AROCLOR 1260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Units in ug/l
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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
BTEX & MTBE COMPOUNDS BY 8020/8020A/8021

LOCATION	MW-01	MW-01	MW-01	MW-01	MW-01	MW-01	MW-02	MW-03
SAMPLE NAME	MW-1-0200	MW-1-0300	MW-1-0400	MW-1-1100	MW-1-0101	MW-1-0401	MW-2	MW-3
SAMPLING DATE	2/1/2000	3/1/2000	4/1/2000	11/1/2000	1/1/2001	4/1/2001	3/31/1998	3/31/1998
BENZENE	--	--	--	--	--	--	--	--
BENZENE -DISSOLVED	<5	<5	<5	<15	<15	<15	--	--
TOLUENE	--	--	--	--	--	--	--	--
TOLUENE -DISSOLVED	<5	<5	<5	<5	<5	<5	--	--
ETHYLBENZENE	--	--	--	--	--	--	--	--
ETHYLBENZENE -DISSOLVED	<5	<5	<5	<5	<5	<5	--	--
XYLENES (TOTAL)	--	--	--	--	--	--	--	--
XYLENES (TOTAL) -DISSOLVED	<5	<5	<5	<5	<5	<5	--	--
METHYL TERT BUTYL ETHER (MTBE)	--	--	--	--	--	--	<10	<11
METHYL TERT BUTYL ETHER (MTBE) -DISSOLVED	<5	<5	<5	<5	<5	<5	--	--

Units in ug/l
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
BTEX & MTBE COMPOUNDS BY 8020/8020A/8021

LOCATION	MW-04	MW-04	MW-04	MW-04	MW-04	MW-04	MW-05
SAMPLE NAME	MW-4a-0200	MW-4a-0300	MW-4a-0400	MW-4a-1100	MW-4a-0101	MW-4a-0401	MW-5
SAMPLING DATE	2/1/2000	3/1/2000	4/1/2000	11/1/2000	1/1/2001	4/1/2001	3/31/1998
BENZENE	--	--	--	--	--	--	<5
BENZENE -DISSOLVED	**10**	**390**	**180**	**25**	<15	**95**	--
TOLUENE	--	--	--	--	--	--	<5
TOLUENE -DISSOLVED	<5	**39**	**18**	<5	<5	**28**	--
ETHYLBENZENE	--	--	--	--	--	--	<5
ETHYLBENZENE -DISSOLVED	<5	**54**	**48**	**8.1**	**5.3**	**53**	--
XYLENES (TOTAL)	--	--	--	--	--	--	<5
XYLENES (TOTAL) -DISSOLVED	<5	<5	<5	<5	<5	**18**	--
METHYL TERT BUTYL ETHER (MTBE)	--	--	--	--	--	--	**9.6**
METHYL TERT BUTYL ETHER (MTBE) -DISSOLVED	<5	<5	<5	<5	<5	<5	--

Units in ug/l
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
BTEX & MTBE COMPOUNDS BY 8020/8020A/8021

LOCATION	MW-05	MW-05	MW-05	MW-05	MW-05	MW-05	SB01-002	SB01-003A
SAMPLE NAME	MW-5-0200	MW-5-0300	MW-5-0400	MW-5-1100	MW-5-0101	MW-5-0401	S102W	S103AW
SAMPLING DATE	2/1/2000	3/1/2000	4/1/2000	11/1/2000	1/1/2001	4/1/2001	3/25/1998	4/20/1998
BENZENE	--	--	--	--	--	--	<0.3	<0.3
BENZENE -DISSOLVED	<5	<5	<5	<15	<15	<15	--	--
TOLUENE	--	--	--	--	--	--	<0.3	<0.3
TOLUENE -DISSOLVED	<5	<5	<5	<5	<5	<5	--	--
ETHYLBENZENE	--	--	--	--	--	--	<0.3	<0.3
ETHYLBENZENE -DISSOLVED	<5	<5	<5	<5	<5	<5	--	--
XYLENES (TOTAL)	--	--	--	--	--	--	<0.6	<0.6
XYLENES (TOTAL) -DISSOLVED	<5	<5	<5	<5	<5	<5	--	--
METHYL TERT BUTYL ETHER (MTBE)	--	--	--	--	--	--	--	--
METHYL TERT BUTYL ETHER (MTBE) -DISSOLVED	<5	<5	<5	<5	<5	<5	--	--

Units in ug/l
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
BTEX & MTBE COMPOUNDS BY 8020/8020A/8021

LOCATION SAMPLE NAME SAMPLING DATE	SB01-015 S115W 3/25/1998	SB01-015A S115A@4.5-5R 4/17/1998	SB01-015A S115AT 4/17/1998	SB01-020 S120W 3/25/1998	SB01-032 S132W 3/24/1998	SB01-035 S135@6.5-7R 3/19/1998	SB01-043 S143W 3/25/1998	SB01-049 S149W 3/26/1998
BENZENE	<0.3	<0.30	<0.30	<0.3	<0.3	<0.3	<0.3	<0.3
BENZENE -DISSOLVED	--	--	--	--	--	--	--	--
TOLUENE	<0.3	<0.30	<0.30	<0.3	**0.43**	<0.3	<0.3	**0.61**
TOLUENE -DISSOLVED	--	--	--	--	--	--	--	--
ETHYLBENZENE	<0.3	<0.30	<0.30	<0.3	<0.3	<0.3	<0.3	<0.3
ETHYLBENZENE -DISSOLVED	--	--	--	--	--	--	--	--
XYLENES (TOTAL)	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
XYLENES (TOTAL) -DISSOLVED	--	--	--	--	--	--	--	--
METHYL TERT BUTYL ETHER (MTBE)	--	--	--	--	--	--	--	--
METHYL TERT BUTYL ETHER (MTBE) -DISSOLVED	--	--	--	--	--	--	--	--

Units in ug/l
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
BTEX & MTBE COMPOUNDS BY 8020/8020A/8021

LOCATION SAMPLE NAME SAMPLING DATE	SB01-060 S160W 3/26/1998	SB01-060 S160WD 3/26/1998	SB01-061 S161W 3/23/1998	SB01-061 S161WD 3/23/1998	SB01-063 S163W 3/30/1998	SB01-067 S167W 3/27/1998	SB01-070A S170A@8.5-9R 4/20/1998	SB01-070A S170AT 4/20/1998
BENZENE	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
BENZENE -DISSOLVED	--	--	--	--	--	--	--	--
TOLUENE	**0.42**	**0.36**	**0.41**	**0.38**	<0.0050	<0.3	**0.23**	<0.3
TOLUENE -DISSOLVED	--	--	--	--	--	--	--	--
ETHYLBENZENE	<0.3	<0.3	<0.3	<0.3	<0.0050	<0.3	<0.3	<0.3
ETHYLBENZENE -DISSOLVED	--	--	--	--	--	--	--	--
XYLENES (TOTAL)	<0.6	<0.6	<0.6	<0.6	<0.015	<0.6	<0.6	<0.6
XYLENES (TOTAL) -DISSOLVED	--	--	--	--	--	--	--	--
METHYL TERT BUTYL ETHER (MTBE)	--	--	--	--	--	--	--	--
METHYL TERT BUTYL ETHER (MTBE) -DISSOLVED	--	--	--	--	--	--	--	--

Units in ug/l
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
BTEX & MTBE COMPOUNDS BY 8020/8020A/8021

LOCATION SAMPLE NAME SAMPLING DATE	SB01-070A S170AW 4/21/1998	SB01-070B S170BW 4/21/1998	SB01-070B S170B 1/9/2001	SB01-070C S170CW 4/21/1998	SB01-070C S170C 1/9/2001	SB01-070D S170DW 4/21/1998	SB01-070D S170DWD 4/21/1998	SB01-070D S170D 1/9/2001
BENZENE	**4.2**	<0.3	<0.25	<0.3	<0.25	<30	<30	<0.25
BENZENE -DISSOLVED	--	--	--	--	--	--	--	--
TOLUENE	<0.3	<0.3	<0.25	<0.3	<0.25	<0.3	<0.3	<0.25
TOLUENE -DISSOLVED	--	--	--	--	--	--	--	--
ETHYLBENZENE	**16**	**0.31**	<0.25	<0.3	<0.25	<0.3	<0.3	<0.25
ETHYLBENZENE -DISSOLVED	--	--	--	--	--	--	--	--
XYLENES (TOTAL)	**1.5**	<0.62	<0.5	<0.6	<0.5	<0.6	<0.6	<0.5
XYLENES (TOTAL) -DISSOLVED	--	--	--	--	--	--	--	--
METHYL TERT BUTYL ETHER (MTBE)	--	--	<0.5	--	<0.5	--	--	<0.5
METHYL TERT BUTYL ETHER (MTBE) -DISSOLVED	--	--	--	--	--	--	--	--

Units in ug/l
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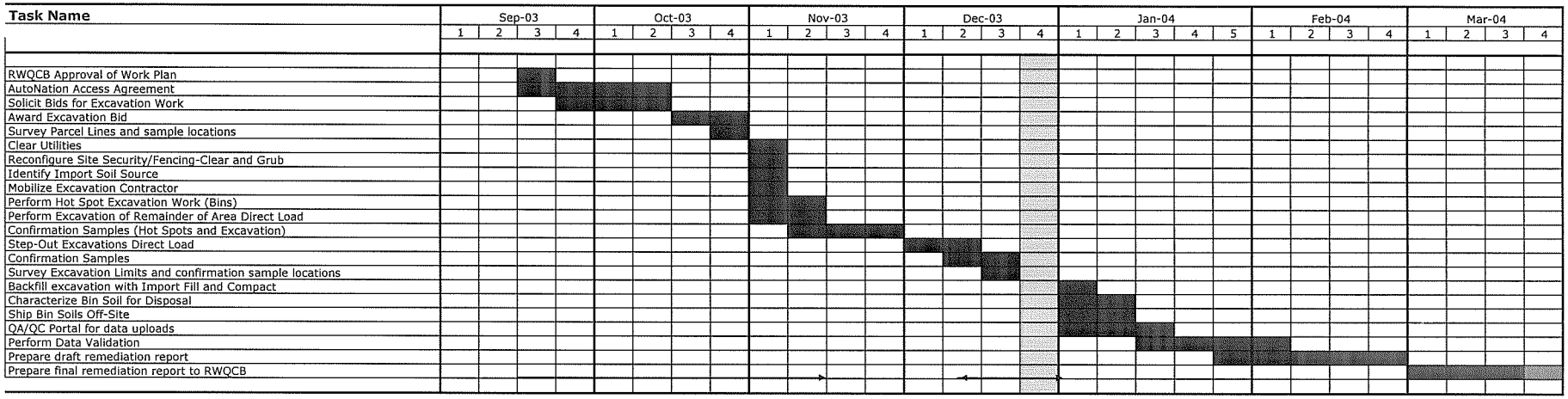
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
BTEX & MTBE COMPOUNDS BY 8020/8020A/8021

LOCATION	SB01-072	SB02-008	SB05-018	SB05-052
SAMPLE NAME	S172W	S208W	S518W	S552@10-11R
SAMPLING DATE	3/27/1998	3/27/1998	3/26/1998	3/20/1998
BENZENE	<0.3	**0.18**	<0.3	<0.3
BENZENE -DISSOLVED	--	--	--	--
TOLUENE	<0.3	<0.3	<0.3	<0.3
TOLUENE -DISSOLVED	--	--	--	--
ETHYLBENZENE	<0.3	<0.3	<0.3	<0.3
ETHYLBENZENE -DISSOLVED	--	--	--	--
XYLENES (TOTAL)	<0.6	<0.6	<0.6	<0.6
XYLENES (TOTAL) -DISSOLVED	--	--	--	--
METHYL TERT BUTYL ETHER (MTBE)	--	--	--	--
METHYL TERT BUTYL ETHER (MTBE) -DISSOLVED	--	--	--	--

Units in ug/l
< = Not Detected at indicated reporting limit
-- = Not Analyzed

Parcel A Arsenic Remediation Schedule: Former Boeing C-6 Facility



Key:
Boeing Holiday Break

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
TPH COMPOUNDS

LOCATION	MW-01	MW-01	MW-01	MW-01	MW-01	MW-01	MW-01	MW-02	MW-03
SAMPLE NAME	MW-1-0188	MW-1-0200	MW-1-0300	MW-1-0400	MW-1-1100	MW-1-0101	MW-1-0401	MW-2	MW-3
SAMPLING DATE	1/1/1988	2/1/2000	3/1/2000	4/1/2000	11/1/2000	1/1/2001	4/1/2001	3/31/1998	3/31/1998
TOTAL EXTRACTABLE HYDROCARBONS	--	--	--	--	--	--	--	<96	<87
TPH	--	--	--	--	--	--	--	--	--
TPH - EXTRACTABLE (DRO)	--	--	--	--	--	--	--	--	--
TPH - HEAVY OILS	--	--	--	--	--	--	--	--	--
TPH - PURGEABLE (GRO)	--	--	--	--	--	--	--	--	--
TPH - PURGEABLE (GRO) -DISSOLVED	<0.001	<500	<500	<500	<500	<500	<500	--	--
TPH AS DIESEL FUEL -DISSOLVED	--	<500	<500	<500	<50	<50	<50	--	--

Units in ug/l
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
TPH COMPOUNDS

LOCATION	MW-04	MW-04	MW-04	MW-04	MW-04	MW-04	MW-04	MW-05
SAMPLE NAME	MW-4	MW-4a-0200	MW-4a-0300	MW-4a-0400	MW-4a-1100	MW-4a-0101	MW-4a-0401	MW-5
SAMPLING DATE	3/31/1998	2/1/2000	3/1/2000	4/1/2000	11/1/2000	1/1/2001	4/1/2001	3/31/1998
TOTAL EXTRACTABLE HYDROCARBONS	**300**	--	--	--	--	--	--	<83
TPH	--	--	--	--	--	--	--	--
TPH - EXTRACTABLE (DRO)	--	--	--	--	--	--	--	--
TPH - HEAVY OILS	--	--	--	--	--	--	--	--
TPH - PURGEABLE (GRO)	--	--	--	--	--	--	--	--
TPH - PURGEABLE (GRO) -DISSOLVED	--	<500	**2100**	**1800**	<500	<500	**920**	--
TPH AS DIESEL FUEL -DISSOLVED	--	<500	**780**	**570**	<50	<50	<50	--

Units in ug/l
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
TPH COMPOUNDS

LOCATION	MW-05	MW-05	MW-05	MW-05	MW-05	MW-05	SB01-002	SB01-003A	SB01-006
SAMPLE NAME	MW-5-0200	MW-5-0300	MW-5-0400	MW-5-1100	MW-5-0101	MW-5-0401	S102@5-6R	S103AW	S106@14-15R
SAMPLING DATE	2/1/2000	3/1/2000	4/1/2000	11/1/2000	1/1/2001	4/1/2001	3/17/1998	4/20/1998	3/18/1998
TOTAL EXTRACTABLE HYDROCARBONS	--	--	--	--	--	--	--	<190	--
TPH	--	--	--	--	--	--	<50	--	**170**
TPH - EXTRACTABLE (DRO)	--	--	--	--	--	--	--	--	--
TPH - HEAVY OILS	--	--	--	--	--	--	--	--	--
TPH - PURGEABLE (GRO)	--	--	--	--	--	--	--	--	--
TPH - PURGEABLE (GRO) -DISSOLVED	<500	<500	<500	<500	<500	<500	--	--	--
TPH AS DIESEL FUEL -DISSOLVED	<500	<500	<500	<50	<50	<50	--	--	--

Units in ug/l
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
TPH COMPOUNDS

LOCATION	SB01-007	SB01-015	SB01-015A	SB01-018	SB01-020	SB01-030	SB01-032	SB01-035
SAMPLE NAME	S107@4-5R	S115W	S115A@4.5-5R	S118@4-5R	S120W	S130@4.5-5R	S132W	S135@6.5-7R
SAMPLING DATE	3/19/1998	3/25/1998	4/17/1998	3/17/1998	3/25/1998	3/16/1998	3/24/1998	3/19/1998
TOTAL EXTRACTABLE HYDROCARBONS	--	--	--	--	--	--	--	--
TPH	**260**	**740**	**100**	**30 J**	**140**	<50	**140**	**150**
TPH - EXTRACTABLE (DRO)	--	--	--	--	--	--	--	--
TPH - HEAVY OILS	--	--	--	--	--	--	--	--
TPH - PURGEABLE (GRO)	--	--	--	--	--	--	--	--
TPH - PURGEABLE (GRO) -DISSOLVED	--	--	--	--	--	--	--	--
TPH AS DIESEL FUEL -DISSOLVED	--	--	--	--	--	--	--	--

Units in ug/l
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
TPH COMPOUNDS

LOCATION	SB01-038A	SB01-041	SB01-043	SB01-046	SB01-049	SB01-055	SB01-060	SB01-060
SAMPLE NAME	S138A@4.5-5R	S141@5-5.5R	S143W	S146@4-5R	S149W	S155@0.5-1.5R	S160W	S160WD
SAMPLING DATE	4/17/1998	3/18/1998	3/25/1998	3/18/1998	3/26/1998	3/16/1998	3/26/1998	3/26/1998
TOTAL EXTRACTABLE HYDROCARBONS	--	--	--	--	--	--	--	--
TPH	**98**	**280**	**100**	**370**	**270**	**84**	**400**	**180**
TPH - EXTRACTABLE (DRO)	--	--	--	--	--	--	--	--
TPH - HEAVY OILS	--	--	--	--	--	--	--	--
TPH - PURGEABLE (GRO)	--	--	--	--	--	--	--	--
TPH - PURGEABLE (GRO) -DISSOLVED	--	--	--	--	--	--	--	--
TPH AS DIESEL FUEL -DISSOLVED	--	--	--	--	--	--	--	--

Units in ug/l
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
TPH COMPOUNDS

LOCATION	SB01-061	SB01-061	SB01-061	SB01-063	SB01-063	SB01-064	SB01-067	SB01-067	SB01-068
SAMPLE NAME	S161@0-1R	S161W	S161WD	S163@0.5-1R	S163W	S164@4-5R	S167@4-5R	S167W	S168@4-5R
SAMPLING DATE	3/17/1998	3/23/1998	3/23/1998	3/19/1998	3/30/1998	3/20/1998	3/17/1998	3/27/1998	3/23/1998
TOTAL EXTRACTABLE HYDROCARBONS	--	--	--	--	**250**	--	--	<59	--
TPH	<50	**640**	**200**	**59**	--	**96**	**45 J**	--	**380**
TPH - EXTRACTABLE (DRO)	--	--	--	--	--	--	--	--	--
TPH - HEAVY OILS	--	--	--	--	--	--	--	--	--
TPH - PURGEABLE (GRO)	--	--	--	--	--	--	--	--	--
TPH - PURGEABLE (GRO) -DISSOLVED	--	--	--	--	--	--	--	--	--
TPH AS DIESEL FUEL -DISSOLVED	--	--	--	--	--	--	--	--	--

Units in ug/l
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
TPH COMPOUNDS

LOCATION	SB01-069	SB01-070A	SB01-070A	SB01-070B	SB01-070B	SB01-070C	SB01-070C	SB01-070D	SB01-070D
SAMPLE NAME	S169@4.5-5R	S170A@8.5-9R	S170AW	S170BW	S170B	S170CW	S170C	S170DW	S170DWD
SAMPLING DATE	3/24/1998	4/20/1998	4/21/1998	4/21/1998	1/9/2001	4/21/1998	1/9/2001	4/21/1998	4/21/1998
TOTAL EXTRACTABLE HYDROCARBONS	--	--	**1400**	**280**	--	**640**	--	**810**	**780**
TPH	**73**	**130**	--	--	<100	--	<100	--	--
TPH - EXTRACTABLE (DRO)	--	--	--	--	<100	--	<100	--	--
TPH - HEAVY OILS	--	--	--	--	<100	--	<100	--	--
TPH - PURGEABLE (GRO)	--	--	--	--	<10	--	<10	--	--
TPH - PURGEABLE (GRO) -DISSOLVED	--	--	--	--	--	--	--	--	--
TPH AS DIESEL FUEL -DISSOLVED	--	--	--	--	--	--	--	--	--

Units in ug/l
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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
TPH COMPOUNDS

LOCATION	SB01-070D	SB01-072	SB02-002	SB02-002	SB02-008	SB03-003A	SB03-007	SB03-009	SB03-011
SAMPLE NAME	S170D	S172W	S202@4-5R	S202W	S208W	S303AW	S307W	S309@4-5R	S311@4-5R
SAMPLING DATE	1/9/2001	3/27/1998	3/25/1998	3/30/1998	3/27/1998	4/20/1998	3/30/1998	3/26/1998	3/26/1998
TOTAL EXTRACTABLE HYDROCARBONS	--	**610**	--	<170	**260**	**1700**	<130	--	--
TPH	<100	--	**140**	--	--	--	--	**44 J**	**66**
TPH - EXTRACTABLE (DRO)	<100	--	--	--	--	--	--	--	--
TPH - HEAVY OILS	<100	--	--	--	--	--	--	--	--
TPH - PURGEABLE (GRO)	**237**	--	--	--	--	--	--	--	--
TPH - PURGEABLE (GRO) -DISSOLVED	--	--	--	--	--	--	--	--	--
TPH AS DIESEL FUEL -DISSOLVED	--	--	--	--	--	--	--	--	--

Units in ug/l
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
TPH COMPOUNDS

LOCATION	SB03-014	SB03-017A	SB03-017A	SB03-018	SB03-020	SB03-022	SB03-024	SB04-005	SB04-010
SAMPLE NAME	S314W	S317A@9-9.5R	S317AW	S318W	S320@4-5R	S322W	S324W	S405W	S410W
SAMPLING DATE	3/31/1998	4/17/1998	4/21/1998	3/30/1998	3/25/1998	3/31/1998	3/30/1998	3/30/1998	3/30/1998
TOTAL EXTRACTABLE HYDROCARBONS	**180**	--	**330**	**540**	--	**90**	**470**	**220**	<160
TPH	--	**98**	--	--	**44 J**	--	--	--	--
TPH - EXTRACTABLE (DRO)	--	--	--	--	--	--	--	--	--
TPH - HEAVY OILS	--	--	--	--	--	--	--	--	--
TPH - PURGEABLE (GRO)	--	--	--	--	--	--	--	--	--
TPH - PURGEABLE (GRO) -DISSOLVED	--	--	--	--	--	--	--	--	--
TPH AS DIESEL FUEL -DISSOLVED	--	--	--	--	--	--	--	--	--

Units in ug/l
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-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
TPH COMPOUNDS

LOCATION	SB04-011	SB04-013	SB05-011	SB05-018	SB05-024	SB05-027	SB05-029	SB05-038	SB05-038
SAMPLE NAME	S411W	S413@4-5R	S511@4-5R	S518W	S524@4-5R	S527@10-11R	S529W	S538@4-5R	S538W
SAMPLING DATE	3/26/1998	3/23/1998	3/18/1998	3/26/1998	3/19/1998	3/16/1998	3/26/1998	3/24/1998	4/10/1998
TOTAL EXTRACTABLE HYDROCARBONS	--	--	--	--	--	--	--	--	**230**
TPH	**540**	**160**	**86**	**1600**	**104**	**54**	**1400**	**230**	--
TPH - EXTRACTABLE (DRO)	--	--	--	--	--	--	--	--	--
TPH - HEAVY OILS	--	--	--	--	--	--	--	--	--
TPH - PURGEABLE (GRO)	--	--	--	--	--	--	--	--	--
TPH - PURGEABLE (GRO) -DISSOLVED	--	--	--	--	--	--	--	--	--
TPH AS DIESEL FUEL -DISSOLVED	--	--	--	--	--	--	--	--	--

Units in ug/l
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
TPH COMPOUNDS

LOCATION	SB05-041A	SB05-043A	SB05-043A	SB05-046	SB05-052	SB05-052	SB05-054	SB05-057
SAMPLE NAME	S541AW	S543A@10.5-11R	S543AW	S546@4-5R	S552@10-11R	S552W	S554W	S557@3-3.5R
SAMPLING DATE	4/17/1998	4/16/1998	4/20/1998	3/20/1998	3/20/1998	3/24/1998	3/31/1998	3/20/1998
TOTAL EXTRACTABLE HYDROCARBONS	--	--	<160	--	--	--	<100	--
TPH	**100**	**99**	--	**200**	**100**	**430**	--	**85**
TPH - EXTRACTABLE (DRO)	--	--	--	--	--	--	--	--
TPH - HEAVY OILS	--	--	--	--	--	--	--	--
TPH - PURGEABLE (GRO)	--	--	--	--	--	--	--	--
TPH - PURGEABLE (GRO) -DISSOLVED	--	--	--	--	--	--	--	--
TPH AS DIESEL FUEL -DISSOLVED	--	--	--	--	--	--	--	--

Units in ug/l
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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
TPH COMPOUNDS

LOCATION	SB05-060	SB05-062	SB05-062	SB05-066	SB05-073	SB05-075	SB05-079	SB05-086	SB05-090
SAMPLE NAME	S560@4-5R	S562@12-13R	S562W	S566W	S573@4-5R	S575W	S579W	S586W	S590@4-5R
SAMPLING DATE	3/24/1998	3/25/1998	3/27/1998	3/27/1998	3/23/1998	3/24/1998	3/24/1998	3/26/1998	3/24/1998
TOTAL EXTRACTABLE HYDROCARBONS	--	--	**220**	**340**	--	--	--	--	--
TPH	**68**	**48 J**	--	--	**62**	**120**	**100**	**370**	**67**
TPH - EXTRACTABLE (DRO)	--	--	--	--	--	--	--	--	--
TPH - HEAVY OILS	--	--	--	--	--	--	--	--	--
TPH - PURGEABLE (GRO)	--	--	--	--	--	--	--	--	--
TPH - PURGEABLE (GRO) -DISSOLVED	--	--	--	--	--	--	--	--	--
TPH AS DIESEL FUEL -DISSOLVED	--	--	--	--	--	--	--	--	--

Units in ug/l
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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
TPH COMPOUNDS

LOCATION	SB05-092	SB05-094
SAMPLE NAME	S592@4-5R	S594W
SAMPLING DATE	3/23/1998	3/26/1998
TOTAL EXTRACTABLE HYDROCARBONS	--	--
TPH	**68**	**1500**
TPH - EXTRACTABLE (DRO)	--	--
TPH - HEAVY OILS	--	--
TPH - PURGEABLE (GRO)	--	--
TPH - PURGEABLE (GRO) -DISSOLVED	--	--
TPH AS DIESEL FUEL -DISSOLVED	--	--

Units in ug/l
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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
METAL COMPOUNDS

LOCATION	B-24	B-25	B-26	B-27	HM-003	MW-02	MW-03	MW-04	MW-05	SB01-002	SB01-003
SAMPLE NAME	B24	B25	B26	B27	HM-003-GW	MW-2	MW-3	MW-4	MW-5	S102@5-6R	SB01-003-GW
SAMPLING DATE	11/26/1997	11/26/1997	11/26/1997	11/26/1997	10/7/1998	3/31/1998	3/31/1998	3/31/1998	3/31/1998	3/17/1998	10/7/1998
ANTIMONY	--	--	--	--	<20	<60	**40**	<60	**34**	<60	<20
ARSENIC	**17**	**6.6**	**16**	**9.3**	<10	**5.9**	**6.9**	<10	<10	<10	<10
BARIUM	--	--	--	--	**70**	<200	<200	<200	<200	<200	**80**
BERYLLIUM	<50	<50	<50	<50	<5	<5	<5	<5	<5	<5	<5
CADMIUM	--	--	--	--	<5	<20	<20	<20	<20	<20	<5
CHROMIUM	<50	**100**	<50	<50	<10	--	--	--	--	<30	<10
COBALT	--	--	--	--	<10	<50	<50	<50	<50	<50	**30**
COPPER	--	--	--	--	<30	**28**	**21**	<25	<25	<25	<30
LEAD	**45**	**26**	**20**	**13**	<20	**3.4**	**7.1**	**5.9**	**5.9**	<4	<20
MERCURY	--	--	--	--	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1
MOLYBDENUM	--	--	--	--	**100**	<100	<100	<100	<100	<100	<10
NICKEL	<50	**460**	**200**	**55**	<10	<40	<40	<40	<40	<40	**30**
SELENIUM	--	--	--	--	<20	<50	<50	<50	<50	<50	<20
SILVER	--	--	--	--	<20	<20	<20	<20	<20	<20	<20
THALLIUM	--	--	--	--	<10	<10	<10	<10	<10	<10	<10
VANADIUM	**55**	**150**	**80**	<50	**100**	**29**	**49**	<50	<50	<50	<10
ZINC	--	--	--	--	<20	<21	<29	<23	<23	**33**	<20

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
METAL COMPOUNDS

LOCATION	SB01-003A	SB01-006	SB01-007	SB01-015A	SB01-018	SB01-020	SB01-030	SB01-032	SB01-035	SB01-038A
SAMPLE NAME	S103AW	S106@14-15R	S107@4-5R	S115A@4.5-5R	S118@4-5R	S120W	S130@4.5-5R	S132W	S135@6.5-7R	S138A@4.5-5R
SAMPLING DATE	4/20/1998	3/18/1998	3/19/1998	4/17/1998	3/17/1998	3/25/1998	3/16/1998	3/24/1998	3/19/1998	4/17/1998
ANTIMONY	<60	<60	<60	<60	<60	<60	<60	<60	<60	<60
ARSENIC	<10	<10	<10	<10	<10	<10	<10	<10	<10	**11**
BARIUM	**160**	<200	<200	<200.0	<200	<200	<200	<200	<200	<200
BERYLLIUM	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
CADMIUM	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
CHROMIUM	--	<30	<30	<30.0	<30	<30	<30	<30	<30	<30
COBALT	**76**	<50	<50	<50	<50	<50	<50	<50	<50	<50
COPPER	**22**	<25	<25	<25.0	<25	<25	<25	<25	<25	**14 J**
LEAD	**11**	<4	<4	**11**	<4	**2 J**	<4	**9.3**	<4	<4
MERCURY	<0.5	<0.5	<0.5	<01	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MOLYBDENUM	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
NICKEL	<40	<40	<40	<40.0	<40	<40	<40	<40	<40	<40
SELENIUM	<50	<50	<50	<50.0	<50	<50	<50	<50	<50	<50
SILVER	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
THALLIUM	<10	**11**	<10	<10	<10	<10	<10	<10	<10	<10
VANADIUM	<50	<50	<50	<50.0	<50	**42**	<50	<50	<50	<50
ZINC	**51**	**21**	**34**	**39**	**24**	**44**	**30**	**55**	**24**	**21**

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
METAL COMPOUNDS

LOCATION	SB01-041	SB01-043	SB01-046	SB01-049	SB01-055	SB01-060	SB01-060	SB01-061	SB01-061	SB01-061	SB01-063
SAMPLE NAME	S141@5-5.5R	S143W	S146@4-5R	S149W	S155@0.5-1.5R	S160W	S160WD	S161@0-1R	S161W	S161WD	S163@0.5-1R
SAMPLING DATE	3/18/1998	3/25/1998	3/18/1998	3/26/1998	3/16/1998	3/26/1998	3/26/1998	3/17/1998	3/23/1998	3/23/1998	3/19/1998
ANTIMONY	**30 J**	<60	<60	<60	<60	**34 J**	<60	<60	**36 J**	<60	<60
ARSENIC	<10	<10	<10	<10	<10	<10	<10	<10	**19**	**21**	<10
BARIUM	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200
BERYLLIUM	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
CADMIUM	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
CHROMIUM	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30
COBALT	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
COPPER	**15 J**	**21 J**	<25	<25	**28**	<25	<25	<25	<25	<25	**13 J**
LEAD	<4	**11**	<4	**11**	<4	**20**	**18**	<4	**8.4**	**9**	<4
MERCURY	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MOLYBDENUM	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
NICKEL	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40	<40
SELENIUM	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
SILVER	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
THALLIUM	<10	<10	<10	<10	**5.2 J**	<10	<10	<10	<10	<10	<10
VANADIUM	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
ZINC	**28**	**63**	**21**	**62**	**69**	**110**	**76**	**27**	**26**	**25**	**26**

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
METAL COMPOUNDS

LOCATION	SB01-063	SB01-064	SB01-067	SB01-067	SB01-068	SB01-069	SB01-070A	SB01-070A	SB01-070B	SB01-070C	SB01-070D
SAMPLE NAME	S163W	S164@4-5R	S167@4-5R	S167W	S168@4-5R	S169@4.5-5R	S170A@8.5-9R	S170AW	S170BW	S170CW	S170DW
SAMPLING DATE	3/30/1998	3/20/1998	3/17/1998	3/27/1998	3/23/1998	3/24/1998	4/20/1998	4/21/1998	4/21/1998	4/21/1998	4/21/1998
ANTIMONY	<60	**38 J**	<60	<60	<60	<60	<60	<60	<60	**36**	<60
ARSENIC	**12**	<10	<10	<10	<10	<10	<10	**9.5**	<10	**14**	<10
BARIUM	<200	<200	<200	<200	<200	<200	<200	<200	**110**	<200	<200
BERYLLIUM	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
CADMIUM	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
CHROMIUM	--	<30	<30	--	<30	<30	<30	--	--	--	--
COBALT	**26**	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
COPPER	**16**	**44**	<25	<25	<25	<25	<25	**32**	**77**	**170**	**29**
LEAD	**5.2**	**2 J**	<4	**11**	<4	<4	<4	<4	**7.5**	**17**	**11**
MERCURY	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MOLYBDENUM	<100	<100	<100	<100	<100	<100	<100	<100	<100	**59**	<100
NICKEL	<40	<40	<40	<40	<40	<40	<40	<40	**62**	**21**	<40
SELENIUM	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
SILVER	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
THALLIUM	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
VANADIUM	<50	<50	<50	<50	<50	<50	<50	<50	<50	**51**	<50
ZINC	**38**	**39**	**26**	<25	**16 J**	**98**	**32**	**35**	**61**	**130**	**34**

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
METAL COMPOUNDS

LOCATION	SB01-070D	SB01-072	SB02-002	SB02-002	SB02-008	SB03-003A	SB03-007	SB03-009	SB03-011	SB03-014	SB03-017A
SAMPLE NAME	S170DWD	S172W	S202@4-5R	S202W	S208W	S303AW	S307W	S309@4-5R	S311@4-5R	S314W	S317A@9-9.5R
SAMPLING DATE	4/21/1998	3/27/1998	3/25/1998	3/30/1998	3/27/1998	4/20/1998	3/30/1998	3/26/1998	3/26/1998	3/31/1998	4/17/1998
ANTIMONY	<60	<60	<60	<60	**32**	<60	**35**	<60	<60	<60	<6
ARSENIC	<10	<10	<10	**6.4**	**8.8**	**12**	**7.4**	<10	<10	**11**	<0.5
BARIUM	<200	<200	<200	**220**	<200	<200	<200	<200	<200	<200	<20
BERYLLIUM	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5
CADMIUM	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<2
CHROMIUM	--	--	<30	--	--	--	--	<30	<30	--	<3
COBALT	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<5
COPPER	**21**	<25	<25	<25	<25	**22**	**23**	<25	<25	**26**	<2.5
LEAD	**2.5**	**8.8**	**3.6 J**	<2	**9.7**	**3.4**	**4.9**	<4	**25**	<4	<0.4
MERCURY	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MOLYBDENUM	<100	<100	<100	<100	<100	**110**	<100	<100	<100	<100	<10
NICKEL	<40	<40	<40	**74**	<40	**42**	<40	<40	<40	<40	<4
SELENIUM	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<1
SILVER	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<2
THALLIUM	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<1
VANADIUM	<50	<50	<50	**33**	<50	**72**	**32**	<50	<50	**64**	<5
ZINC	**42**	<33	**72**	**25**	**34**	**49**	**25**	**26**	**39**	**36**	**30**

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
METAL COMPOUNDS

LOCATION	SB03-017A	SB03-018	SB03-020	SB03-022	SB03-024	SB04-005	SB04-010	SB04-011	SB04-013	SB05-011	SB05-015	SB05-018
SAMPLE NAME	S317AW	S318W	S320@4-5R	S322W	S324W	S405W	S410W	S411W	S413@4-5R	S511@4-5R	S515W	S518W
SAMPLING DATE	4/21/1998	3/30/1998	3/25/1998	3/31/1998	3/30/1998	3/30/1998	3/30/1998	3/26/1998	3/23/1998	3/18/1998	4/16/1998	3/26/1998
ANTIMONY	<60	<60	**36 J**	<60	<60	**36**	<60	<60	**43 J**	<60	<60	<60
ARSENIC	<10	**7.2**	<10	**7.7**	<10	**5.5**	**6.5**	**11**	**6.9 J**	<10	<10	**8.5 J**
BARIUM	<200	<200	<200	<200	<200	**170**	<200	<200	<200	<200	<200	**220**
BERYLLIUM	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
CADMIUM	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
CHROMIUM	--	--	<30	--	--	--	--	<30	<30	<30	<30	<30
COBALT	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
COPPER	**61**	**24**	<25	<25	<25	**48**	<25	**42**	<25	<25	**16 J**	**20 J**
LEAD	**6.2**	<4	**11**	**4.1**	<25	**11**	<25	**13**	<4	<4	**3.2 J**	**4.5**
MERCURY	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MOLYBDENUM	<100	<100	<100	<100	<100	<100	<100	**250**	<100	<100	<100	<100
NICKEL	**27**	<40	<40	<40	**45**	<40	**68**	**31 J**	<40	<40	<40	<40
SELENIUM	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
SILVER	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
THALLIUM	<10	**13**	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
VANADIUM	<50	**28**	<50	<50	<50	**39**	**26**	<50	<50	<50	<50	**31 J**
ZINC	**46**	**39**	**54**	**22**	**28**	**34**	**38**	**76**	**24**	**24**	**55**	**36**

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
METAL COMPOUNDS

LOCATION	SB05-024	SB05-027	SB05-029	SB05-038	SB05-038	SB05-040	SB05-041A	SB05-043A	SB05-043A	SB05-046
SAMPLE NAME	S524@4-5R	S527@10-11R	S529W	S538@4-5R	S538W	S540W	S541AW	S543A@10.5-11R	S543AW	S546@4-5R
SAMPLING DATE	3/19/1998	3/16/1998	3/26/1998	3/24/1998	4/10/1998	4/10/1998	4/17/1998	4/16/1998	4/20/1998	3/20/1998
ANTIMONY	<60	<60	<60	<60	<60	<60	<60.	<60	<60	<60
ARSENIC	<10	<10	**9 J**	<10	<10	<10	<10	<10	**6.1**	<10
BARIUM	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200
BERYLLIUM	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
CADMIUM	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
CHROMIUM	<30	<30	<30.0	<30	<30	<30	<30.0	<30	--	<30
COBALT	<50	<50	<50.0	<50	<50	<50	<50.0	<50	<50	<50
COPPER	<25	<25	**20 J**	<25	**14 J**	**13 J**	**21 J**	<25	**18**	<25
LEAD	<4	<4	<4	<4	**3.6 J**	<4	<4	<4	**2.6**	<4
MERCURY	<0.5	<0.5	**1.4**	<0.5	<0.5	<0.5	**0.28 J**	<0.5	<0.5	**0.22**
MOLYBDENUM	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
NICKEL	<40	<40	<40.0	<40	<40	<40	<40	<40	<40	<40
SELENIUM	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
SILVER	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
THALLIUM	<10	<10	<10	<10	**8 J**	<10	<10	<10	<10	<10
VANADIUM	<50	<50	<50.0	<50	**37 J**	**26 J**	<50	<50	**34**	<50
ZINC	**32**	**40**	**35**	**37**	**40**	**51**	**25**	**79**	**34**	**35**

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SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
METAL COMPOUNDS

LOCATION	SB05-052	SB05-052	SB05-054	SB05-057	SB05-060	SB05-062	SB05-062	SB05-066	SB05-073	SB05-075	SB05-079
SAMPLE NAME	S552@10-11R	S552W	S554W	S557@3-3.5R	S560@4-5R	S562@12-13R	S562W	S566W	S573@4-5R	S575W	S579W
SAMPLING DATE	3/20/1998	3/24/1998	3/31/1998	3/20/1998	3/24/1998	3/25/1998	3/27/1998	3/27/1998	3/23/1998	3/24/1998	3/24/1998
ANTIMONY	<60	<60	<60	<60	<60	<60	<60	<60	<60	**35 J**	<60
ARSENIC	<10	<10	**7.7**	<10	<10	<10	<10	<10	<10	<10	<10
BARIUM	<200	**290**	<200	<200	<200	<200	<200	<200	<200	<200	**120 J**
BERYLLIUM	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
CADMIUM	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
CHROMIUM	<30	<30	--	<30	<30	<30	--	--	<30	<30	<30
COBALT	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
COPPER	<25	<25	<25	**17 J**	<25	<25	<25	<25	<25	<25	**15 J**
LEAD	<4	<4	<4	<4	<4	<4	**12**	**6.8**	<4	**15**	**12**
MERCURY	**0.036**	**1.5**	<0.5	**0.035**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MOLYBDENUM	<100	**140**	<100	<100	<100	<100	<100	<100	<100	<100	<100
NICKEL	<40	<40	<40	<40	<40	<40	<40	<40	<40	**22 J**	<40
SELENIUM	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
SILVER	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
THALLIUM	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
VANADIUM	<50	<50	**33**	<50	<50	<50	<50	**49**	<50	**27 J**	<50
ZINC	**49**	**27**	**25**	**32**	**32**	**30**	<23	<24	<20	**36**	**26**

Units in ug/l
< = Not Detected at indicated reporting limit
-- = Not Analyzed

SOUTH BAY POWER PLANT
SAN DIEGO GAS & ELECTRIC
GROUNDWATER ANALYTICAL DATA
METAL COMPOUNDS

LOCATION	SB05-090	SB05-092	TN-001	TN-002	TN-003	TS-001
SAMPLE NAME	S590@4-5R	S592@4-5R	TN-001-GW	TN-002-GW	TN-003-GW	TS-001-GW
SAMPLING DATE	3/24/1998	3/23/1998	10/7/1998	10/7/1998	10/7/1998	10/7/1998
ANTIMONY	<60	<60	<20	<20	<20	<20
ARSENIC	<10	<10	<10	<10	<10	<10
BARIUM	<200	<200	**120**	**120**	**60**	**100**
BERYLLIUM	<5	<5	<5	<5	<5	<5
CADMIUM	<20	<20	<5	<5	<5	<5
CHROMIUM	<30	<30	<10	<10	<10	<10
COBALT	<50	<50	<10	**20**	<10	**20**
COPPER	<25	<25	<30	<30	<30	<30
LEAD	<4	<4	<20	<20	<20	<20
MERCURY	<0.5	<0.5	<1	<1	<1	<1
MOLYBDENUM	<100	<100	<10	**40**	**14**	**60**
NICKEL	<40	<40	<10	**50**	<10	**20**
SELENIUM	<50	<50	<20	<20	<20	<20
SILVER	<20	<20	<20	<20	<20	<20
THALLIUM	<10	<10	<10	<10	<10	<10
VANADIUM	<50	<50	**20**	<10	<10	<10
ZINC	**52**	**57**	<20	**30**	<20	**40**

Units in ug/l
< = Not Detected at indicated reporting limit
-- = Not Analyzed

APPENDIX C

Selection and Analysis of Background Data

APPENDIX C
BACKGROUND DATA EVALUATION

In response to DTSC's comments and concern over the appropriateness of the originally selected background data set, the entire background data set for metals in soils at the San Diego Gas & Electric (SDG&E) South Bay Power Plant (SBPP) Site was rigorously re-evaluated. The purpose of the re-evaluation was to more fully establish the technical basis and rationale for development of a background dataset for metals in soils. The background dataset will then be used, in subsequent phases of the risk assessment, to determine whether the metals in soils at the Site are present at levels that exceed naturally occurring background concentrations.

The re-evaluation was a three-step process involving the selection of a geographic area containing potential background sample locations and samples, an evaluation of the geologic and historic information contained in previous site investigation reports, and a statistical evaluation of the chemical constituents present in the background data set. Each of these steps is discussed in detail below.

1.0 Selection of Background Area

As with the prior background analysis presented in the Phase II ESA (Fluor Daniel GTI, 1998b), Iris Environmental selected all borings collected from within Area 5 (located predominantly on the easternmost region of the site) as a starting point for the development and evaluation of an appropriate background data set. This area of the site has reportedly not been utilized by the SBPP for site operations, and has historically remained undeveloped (Fluor Daniel GTI, 1998a; 1998b). There are a few limited geographic areas within Area 5 where some site development activities must have modified this portion of the site, most notably the concrete channelization of Telegraph Canyon Creek, which bisects the site in a northwest-southeast direction. Presumably, this construction entailed local excavations and potential fill emplacement to channelize the creek bed. Our evaluation into the potential presence of fill materials in Area 5 is discussed in detail in the section below.

Borings in Area 5 that abutted any SBPP operating facilities and infrastructure (approximately a 60-foot buffer zone) were then removed from the proposed background data set. This was a conservative approach that assumed SBPP operations could have

impacted soils directly adjacent to them. We also excluded Area 5 borings located in the western portion of the SBPP site that Fluor Daniel GTI (1998b) had considered as background. As this western area is small, is located in-between operational areas, and is located along shoreline areas that likely contain fill materials, we conservatively decided to omit borings from this area from our background data set. Lastly, we also excluded two boring (SB05-082 and SB05-083) on the northern side of Area 5 that had similarly been excluded by Fluor Daniel GTI in their Phase II ESA (1998b), due to suspected historic metal-related operations in the vicinity (Fluor Daniel GTI, 1998a).

The resulting database of proposed background soil samples from Area 5 included 65 borings with a total of 140 soil samples. This is a smaller data set than the previous Phase II ESA data set (approximately 200 soil samples; Fluor Daniel GTI 1998b). While we believe the smaller data set is more conservative in its selection of sample points, the size of the data set (140 samples) still remains large, and allows for a large variety of statistical analysis. Borings selected for inclusion in the background data set are listed in Table 1 and are shown on Figure 1.

2.0 Geologic and Historic Site Use Evaluation

To respond to DTSC concerns that the background data set previously utilized in the Fluor Daniel GTI Phase II ESA may have represented multiple geologic units (i.e. native and fill units), and therefore may be representative of multiple populations of metals data, geologic and historic site use information presented in Fluor Daniel GTI's Phase I and Phase II reports were thoroughly reviewed.

In its description of site geology, the Phase I ESA (Fluor Daniel GTI, 1998a) broadly states "The SBPP is characterized by varying thicknesses of fill materials composed of silty to clayey sand, underlain by clayey sand, silty sand, and find sand alluvial deposits." The report presents descriptions of select historic geotechnical borings advanced by others, some of which indicate the presence of fill and some of which do not indicate the presence of fill. In general, it appears that those borings indicating the presence of fill are restricted to areas immediately adjacent (or under) SBPP infrastructure, storage impoundments, and other developed areas of the site. The Phase I report does not provide any detailed discussion of the lateral and vertical distribution of fill materials on SBPP site.

Iris Environmental reviewed all 65 boring logs from the proposed background data set in Area 5 presented in Appendix A of the Phase II ESA (Fluor Daniel GTI, July 1998). The review was intended to identify and map units of fill material within Area 5, such that our subsequent statistical evaluation of background data could incorporate

multiple geologic and metals populations, if appropriate. Our review indicated that none of the geological logs from the proposed background data set in Area 5 differentiate any geologic units as fill or native materials by unit name. Subsequent review was designed to identify geologic descriptions that could reasonably be indicative of fill materials such as identification of anthropomorphic artifacts (e.g. nails or glass), or atypical geologic matrixes or colors (e.g. reworked rock clasts in a fine grained unit). Neither of these scenarios was identified in the boring logs, with the exception of road base gravel in the top few inches of three of the borings. These early steps of our analysis suggested that there were not significant laterally and vertically continuous fill material units in the proposed background dataset within Area 5.

The shallow geologic units in Area 5 (the deepest boring was 25 feet below ground surface) are typified by fine grained sand units with significant silt and clay fractions, and silt and clay units. Geologic logging was conducted in accordance with the Unified Soil Classification System (USCS); accordingly unit descriptions are predominantly SM (silty sand), SC (clayey sand), CL (clay), and ML (silt). Select boring logs record the presence of gypsum and shell fragments. Two geologic cross-sections trending north-south through Area 5 were prepared (cross-sections C-C' and D-D'; Figures 2 and 3) in order to supplement the existing cross-sections A-A' and B-B' presented in the Phase II ESA. The new sections transecting Area 5 display a variable assemblage of the fine grained shallow units, and do not show evidence of the presumed fill materials (gravels) that are present beneath the Main Power Plant as evidenced on section B-B'. This component of our analysis similarly suggests that the proposed background data set within Area 5 does not contain fill material units.

Following the review of boring logs, Iris Environmental reviewed the excerpts of historical reports contained in the Phase I ESA appendices[1], specifically a 1986 Woodward-Clyde report and a 1984 Dames & Moore Report. The Woodward-Clyde report contains a regional surficial geologic map of the vicinity based on the California Division of Mines and Geology geologic map for this region (Kennedy and Tan, 1977). Surficial geologic units for the vast majority of the SBPP site are identified as undifferentiated Holocene alluvium and slope wash deposits. The map (appended as Figure 4) suggests a depositional fan type environment at the mouth of Telegraph Creek Canyon – the fan itself encompasses the SBPP site. Areas to the north and south of SBPP, and possibly the westernmost (seaward) margins of the SBPP site itself, are indicated as artificial fill. Geologic cross sections included in the Dames & Moore report support the observation of alluvium and slope wash sediments in the upland areas of

[1] The Fluor Daniel GTI Phase I ESA (1998a) appendices have *only* excerpts of the reports presented, and do not contain the reports in their entirety.

SBPP, including Area 5 . Based on our review of these historical maps and cross-sections, we believe the description of native alluvium and slope wash deposits is entirely consistent with lithologies identified in Area 5 boring logs in Fluor Daniel GTI's Phase II report. This component of our analysis further supports that the proposed background data set within Area 5 does not contain fill material units.

The final component in our evaluation of potential fill materials impacting the background area data set was to review aerial photographs presented in Fluor Daniel GTI's Phase I ESA to verify that site operations did not appear to have occurred in Area 5. We reviewed the photographs to assess any evidence of mass excavations, land surface alteration, or dumping in Area 5. No such evidence was noted, with the exception of the channelization of Telegraph Creek, and apparent alterations and relocations of roadway surfaces.

The geologic and historical site use analysis leads us to conclude that the proposed background dataset in Area 5 does not contain significant laterally or vertically continuous fill material units. Geologic logs presented in the Fluor Daniel GTI Phase II ESA show lithologies consistent with those identified by the California Division of Mines and Geology as being native, undifferentiated alluvium and slope wash sediments. Accordingly, we believe the available geologic and historic information support that the selection of proposed background dataset within Area 5 is appropriate, as it is representative of local geologic units unaffected by site-related activities, consistent with DTSC guidance (DTSC 1997). Our statistical evaluation discussed below further supports our conclusion that the proposed background data set within Area 5 is typified by native lithologies by displaying a metals population distribution indicative of a single data population.

3.0 Background Data Set Statistical Evaluation

Iris Environmental performed a detailed statistical evaluation of the background data set for metals in soils. Data validation was an iterative process (e.g. the identification of outliers could only be accomplished through graphical and statistical tools once an initial population had been selected), however certain assumptions regarding the background data set were made prior to our statistical evaluation. Specifically, we assumed that a sufficient number of background data points existed to facilitate meaningful analyses and assumed the data were collected in a stratified random sampling pattern (as outlined in Fluor Daniel GTI, 1998b) that would minimize bias.

Using the database consisting of 140 samples from 65 borings in Area 5 as the proposed background data set, the detection frequencies for 17 metals (antimony, arsenic,

barium, beryllium, cadmium, chromium, cobalt, copper, lead, mercury, molybdenum, nickel, selenium, silver, thallium, vanadium, and zinc) were calculated. As shown on Table 2, six metals (antimony, beryllium, cadmium, selenium, silver, and thallium) were not detected in any of the 140 samples, and were excluded from further statistical analysis. Six metals (barium, chromium, lead, nickel, vanadium, and zinc) were detected at a 100% detection frequency, arsenic and copper at a 99% frequency, cobalt at a 91% frequency, and mercury at a 32% frequency. Molybdenum was only detected in a single sample, at an estimated concentration ("J" qualified) below the detection limit. Detailed descriptions of statistical calculations shown on Table 2 are described below.

In accounting for non-detects in the database for the five metals with detection frequencies between 0% and 100% (arsenic, copper, cobalt, mercury, and molybdenum), we assigned a value of one-half the detection limit for non-detect data points. Consistent with USEPA guidance, with detection frequencies greater than 90%, we do not consider arsenic, copper, and cobalt data sets to represent significantly censored data sets (USEPA 1996; 2002). Histograms of raw and log-transformed data were prepared (Figures 5 through 24) to visually assess distribution trends of data, and to assist in determining whether multiple populations of data appeared to be present within the background data set. Molybdenum was omitted from this graphical analysis as there was only one detection in 140 samples. Our qualitative analysis indicates that multiple populations of data for any given metal were not readily apparent. A visual review of the histograms suggests that most metals appear to be lognormally distributed.

To quantitatively test the distribution of individual metals populations, Iris Environmental ran the D'Agostino test to evaluate whether data populations were normally or lognormally distributed (Gilbert 1987). The D'Agostino test is similar to the Shapiro-Wilk's W-test, but is designed for analyses where $n \geq 50$ ($n = 140$ for the background data set). The test was performed on both raw and log-transformed data sets. At the 95% confidence level, only barium, cobalt, and nickel were distributed lognormally. Interestingly, the distributional test indicates that vanadium is distributed both normally and lognormally. For the other seven metals, the data populations tested neither normal nor lognormal at the 95% confidence level. For these seven metals (as well as vanadium which tested *both* normal and lognormal) we selected a population distribution based on which D'Agostino Y-statistic was closer to zero[2]. The assignment of a population distribution to individual metals populations allowed for further graphic portrayal of data populations, and allowed for the calculation of summary statistics (e.g. mean and 95% upper confidence level [UCL] of the mean) utilizing the appropriate

[2] As outlined in Gilbert (1987), "if n is large and the data are drawn from a normal [or lognormal] distribution, the expected value of Y is zero". As such, a determination as to the better distributional fit (i.e., either normal or lognormal) was selected for each metal based on the Y-statistic.

statistical tests. The selected population distributions are presented on Table 2 for the eleven metals evaluated. As discussed below, we also calculated UCLs of the mean utilizing tests that are not reliant on any distribution type (i.e, using statistical tests that do not make assumptions about the shape of the underlying distribution of concentrations).

As recommended by DTSC guidance (1997), cumulative probability plots represent another useful tool that can be used to determine whether multiple data populations are present. Consistent with DTSC guidance, Iris Environmental prepared histograms and cumulative probability plots for the lognormally distributed populations of arsenic, barium, chromium, cobalt, copper, lead, mercury, nickel, vanadium, and zinc (Figures 25 through 44). Molybdenum was omitted from this graphical analysis as there was only one detection in 140 samples. As with the earlier graphic evaluation of the histograms, our evaluation of the cumulative probability plots leads us to conclude only one data population is present for each metal. There are no apparent breaks in the plot lines indicating the presence of multiple distinct populations (DTSC 1997).

Iris Environmental also used Figures 25 through 44 to identify potential outliers for further statistical evaluation. Utilizing the USEPA's DataQUEST software package (1997b), Iris Environmental ran both Rosner's (parametric) and Walsh's (non-parametric) test to identify potential outliers at the high end of the data distributions. Data populations where either one or both statistical tests suggested potential outliers included arsenic, copper, lead, mercury, vanadium, and zinc. In no case, did both statistical tests yield identical conclusions regarding which sample points could be considered outliers. Consistent with sound statistical protocols, the potential outliers were not immediately discarded but were subjected to further evaluation, as they may represent true spatial variation in data concentrations (USEPA 1997b; 2002).

Suspected outliers were plotted on the site map to determine if elevated metals concentrations were collocated in individual soil samples or collocated geographically within Area 5, and could therefore potentially represent unique data populations. Instances of both were identified. For example, the soil sample SB05-056 from a depth of 4.0 feet has the maximum detected concentrations of copper (56 parts per million [ppm]), lead (24 ppm), and zinc (190 ppm) whereas the four maximum arsenic detections were from shallow soil samples spread widely across the southern end of Area 5. Further analysis then included whether adjacent samples (either from the same borehole or surrounding borings) had comparably elevated metals detections, whether elevated metals detections were located near any known historical site activities and operations, whether collocated elevated metals results could be explained through natural depositional environments and mineral speciation, and whether absolute values could be generally considered within published background ranges for San Diego soils (Kearny Foundation,

1996). Due to the combination of these factors, we conclude that there is not sufficient evidence to throw out any of the suspected outliers and believe that the detections could likely represent true spatial variation within a data population. Accordingly, the proposed background data set within Area 5 was left intact with all 140 soil samples.

For each metal, the maximum, mean, and the 95% UCL of the mean concentrations were determined, as shown on Table 2. As there was only one detection of molybdenum (at an estimated concentration below the detection limit), the calculation of mean and 95% UCL for molybdenum is of little statistical use (both values reflect our assignment of ½ the detection limit as the population mean and 95% UCL). For the other ten metals, assumed to be distributed lognormally, the arithmetic mean of the log-transformed data and the corresponding 95% UCLs were calculated based on the Land's H-statistic (USEPA 2002; Gilbert 1987). Consideration was given to concerns regarding this statistical method, as outlined by USEPA (1997a).[3] Specifically, we believe our use of this statistic calculation is an appropriate choice given the large sample size ($n = 140$), and our belief that any positive skewness within the populations is unlikely to be attributable to biased sampling, multiple populations, or significant outliers. Nonetheless, our statistical evaluation includes an alternative test of the 95% UCL, as outlined below.

As an alternative measure of the upper confidence limits of the mean concentration, the 95% UCL of the mean was calculated using the skewness-adjusted Central Limit Theorem (CLT), using the formula outlined by USEPA (2002). This calculation has the advantage of making no assumptions regarding the distribution of the data (either normal or lognormal) and can address some of the uncertainties associated with the Land's H-statistic method (USEPA 1997a). We selected the skewness-adjusted CLT, as our metals populations are all positively skewed, and the adjusted-CLT test accounts for this skewness (USEPA 2002). Results of the calculations are shown on Table 2. As shown on Table 2, the calculated 95% UCLs using the CLT are comparable to those calculated using Land's H-statistic. With the exception of mercury, all the CLT calculated 95% UCLs are slightly lower than those calculated with Land's H-statistic. A final statistical calculation shown on Table 2 is the 95th percentile of the background data set. For background data sets that are large, an upper percentile of the background data set, such as the 95th percentile, is often used in defining the upper range of the background distribution and in assessing whether concentrations present at the Site are elevated relative to the background concentrations.

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[3] This USEPA guidance document primarily addresses the problem of calculating 95% UCLs when the contaminant concentration distribution is highly skewed – thereby biasing the calculated 95% UCL concentration high. Artificial high skewness may be due to "biased sampling, multiple populations, or outliers, and not necessarily due to lognormally distributed data".

4.0 Summary

As described above, the background data set for metals in soils at the SBPP site was rigorously re-evaluated. Our re-evaluation included re-examining and refining the logic behind the original selection of background sample locations and samples, a detailed geologic analysis of the proposed background area, graphical plotting and data validation, and multiple statistical evaluations. As indicated above, the proposed background data set is 30% smaller than that previously utilized by Fluor Daniel GTI (1998b), however we believe the data points included are more likely to be representative of true background concentrations. The likelihood of multiple data populations being present within the background data set was evaluated utilizing a geologic, graphical, and statistical analysis tools. In sum, we believe that the proposed background data set within Area 5, consisting of 140 samples, is representative of a single population of native sedimentary deposits. Summary statistics for the metals concentrations in the proposed background data set within Area 5 are presented in Table 2. This background data set, and the corresponding summary statistics, will be used to assess whether metals detected onsite are present at levels that exceed the naturally occurring background concentrations.

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TABLE 1: SOIL DATA UTILIZED IN BACKGROUND METALS ANALYSES - South Bay Power Plant
San Diego, California

LOCATION	SB05-002	SB05-002	SB05-003	SB05-003	SB05-004	SB05-004	SB05-004	SB05-005	SB05-005	SB05-006
COLLECTION DATE	3/19/1998	3/19/1998	3/18/1998	3/18/1998	3/24/1998	3/24/1998	3/24/1998	3/18/1998	3/18/1998	3/18/1998
SAMPLE DEPTH (ft)	0.5-1	4-5	0.5-1	4-5	0-1	10-11	5-6	0.5-1	4-5	0.5-1
UNITS	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Antimony	<6	<6	<6	<6	<6.0	<6.0	<6.0	<6	<6	<6
Arsenic	1.8	2.1	1.6	2.7	2.2	3.3	1.1	1.4	2.1	1.7
Barium	63	29	33	22	48	220	47	26	52	42
Beryllium	<0.5	<0.5	<0.5	<0.5	<0.50	<0.50	<0.50	<0.5	<0.5	<0.5
Cadmium	<2	<2	<2	<2	<2.0	<2.0	<2.0	<2	<2	<2
Chromium	8.5	6	10	5.1	8.7	8.8	15	7.4	8.2	18
Cobalt	2.8 J	<5	4.3 J	<5	3.5 J	3.1 J	7.6	3.6 J	2.8 J	3.5 J
Copper	2.6	2.1 J	6	3.6	3.2	6.7	3.6	6.1	1.9 J	5.4
Lead	4	2.6	4	2.5	3.7	2.8	5.7	6	2.7	5
Mercury	<0.05	0.035 J	<0.05	<0.05	<0.050	<0.050	<0.050	<0.05	2.4	<0.05
Molybdenum	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Nickel	7.1	5.2	8.4	4.9	7.5	6.9	13	6	7	13
Selenium	<1	<1	<1	<1	<1.0	<1.0	<1.0	<1	<1	<1
Silver	<2	<2	<2	<2	<2.0	<2.0	<2.0	<2	<2	<2
Thallium	<1	<1	<1	<1	<1.0	<1.0	<1.0	<1	<1	<1
Vanadium	25	21	26	22	27	29	28	21	31	25
Zinc	17	20	19	11	17	22	31	19	14	26

Notes:
Samples analyzed by EPA
Method 6010
mg/Kg = milligrams per Kilogram
J = estimated concentration; below
method detection limit.

TABLE 1: SOIL DATA UTILIZED IN BACKGROUND METALS ANALYSES - South Bay Power Plant
San Diego, California

LOCATION	SB05-006	SB05-007	SB05-007	SB05-009	SB05-009	SB05-010	SB05-010	SB05-011	SB05-011	SB05-012
COLLECTION DATE	3/18/1998	3/19/1998	3/19/1998	3/19/1998	3/19/1998	3/19/1998	3/19/1998	3/18/1998	3/18/1998	3/18/1998
SAMPLE DEPTH (ft)	4-5	0.5-1	4-5	0.5-1	4-5	0.5-1	4-5	0.5-1	4-5	0.5-1
UNITS	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Antimony	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
Arsenic	1.4	8.9	1.6	15	1.1	1.6	2.6	2.2	1.9	2.5
Barium	62	27	60	68	20	62	140	44	28	25
Beryllium	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Cadmium	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Chromium	6.8	13	5.8	5.7	4.1	7	9.8	10	14	5.5
Cobalt	2.7 J	4.4 J	<5	3.5 J	<5	3.1 J	4.8 J	4.2 J	4.8 J	2.5 J
Copper	2.6	3.8	1.9 J	5.6	<2.5	4	3.3	4.6	4	3.9
Lead	2.7	3.9	2.4	11	1.1	4.1	3.9	4.1	4	5.9
Mercury	<0.05	<0.05	0.21	0.053	<0.05	<0.05	<0.05	0.034 J	0.027 J	<0.05
Molybdenum	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Nickel	5.9	10	4.8	11	3.2 J	6.4	8.4	19	12	5.4
Selenium	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Silver	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Thallium	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium	24	35	21	22	18	23	32	43	33	17
Zinc	13	25	12	42	7.4	16	20	22	26	20

Notes:
Samples analyzed by EPA
Method 6010
mg/Kg = milligrams per Kilogram
J = estimated concentration; below
method detection limit.

TABLE 1: SOIL DATA UTILIZED IN BACKGROUND METALS ANALYSES - South Bay Power Plant
San Diego, California

LOCATION	SB05-012	SB05-013	SB05-013	SB05-014	SB05-014	SB05-015	SB05-015	SB05-015	SB05-016	SB05-016
COLLECTION DATE	3/18/1998	3/18/1998	3/18/1998	3/18/1998	3/18/1998	3/24/1998	3/24/1998	3/24/1998	3/19/1998	3/19/1998
SAMPLE DEPTH (ft)	4-5	0.5-1	4-5	0.5-1	4-5	0-1	10-11	5-6	0.5-1	4-5
UNITS	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Antimony	<6	<6	<6	<6	<6	<6.0	<6.0	<6.0	<6	<6
Arsenic	1.4	1	1.7	2.8	2.2	2.2	1.8	1.5	3.5	1.5
Barium	27	29	79	73	89	23	68	88	110	59
Beryllium	<0.5	<0.5	<0.5	<0.5	<0.5	<0.50	<0.50	<0.50	<0.5	<0.5
Cadmium	<2	<2	<2	<2	<2	<2.0	<2.0	<2.0	<2	<2
Chromium	8.6	7.2	9.7	11	15	8.1	14	6.6	9.4	5.1
Cobalt	3.3 J	3.8 J	3.1 J	5.8	5.7	4.3 J	9	6.4	4.9 J	<5
Copper	2.4 J	3.5	2.8	4.1	5.1	2.7	7.9	2.5	5.1	1.9 J
Lead	3.1	2.3	3.5	4.7	5.1	3.5	4.7	3.1	4.8	2.1
Mercury	<0.05	<0.05	<0.05	0.035 J	0.037 J	<0.050	<0.050	<0.050	<0.05	<0.05
Molybdenum	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Nickel	7.4	5.4	8.1	10	14	6.7	13	5.9	9.5	4.5
Selenium	<1	<1	<1	<1	<1	<1.0	<1.0	<1.0	<1	<1
Silver	<2	<2	<2	<2	<2	<2.0	<2.0	<2.0	<2	<2
Thallium	<1	<1	<1	<1	<1	<1.0	<1.0	<1.0	<1	<1
Vanadium	27	18	28	28	40	21	40	22	27	18
Zinc	16	12	19	25	28	16	32	14	22	10

Notes:
Samples analyzed by EPA
Method 6010
mg/Kg = milligrams per Kilogram
J = estimated concentration; below
method detection limit.

TABLE 1: SOIL DATA UTILIZED IN BACKGROUND METALS ANALYSES - South Bay Power Plant
San Diego, California

LOCATION	SB05-019	SB05-019	SB05-020	SB05-020	SB05-021	SB05-021	SB05-022	SB05-022	SB05-024	SB05-024
COLLECTION DATE	3/18/1998	3/18/1998	3/18/1998	3/18/1998	3/19/1998	3/19/1998	3/19/1998	3/19/1998	3/19/1998	3/19/1998
SAMPLE DEPTH (ft)	0.5-1	4-5	0.5-1	4-5	0.5-1	4-5	0.5-1	4-5	0.5-1	4-5
UNITS	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Antimony	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
Arsenic	1.1	1.8	1.1	2.8	2.9	1.8	3.9	1.9	14	1.3
Barium	29	42	27	76	22	60	44	30	75	36
Beryllium	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Cadmium	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Chromium	7.3	9.1	5.8	11	7.6	5.5	6.1	3.3	10	3.7
Cobalt	3.8 J	3.9 J	3.1 J	4.4 J	3.7 J	3.1 J	2.7 J	<5	3.9 J	<5
Copper	3.4	3.7	4.6	3.3	2.4 J	1.8 J	4.6	1.6 J	3.5	1.3 J
Lead	2.6	3.1	3.3	3.9	3.4	2.7	3.9	1.9	5.8	1.6
Mercury	0.054	<0.05	<0.05	0.05	<0.05	1	0.03 J	<0.05	0.041 J	<0.05
Molybdenum	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Nickel	5.8	7.2	4.9	8.9	6.9	5	6.9	3.3 J	11	3.5 J
Selenium	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Silver	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Thallium	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium	20	24	16	32	20	21	23	16	33	14
Zinc	13	16	12	20	14	10	16	7.4	20	6.4

Notes:
Samples analyzed by EPA Method 6010
mg/Kg = milligrams per Kilogram
J = estimated concentration; below method detection limit.

TABLE 1: SOIL DATA UTILIZED IN BACKGROUND METALS ANALYSES - South Bay Power Plant
San Diego, California

LOCATION	SB05-025	SB05-025	SB05-026	SB05-026	SB05-026	SB05-027	SB05-027	SB05-027	SB05-028	SB05-028
COLLECTION DATE	3/19/1998	3/19/1998	3/17/1998	3/17/1998	3/17/1998	3/16/1998	3/16/1998	3/16/1998	3/19/1998	3/19/1998
SAMPLE DEPTH (ft)	0.5-1	4-5	0.5-1	14-15	5-6	0.5-1	10-11	5-6	0.5-1	4-5
UNITS	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Antimony	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
Arsenic	1	1.7	1.2	0.57	2.9	1.5	0.73	2	2.6	1.8
Barium	26	32	28	310	71	38	66	54	33	69
Beryllium	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Cadmium	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Chromium	5.5	8.1	6.3	6.2	10	8.4	26	8.8	7.6	6.2
Cobalt	3.6 J	3.3 J	3.8 J	5.9	4.6 J	5.6	9.6	4.2 J	3.5 J	2.9 J
Copper	3.2	3.1	3.7	9.7	3.6	4.4	10	2.9	3.3	2 J
Lead	2.8	3.1	2.3	3.9	3.6	2.8	4.5	3.2	3.8	2.4
Mercury	<0.05	0.29	<0.05	0.093	<0.05	<0.05	<0.05	<0.05	0.043 J	<0.05
Molybdenum	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Nickel	4.5	6.7	5.5	11	9.5	6.4	21	7.2	8.7	5.6
Selenium	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Silver	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Thallium	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium	16	26	17	28	32	22	50	26	23	19
Zinc	10	15	12	22	20	14	47	16	16	12

Notes:
Samples analyzed by EPA
Method 6010
mg/Kg = milligrams per Kilogram
J = estimated concentration; below
method detection limit.

TABLE 1: SOIL DATA UTILIZED IN BACKGROUND METALS ANALYSES - South Bay Power Plant
San Diego, California

LOCATION	SB05-029	SB05-029	SB05-029	SB05-030	SB05-030	SB05-031	SB05-031	SB05-033	SB05-033	SB05-034
COLLECTION DATE	3/23/1998	3/23/1998	3/23/1998	3/20/1998	3/20/1998	3/18/1998	3/18/1998	3/19/1998	3/19/1998	3/20/1998
SAMPLE DEPTH (ft)	0-1	10-11	5-6	0.5-1	4-5	0.5-1	4-5	0.5-1	4-5	0.5-1
UNITS	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Antimony	<6.0	<6.0	<6.0	<6	<6	<6	<6	<6	<6	<6
Arsenic	1.3	1.5	2.7	1.3	1.6	8.3	2.1	1.4	1.1	1.5
Barium	28	200	49	21	50	26	51	25	21	25
Beryllium	<0.50	<0.50	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Cadmium	<2.0	<2.0	<2.0	<2	<2	<2	<2	<2	<2	<2
Chromium	7.4	18	15	5.9	9.5	7.1	8.9	6.4	6.3	8.6
Cobalt	4.9 J	9.7	7	4.1 J	4.4 J	3.3 J	2.7 J	3.1 J	4.7 J	4.1 J
Copper	6.1	7.5	7.4	5	2.9	5.8	2.2 J	5.4	4.5	7
Lead	3.3	5.2	6.5	3.3	3.3	7.9	2.8	5.3	2.5	5.5
Mercury	<0.050	<0.050	<0.050	0.072	0.16	<0.05	<0.05	<0.05	<0.05	0.066
Molybdenum	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Nickel	5.4	17	14	4.6	8.3	9.5	7	5	4.7	4.9
Selenium	<1.0	<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1
Silver	<2.0	<2.0	<2.0	<2	<2	<2	<2	<2	<2	<2
Thallium	<1.0	<1.0	<1.0	<1	<1	<1	<1	<1	<1	<1
Vanadium	20	41	36	16	26	24	33	20	17	18
Zinc	13	37	38	12	18	19	15	16	11	16

Notes:
Samples analyzed by EPA
Method 6010
mg/Kg = milligrams per Kilogram
J = estimated concentration; below
method detection limit.

TABLE 1: SOIL DATA UTILIZED IN BACKGROUND METALS ANALYSES - South Bay Power Plant
San Diego, California

LOCATION	SB05-034	SB05-035	SB05-035	SB05-036	SB05-036	SB05-039	SB05-039	SB05-040	SB05-040	SB05-040
COLLECTION DATE	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/24/1998	3/24/1998	3/24/1998
SAMPLE DEPTH (ft)	4-5	0.5-1	4-5	0.5-1	4-5	0.5-1	4-5	0-1	10-11	5-6
UNITS	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Antimony	<6	<6	<6	<6	<6	<6	<6	<6.0	<6.0	<6.0
Arsenic	1.2	0.73	1.7	<0.5	2.1	1.6	1.1	1.6	1.6	2.2
Barium	49	21	41	19	100	25	32	24	73	36
Beryllium	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.50	<0.50	<0.50
Cadmium	<2	<2	<2	<2	<2	<2	<2	<2.0	<2.0	<2.0
Chromium	7.6	4.5	7.8	5.2	11	6.1	7	8	15	12
Cobalt	3.6 J	3.3 J	3.7 J	3.7 J	4.9 J	3.4 J	3.8 J	4.4 J	6.4	5.4
Copper	2.4 J	2.4 J	2.1 J	3.8	3.1	2.7	2.5	3.5	5.5	4.2
Lead	3.3	2.1	2.7	4.4	3.6	2.1	2.8	3.1	4.6	4.7
Mercury	<0.05	0.13	0.062	0.45	0.083	0.046 J	<0.05	<0.050	<0.050	<0.050
Molybdenum	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Nickel	6.2	3.4	6.5	3.8 J	9	3.8 J	5.9	6.6	12	10
Selenium	<1	<1	<1	<1	<1	<1	<1	<1.0	<1.0	<1.0
Silver	<2	<2	<2	<2	<2	<2	<2	<2.0	<2.0	<2.0
Thallium	<1	<1	<1	<1	<1	<1	<1	<1.0	<1.0	<1.0
Vanadium	23	13	26	14	32	14	19	20	34	25
Zinc	14	8.2	15	14	22	9	15	16	31	26

Notes:
Samples analyzed by EPA
Method 6010
mg/Kg = milligrams per Kilogram
J = estimated concentration; below
method detection limit.

TABLE 1: SOIL DATA UTILIZED IN BACKGROUND METALS ANALYSES - South Bay Power Plant
San Diego, California

LOCATION	SB05-041	SB05-041	SB05-042	SB05-042	SB05-043	SB05-043	SB05-043	SB05-043A	SB05-046	SB05-046
COLLECTION DATE	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	4/16/1998	3/20/1998	3/20/1998
SAMPLE DEPTH (ft)	0.5-1	4-5	0.5-1	4-5	0-1	10-11	4-4.5	10.5-11	0-1	4-5
UNITS	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Antimony	<6	<6	<6	<6	<6	<6	<6	<06	<6	<6
Arsenic	3.9	1.4	4.2	2	5	0.96	2.4	0.93	1.7	3
Barium	34	55	52	63	62	71	100	160	38	62
Beryllium	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<01	<0.5	<0.5
Cadmium	<2	<2	<2	<2	<2	<2	<2	<02	<2	<2
Chromium	6.5	6.4	8.1	9.6	11	11	12	15	6.6	12
Cobalt	3.8 J	3.2 J	3.3 J	3.5 J	3.9 J	<5	4.3 J	5.1	3 J	5.8
Copper	3	2.2 J	4.1	4.1	5.1	3.7	5.6	9.2	3.3	5.8
Lead	4.4	2.6	5.6	3.7	3.8	3.2	4	5	4.1	5.6
Mercury	<0.05	<0.05	0.041 J	0.039 J	<0.05	0.22	0.035 J	<0.05	<0.05	0.062
Molybdenum	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Nickel	6.9	5.5	8.2	9	9.4	8.6	11	14	5.8	11
Selenium	<1	<1	<1	<1	<1	<1	<1	<01	<1	<1
Silver	<2	<2	<2	<2	<2	<2	<2	<02	<2	<2
Thallium	<1	<1	<1	<1	<1	<1	<1	<01	<1	<1
Vanadium	21	21	22	23	28	18	29	29	20	30
Zinc	14	12	22	21	25	23	29	25	16	30

Notes:
Samples analyzed by EPA
Method 6010
mg/Kg = milligrams per Kilogram
J = estimated concentration; below
method detection limit.

TABLE 1: SOIL DATA UTILIZED IN BACKGROUND METALS ANALYSES - South Bay Power Plant
San Diego, California

LOCATION	SB05-047	SB05-047	SB05-048	SB05-048	SB05-049	SB05-049	SB05-051	SB05-051	SB05-052	SB05-052
COLLECTION DATE	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998
SAMPLE DEPTH (ft)	0.5-1	4-5	0.5-1	4-5	0.5-1	4-5	0.5-1	4-5	0.5-1	10-11
UNITS	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Antimony	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
Arsenic	2	1.5	1.6	1.4	3.8	4.9	2.1	1.9	1.8	0.99
Barium	61	39	52	57	53	66	120	60	55	69
Beryllium	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Cadmium	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Chromium	7.3	6.3	6.8	7.5	8.5	11	15	9.9	9.2	7.9
Cobalt	3.8 J	2.7 J	<5	3.2 J	4.4 J	5.1	5.9	3.4 J	4 J	3.1 J
Copper	4.2	4.9	1.8 J	3.6	4.3	7.6	7.4	4.8	4.1	3.8
Lead	5.9	7	2.1	4.1	5.2	11	6.6	5.5	4.9	3.5
Mercury	0.074	<0.05	<0.05	<0.05	0.059	0.057	<0.05	<0.05	<0.05	<0.05
Molybdenum	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Nickel	9.3	5.9	7	8	8	14	15	11	8.9	7.9
Selenium	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Silver	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Thallium	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium	25	16	21	22	23	34	32	22	27	19
Zinc	33	19	14	17	26	65	35	25	19	19

Notes:
Samples analyzed by EPA
Method 6010
mg/Kg = milligrams per Kilogram
J = estimated concentration; below
method detection limit.

TABLE 1: SOIL DATA UTILIZED IN BACKGROUND METALS ANALYSES - South Bay Power Plant
San Diego, California

LOCATION	SB05-052	SB05-053	SB05-053	SB05-056	SB05-056	SB05-057	SB05-057	SB05-058	SB05-058	SB05-060
COLLECTION DATE	3/20/1998	3/23/1998	3/23/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/20/1998	3/24/1998
SAMPLE DEPTH (ft)	4-5	0.5-1	4-5	0.5-1	4-5	0.5-1	3-3.5	0.5-1	4-5	0.5-1
UNITS	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Antimony	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6.0
Arsenic	1.4	4.8	2.2	2.4	4.4	1.8	3	1.7	1.2	1.9
Barium	48	130	120	80	58	51	63	71	61	66
Beryllium	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.50
Cadmium	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2.0
Chromium	10	15	38	13	9.3	10	13	15	18	34
Cobalt	4.1 J	5.8	5.1	4.8 J	4.7 J	4.8 J	4.7 J	6	8.4	4.7 J
Copper	3.8	10	5.5	7.2	56	18	15	6.8	10	5
Lead	4	5.6	4	5	24	5	15	3.5	4.3	5.1
Mercury	<0.05	<0.05	<0.05	0.026 J	0.079	0.39	0.029 J	<0.05	0.031 J	<0.050
Molybdenum	<10	<10	<10	<10	5.7 J	<10	<10	<10	<10	<10
Nickel	10	13	21	12	21	12	19	11	17	23
Selenium	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1.0
Silver	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2.0
Thallium	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1.0
Vanadium	25	41	36	29	39	29	34	34	42	27
Zinc	20	44	27	33	190	32	46	29	40	25

Notes:
Samples analyzed by EPA
Method 6010
mg/Kg = milligrams per Kilogram
J = estimated concentration; below
method detection limit.

TABLE 1: SOIL DATA UTILIZED IN BACKGROUND METALS ANALYSES - South Bay Power Plant
San Diego, California

LOCATION	SB05-060	SB05-061	SB05-061	SB05-062	SB05-062	SB05-062	SB05-063	SB05-063	SB05-065	SB05-065
COLLECTION DATE	3/24/1998	3/24/1998	3/24/1998	3/25/1998	3/25/1998	3/25/1998	3/24/1998	3/24/1998	3/24/1998	3/24/1998
SAMPLE DEPTH (ft)	4-5	0.5-1	4-5	0.5-1	12-13	4-5	0.5-1	4-5	0.5-1	4-5
UNITS	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Antimony	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0
Arsenic	4.7	1.8	0.71	1.4	2.4	1.8	2.8	0.84	3.8	1.8
Barium	93	94	33	38	53	39	60	40	62	110
Beryllium	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Cadmium	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Chromium	26	47	34	7.9	11	5.6	8.5	21	12	23
Cobalt	6.4	9.4	4.6 J	4.8 J	4.5 J	<5.0	3.4 J	5.1	4.1 J	6.9
Copper	9.8	9.4	5	5.4	4.3	1.7 J	4.7	4.6	7.8	7.2
Lead	6.5	5.5	3.3	3.5	1.6	2.1	6.3	3.1	10	3.9
Mercury	<0.050	0.21	0.046 J	0.078	0.036 J	<0.050	<0.050	<0.050	<0.050	<0.050
Molybdenum	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Nickel	21	28	17	6.7	8.6	4.8	7.9	13	13	17
Selenium	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Silver	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Thallium	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Vanadium	44	43	16	20	38	21	32	18	28	42
Zinc	36	42	16	16	22	10	19	16	37	33

Notes:
Samples analyzed by EPA
Method 6010
mg/Kg = milligrams per Kilogram
J = estimated concentration; below
method detection limit.

TABLE 1: SOIL DATA UTILIZED IN BACKGROUND METALS ANALYSES - South Bay Power Plant
San Diego, California

LOCATION	SB05-066	SB05-066	SB05-066	SB05-067	SB05-067	SB05-068	SB05-068	SB05-069	SB05-069	SB05-070
COLLECTION DATE	3/25/1998	3/25/1998	3/25/1998	3/24/1998	3/24/1998	3/23/1998	3/23/1998	3/24/1998	3/24/1998	3/24/1998
SAMPLE DEPTH (ft)	0.5-1	14-15	4-5	0.5-1	4-5	0.5-1	4-5	0.5-1	4-5	0.5-1
UNITS	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Antimony	<6.0	<6.0	<6.0	<6.0	<6.0	<6	<6	<6.0	<6.0	<6.0
Arsenic	1.9	2	2.7	1.7	2.1	1.2	1.3	2	<0.50	1
Barium	72	60	83	72	63	22	24	88	76	51
Beryllium	<0.50	<0.50	<0.50	<0.50	<0.50	<0.5	<0.5	<0.50	<0.50	<0.50
Cadmium	<2.0	<2.0	<2.0	<2.0	<2.0	<2	<2	<2.0	<2.0	<2.0
Chromium	12	9.2	12	19	25	7.3	6.4	22	22	24
Cobalt	5.1	5	4.5 J	5.1	5	4.5 J	3.1 J	5.7	7.1	3.9
Copper	5.8	5.1	5.8	5	4	4.9	2.3 J	7.9	8.1	3.8
Lead	4.5	1.5	3.8	5.3	3.9	2.6	2.4	5.1	4.3	2.4
Mercury	<0.050	<0.050	<0.050	<0.050	<0.050	<0.05	<0.05	<0.050	<0.050	<0.050
Molybdenum	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Nickel	11	9	10	14	17	5.4	5.9	16	19	13
Selenium	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1.0	<1.0	<1.0
Silver	<2.0	<2.0	<2.0	<2.0	<2.0	<2	<2	<2.0	<2.0	<2.0
Thallium	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1.0	<1.0	<1.0
Vanadium	29	41	33	26	32	17	18	28	51	28
Zinc	28	21	28	24	29	13	13	29	33	17

Notes:
Samples analyzed by EPA
Method 6010
mg/Kg = milligrams per Kilogram
J = estimated concentration; below
method detection limit.

TABLE 1: SOIL DATA UTILIZED IN BACKGROUND METALS ANALYSES - South Bay Power Plant
San Diego, California

LOCATION	SB05-070	SB05-071	SB05-071	SB05-072	SB05-072	SB05-073	SB05-073	SB05-074	SB05-074	SB05-075
COLLECTION DATE	3/24/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/23/1998	3/20/1998
SAMPLE DEPTH (ft)	4-5	0.5-1	4-5	0.5-1	4-5	0.5-1	4-5	0.5-1	4-5	0.5-1
UNITS	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Antimony	<6.0	<6	<6	<6	<6	<6	<6	<6	<6	<6
Arsenic	1.1	1.7	1.4	2.6	1.9	2.7	0.85	2.3	3.2	1.8
Barium	29	64	18 J	84	32	64	27	81	110	32
Beryllium	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Cadmium	<2.0	<2	<2	<2	<2	<2	<2	<2	<2	<2
Chromium	14	9.8	40	12	14	12	6.2	8.8	12	7
Cobalt	2.7 J	3.9 J	3.3 J	5.2	4.2 J	5.2	5.1	4.5 J	5.6	<5
Copper	2.9	5	3.7	6.9	4	7.5	3.8	5.9	7.7	<2.5
Lead	1.5	3.6	3.5	8.6	4.5	5.3	3	4	3.2	4.5
Mercury	<0.050	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.12
Molybdenum	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Nickel	8.2	8.5	19	13	12	11	5.2	7.9	10	7.1
Selenium	<1.0	<1	<1	<1	<1	<1	<1	<1	<1	<1
Silver	<2.0	<2	<2	<2	<2	<2	<2	<2	<2	<2
Thallium	<1.0	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium	29	21	22	33	30	36	17	33	42	20
Zinc	12	22	23	30	28	25	11	21	27	18

Notes:
Samples analyzed by EPA
Method 6010
mg/Kg = milligrams per Kilogram
J = estimated concentration; below
method detection limit.

TABLE 1: SOIL DATA UTILIZED IN BACKGROUND METALS ANALYSES - South Bay Power Plant
San Diego, California

LOCATION	SB05-075	SB05-075	SB05-076	SB05-076	SB05-077	SB05-077	SB05-078	SB05-078	SB05-080	SB05-080
COLLECTION DATE	3/20/1998	3/20/1998	3/23/1998	3/23/1998	3/24/1998	3/24/1998	3/25/1998	3/25/1998	3/23/1998	3/23/1998
SAMPLE DEPTH (ft)	10-11	4-5	0.5-1	4-5	0.5-1	4-5	0.5-1	4-5	0.5-1	4-5
UNITS	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Antimony	<6	<6	<6	<6	<6.0	<6.0	<6.0	<6.0	--	<6
Arsenic	2.2	1.4	2	1.2	2.3	2.1	2.8	1.9	--	1
Barium	110	25	45	25	69	88	95	29	29	25
Beryllium	<0.5	<0.5	<0.5	<0.5	<0.50	<0.50	<0.50	<0.50	<0.5	<0.5
Cadmium	<2	<2	<2	<2	<2.0	<2.0	<2.0	<2.0	<2	<2
Chromium	15	11	11	8.1	24	12	9.5	12	6.1	7.2
Cobalt	<5	7.1	4 J	3.2 J	5	6.8	3.9 J	3.3 J	2.7 J	5.6
Copper	6.2	5.3	5	4.6	8.5	6.2	5	5.3	7	4.3
Lead	4.2	5.2	3.1	3.6	9.7	6.1	5	4	3.4	3.4
Mercury	<0.05	0.06	<0.05	<0.05	0.046 J	0.24	<0.050	<0.050	<0.05	<0.05
Molybdenum	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Nickel	13	8.2	8.7	7	20	11	9.2	8.8	5.6	6.9
Selenium	<1	<1	<1	<1	<1.0	<1.0	<1.0	<1.0	<1	<1
Silver	<2	<2	<2	<2	<2.0	<2.0	<2.0	<2.0	<2	<2
Thallium	<1	<1	<1	<1	<1.0	<1.0	<1.0	<1.0	<1	<1
Vanadium	37	22	25	22	32	28	26	27	24	19
Zinc	30	19	22	19	33	30	24	21	17	15

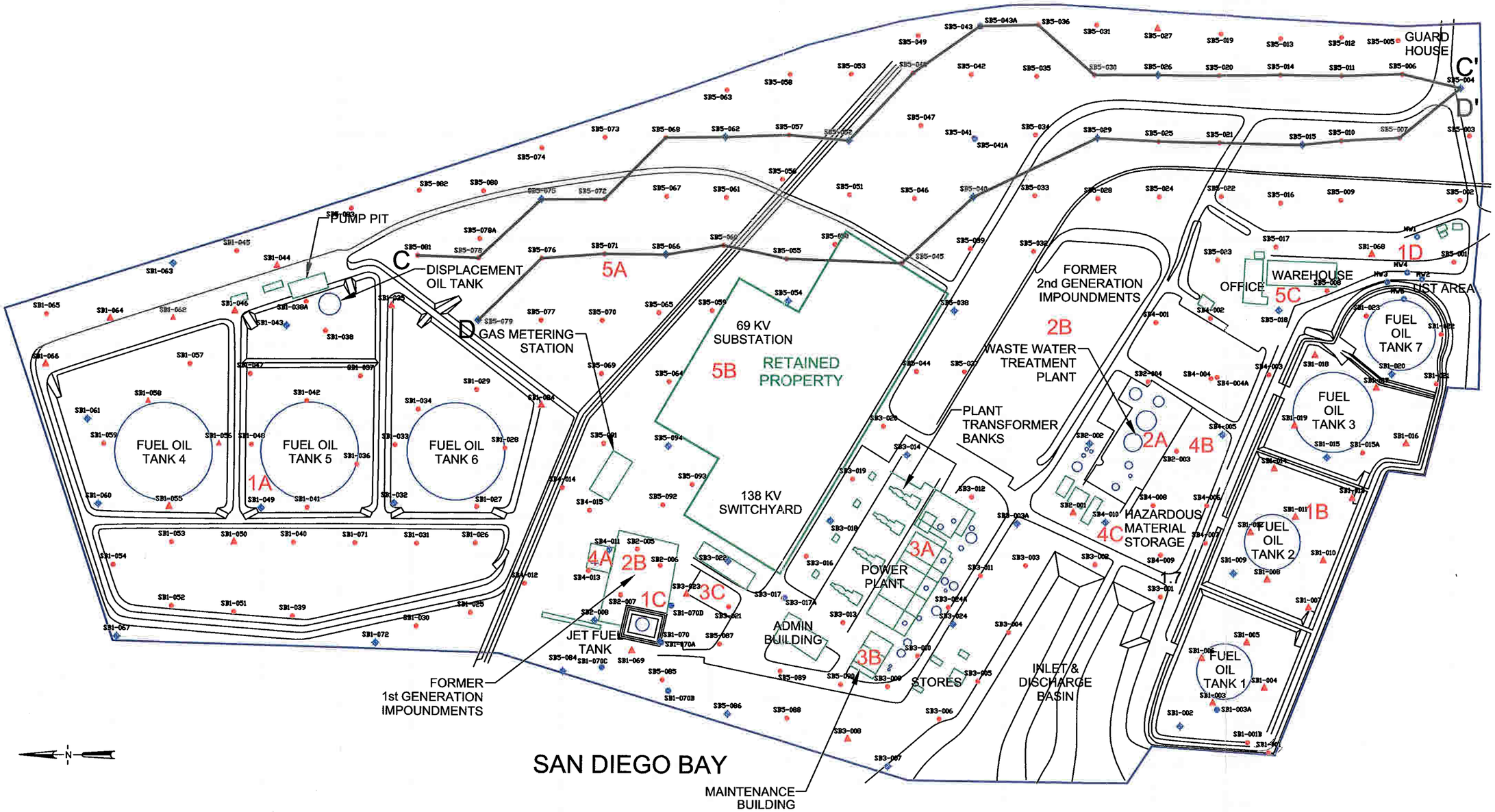
Notes:
Samples analyzed by EPA
Method 6010
mg/Kg = milligrams per Kilogram
J = estimated concentration; below
method detection limit.

TABLE 2: Summary Statistics of Background Metals Populations (Area 5) - South Bay Power Plant
San Diego, California

	# of Samples	# of Detects	Normal or Log Normal Distibution (1)	Mean Concentration (mg/kg) (2)	Maximum Concentration (mg/kg)	95% UCL (mg/kg) (3)	Central Limits Theorem UCL (mg/kg) (6)	95th Percentile (mg/kg)	Comments
Metals									
Antimony	140	0			Excluded from Further Analysis				
Arsenic	140	138	Lognormal (4)	1.85	15	2.39	2.37	4.75	
Barium	140	140	Lognormal	50.01	310	63.65	59.00	120	
Beryllium	140	0			Excluded from Further Analysis				
Cadmium	140	0			Excluded from Further Analysis				
Chromium	140	140	Lognormal (4)	9.86	47	11.99	11.44	25.5	
Cobalt	140	128	Lognormal	4.12	9.7	4.54	4.48	7.1	
Copper	140	138	Lognormal (4)	4.35	56	5.46	5.32	9.75	
Lead	140	140	Lognormal (4)	3.90	24	4.58	4.48	8.3	
Mercury	140	45	Lognormal (4)	0.036	2.4	0.055	0.210	0.215	
Molybdenum	140	1	Normal (4)	5.01	5.7	5.01	5.14	5.0	
Nickel	140	140	Lognormal	8.65	28	10.31	9.77	19.5	
Selenium	140	0			Excluded from Further Analysis				
Silver	140	0			Excluded from Further Analysis				
Thallium	140	0			Excluded from Further Analysis				
Vanadium	140	140	Lognormal (5)	25.38	51	27.66	26.63	42.0	
Zinc	140	140	Lognormal (4)	20.03	190	23.92	22.89	41.0	

NOTES:

(1) Data tested for normality and lognormality using D'Agostino's Test (Gilbert 1987). Similar to Shapiro-Wilk's Test, but for populations with n>50.
(2) Geometric mean for lognormally distributed populations. Arithmetic mean for normal distribution.
(3) 95% Upper Confidence Level of Mean Concentration. For lognormally distributed data sets, this value was calculated based on Gilbert (1987) and the H-statistic.
(4) Data population tests neither normal nor lognormal at the 95% confidence level. Population with the D'Agostino's Y-statistic closer to zero selected.
(5) Data population test both normal and lognormal at the 95% confidence level. Population with the D'Agostino's Y-statistic closer to zero selected.
(6) Skewness-adjusted Central Limits Theorem of raw data set used to compute 95% UCL of mean (from USEPA's 2002 OSWER 9285.6-10).



SB1-045	SOIL BORING 0'-5.5'
SB1-062	SOIL BORING 6'-15'
SB1-070C	2" MOMITORING WELL (PERMANENT)
MW5	PREVIOUSLY DRILLED MONITORING WELL (PERMANENT)
SB1-063	GROUNDWATER SAMPLING POINT (TEMPORARY WELL)

1A	NORTH TANK FARM
1B	SOUTH TANK FARM
1C	JET FUEL TANK
1D	UST AREA
2A	WASTEWATER TREATMENT PLANT
2B	1ST GENERATION FORMER SURFACE IMPOUNDMENT
2B	2ND GENERATION FORMER SURFACE IMPOUNDMENT
3A	POWER PLANT
3B	MAINTENANCE BUILDING
3C	GAS TURBINE
4A	FORMER DRUM STORAGE AREA
4B	CONSTRUCTION YARD
4C	HAZARDOUS MATERIAL STORAGE
5A	OPEN AREA
5B	SWITCH YARD
5C	SEPTIC / LEACH FIELD

HALEY & ALDRICH
UNDERGROUND ENGINEERING & ENVIRONMENTAL SOLUTIONS

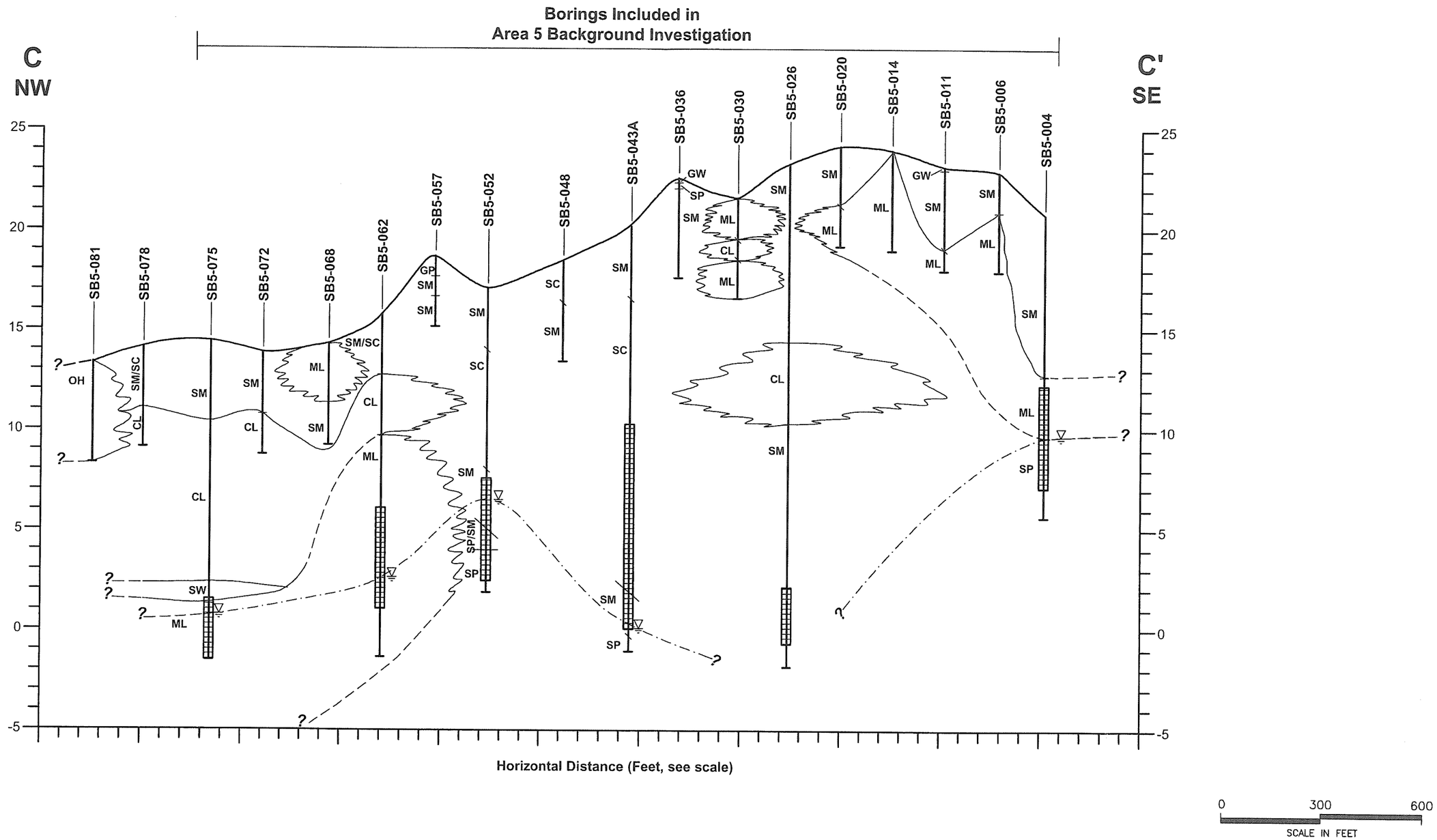
PROJECT TITLE
PROJECT ADDRESS
PROJECT CITY, STATE

FIGURE: 1

SOUTH BAY POWER PLANT
POTENTIAL ENVIRONMENTAL CONDITIONS - JUNE 1998 PHASE I SITE ASSESSMENT

SCALE: NO SCALE
PROJECT: 29084-970
DRAWN: SAL
REVIEWED: -
DATE: 8 AUG 2002

G:\PROJECTS\ENVIRONMENTAL\29084\970\29084004.DWG



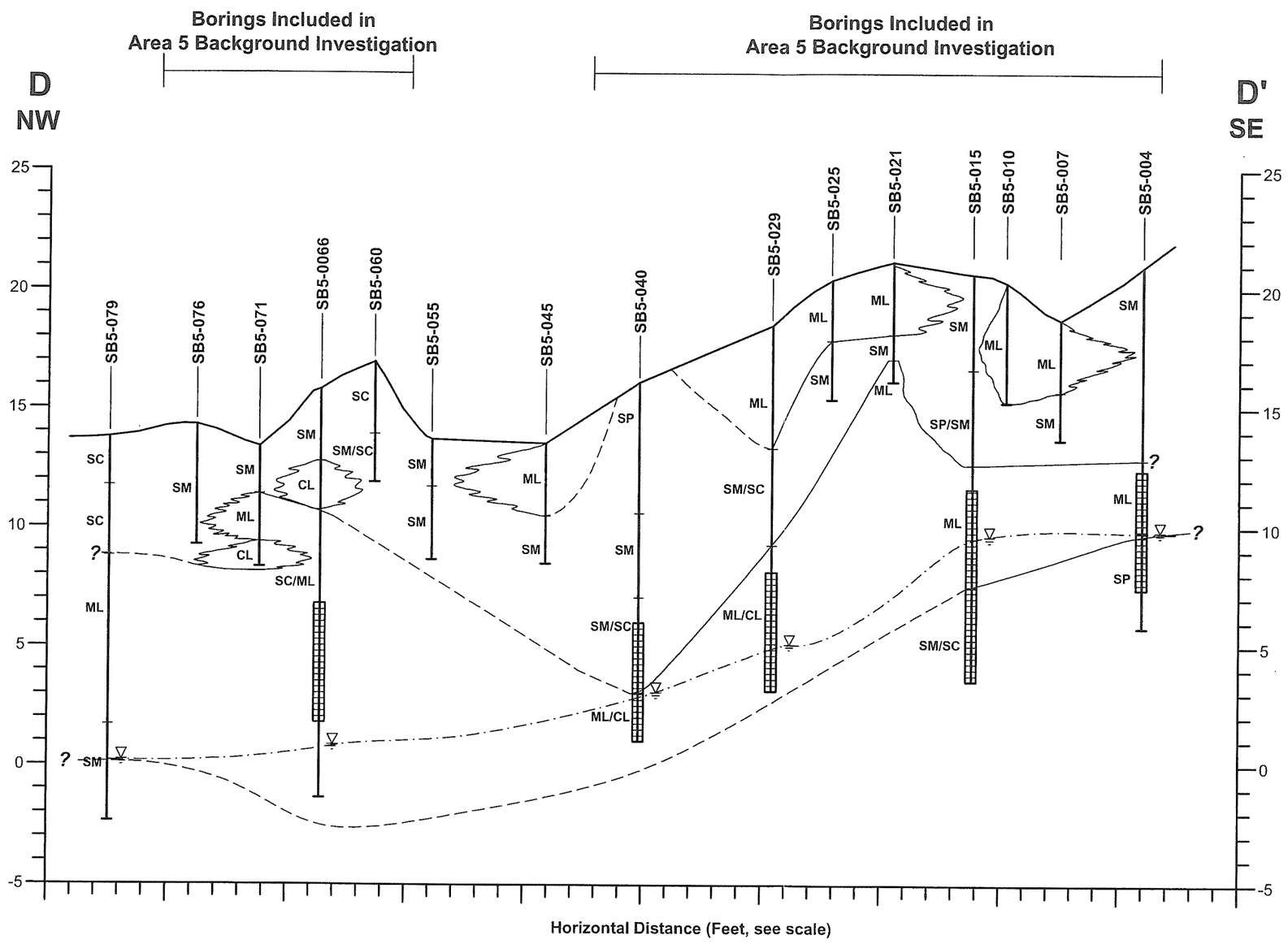
SOUTHBAYPOWPLANT\SOUTHBAY-XSEC-CC.DWG

IRIS ENVIRONMENTAL
1615 Broadway, Suite 1003, Oakland, California 94612

Geologic Cross Section C-C'
South Bay Power Plant Site
Chula Vista, California

Figure
2

Drafter: MAS | Date: 7/21/03 | Contract Number: 00-129-Q | Approved: | Revised:



0 300 600
SCALE IN FEET

SOUTHBAYPOWPLANT\SOUTHBAY-XSEC-DD.DWG

IRIS ENVIRONMENTAL 1615 Broadway, Suite 1003, Oakland, California 94612	**Geologic Cross Section D-D'** South Bay Power Plant Site Chula Vista, California	Figure 3

Drafter: MAS | Date: 7/21/03 | Contract Number: 00-129-Q | Approved: | Revised:

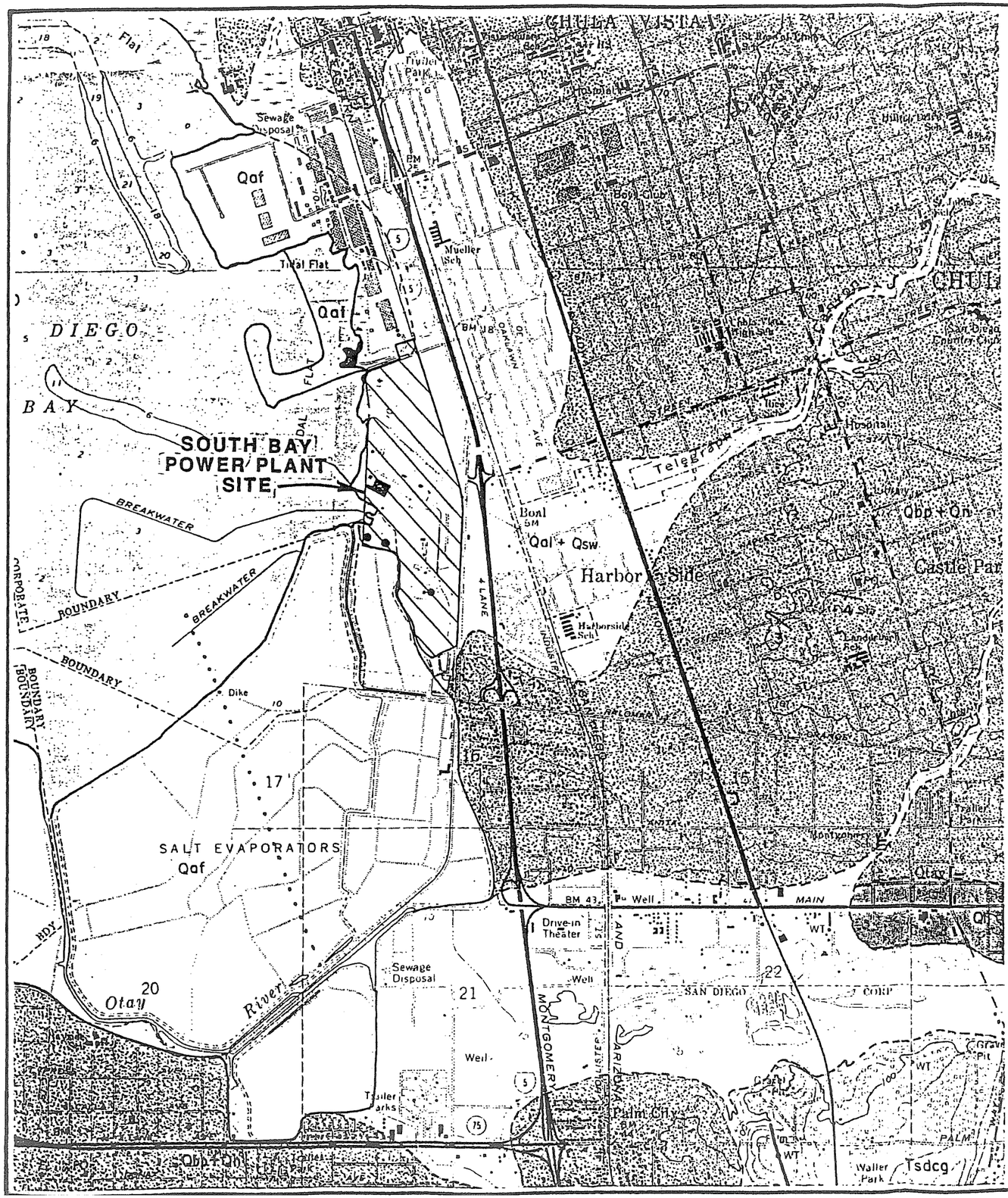


FIGURE 4

(From Woodward-Clyde. 1986. 2nd Generation Impoundment, Hydrogeologic Assessment Report, South Bay Power Plant, Chula Vista, California. September)

EXPLANATION

QUATERNARY

HOLOCENE

Qaf

Artificial fill

Qal+Qsw

Alluvium and slope wash undifferentiated

Qt

Stream-terrace deposits

PLEISTOCENE

Qbp | Qn
Qbp+Qn

Bay Point Formation and unnamed, nearshore, marine sandstone

Qbp, *Bay Point Formation;*
Qn, *unnamed, nearshore, marine sandstone;*
Qbp+Qn, *Bay Point Formation and unnamed, nearshore marine sandstone undifferentiated.*

TERTIARY

Tsdcg / Tsdss

San Diego Formation

Tsdcg, *conglomerate part;* Tsdss, *sandstone part.*

SYMBOLS

Contact

(Dashed where location is approximate, dotted where concealed)

76
U
D

Fault

(Long dash where location is approximate, short dash where inferred, dotted where concealed, D, downdropped side; U, upthrown side; arrow and associated number indicate dip of fault)

6

Strike and dip of beds

7

Strike and dip of S-surface in the metamorphic rocks.

0 ½ 1

Scale (Miles)

SOURCE: Kennedy and Tan, 1977.

REGIONAL GEOLOGIC MAP
HYDROGEOLOGIC ASSESSMENT REPORT
SDG&E SOUTH BAY POWER PLANT

DRAWN BY: bn	CHECKED BY: KJ	FIGURE NO: 5.1
DATE: 3-28-86	PROJECT NO: 55935K- SBRP	

Figure 5: Arsenic - Histogram

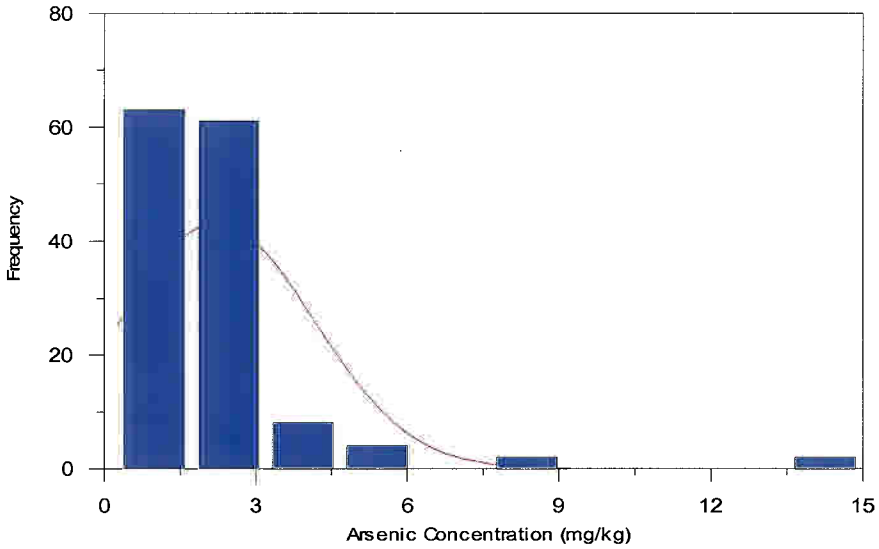


Figure 6: LN(Arsenic) - Histogram

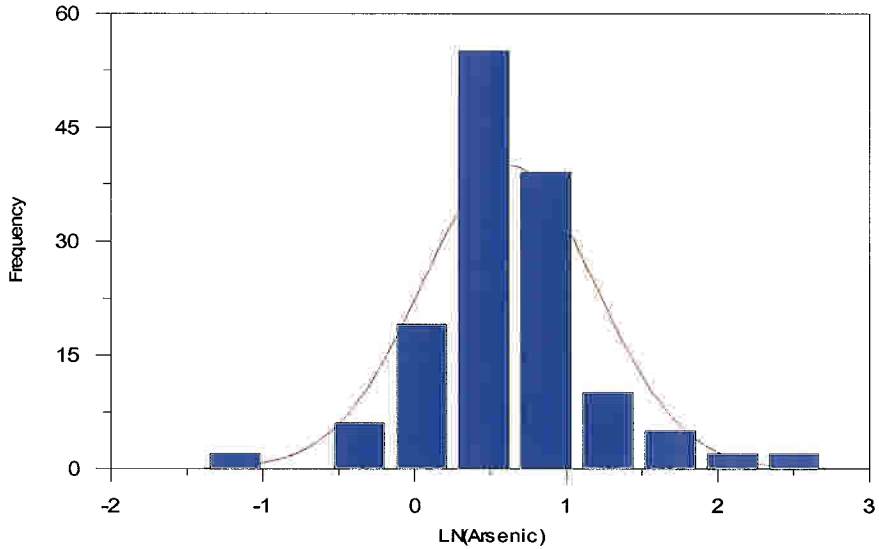


Figure 7: Barium - Histogram

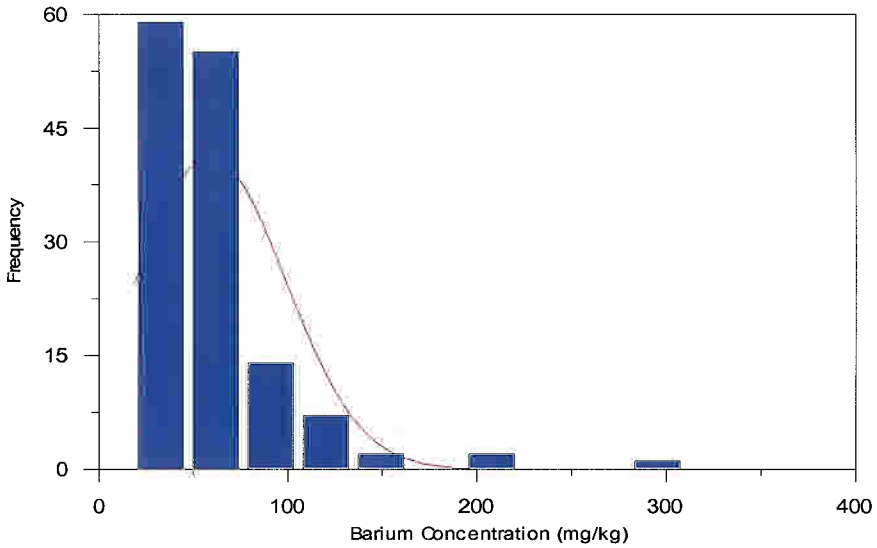


Figure 8: LN(Barium) - Histogram

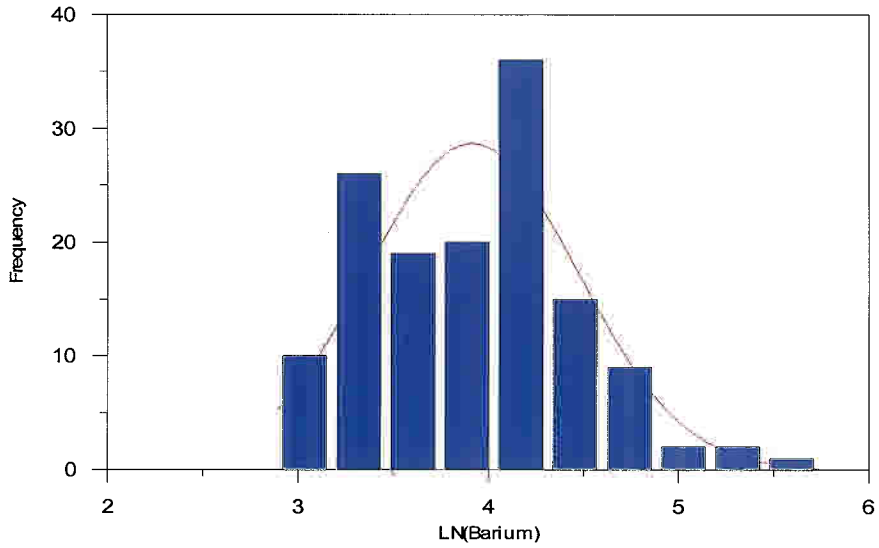


Figure 9: Chromium - Histogram

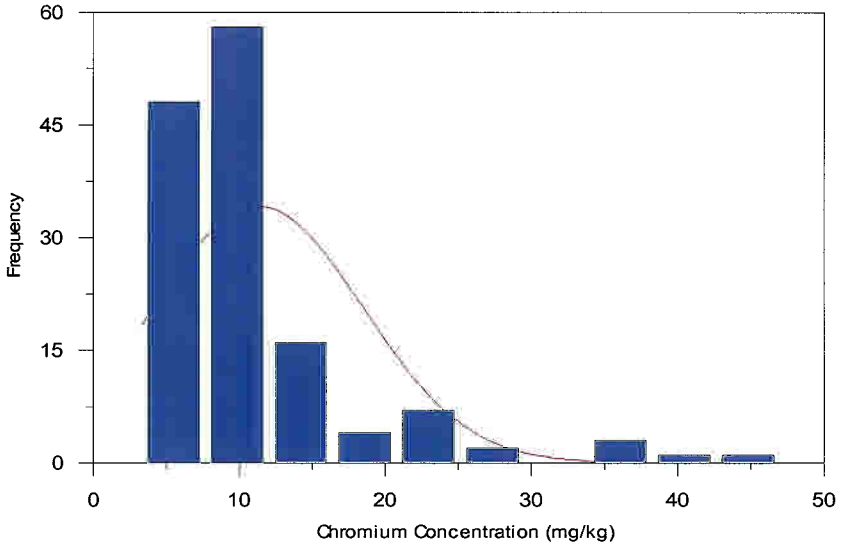


Figure 10: LN(Chromium) - Histogram

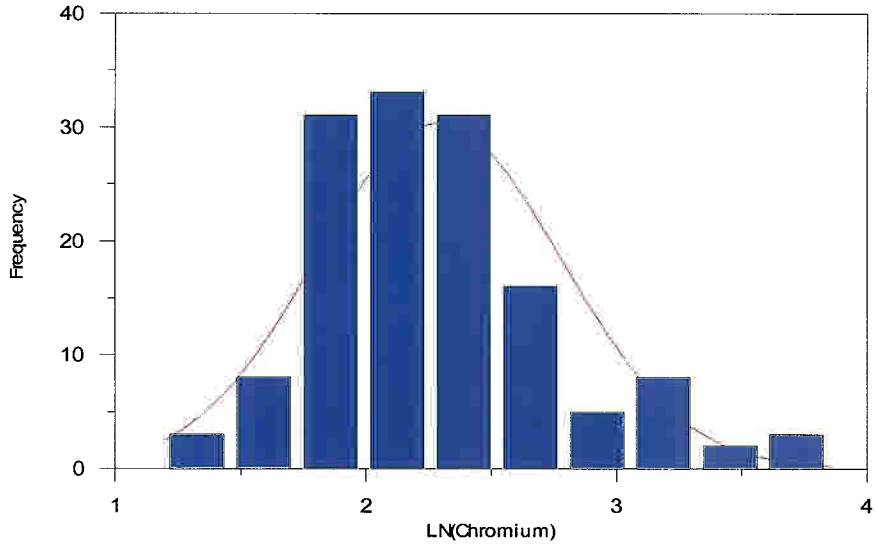


Figure 11: Cobalt - Histogram

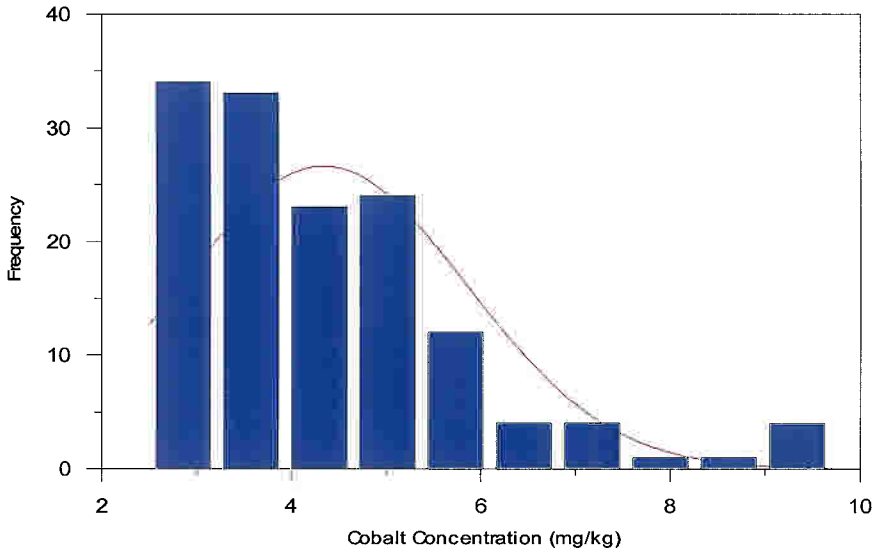


Figure 12: LN(Cobalt) - Histogram

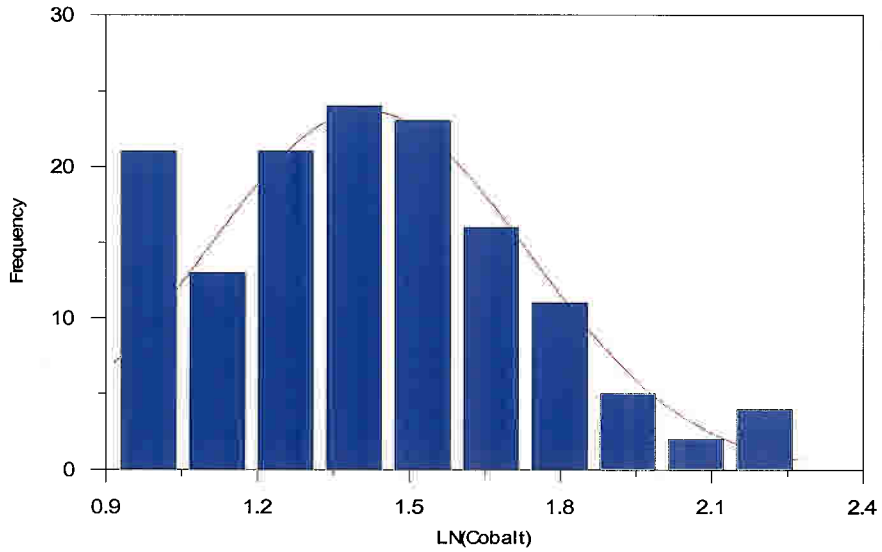


Figure 13: Copper - Histogram

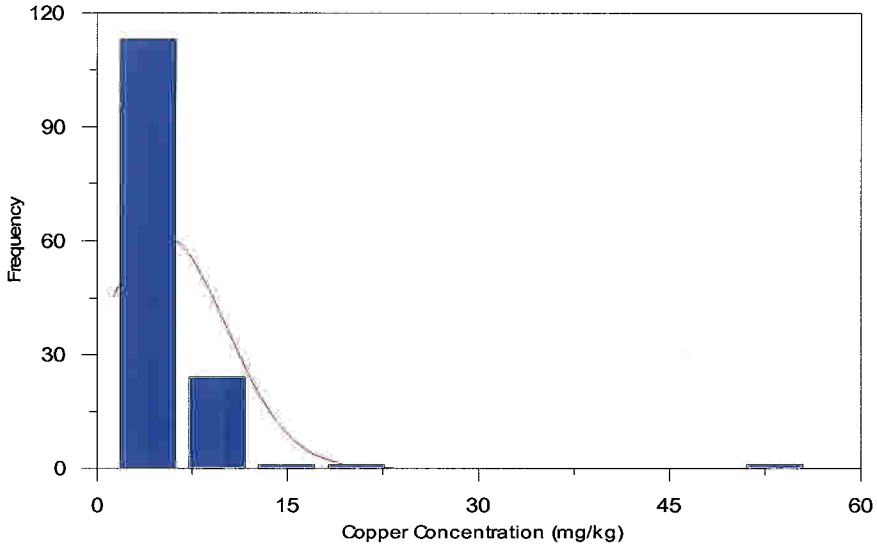


Figure 14: LN(Copper) - Histogram

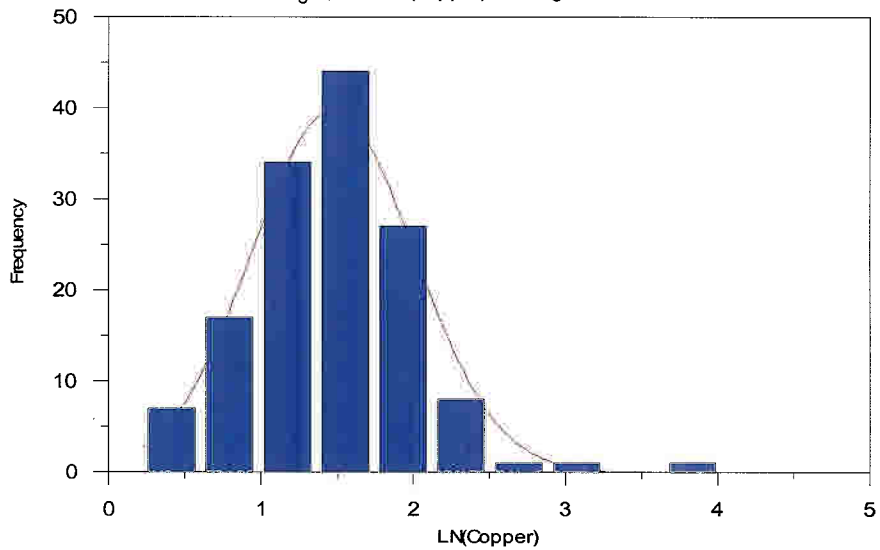


Figure 15: Lead - Histogram

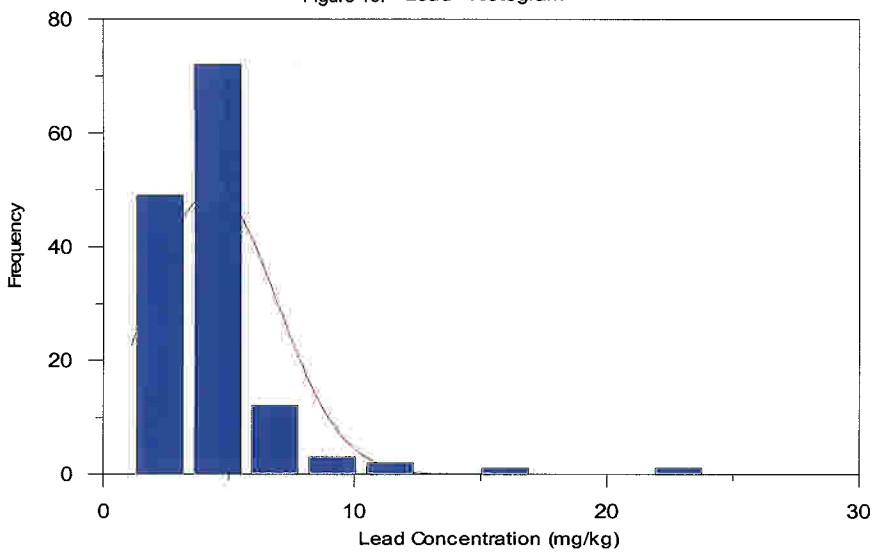


Figure 16: LN(Lead) - Histogram

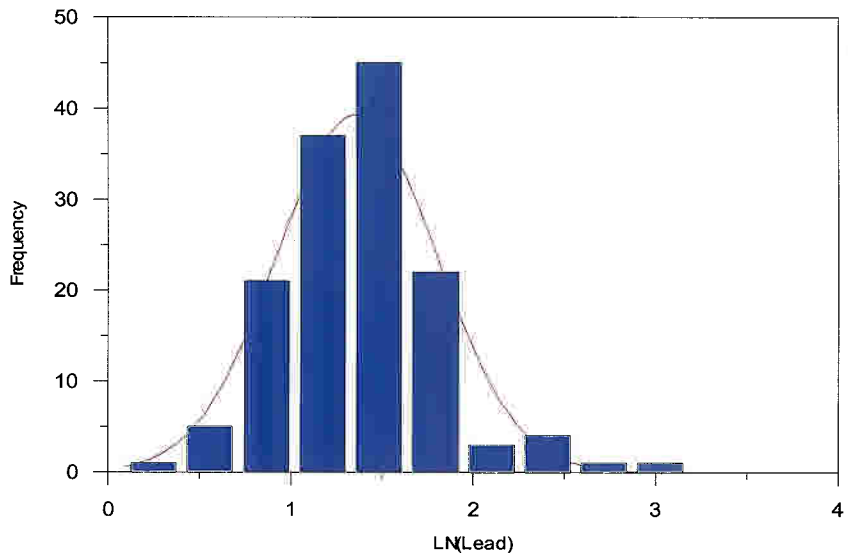


Figure 17: Mercury - Histogram

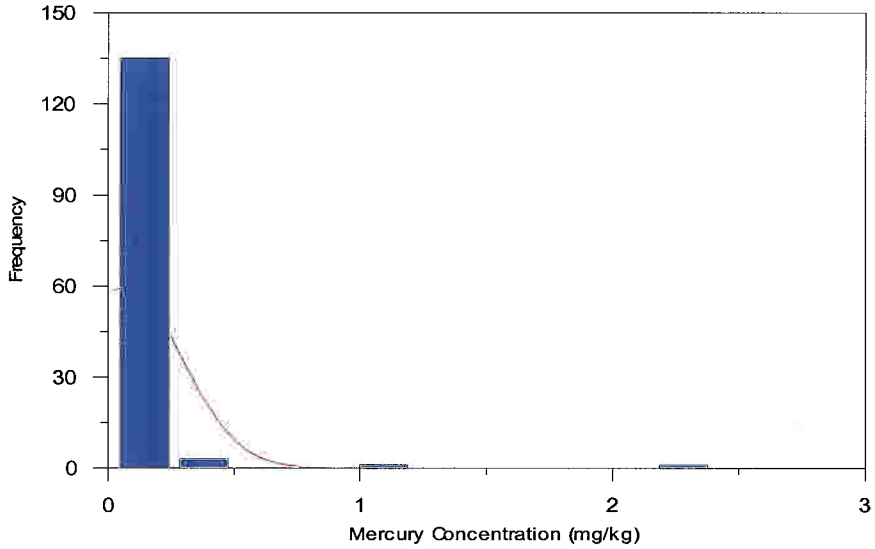


Figure 18: LN(Mercury) - Histogram

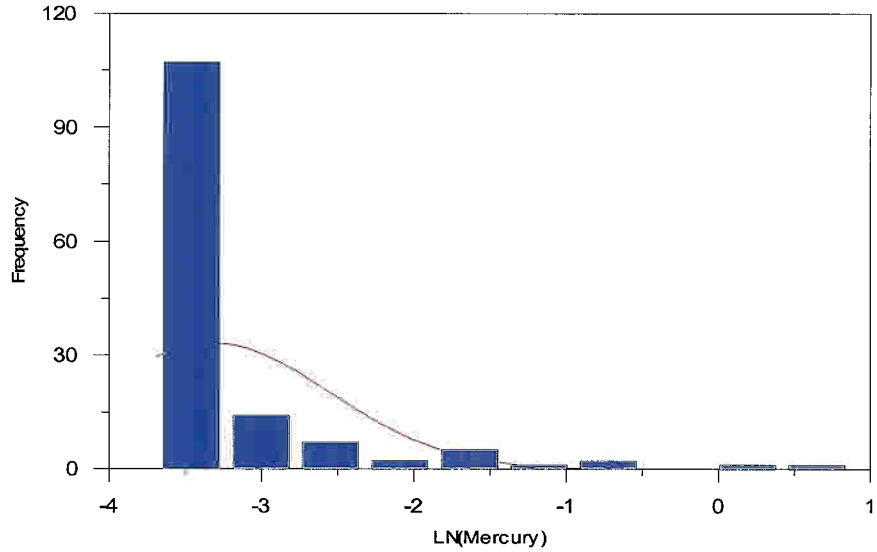


Figure 19: Nickel - Histogram

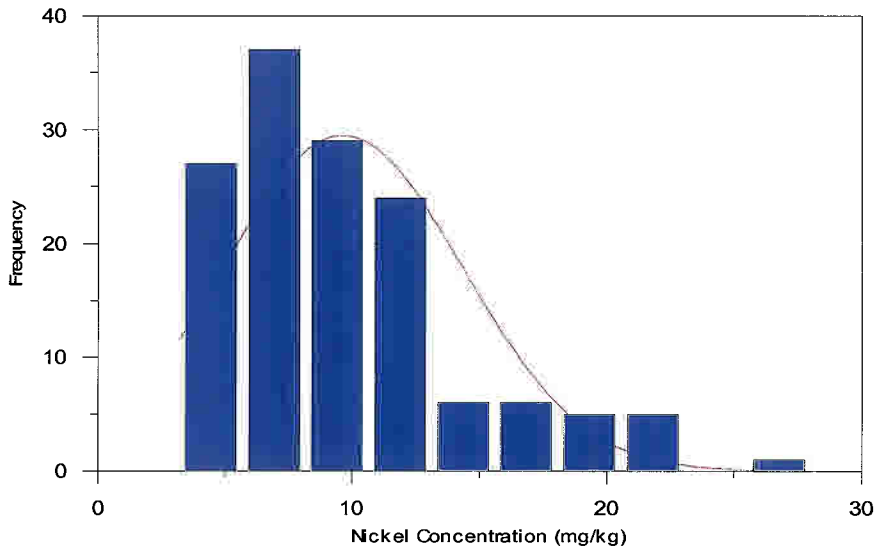


Figure 20: LN(Nickel) - Histogram

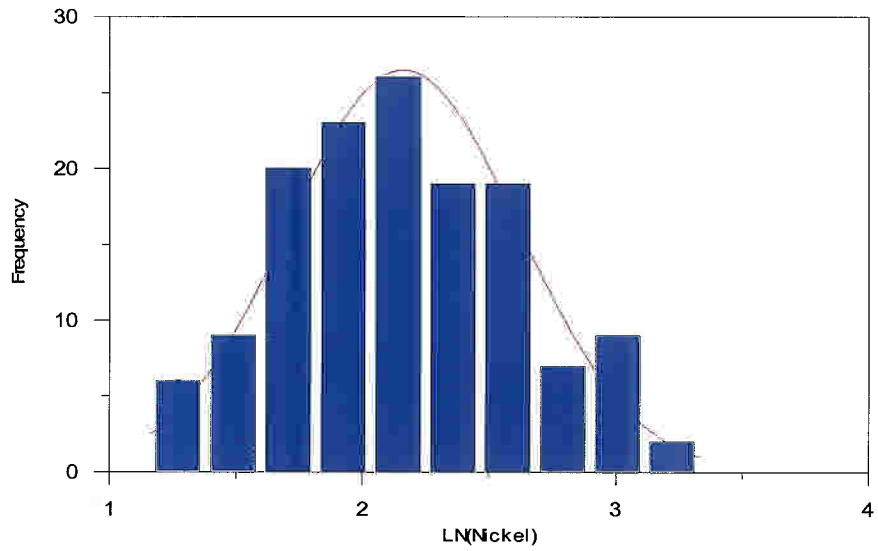


Figure 21: Vanadium - Histogram

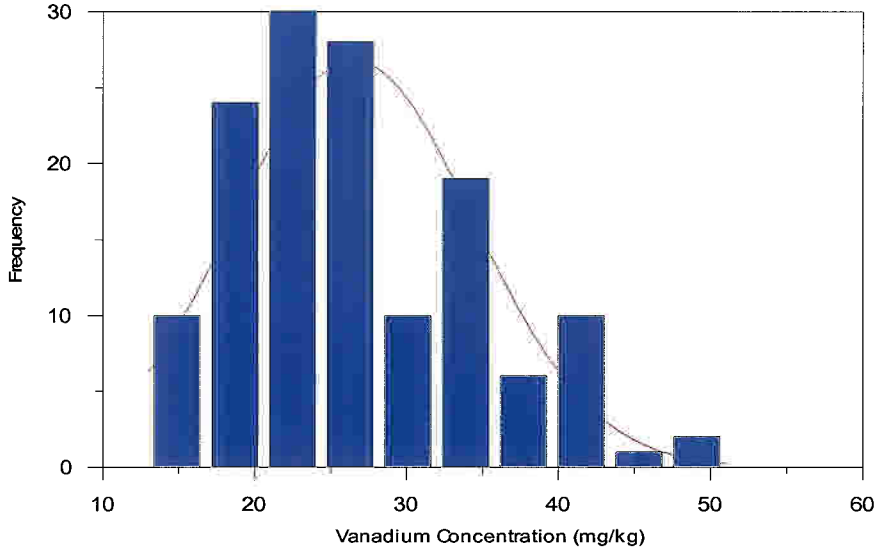


Figure 22: LN(Vanadium) - Histogram

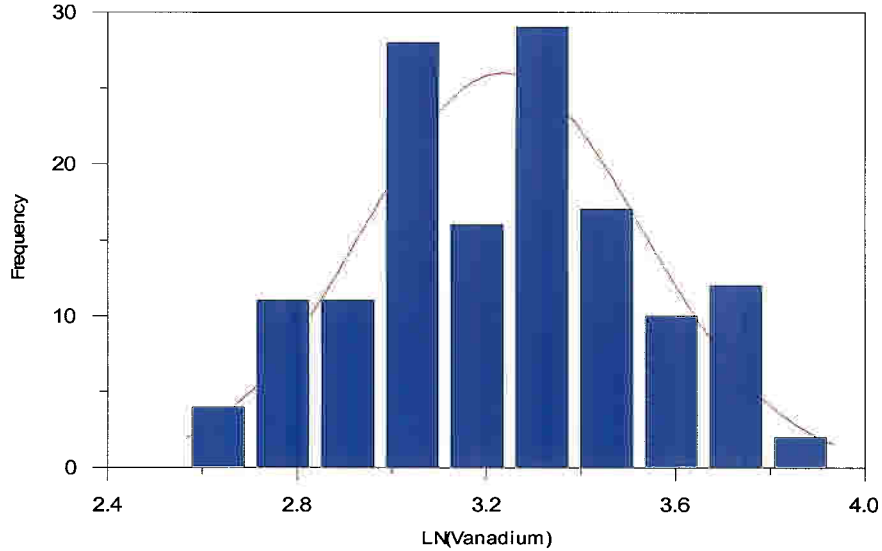


Figure 23: Zinc - Histogram

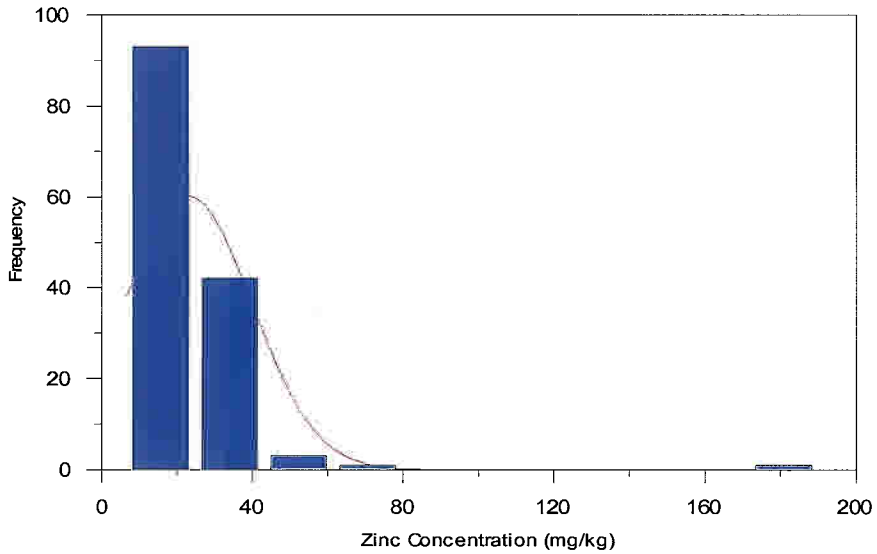


Figure 24: LN(Zinc) - Histogram

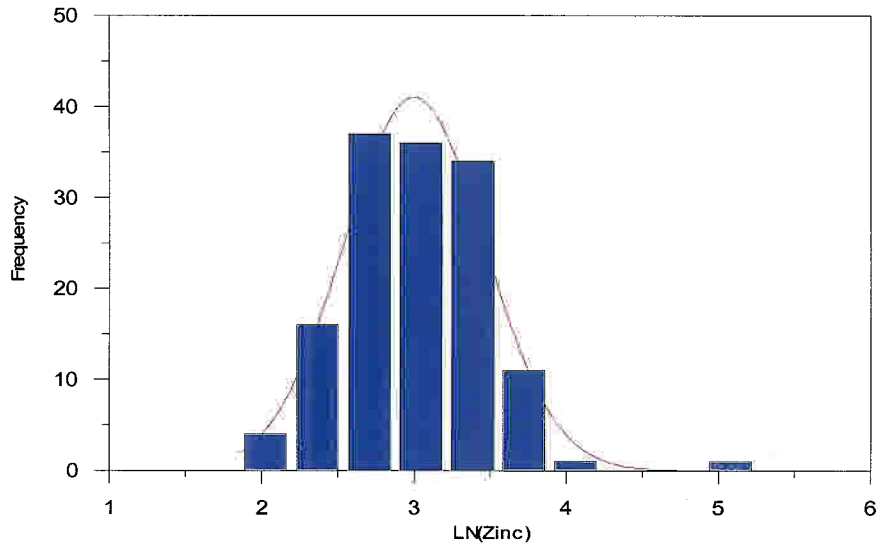


Figure 25: LN(Arsenic) - Histogram

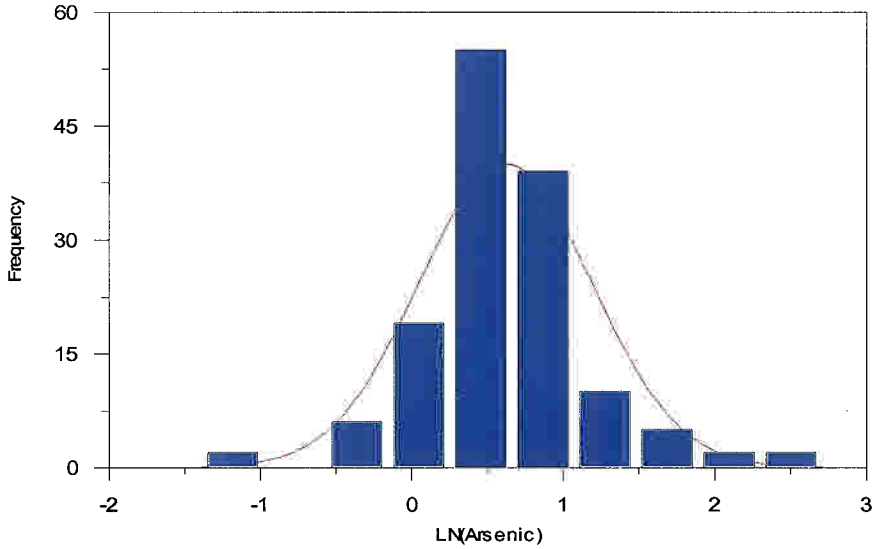


Figure 26: LN(Arsenic) - Probability Plot

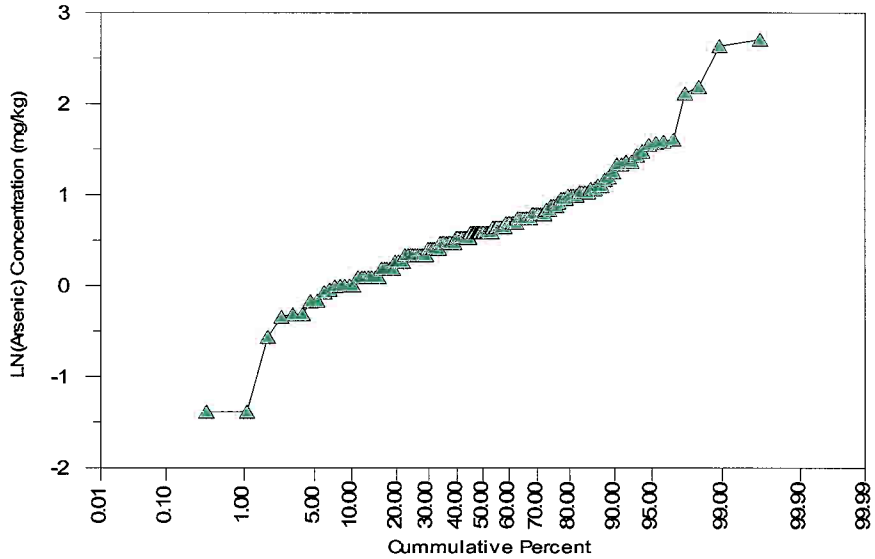


Figure 27: LN(Barium) - Histogram

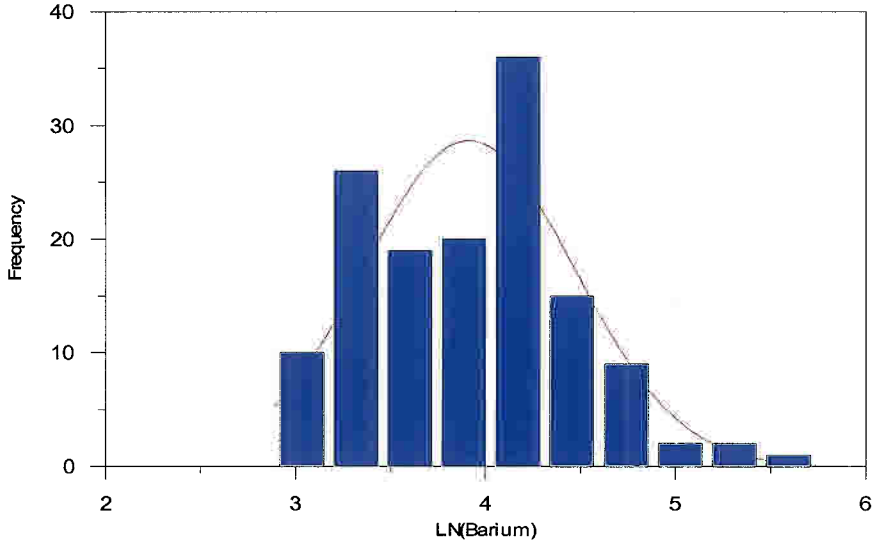


Figure 28: LN(Barium) Probability Plot

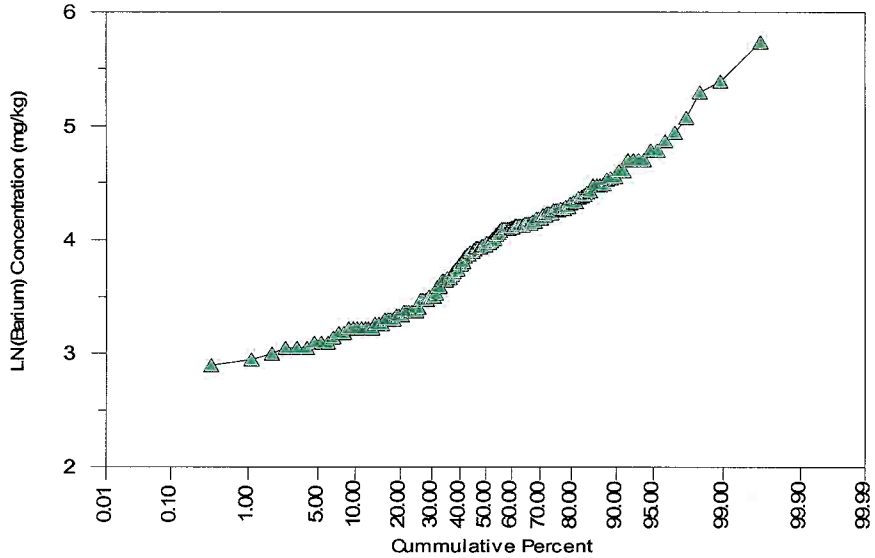


Figure 29: LN(Chromium) - Histogram

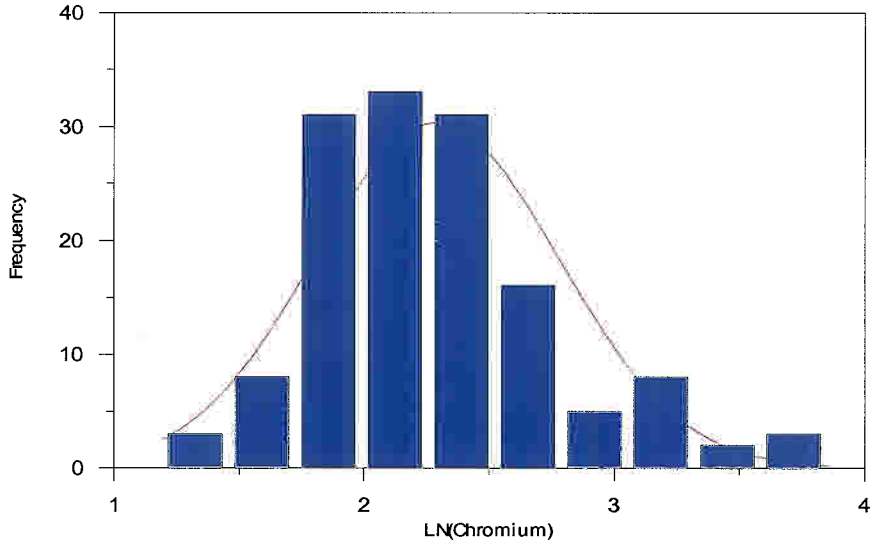


Figure 30: LN(Chromium) - Probability Plot

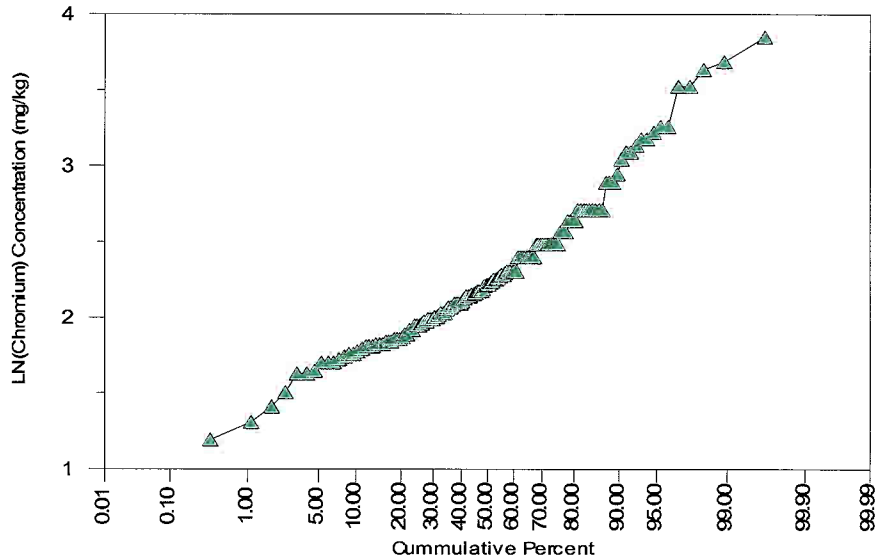


Figure 31: LN(Cobalt) - Histogram

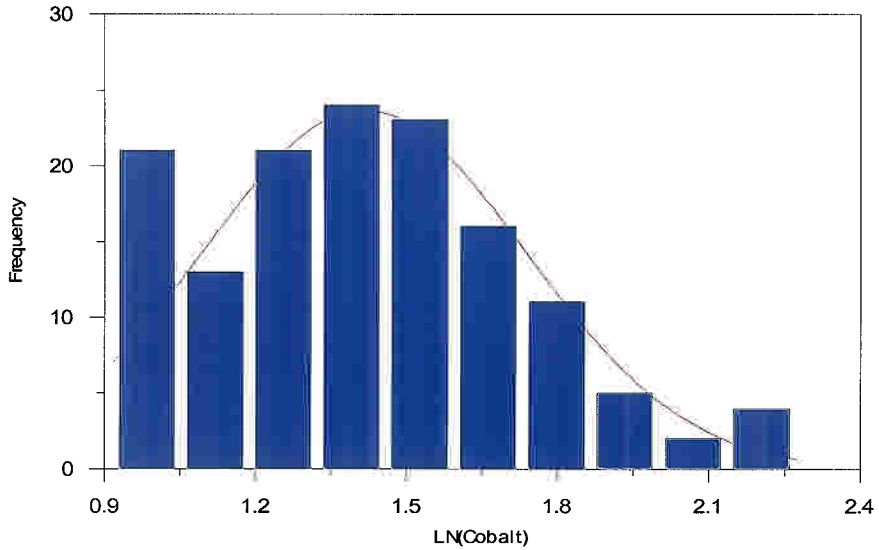


Figure 32: LN(Cobalt) - Probability Plot

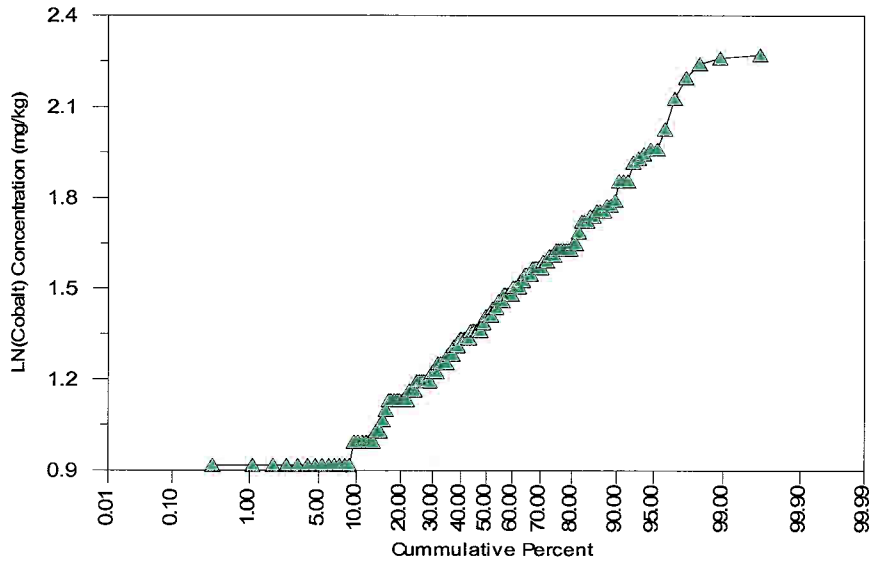


Figure 33: LN(Copper) - Histogram

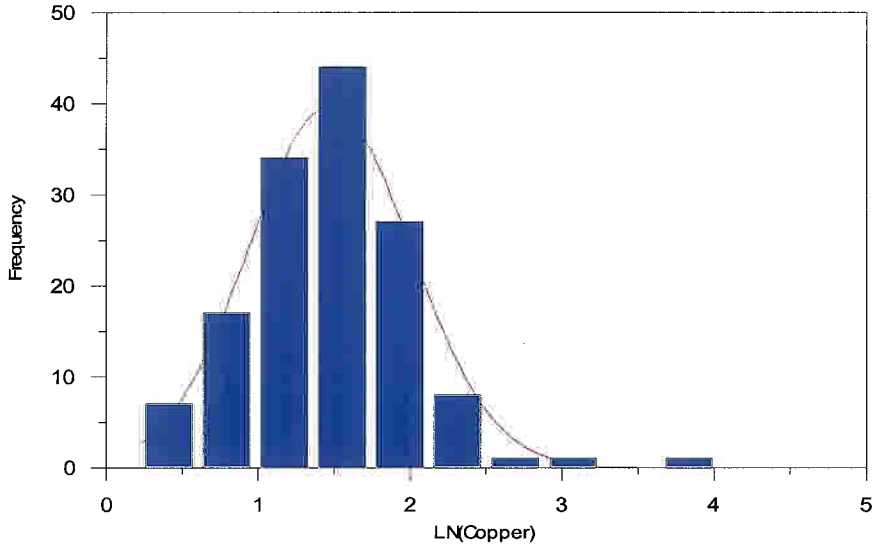


Figure 34: LN(Copper) - Probability Plot

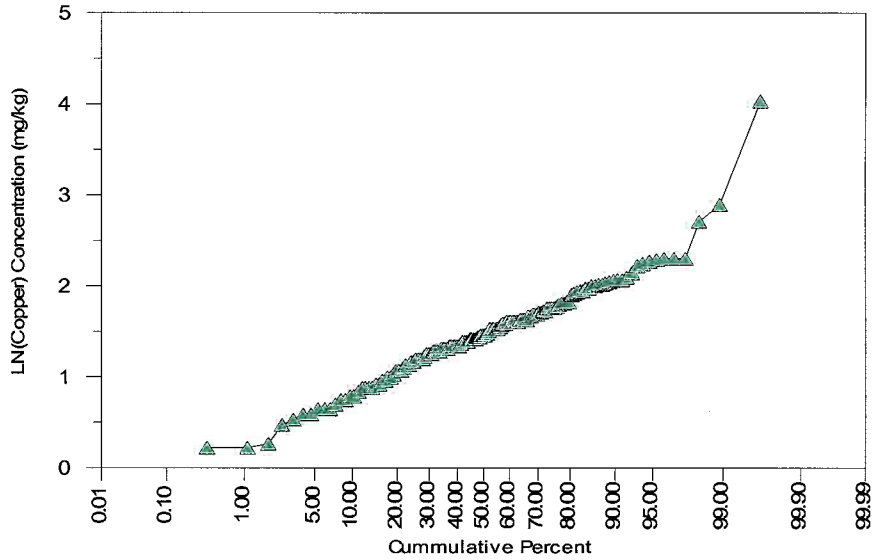


Figure 35: LN(Lead) - Histogram

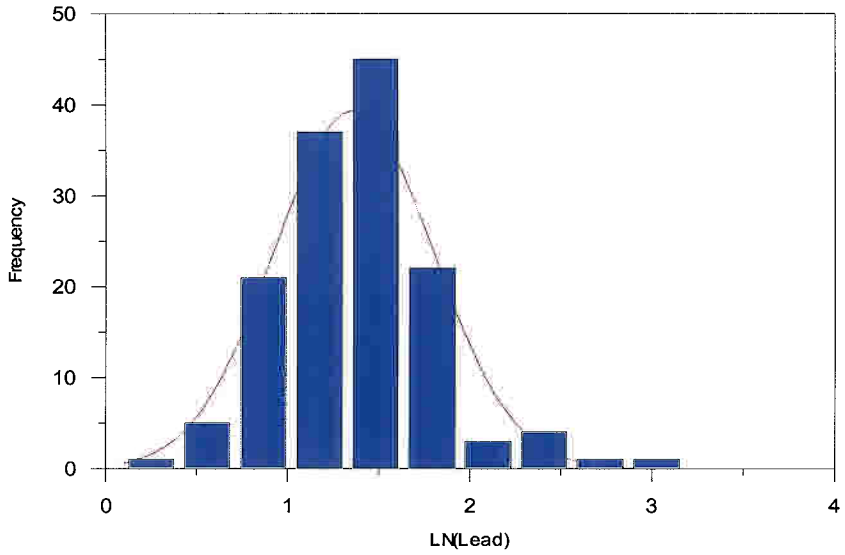


Figure 36: LN(Lead) - Probability Plot

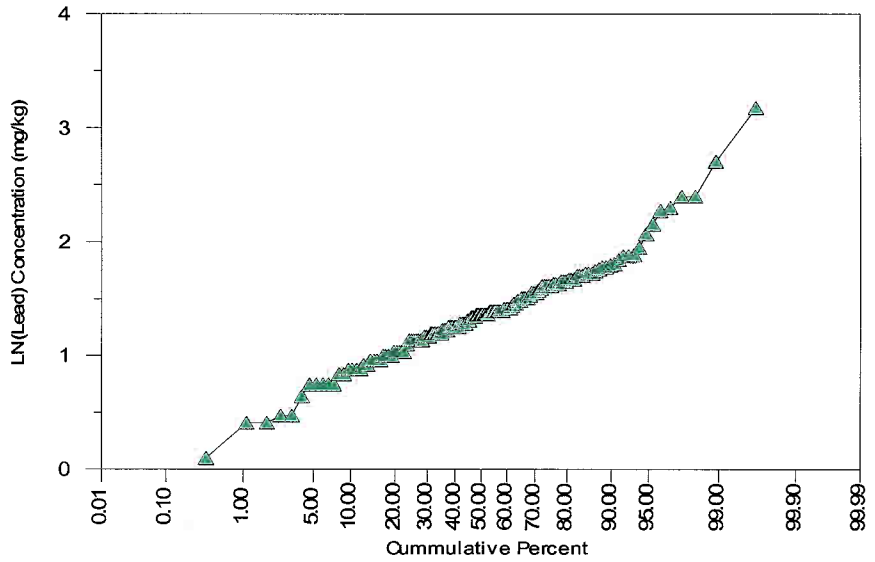


Figure 37: LN(Mercury) - Histogram

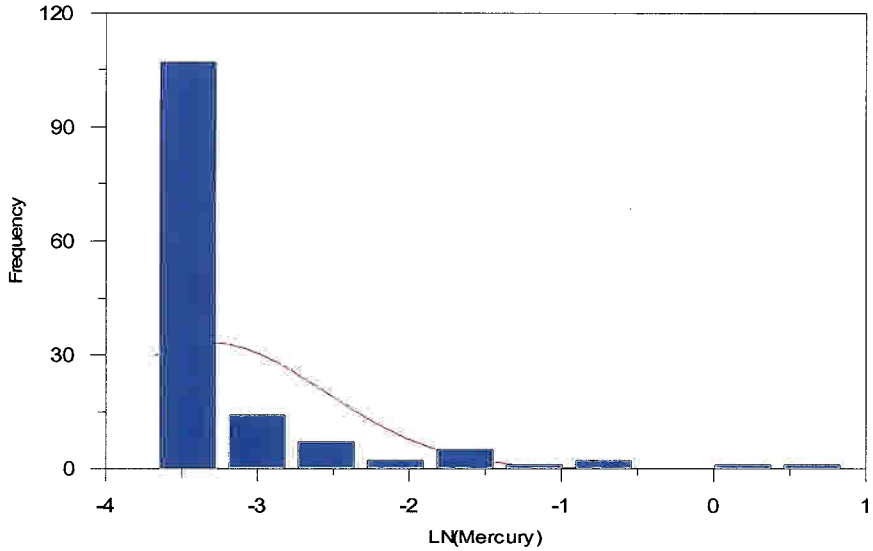


Figure 38: LN(Mercury) - Probability Plot

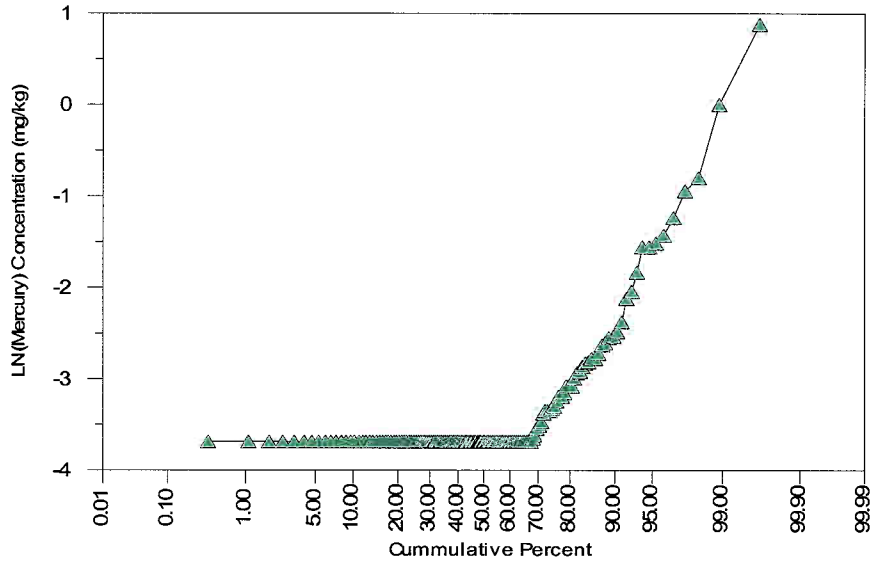


Figure 39: LN(Nickel) - Histogram

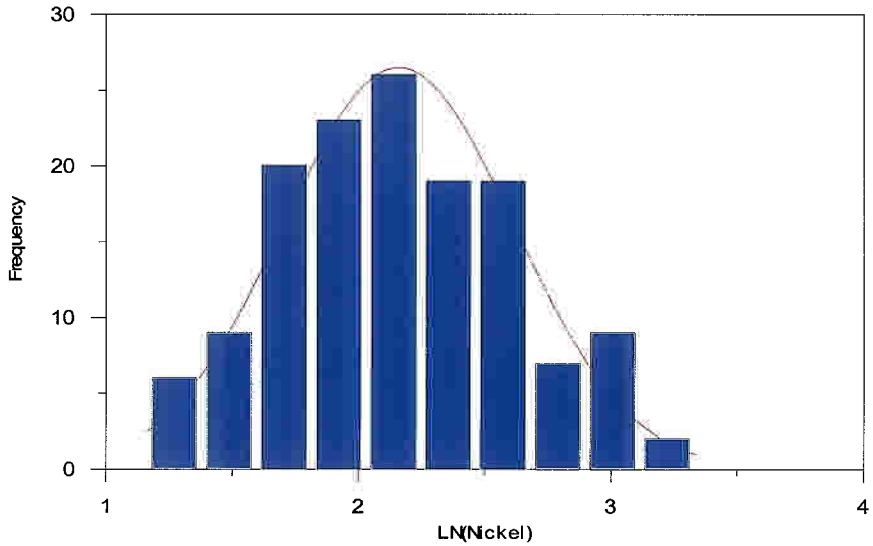


Figure 40: LN(Nickel) - Probability Plot

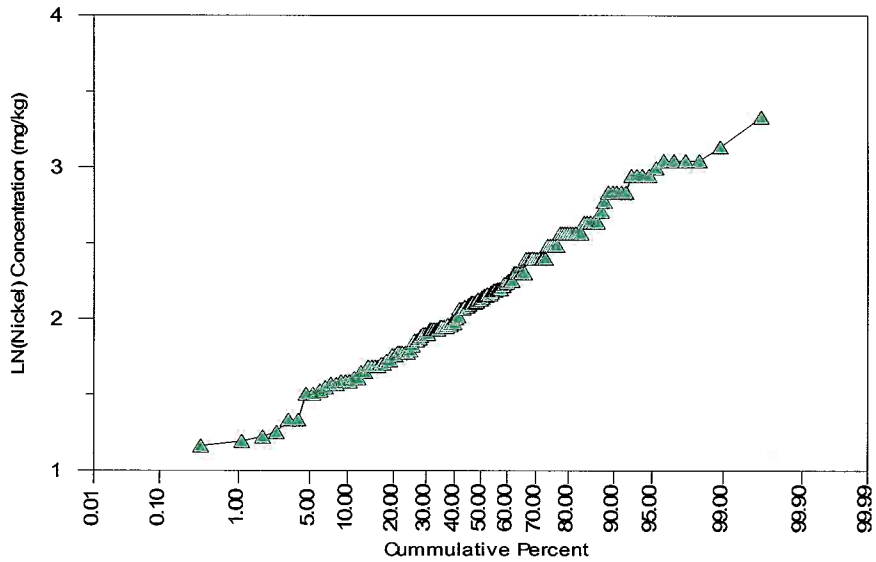


Figure 41: LN(Vanadium) - Histogram

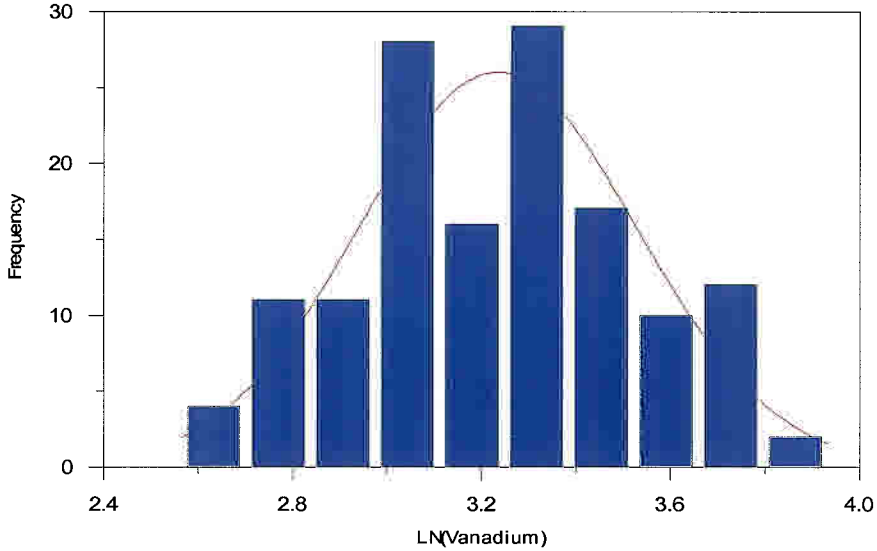


Figure 42: LN(Vanadium) - Probability Plot

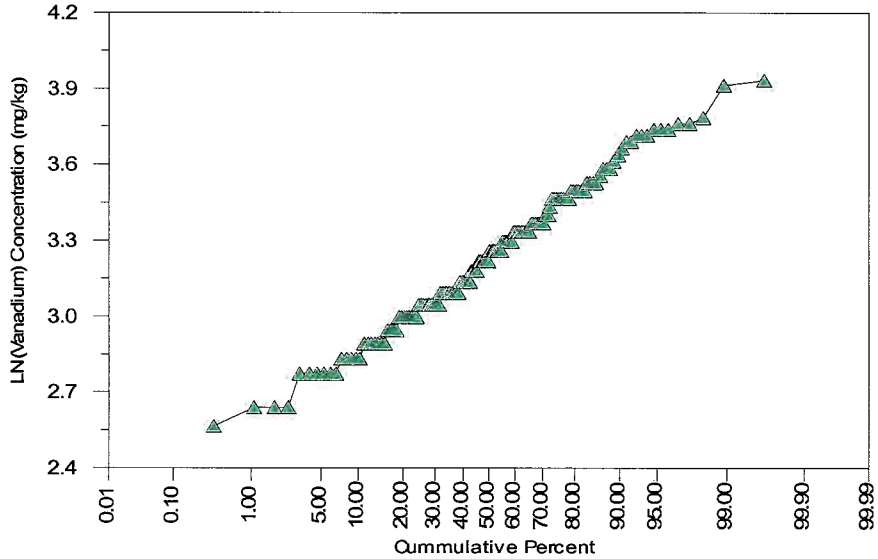


Figure 43: LN(Zinc) - Histogram

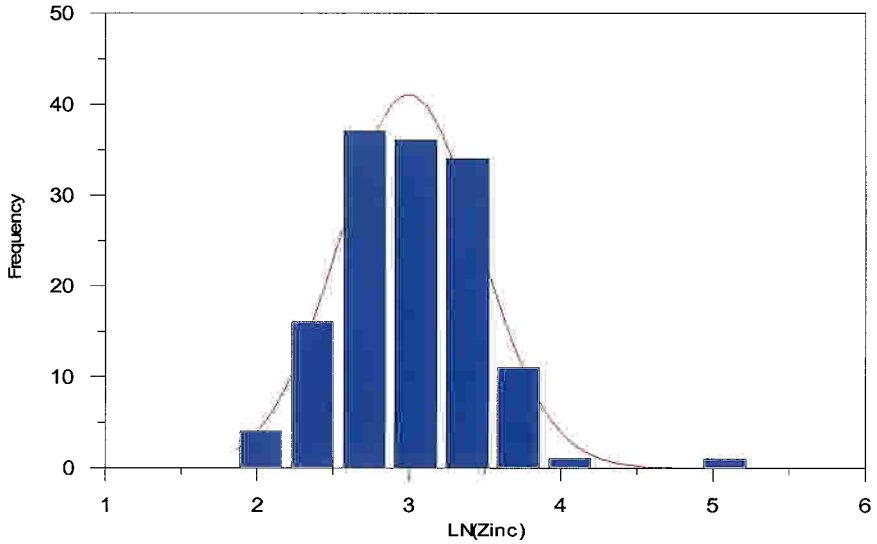
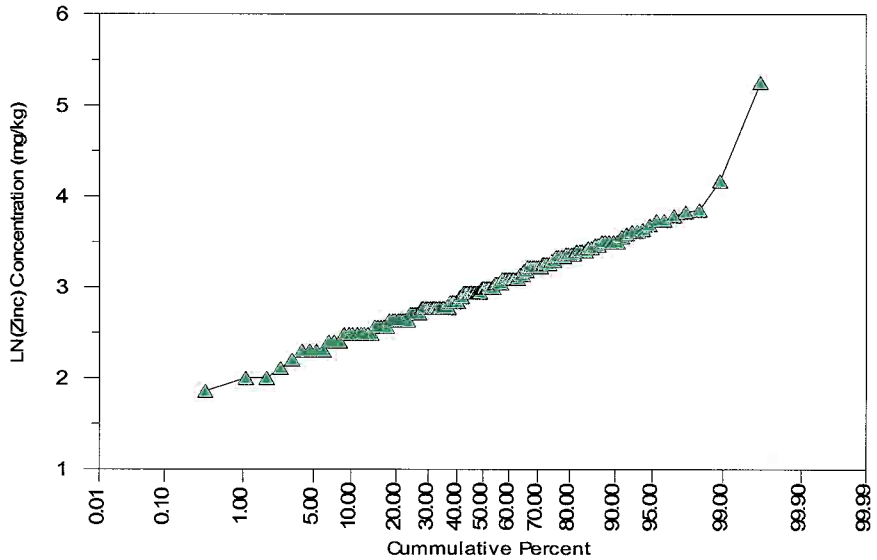


Figure 44: LN(Zinc) - Probability Plot



APPENDIX D

Duke/Port Response to DTSC Comments

Duke Energy North America℠
A Duke Energy Company

Duke Energy
North America, LLC
P. O. Box 1737
Morro Bay, CA 93443-1737

1290 Embarcadero Road
Morro Bay, CA 93442

(805) 595-5515 *OFFICE*
(805) 595-5592 *FAX*

February 19, 2004

San Diego Gas and Electric
Attn.: Barbara Montgomery
6875 Consolidated Way, SD1373
San Diego, CA 92121-2602

RE: Department of Toxic Substances Control (DTSC) Comments on the Review of Documents for SRPD Docket Number SRPD 01//02 SCC-4263: Response to Comments Applicable to Duke Energy South Bay LLC and The Port of San Diego

Dear Ms. Montgomery:

In their letter dated February 11, 2003 and entitled *DTSC's Comments on the Review of Documents for the SDG&E South Bay Power Plant, Chula Vista, SRPD Docket Number SRPD 01/02 SCC-4263,* the DTSC commented on various environmental remediation reports submitted by SDG&E and Duke Energy currently in their possession. The Port of San Diego and Duke Energy South Bay LLC (Port/Duke) have both reviewed that letter and herein provide SDG&E with responses to DTSC's comments as they pertain to Port/Duke. As stated in the meeting held at Duke Energy South Bay LLC on January 15, 2004 attended by the Port, SDG&E, and Duke, it is our understanding that these responses will be incorporated in the collective response to be written by Haley & Aldrich (H&A). Footnotes will denote which responses were written by Port/Duke and which by SDG&E.

Also enclosed are four documents that are referenced in Port/Duke's response as attachments. Please include these documents as attachments to H&A's report, as they provide supplemental information that may be needed by DTSC. The attachments include:

- Report of Excavation and Temporary Storage Activities for the North Tank Farm at the South Bay Power Plant, DE&S, August 2001
- Final Work Plan for the North Tank Farm Soil Excavation and Temporary Storage Activities South Bay Power Plant, DE&S, April 7, 2001
- Final Report for the North Tank Farm Soil Characterization Activities South Bay Power Plant, DE&S, March 20, 2001
- Letter: Response to DTSC comment regarding excavation of hydrocarbon impacted soil from the North Tank Farm Area in May 2001, Intera, February 12,2004

We appreciate the opportunity to work with SDG&E to provide a seamless, technically complete response to the DTSC and hope to maintain a cooperative relationship as all three parties fulfill their respective environmental obligations at the South Bay Power Plant.

If you have any questions or need additional information, please contact Kathy Woodard, of Duke, at (805) 595-4213 or Bill Hays, of The Port, at (619) 686-6584.

Sincerely,

Kathy K. Woodard
Environmental Scientist

KKW/
ENV-04-032
413-05-01

Attachments

Cc: Mehdi Miremadi (w/ attachments)
Vice President
Haley & Aldrich, Inc.
9040 Friars Road, Suite 220
San Diego, California 92108

Bill Hays (w/o attachments)
Port of San Diego
Environmental Services Department
P.O. BOX 120488
San Diego, CA 92101

Joe Otahal, SBPP(w/o attachments)

Don Weaver, III, SBPP (w/o attachments)

SWMU #1, MAP LOCATION 1A, NORTH TANK FARM, NORTHERN PORTION OF SBPP

DTSC Comment (a): ASTs Pipelines and Pump Deck, Page 8

Duke/Port:
The following historical releases have been reported in the Phase I report for the North Tank Farm area based on employee interviews:

- Heater Unit, AST #5, 15 to 20 gallons of fuel oil, unknown date
- Periodic minor leaks from Displacement Oil AST heat exchanger
- Periodic Fuel Oil release from Pump Pit

The Phase I report did not include any evidence and documentation of releases from the fuel oil ASTs themselves (see page 29 Section 3.4.1 of the Phase I report). The reference in the Phase II report Table 1-1 identifies "potential releases", not actual known releases.

All of the ASTs and associated piping in the North Tank Farm and the Pump Deck were decommissioned by Duke Energy South Bay LLC (Duke) by end of May 2001. Three reports attached for your reference were compiled by Duke Engineering and Service (DE&S) to document remedial activities associated with the North Tank Farm demolition project.

- Final Report for the North Tank Farm Soil Characterization Activities South Bay Power Plant, March 20, 2001, herein after referred to as the *Characterization Report.*
  - Purpose: Document soil sampling and analytical characterization of potentially contaminated soils beneath North Tank Farm tank foundations.
  - Scope: Investigated soil lithology and analyzed 62 soil samples collected from tank foundation soils beneath Fuel Oil Tanks 4, 5 and 6 and the Displacement Oil (DO) Tank. A wide array of potential constituents of concern (COCs) was selected for chemical analysis based on contamination sources in the area, soil descriptions, and field observations.
  - Agency: San Diego Regional Water Quality Control Board (SDRWQCB)

- Final Work Plan for the North Tank Farm Soil Excavation and Temporary Storage Activities, South Bay Power Plant, April 7, 2001, herein after referred to as the *Work Plan.*
  - Purpose: Provided a plan for excavation and relocation of petroleum contaminated non-hazardous industrial soils for potential on-site remediation.
  - Scope: Remove and relocate petroleum contaminated soil from beneath Fuel Oil Tanks 4, 5 and 6 and the DO Tank for potential on-site remediation. The plan only applied to the former tank footprints (structural fill). The estimated vertical extent of each excavation and the primary COCs (diesel-range petroleum hydrocarbons) were based on results presented in the *"Final Report for the North Tank Farm Soil Characterization Activities South Bay Power Plant, March 20, 2001".*
  - Agency: SDRWQCB

- Report of Excavation and Temporary Storage Activities for the North Tank Farm at the South Bay Power Plant, August 2001, herein after referred to as the *Final Report.*
  - Purpose: Document actual remediation activities conducted in accordance with the *Work Plan*
  - Agency: SDRWQCB

Together, these three reports document the scope and extent of remediation activities performed in the North Tank Farm by Duke pursuant to an agreement between Duke and the Port of San Diego. All petroleum hydrocarbon impacted soils beneath the footprint of each AST was excavated during decommissioning of the ASTs in 2000/2001. Results of confirmation are presented in the *Final Report.*

All ancillary equipment including pipelines was removed during decommissioning. Soil sampling beneath the pipelines was not part of the scope of work presented in the *Work Plan*; therefore, investigative sampling under the pipelines was not conducted. Even so, any petroleum impacted soils beneath the pipelines encountered during the excavation phase would have been noted and removed. There was no visible staining noted or observed under the pipelines.

During the SDG&E 1998 Phase II investigation, five soil borings were advanced adjacent to or near the pipe runs. Soil samples were collected at 0 to 1, 2.5 to 3.5 and 5 to 6 feet below ground surface (bgs), which the depth and number of samples vary upon location (Figure A: SB01-029, SB01-034, SB01-042, SB01-057 and SB01-058). The highest Total Petroleum Hydrocarbon, diesel range (TPHd) concentration detected was 30 mg/kg in the SB01-042, 0 to1-foot sample. The corresponding 3-3.5-foot sample at this location contained 1.9 mg/kg TPHd. All other locations were 4.8 mg/kg or less. These are relatively low concentrations, below the 1000 mg/kg cleanup level proposed in the *Work Plan*.

The pump deck directly northeast of the DO tank was constructed with a reinforced concrete foundation. When the pump deck was removed, there was no visual evidence of contamination within the footprint of the foundation. For this reason, confirmation sampling was not considered. To provide analytical verification that clean soils remain in place, Duke will define a sample grid and collect soil samples for chemical analysis in accordance with the *Work Plan*. As presented in the *Characterization Report*, the constituent of concern defining the vertical extent of excavation conducted in the North Tank Farm was total petroleum hydrocarbons in the diesel range (TPHd) analyzed using EPA Method 8015M. Because the DTSC believes the composite sampling protocol followed by Duke was inappropriate for properly characterizing other potential contaminates of concern [see DTSCs Specific Comments, Other Areas/Comments (a)] each sample will be analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs) following EPA Method 8270C and total recoverable metals (CAM 17 metals) in addition to TPHd. The analytical results will be forwarded to the DTSC as an addendum to the *Final report*.

SDG&E to finalize response from this point forward as the contamination was outside the footprint of the Pump Deck and was pre-existing to the sale date.

DTSC Comment (b): Pump Pit and Bermed Pond, Page 8

FYI to SDG&E: If you remember during our conversation, we believe that the terms "Pump Pit" and "Pump Deck" are being used interchangeably by the DTSC. SDG&E may want to make a note of this here, as we have already addressed the Pump Deck above.

DTSC Comment (c): Displacement Oil AST and Heat Exchanger, Page 9

As discussed previously, the DO Tank was removed during decommissioning of the North Tank Farm ASTs by Duke along with the Fuel Oil Tanks 4, 5 and 6. All petroleum hydrocarbon impacted soils beneath the footprint of the DO Tank was excavated during decommissioning. Results of confirmation are presented in the *Final Report*.

Presented in the *Characterization Report* are the results of a preliminary analytical characterization study for soils beneath each tank. A vertical gradient of potential contaminants of concern was determined to develop the excavation *Work Plan*. Based on this report, TPH was detected at 4,600 mg/kg in the 7.5-feet bgs sample collected from the center of the tank footprint. The TPH concentration significantly

decreased to 11 mg/kg in the 10.5-feet sample. Therefore, the *Work Plan* conservatively set the excavation depth for the entire footprint down to 8 feet bgs. Duke was actually able to remove more soil down to 9 feet bgs, where groundwater was encountered. TPHd measured in the reconnaissance sample collected at this depth was none detected (<10 mg/kg), which is consistent with the TPHd concentration measured at 10.5 feet (11 mg/kg) during the preliminary soil characterization phase.

Both qualitative and quantitative field screening methods were used in conjunction with analyzing soil samples from pre-determined fixed locations to detect petroleum contaminated soils near the clean up level, including visual observations for stained or discolored soil, olfactory senses for odors and field monitoring with a photo-ionization detector (PID). There were no instances or observations of residual contamination noted using these screening methods when excavation activities ceased. Because field screening did not indicate the presence of elevated TPHd and groundwater was encountered, only one sample was collected for confirmation.

SDG&E – The Heat Exchanger is outside the footprint of the DO Tank. Your response is needed here.

DTSC Comment (d): Tank #5

Fuel Oil Tank 5 was removed during decommissioning of the North Tank Farm ASTs by Duke along with the Fuel Oil Tanks 4 and 6 and the DO Tank. All petroleum hydrocarbon impacted soils beneath the footprint of the Tank 5 was excavated during decommissioning. Results of confirmation are presented in the *Final Report*.

After initially excavating a planned 3-foot lift across the entire tank footprint, screening samples were collected to determine the depth of localized contamination that appeared to be prevalent in the tanks perimeter "ring" at several locations. Based on the results, excavation of soil continued until contamination was no longer detected in all locally identified contaminated areas. The depth of excavation ranged from approximately 3.5 feet to 7.5 feet below original surface (bos). All hydrocarbon impacted soil above the established 1000 mg/kg cleanup level was removed. Refer to Table 2 and Figure 8 of the *Final Report* for final verification sampling results.

The oily sheen observed within the footprint of Tank 5 was only noted to support the fact that additional excavation was required to address staining in the perimeter "ring" area of the tank (refer to section 3.2.2, page 10 through 12 of the *Final Report*). Condensation from the "ring" sediments formed a small pond of water in a tire track left by the loader. The picture was included in the *Final Report* to demonstrate the use of visual means to conduct additional excavation. The water was not groundwater. The sheen was observed at 3-foot bos and soil was excavated down to 7.5-feet bos in this area, where clean soil was encountered.

Other Areas/Comments (a), Page 10

After decommission of the ASTs, DE&S completed soil sampling and analytical characterization of potentially contaminated soil beneath the footprint of each tank. A wide array of potential contaminates or classes of contaminates were targeted for chemical screening and analysis based on potential sources from past operations and field observations. The soils were analyzed for total recoverable metals (CAM 17), polychlorinated biphenyls (PCBs), TPHd and SVOCs. Samples for PCB and TPHd analysis were direct, where samples for SVOCs and metals were a composite three individual samples. The analytical results narrowed the excavation confirmation analysis to TPHd, as the other constituents of concern were either below detection limits or within background range.

To provide analytical verification that clean soils remain in place, Duke will define a sample grid and collect soil samples for additional chemical analysis in accordance with the *Work Plan*. Discrete soil samples will be collected and analyzed for VOCs following EPA Method 8260, SVOCs following EPA

Method 8270C and total recoverable metals (CAM 17 metals). Analytical results with soil sample locations will be forwarded to the DTSC as an addendum to the *Final Report*.

Other Areas/Comments (b), Page 10

Excavation activities and associated confirmation sampling for this location was discussed in the *Final Report* (see pages 10 through 12 and Table 2). Enclosed as Attachment ??, please find a letter dated February 7, 2004 written by the Project Geologist, Kelly Tilford, who designed and implemented the *Work Plan* and provided oversight for all field activities. This letter is provided as a supplement to the Final report and should address this comment.

Specific to DTSCs comment, T5-AE7a was a confirmation sample pulled after additional excavation was conducted at the same horizontal location as T5-AE7, which contained TPHd in excess of the 1000 mg/kg TPH clean-up level. Attached to the enclosed letter are field notes and a field diagram for the area in question.

3.0 RESPONSE TO GEOLOGICAL SERVICES UNIT COMMENTS

Specific Comments on Environmental Due Diligence Program, South Bay Power Plant, Phase I Environmental Site Assessment

3) Table 1-1, Current and Past Tankage.

Following is the current status of tankage listed in Table 1-1 of the Phase I report.

Page 1 of 4
- Area 1d – Vehicle Fueling Station – 1601a: Removed by SDG&E in 1999
- Area 1d – Vehicle Fueling Station – 1602a: Removed by SDG&E in 1999

Page 2 of 4
- Area 1a – North 40 – Fuel Oil Tanks 4, 5, 6 and the Displacement Oil Tank: Removed in 2000.
- Area 1b – South 40 – Fuel Oil Tanks 3 and 7: Tanks structures removed in 2002/2003; Concrete foundations still in place.
- Area 2a – Waste Water: 1,000 gallon sulfuric acid tank – out of service.

Page 3 of 4
- Area 2a – Waste Water: 3,000 gallon sodium hydroxide tank – out of service.
- Area 3a – Plant: 6,000 gallon sulfuric acid tank – out of service.
- Area 3a – Plant: 7,000 gallon sodium hypochlorite tank – out of service.
- Area 3a – Plant: 400 gallon sulfuric acid tank – out of service.

Page 4 of 4
- Area 6 – Terminal – Tanks 1, 2 and DO: Removed in 2002.

5) Table 3-1, Site Release History 1998 to present.

HR-31

Area:	1: Tank containment for Fuel Oil Tank 2
Date:	May 23, 2001
Material:	Light Cycle Oil
Volume:	200 gallons

Description: Contractor inadvertently overfilled a Baker tank containing light cycle oil causing product to spill to the ground.

Actions Taken: The spilled material was immediately contained and absorbent was used to collect product. Approximately 135 cubic yards of impacted soil was removed. Cleanup was confirmed by soil sampling and analysis.

Status: A report entitled, *Assessment and Remediation of a Light Cycle Oil Spill in the Tank 2,* dated August 13, 2001, was submitted to the DTSC on September 6, 2001. No further action required.

HR-32

Area: 3c: Gas Turbine
Date: July 12, 2001
Material: Turbine Oil
Volume: 25 gallons
Description: Turbine oil seeped from the exciter housing onto rock and soil due to pump failure.
Actions Taken: Contaminated soil and rock was immediately removed for proper disposal.
Status: No further action.

HR-33

Area: 3: 4E Cooling Water Pump Deck
Date: September 11, 2002
Material: Lube Oil
Volume: 1 gallon
Description: 5 gallons lubricating oil was released from a cooling water pump sight glass to a concrete deck, of which approximately one (1) gallon drained into the forebay of the inlet cooling water channel for Unit 4, which caused an oily sheen on the water surface.
Actions Taken: A boom was immediately deployed to contain the oily sheen inside the intake channel and absorbents placed on the concrete to prevent additional drainage. Foss Environmental was contracted for clean-up support. All residual oil was cleaned off the rocks and skimmed from the water surface.
Status: No impact to soil. No further action required.

Specific Comments on Remedial Action Work Plan: Fuel Hydrocarbons and Metal Impacted Areas, South Bay Power Plant

51) General Comments on the Duke Energy Work for the North Tank Farm

As presented in the *Characterization Report*, the constituent of concern defining the vertical extent of excavation conducted in the North Tank Farm was total petroleum hydrocarbons in the diesel range (TPHd) analyzed using EPA Method 8015M. Other potential contaminates of concern, including PCBs, SVOCs and metals, were eliminated from consideration because sample results were either non-detected or within a concentration range indicative of background.
DTSC expressed concern that that the composite sampling protocol followed by Duke was inappropriate for properly characterizing SVOCs and metals in a previous comment [see DTSCs Specific Comments, Other Areas/Comments (a)]. As such, Duke has agreed to collect discrete soil samples for VOC, SVOC

and metals analysis. The results should also resolve the SVOC high detection limit issue and provide data necessary to confirm the absence of other potential constituents of concern.

Excavation activities and associated confirmation sampling under the ASTs in the North Tank Farm was conducted in accordance with the *Work Plan* and discussed in the *Final Report.* The scope of work presented in the Work Plan was written specific to "structural fill". However, field work determined that contamination existed beyond "structural fill" in isolated areas and additional excavation was required. All petroleum hydrocarbon impacted soils beneath the footprint of each AST was excavated and results of confirmation are presented in the *Final Report.*

February 15, 2004

Ms. Kathy Woodard
Environmental Engineer
Duke Energy Morro Bay
1290 Embarcadero
Morro Bay, California 93442

Re: Response to DTSC comment regarding excavation of hydrocarbon impacted soil from the North Tank Farm Area in May 2001

Dear Ms. Woodard,

The purpose of this letter is to address comment (b.) from the section titled "Other Areas/Comments" in a letter from the California Department of Toxic Substances Control (DTSC) to San Diego Gas and Electric (SDG&E) titled *DTSC's Comments on the Review of Documents for the San Diego Gas & Electric South Bay Power Plant, Chula Vista, SRPD Docket Number SRPD 01/02 SCC-4263*. The text of the comment follows:

b. Table 2, Excavation Report – DTSC suggests that SDG&E clarify if analysis results for sampling location T5-AE7a with a concentration of < 10 mg/kg TPH is a confirmatory sample for T5-AE7 with 3,500 mg/kg. In addition, sampling locations T5-AE1 through T5-AE7a cannot be located in the figure section of the Excavation Report. DTSC suggests that a map be provided for review.

The response to the first portion of the comment is that sample T5-AE7a is a confirmation sample for the T5-AE7 location. I discussed this explanation with Mr. Charles Smith, the field manager during the excavation and have reviewed the field notes for the excavation project. A copy of the field notes for the days in question are attached. The notes include sketched maps that provide locations for the samples collected, including samples T5-AE1 through T5-AE7a. Following is a more detailed explanation for the sequence that led to the collection of samples T5-AE7 and T5-AE7a.

The original confirmation sampling had indicated that cleanup to standards had been obtained. However, part of the screening protocol included visual examination and removal if any hydrocarbon staining was noted. The purpose of the second round of excavation, conducted on May 3 and 4, 2001, was to remove areas of oil-stained soil that only became evident after the surface soils had dried out for several days. The contractor was remobilized to the site for the additional excavation. Again, the field screening procedure included a combination of visual examination coupled with analytical verification. After additional excavation, if the verification soil sample contained petroleum hydrocarbons above the cleanup level, or if staining became evident once the soil was allowed to dry, then additional soil was excavated. This procedure was continued until no staining was visible and verification samples indicated that excavation

was complete. The attached field notes indicate that sample T5-AE7 contained a mixture of green sand and brown clay, while sample T5-AE7a contained only green sand. The contaminated brown clay was removed and a second verification sample (T5-AE7a) was collected of the underlying sand that indicated adequate removal.

We trust this adequately addresses the DTSC question, and that the sketched maps provided in the field notes contain enough information to satisfy the second portion of the DTSC comment. If you require any additional information, please do not hesitate to contact me.

Sincerely,

Kelly Tilford, RG
Project Manager

Enclosure

cc: Charles Smith
File

April 23 — S4

7:00 CS onsite

FNCCI crew onsite establishing plan of action for spreading liner over stockpile

Shipped materials to Austin with Atif's help.

CS & Atif gave Mark Hays a tour of the excavation area.

Fred North & crew will set up barricades that blew over during the saturday storm.

9:30 off site to pack & Travel to Austin.

5/3/01 — S5

Weather - Clear & Fair

6:50 CS on site

Additional excavation requested by Bill Hays of the Port of San Diego

6:55 Pat of FNCCI on site
Safety Meeting

Walk around w/ Pat and point out stained areas to excavate

7:15 Start excavation at NE Quadrant of Tank 5

10:00 Complete excavating "stained" areas at Tanks 5 & move to Tank 4

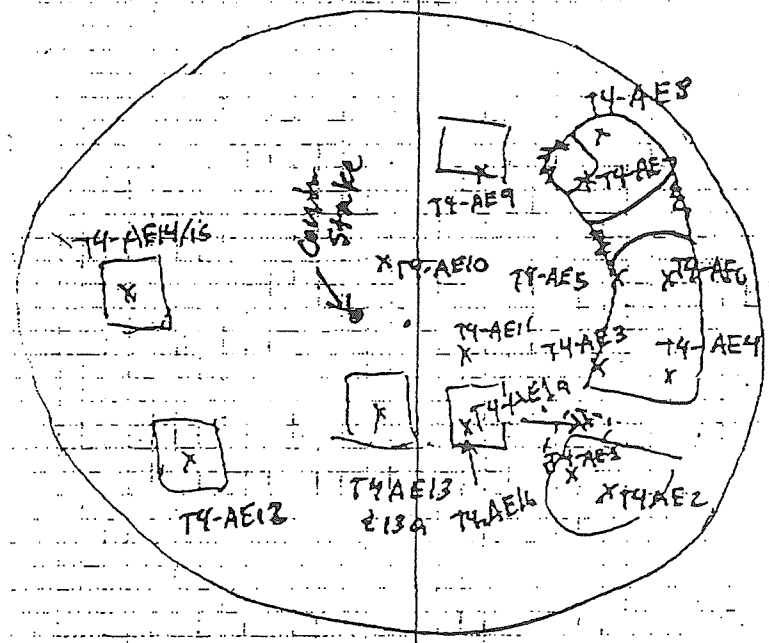
Most stains in Tank 4 are located at the east side, w/ 4 addition small stained areas

11:00 Called Mobil lab - will be here within the hour

Samples

Sample #	Sample Time	Sample Depth	Location/ Description	Result	Comment	#
T4-AE1	11:41	Surface	Side wall/ Clay w/ Snd	25,820	color	1
T4-AE2	11:43	"	Bottom/ Clay	<10		2
T4-AE3	12:46		sidewall clay w/snd	50		3
T4-AE4	12:49		Bottom/ Moving Clay	1,010		4
T4-AE1a	12:59		Sidewall grn. clay w/snd	<10		5
T4-AE5	13:01		Sidewall clay	70	color?	6
T4-AE6	13:06		Bottom clay	<10		7
T4-AE7	13:08		Side wall Clay w/snd	110		8
T4-AE8	13:19		Bottom clay	<10		9
T4-AE9	13:20		Side wall grn. snd	<10		10
T4-AE10	13:38		snd w/clay	19,860	Stain	11
T4-AE11	13:39		clay w/snd	<10	dark snd	12
T4-AE12	13:50		Clay w/snd bottom	<10		13
T4-AE13	13:52		Clay bottom	1,960		14
T4-AE14	14:13		clay w/snd (gu)	60		15
T4-AE15	14:15			70	up of AE14	D1
TS-AE1	14:44		bottom clay	<10		16
TS-AE2	14:46		bottom clay w/ snd	<10		17
T4-ER1	14:24			<10		ER1
T4-AE1b	14:18		clay w/ Snd	<10	Under AE10	18
TS-AE3	15:00		Snd/clay/ grvl	530	bottom	19
TS-AE4	14:59		Snd/clay/ grvl	<10	bottom	20
T4-AE1a	15:13		Clay	80	after T4-AE4	21

Schematic of Sample Locations - Additional Excavation at Tank 4



5/3/01

11:50 - Excavation Crew Take Lunch

11:61 - Mobile Lab is on site. Submit 2 samples

12:03 CS offsite - lunch & fix mix up at Motel

12:35 CS back on site

13:30 Complete Tank 4 - Dig hot spots at Tank 6

14:30 Return to Tank 4 - additional excavation at T4-AE4 - (1,010 ppm).

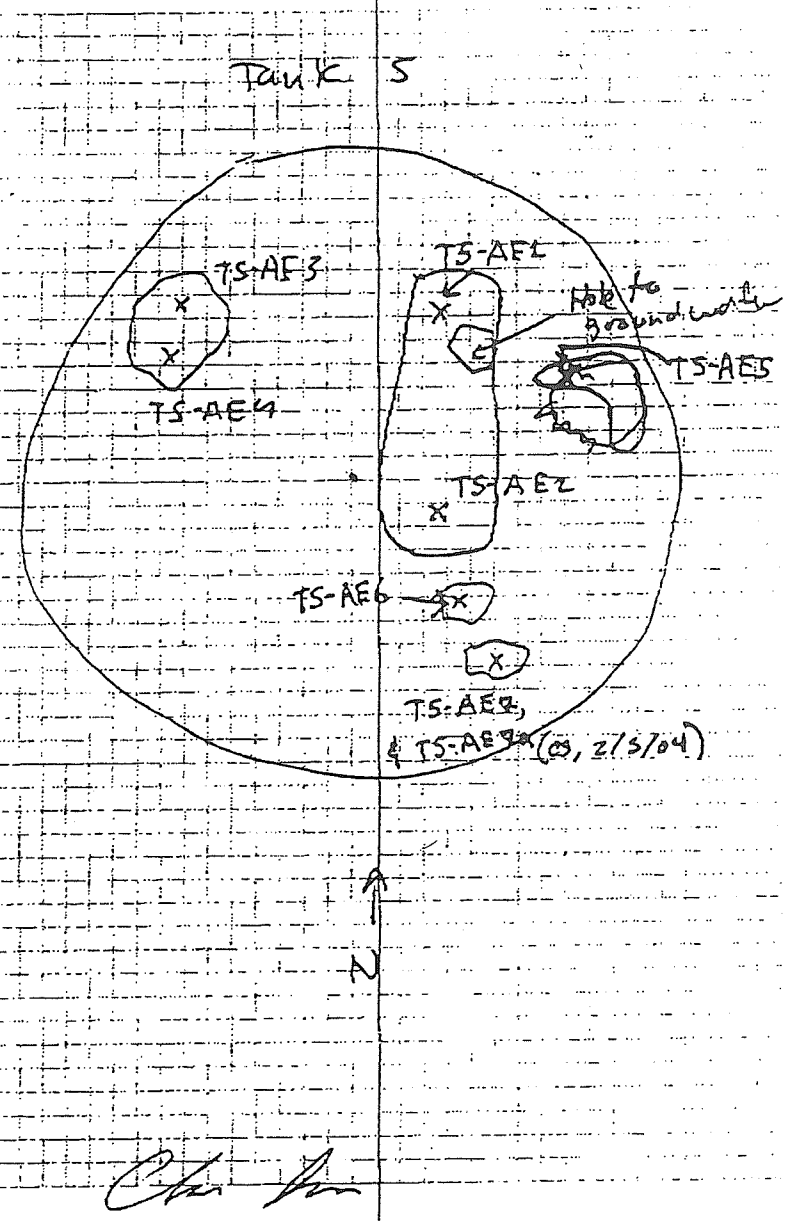
15:00 Remove stains located at Tank 5

15:30 Trucks off site

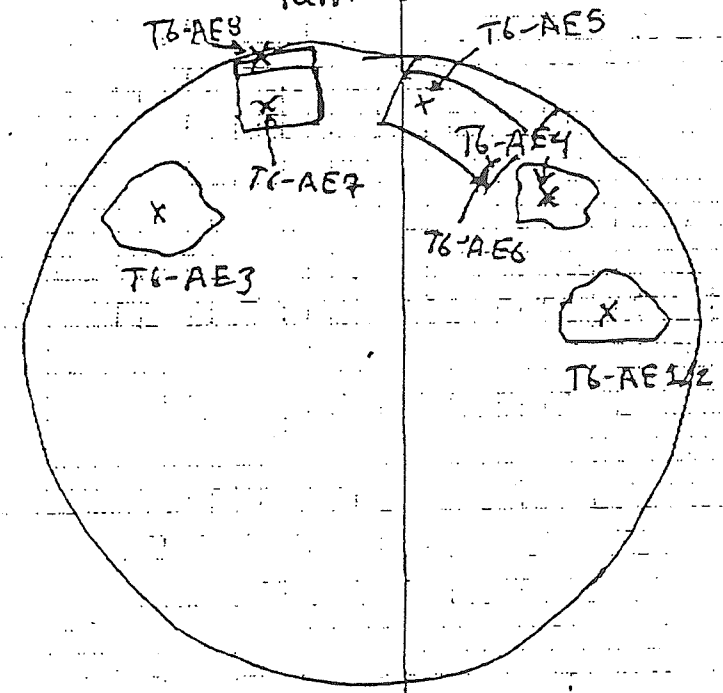
16:00 Part of FNCCI off site

18:10 Lab & CS off site

5/3/01



Sample #	Sample Time	Sample Depth	Location/ Description	Result	Comment #
T6-AE1	15:21	Surface	bottom/ snd/grvl/cly	220	22
T6-AE2	15:23			70	Dup of AE1 D2
T6-AE3	15:35		bottom/ Cly, grvl, snd	>10	23
T6-AE4	15:38		bottom cly	>10	24
T5-AE5	15:52		bottom/ cly/grvl/snd	>10	25
T5-AE6	15:54		bottom grvl/cly/snd	20	26
T5-AE7	16:13		cly/grvl/snd	3,490	27



5/4/01

weather - NICE!

6:30 CS on site

6:35 Truckers on site - 2 trucks showed up although only one is needed -

6:45 Lab on site

6:57 Pat of FNCCI on site.

Safety Meeting

Three spots left -

1- High sample at Tank 4 T4-AE13 - 1,960 ppm

2- High sample at Tank 5 T5-AE7 - 3,490

3- Stain at Tank 6 - NE Quadrant

Start at Tank 5.

7:30 Complete Tank 5 - move to get additional stain(s) at Tank 6

North & North East "ring" area at Tank 6 was wet 5/3/01 - as area dries, stains become apparent

8:30 Move to Tank 4 to excavate additional soil at T4-AE13

9:00 Completed - waiting for Analytical Results.

9:52 Analysis complete

No suprise hits

5/4/01 64

Sample#	Sample Time	Sample Depth	Location/ Description	Result	Comment	#
Decon	7:30	NA	Decon Pit	870		1
T5-AE7a	7:38	Surface	bottom grn Snd	<10		28
T6-AE5	8:10	"	Bottom cly w/ snd	105		29
T6-AE6	8:12	"	Bottom cly w/ sand	55		30
T6-AE7	8:36		Bottom Snd/Cly	<10		31
T6-AE8	8:39		wall grn cly & snd	80	Not Foundation Soil	32
T4-AE13a	8:45		floor cly	<10		33

5/4/01 65

9:58 Trucker checking & cleaning out beds of Trucks. No Trucks drove on contaminated soil so no decon is required other than cleaning beds.

Pat Plans to take ~~excavator~~ backhoe over to stockpile & get it ready to cover.

Plans are to cover stockpile Monday 5/7/01.

10:45 es offsite.
Pat From FNCCI is on site working stockpile area.