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JUNE 1987

QUARTERLY SAMPLING REPORT

SOUTHERN CALIFORNIA CHEMICAL CO., INC.

SANTA FE SPRINGS, CALIFORNIA

09-24-87

August, 1987

Prepared by:

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J. H. KLEINFELDER & ASSOCIATES
GEOTECHNICAL CONSULTANTS • MATERIALS TESTING
LAND AND WATER RESOURCES

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KLEINFELDER

September 24, 1987
File: 50-1014-03

California Regional Water Quality Control Board
Los Angeles Region
107 South Broadway, Room 4027
Los Angeles, California 90012-4596

Attention: Mr. Hank Yacoub

**Subject: Southern California Chemical Co., Inc.**
**Quarterly Sampling - June, 1987**

Dear Mr. Yacoub:

Attached to this letter is our quarterly sampling report of the Southern California Chemical Co., Inc., Santa Fe Springs facility. The report presents the results of analyses of water samples and water level measurements obtained on June 31 and July 1 and 2, 1987 from the onsite monitoring wells. This report also contains sampling protocols used during sampling and analysis.

We trust the information presented in the report meets your needs at this time. Should you have any questions, please feel free to contact us at your convenience.

Very truly yours,

**KLEINFELDER**

Kenneth L. Durand
Hydrogeologist

Brian Villalobos, R.G. 4153
Senior Hydrogeologist

KLD:BV:lrd

cc: Bud Torrance
John Leo
Mark Vest
William Wilson

50-1014-03

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# 1 INTRODUCTION

Presented in this report is a summary of laboratory analyses of water samples and water level measurements obtained during June 30 and July 1 and 2, 1987 from Southern California Chemical Co., Inc. groundwater monitoring wells. Included for comparison are the results of our previous water samplings.

Groundwater sampling began in February, 1985 to assess and mitigate a chromium and cadmium plume located in the vicinity of monitoring well MW-4 (see Plate 2). A quarterly groundwater sampling program was initiated in March of 1986. The purpose of the quarterly sampling program is to establish a data base for monitoring the compounds in the groundwater beneath the site. The most important aspects of this program are (a) assessment of location and concentration of the chromium and cadmium plume; (b) detection and evaluation of water quality changes; (c) characterization of background water quality; and (d) evaluation of the adequacy of this monitoring program.

This report presents the data obtained from the sixth quarterly sampling interval conducted in June of 1987 and all previous sampling data. The original laboratory reports and chain of custody records of the June 1987 sampling are included in the Appendices. The seventh quarterly sampling is scheduled for September, 1987 with a report to the Regional Water Quality Control Board to follow in October 1987.

# 2 MONITORING WELL SAMPLING

Sampling was performed by a **KLEINFELDER** environmental technician using the Mark Series I groundwater sampling vehicle.

All wells are measured for static water level prior to sampling. The wells were purged and sampled by using an air-activated submersible pump (bladder pump). To minimize the potential for cross-contamination, the pump and sample lines were thoroughly decontaminated before sampling and between wells, as described in Appendix A.

A total of twelve monitoring wells were sampled as part of this program. Eleven of the twelve wells sample groundwater from the uppermost portion of the first aquifer beneath the site. Well MW 4A is perforated in the lowest portion of the same aquifer.

As customary, the Regional Water Quality Control Board was notified prior to sampling and was provided the opportunity to observe sampling and to collect duplicate or split samples.

# 3 LABORATORY TESTING

Analytical testing was performed by Brown and Caldwell Laboratories of Pasadena, California. Quality assurance testing was provided by Analytical Technologies, Inc. of San Diego, California.

Laboratory testing for the June 1987 quarterly sampling consisted of analyzing a total of about 360 water samples. The primary laboratory, Brown & Caldwell Laboratories, analyzed 312 monitoring well samples, 34 quality control samples, and 3 spiked samples. The quality assurance laboratory, Analytical Technologies, Inc., analyzed 10 split monitoring well samples, and 3 spiked samples. Spike samples were provided by Analytical Technologies, Inc. of San Diego, California.

The results of the testing are summarized and presented in Tables 1 through 14. Individual test results are included in Appendix B and Chain-of-Custody records are included in Appendix C.

# 4 QUALITY CONTROL

To monitor the validity of the chemical data, the following quality assurance measures were employed.

## 4.1 DUPLICATE SAMPLES

Duplicate samples were taken at each sampling site. This ensures that if breakage or trouble with the testing equipment occurs, there is a backup sample for testing. This also allows a provision for a recheck on results if there is an inconsistency or if confirmation of results becomes necessary.

## 4.2 SPLIT SAMPLE TESTING

Split samples were collected and analyzed on five of the eleven monitoring wells. Monitoring wells MW-4, MW-4A, MW-7, MW-10, and MW-11 were analyzed by both laboratories. Table 13 presents the comparison of the split samples. The comparison indicates that the results of both laboratories agree favorably. The one exception is that ethyl benzene was detected at 2000 ug/l and toluene at 190 ug/l by Brown and Caldwell. ATI had non-detectable levels of ethyl benzene and toluene at a detection limit of 50 ug/l. The reason for this discrepancy is under review.

## 4.3 CROSS-CONTAMINATION TESTING

Quality control (QC) samples were collected to verify that cross-contamination between wells was not occurring during sampling. Samples were collected prior to sampling the first well and again between selected subsequent wells by the protocol described in

Appendix A. The sequence of sampling and the compounds detected in the quality control samples are presented in Table 14. Methylene chloride was detected at levels up to 22 ug/l in 4 of the 5 QC samples. This is not unusual since methylene chloride is a common laboratory contaminant. No other EPA method 601 or 602 compounds except chloroform at 1.2 ug/l in one sample were detected in the quality control samples above the detection limit of 0.5 ppb. The data indicate that the samples were not contaminated by the sampling process.

## 4.4 SPIKED SAMPLE TESTING

Analytical Technologies, Inc. of San Diego, California supplied a set of spiked samples. Samples were spiked with toluene at 500 ug/l, trichloroethylene at 100 ug/l, and ethyl benzene at 500 ug/l. Table 15 presents the percent recovery of each laboratory for these compounds. Percent recovery from the calculated concentration ranged from 74 to 154 percent which indicates a high level of confidence in the analytical results.

## 4.5 SAMPLE CONTROL

All samples were labeled during sampling and shipped refrigerated to the laboratories. A chain-of-custody form was maintained for all samples taken. Copies of these forms are included in Appendix C.

# 5 GROUNDWATER LEVELS

Depth to groundwater was measured prior to sampling of each monitoring well. The June 1987 measurements and all prior measurements are presented in Table 16. The groundwater surface for June 1987, both rose and declined in elevation beneath the facility from the previous quarter. Monitoring wells MW-4 and MW-6 rose 1.18 and 1.16 feet respectively. Groundwater elevations for the other nine wells declined between 2.86 feet and 0.16 feet.

# 6 GROUNDWATER QUALITY

Hexavalent chromium exists at elevated levels in monitoring well MW-4. Chromium concentrations were originally detected in this well at 500 mg/l in February 1985. Subsequent concentrations have fluctuated between 61 mg/l and the current 440 mg/l. Chromium was detected in monitoring well MW-9 at concentrations between 0.05 mg/l and 0.12 mg/l. This was the first confirmed detection of chromium in any well except MW-4.

Cadmium, the other compound of concern, was originally detected in monitoring well MW-4 at a concentration of 0.78 mg/l. Concentrations have decreased in MW-4 to below the Drinking Water Standard of 0.01 mg/l. Currently no monitoring wells have cadmium concentrations above 0.01 mg/l.

The EPA 40 CFR groundwater indicator parameters TOC, TOX, pH, and Specific Conductance, have remained relatively consistent with previous levels. The exception was the specific conductance in MW-2 and MW-4. Specific conductance increased in MW-2 from 1900 umhos/cm to 3400 umhos/cm and in MW-4 from 4000 umhos/cm to 11,000 umhos/cm.

Organic chemicals have not been used onsite by the Southern California Chemical Company, Inc. during production processes. However, a number of organic compounds exist in the groundwater beneath the site. Organics have been detected in wells MW-4, MW-10, and MW-11. Monitoring Well MW-11 is an upgradient well located along the northern property boundary of the site. Monitoring wells MW-10 and MW-4 are located adjacent to Pond 1 downgradient from MW-11. As discussed in previous reports, since

organic compounds have not been used onsite, the suspected source for the organics is a neighboring facility. The present analytical results continue to support this suggestion.

# 7 LIMITATIONS

This report is based on:

1. The observations of our field personnel
2. The results of laboratory tests performed by Brown & Caldwell Laboratory and Analytical Technologies, Inc.
3. Measurements of groundwater elevations in the 12 monitoring wells
4. Referenced documents

It is possible that variations in the soil or groundwater conditions could exist beyond the points explored in this investigation. Also, changes in the groundwater conditions could occur at some time in the future due to variations in rainfall, temperature, regional water usage, or other factors. The services performed by **KLEINFELDER** have been conducted in a manner consistent with the level of care and skill ordinarily exercised by members of our profession currently practicing under similar conditions in the Los Angeles County area. No other warranty, expressed or implied, is made.

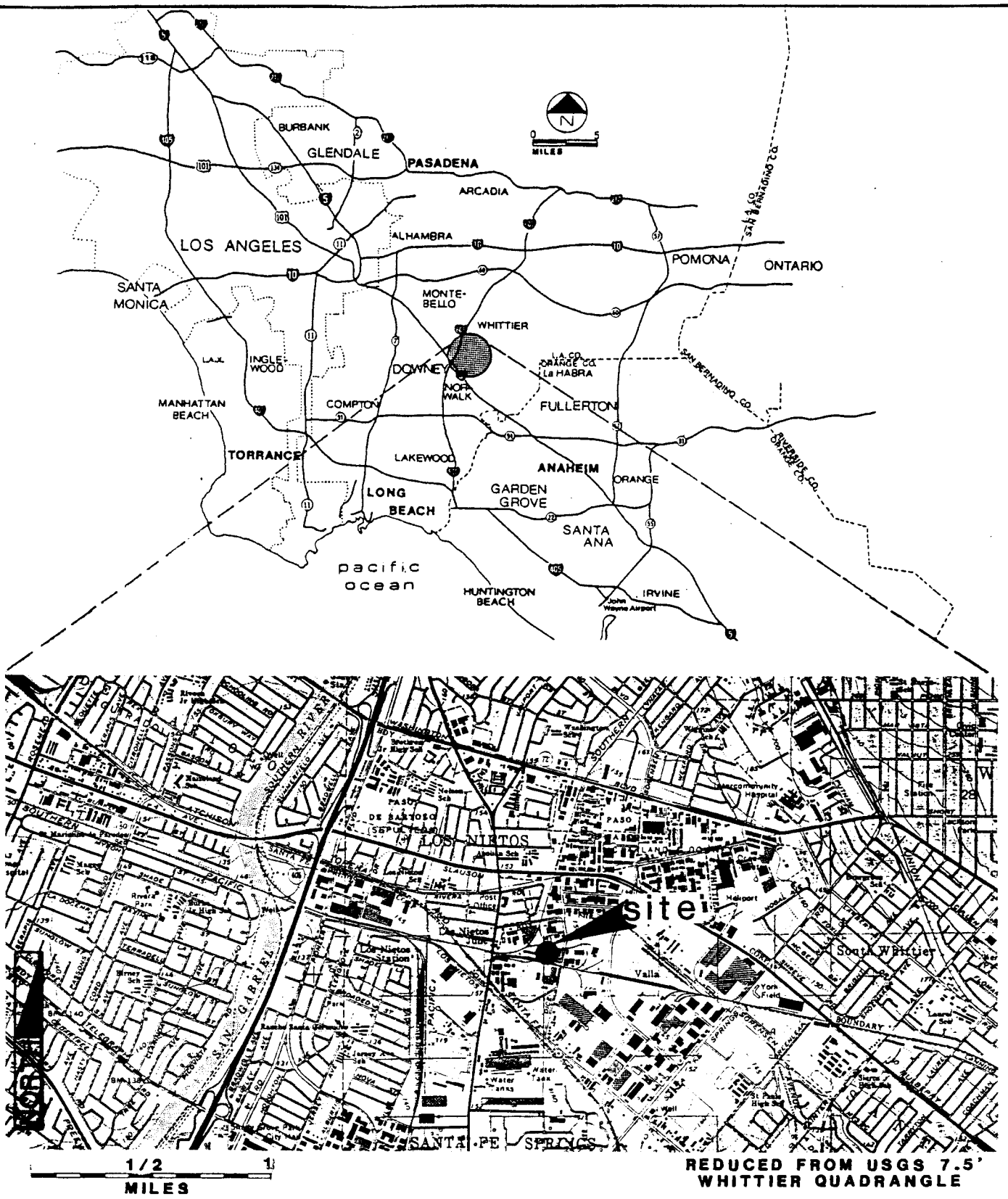
Respectfully submitted,

**KLEINFELDER**

Kenneth L. Durand
Staff Hydrogeologist

Brian Villalobos, R.G. #4153
Senior Hydrogeologist

KLD:BV:lrd




Drawn By: _____ Date: _____ Checked by: _____ Date _____

KLEINFELDER

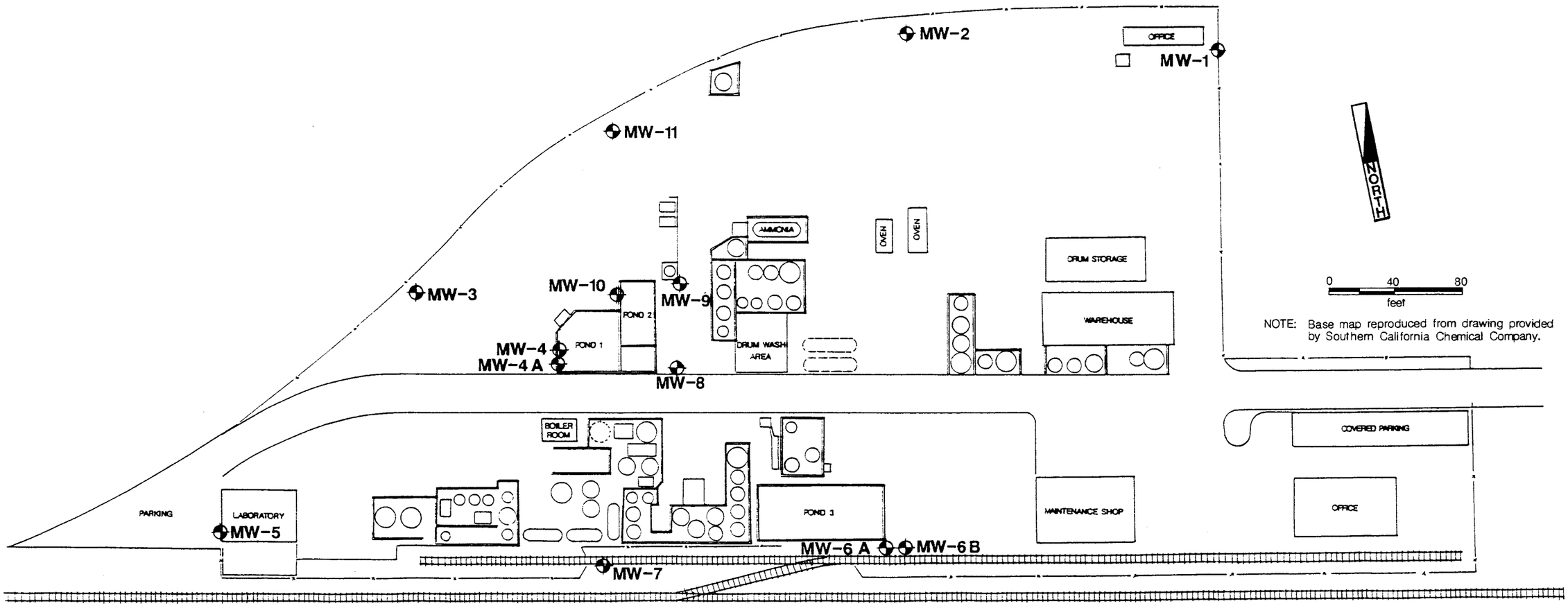
Project Number 50-1014-03 September 1987

SOUTHERN CALIFORNIA CHEMICAL
Santa Fe Springs, California

**SITE LOCATION MAP**

PLATE

**1**




NOTE: Base map reproduced from drawing provided by Southern California Chemical Company.

## EXPLANATION

MONITORING WELL, estimated location

SOUTHERN CALIFORNIA CHEMICAL COMPANY
Santa Fe Springs, California

**MONITORING WELL LOCATION MAP**

PLATE **2**

KLEINFELDER

Project Number 50-1014-02

August 1987

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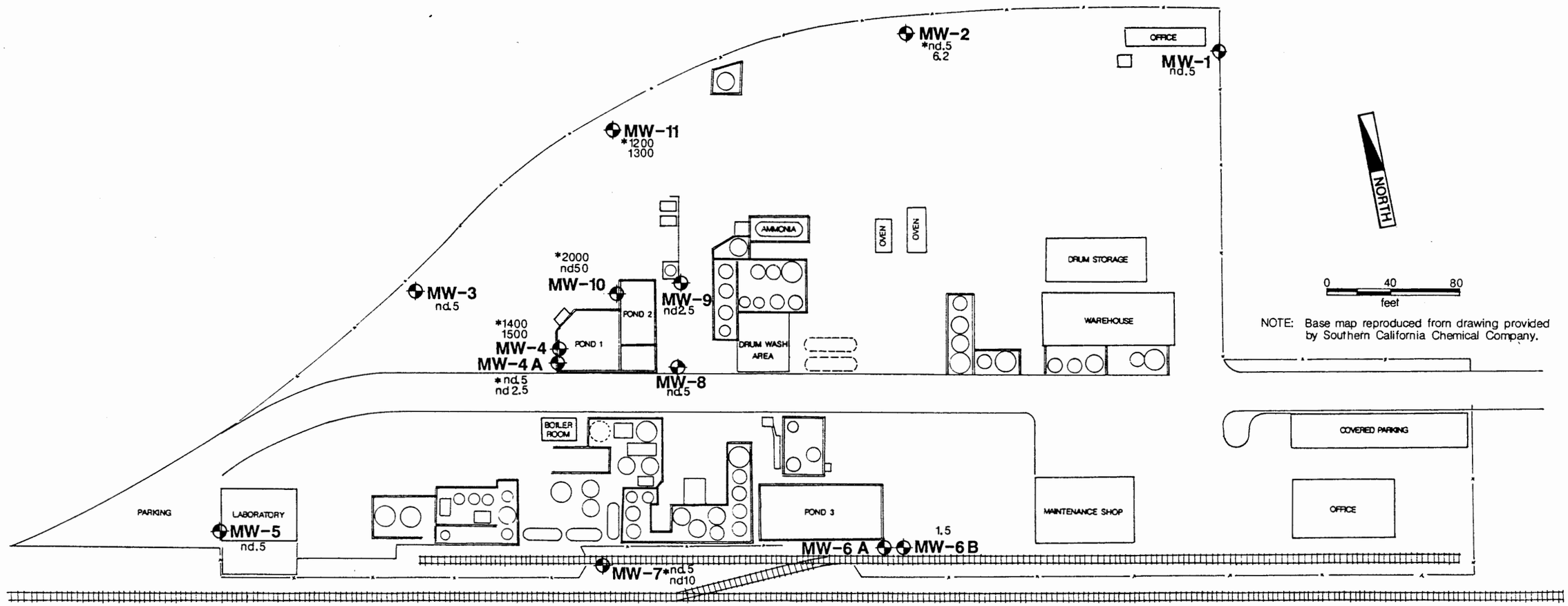



## EXPLANATION

MONITORING WELL, estimated location

*1200 Number with asterisk indicates sample analyzed by Analytical Technologies, Inc.

1300 Number without asterisk indicates sample analyzed by Brown & Caldwell

SOUTHERN CALIFORNIA CHEMICAL COMPANY
Santa Fe Springs, California

**CHEMICAL ANALYSIS of WATER SAMPLES FROM MONITORING WELLS**

**ETHYL BENZENE (ug/l)**

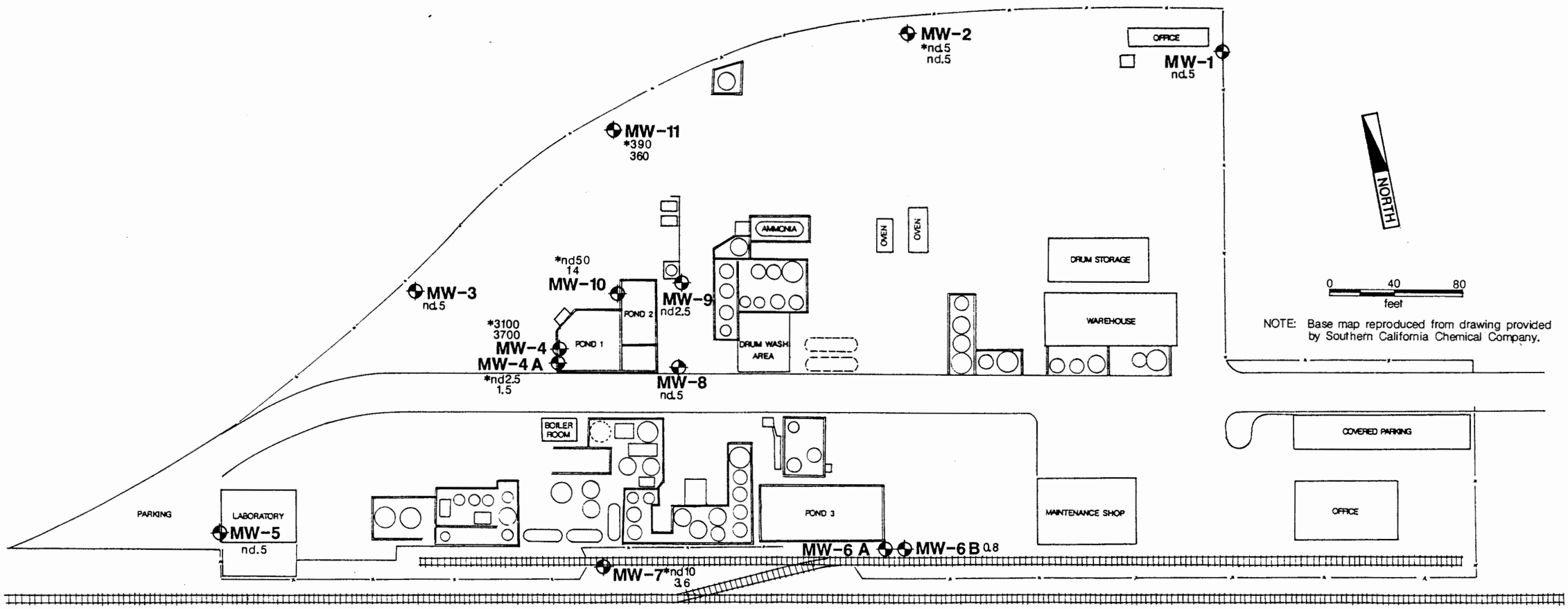
PLATE **3**

KLEINFELDER

Project Number 50-1014-02

August 1987

Drawn By: Date: Checked by: Date:




## EXPLANATION

MONITORING WELL, estimated location

*390 Number with asterisk indicates sample analyzed by Analytical Technologies, Inc.

360 Number without asterisk indicates sample analyzed by Brown & Caldwell

SOUTHERN CALIFORNIA CHEMICAL COMPANY
Santa Fe Springs, California

**CHEMICAL ANALYSIS of WATER SAMPLES FROM MONITORING WELLS**

**TOLUENE (ug/l)**

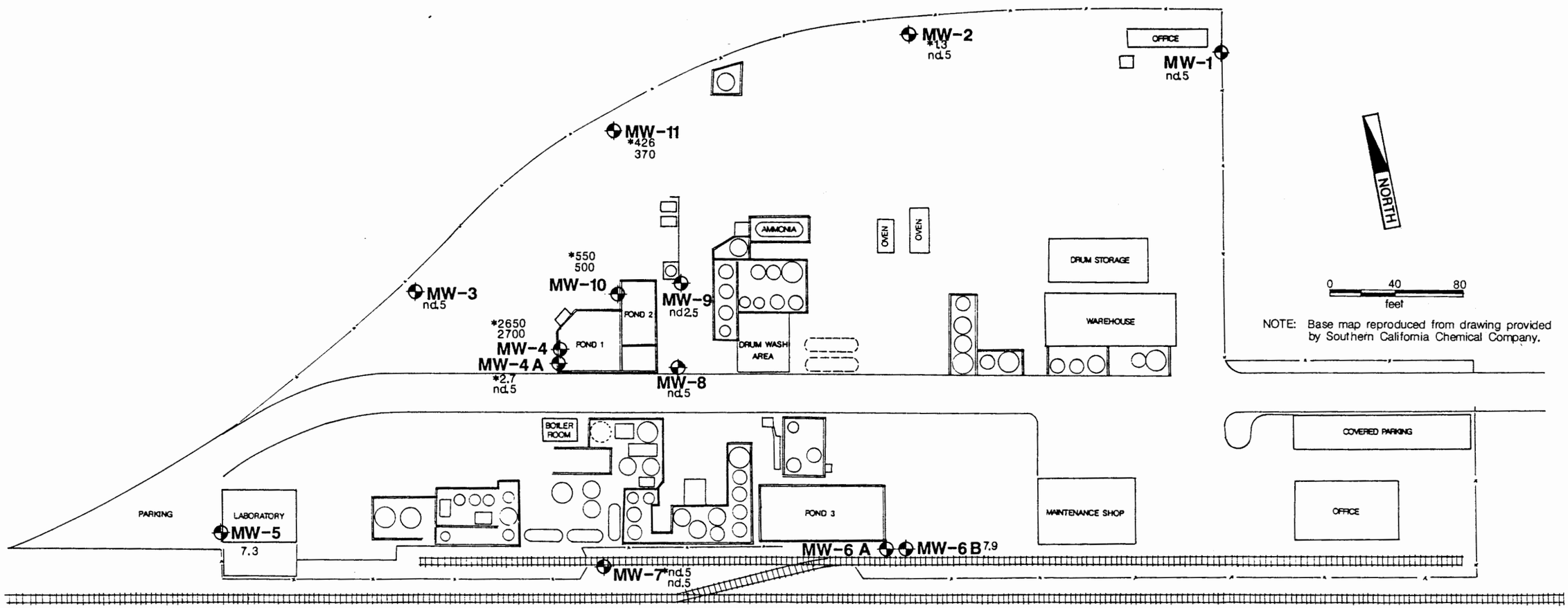
PLATE **4**

KLEINFELDER

Project Number 50-1014-02

August 1987

Drawn By: ____ Date: ____ Checked by: ____ Date: ____




NOTE: Base map reproduced from drawing provided by Southern California Chemical Company.

## EXPLANATION

MONITORING WELL, estimated location

*426 / 370 — Number with asterisk indicates sample analyzed by Analytical Technologies, Inc. Number without asterisk indicates sample analyzed by Brown & Caldwell

SOUTHERN CALIFORNIA CHEMICAL COMPANY
Santa Fe Springs, California

**CHEMICAL ANALYSIS of WATER SAMPLES FROM MONITORING WELLS**
TOTAL XYLENE (ug/l)

PLATE **5**

KLEINFELDER

Project Number 50-1014-02

August 1987

Drawn By: ____ Date: ____ Checked by: ____ Date: ____

# TABLE 1

SOUTHERN CALIFORNIA CHEMICAL CO., INC.

WATER QUALITY DATA

MONITORING WELL #1

| | DATE SAMPLED | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 2/85 - 3/85 | 7/85 - 8/85 | 3/86 | 5/86 | 7/86 | 9/86 | 12/86 | 3/87 | 6/87 - 7/87 |
| COMPOUND | E.P.A. Indicator Parameters (CFR 40 265.92) | | | | | | | | |
| pH (Units) | 7.3 | | 7.1 | | 7.2 | 7.0 | 7.38 | 6.8 | 7.0 |
| TOC (mg/l) | 3.7 | | 19 | | 35 | 21 | ND 3 | ND 3 | 13 |
| TOX (mg/l) | ND .05 | | ND .08 | | ND .06 | ND .08 | ND .08 | ND .08 | ND .08 |
| SP. COND. (umhos/cm) | 2300 | | 3400 | | 1650 | 3600 | 3200 | 2900 | 3400 |
| | Site Specific Indicator Parameters | | | | | | | | |
| CHROMIUM (TOTAL) (mg/l) | ND .0005 | | ND .03 | | ND .03 | ND .03 | ND .03 | ND .04 | ND .04 |
| CHROMIUM (HEX) (mg/l) | ND .05 | | ND .02 | | ND .02 | ND .02 | ND .02 | ND .02 | ND .02 |
| CADMIUM (mg/l) | ND .0002 | | ND .009 | | ND .02 | ND .01 | ND .01 | ND .01 | ND .01 |
| COPPER (mg/l) | ND .06 | | ND .02 | | ND .01 | ND .04 | ND .04 | ND .02 | 0.10 |
| ZINC (mg/l) | ND .019 | | 0.18 | | 0.04 | ND .08 | 0.018 | ND .03 | 0.06 |
| CHLORIDE (mg/l) | 330 | | 300 | | 650 | 920 | 700 | 570 | 720 |
| NITRATE as N (mg/l) | 7.0 | | 3.7 | | 0.5 | 1.3 | 4.06 | 5.3 | ND .1 |
| NITRATE as NO3 (mg/l) | 31 | | 17 | | 15 | 11 | 18 | 23 | ND .4 |
| NOTE: ND 1 = Compound was not detected at 1 ug/l. | | | | | | | | | |
| | Organic Compounds (E.P.A. Method 624) | | | | | | | | |
| 1,1-DICHLORETHANE (ug/l) | | | ND 1 | | ND 1 | ND 1 | ND 1 | ND .5 | ND .5 |
| 1,1-DICHLORETHYLENE (ug/l) | | | ND 1 | | ND 1 | ND 1 | ND 1 | ND .5 | ND .5 |
| 1,2-DICHLORETHANE (ug/l) | | | ND 1 | | ND 1 | 2 | 1 | 0.5 | 1 |
| BENZENE (ug/l) | | | ND 1 | | ND 1 | ND 1 | ND 1 | ND .5 | ND .5 |
| CARBON TETRACHLORIDE (ug/l) | | | ND 1 | | ND 1 | ND 1 | ND 1 | ND .5 | ND .5 |
| CHLOROFORM (ug/l) | | | ND 1 | | ND 1 | ND 1 | ND 1 | ND .5 | ND .5 |
| ETHYL BENZENE (ug/l) | | | ND 1 | | ND 1 | ND 1 | ND 1 | ND .5 | ND .5 |
| TRICHLORETHYLENE (ug/l) | | | 16 | | 16 | 15 | 15 | 9 | 11 |
| TOLUENE (ug/l) | | | ND 1 | | ND 1 | ND 1 | ND 1 | ND .5 | ND .5 |
| XYLENE (ug/l) | | | ND 1 | | ND 1 | ND 1 | ---- | ND .5 | ND .5 |
| METHYLENE CHLORIDE (ug/l) | | | ND 1 | | ND 1 | ND 1 | ND 1 | ND 2 | ND .5 |

NOTE: ND 1 = Compound was not detected at 1 ug/l.

# TABLE 2

SOUTHERN CALIFORNIA CHEMICAL CO., INC.

WATER QUALITY DATA

MONITORING WELL #2

| | DATE SAMPLED | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1/85 - 3/85 | 1/85 - 3/85 | 1/86 | 3/86 | 7/86 | 9/86 | 1/86 | 3/87 | 6/87 - 7/87 |
| COMPOUND | E.P.A. Indicator Parameters (CFR 40 136.3) | | | | | | | | |
| pH (Units) | 7.3 | | 7.4 | | 7.7 | 7.4 | 7.68 | 7.1 | 7.1 |
| TOC (mg/l) | 24 | | 4.3 | | ND 2 | ND 2 | ND 2 | ND 3 | ND 2 |
| TOX (mg/l) | ND .05 | | ND .08 | | ND .08 | ND .13 | ND .08 | ND .08 | ND .08 |
| SP. COND. (uamos/cm) | 2300 | | 1900 | | 1900 | 2100 | 2280 | 1900 | 2400 |
| Site Specific Indicator Parameters | | | | | | | | | |
| CHROMIUM (TOTAL) (mg/l) | ND .0005 | ND .033 | ND .03 | | ND .03 | ND .11 | ND .03 | ND .04 | ND .04 |
| CHROMIUM (HEX) (mg/l) | ND .05 | ND .033 | ND .03 | | ND .02 | ND .11 | ND .02 | ND .02 | ND .02 |
| CADMIUM (mg/l) | ND .0002 | | ND .009 | | ND .01 | ND .1 | ND .01 | ND .01 | ND .01 |
| COPPER (mg/l) | ND .08 | | ND .02 | | ND .02 | ND .1 | ND .04 | ND .02 | ND .02 |
| ZINC (mg/l) | ND .019 | | ND .03 | | ND .04 | ND .1 | 0.021 | ND .021 | ND .03 |
| CHLORIDE (mg/l) | 270 | | 180 | | 220 | 410 | 510 | 250 | 700 |
| NITRATE as N (mg/l) | 2.1 | | 5.8 | | 5.4 | 5.1 | 6.25 | 7.1 | 8.8 |
| NITRATE as NO3 (mg/l) | 9.1 | | 25 | | 24 | 22 | 27.7 | 32 | 39 |
| NOTE: ND 1 = Compound was not detected at 1 ug/l. | | | | | | | | | |
| Organic Compounds (E.P.A. Method 624) | | | | | | | | | |
| 1,1-DICHLOROETHANE (ug/l) | 4 | | 3 | | ND 1 | 2 | 4 | 21 | 20 |
| 1,1-DICHLOROETHYLENE (ug/l) | 3 | | ND 1 | | ND 1 | 1 | 5 | 4.5 | 11 |
| 1,2-DICHLOROETHANE (ug/l) | ND 1 | | ND 1 | | 3 | 1 | ND 1 | ND .5 | 2.1 |
| BENZENE (ug/l) | ND 1 | | ND 1 | | ND 1 | ND 1 | ND 1 | ND .5 | ND .5 |
| CARBON TETRACHLORIDE (ug/l) | ND 1 | | ND 1 | | ND 1 | ND 1 | ND 1 | ND .5 | ND .5 |
| CHLOROFORM (ug/l) | ND 1 | | ND 1 | | ND 1 | 1 | 2 | 1 | ND .5 |
| ETHYL BENZENE (ug/l) | ND 1 | | ND 1 | | 3 | 1 | ND 1 | ND .5 | 5.1 |
| TRICHLOROETHYLENE (ug/l) | 21 | | 22 | | 11 | 19 | 57 | 20 | 41 |
| TOLUENE (ug/l) | ND 1 | | ND 1 | | 1 | ND 1 | ND 1 | ND .5 | ND .5 |
| XYLENE (ug/l) | ND 1 | | ND 1 | | 1 | ND 1 | ---- | ND .5 | ND .5 |
| METHYLENE CHLORIDE (ug/l) | ND 1 | | ND 1 | | ND 1 | ND 1 | ND 1 | ND 1 | ND .5 |

NOTE: ND 1 = Compound was not detected at 1 ug/l.

# TABLE 3

SOUTHERN CALIFORNIA CHEMICAL CO., INC.

WATER QUALITY DATA

MONITORING WELL #3

| | DATE SAMPLED | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 2/85 - 3/85 | 7/85 - 8/85 | 3/86 | 5/86 | 7/86 | 9/86 | 12/86 | 3/87 | 6/87 - 7/87 |
| COMPOUND | E.P.A. Indicator Parameters (CFR 40 265.92) | | | | | | | | |
| pH (units) | 7.4 | | 7.0 | | 7.2 | 7.2 | 7.55 | 6.9 | 7.0 |
| TOC (mg/l) | 16 | | 190 | | 44 | 29 | 31 | 20.5 | 21 |
| TOX (mg/l) | 0.17 | | ND .08 | | .18 | .17 | .21 | .22 | .15 |
| SP. COND. (uamos/cm) | 1700 | | 1500 | | 2200 | 2200 | 2400 | 2300 | 2200 |
| | Site Specific Indicator Parameters | | | | | | | | |
| CHROMIUM (TOTAL) (mg/l) | ND .0005 | ND .033 | ND .03 | | ND .03 | ND .03 | ND .03 | ND .04 | ND .04 |
| CHROMIUM (HEX) (mg/l) | ND .05 | ND .033 | ND .02 | | ND .02 | ND .02 | ND .02 | ND .02 | ND .02 |
| CADMIUM (mg/l) | ND .0002 | ND .011 | ND .009 | | ND .01 | ND .01 | ND .01 | ND .01 | ND .01 |
| COPPER (mg/l) | ND .08 | | ND .02 | | ND .02 | ND .04 | ND .04 | ND .02 | 0.02 |
| ZINC (mg/l) | ND .019 | | 0.26 | | ND .04 | ND .08 | 0.021 | ND .031 | ND .03 |
| CHLORIDE (mg/l) | 170 | | 76 | | 400 | 520 | 550 | 420 | 380 |
| NITRATE as N (mg/l) | 3.0 | | ND 1 | | 6.5 | 4.1 | 4.81 | 3.4 | 3.8 |
| NITRATE as NO3 (mg/l) | 13 | | ND 4.4 | | 29 | 18 | 21.3 | 15 | 17 |

NOTE: ND 1 = Compound was not detected at 1 ug/l.

| | Organic Compounds (E.P.A. Method 624) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1,1-DICHLOROETHANE (ug/l) | 6 | ND 50 | 5 | 4 | 5 | 5 | 4 | 1.6 |
| 1,1-DICHLOROETHYLENE (ug/l) | 14 | ND 50 | 11 | 7 | 13 | 17 | 7.8 | 3.9 |
| 1,2-DICHLOROETHANE (ug/l) | ND 1 | ND 50 | 9 | 6 | 7 | 11 | 18 | 2.1 |
| BENZENE (ug/l) | 9 | ND 50 | 3 | ND 1 | 3 | 2 | ND .5 | ND .5 |
| CARBON TETRACHLORIDE (ug/l) | 73 | ND 50 | 78 | 110 | 53 | 87 | 50 | 73 |
| CHLOROFORM (ug/l) | 46 | ND 50 | 36 | 97 | 33 | 45 | 20 | 22 |
| ETHYL BENZENE (ug/l) | ND 1 | 95,000 | 1100 | ND 1 | 310 | 4 | ND .5 | ND .5 |
| TRICHLOROETHYLENE (ug/l) | 320 | ND 50 | 160 | 170 | [illegible] | 160 | 98 | 70 |
| TOLUENE (ug/l) | 2 | 15,000 | 11 | ND 1 | ND 1 | ND 1 | ND .5 | ND .5 |
| XYLENE (ug/l) | ND 1 | 20,000 | 2000 | ND 1 | [illegible] | ---- | ND .5 | ND .5 |
| METHYLENE CHLORIDE (ug/l) | ND 1 | ND 50 | ND 1 | ND 1 | 2 | ND 1 | ND 2 | 2.2 |

NOTE: ND 1 = Compound was not detected at 1 ug/l.

# TABLE 4

SOUTHERN CALIFORNIA CHEMICAL CO., INC.

WATER QUALITY DATA

MONITORING WELL #4

| | DATE SAMPLED | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 2/85 - 3/85 | 7/85 - 8/85 | 3/86 | 5/86 | 7/86 | 9/86 | 12/86 | 3/87 | 6/87 - 7/87 |
| COMPOUND | E.P.A. Indicator Parameters (CFR 40 265.92) | | | | | | | | |
| pH (units) | 6.3 | | 7.1 | | 7.1 | 6.6 | 7.4 | 6.7 | 6.3 |
| TOC (mg/l) | 36 | | 26 | | 110 | 79 | 98 | 26.5 | 133 |
| TOX (mg/l) | ND .05 | | .26 | | .19 | 2.3 | 1.40 | .68 | 2.10 |
| SP. COND. (umhos/cm) | 6400 | | 3600 | | 3500 | 4250 | 4950 | 4000 | 11,000 |
| | Site Specific Indicator Parameters | | | | | | | | |
| CHROMIUM (TOTAL) (mg/l) | 500 | 550 | 61 | | 120 | 180 | 170 | 98 | 440 |
| CHROMIUM (HEX) (mg/l) | 500 | 500 | | | 120 | 180 | 170 | 100 | 430 |
| CADMIUM (mg/l) | 0.78 | 0.92 | 0.035 | | 0.04 | 0.09 | 0.07 | 0.05 | ND .01 |
| COPPER (mg/l) | ND .08 | | ND .02 | | ND .02 | ND .04 | ND .03 | ND .02 | ND .02 |
| ZINC (mg/l) | 0.06 | | ND .03 | | ND .04 | ND .08 | ND .007 | ND .03 | ND .03 |
| CHLORIDE (mg/l) | 2300 | | 1100 | | 770 | 1300 | 1400 | 960 | 3500 |
| NITRATE as N (mg/l) | 18 | 12 | ND 13 | | 0.5 | 1.3 | 1.1 | ND .1 | ND .7 |
| NITRATE as NO3 (mg/l) | 81 | 55 | ND 55 | | 2.4 | 5.6 | 5.0 | ND .4 | ND 3 |
| NOTE: ND 1 = Compound was not detected at 1 ug/l. | | | | | | | | | |
| | Organic Compounds (E.P.A. Method 624) | | | | | | | | |
| 1,1-DICHLOROETHANE (ug/l) | | 100 | 100 | 42 | 57 | 61 | 120 | 27 | 110 |
| 1,1-DICHLOROETHYLENE (ug/l) | | 100 | 42 | 34 | 41 | 61 | 67 | 30 | 94 |
| 1,2-DICHLOROETHANE (ug/l) | | ND 50 | 17 | 34 | 61 | 12 | 140 | 74 | 74 |
| BENZENE (ug/l) | | ND 50 | 16 | 9 | ND 1 | ND 10 | 5 | ND 5 | ND 5 |
| CARBON TETRACHLORIDE (ug/l) | | ND 50 | ND 1 | ND 1 | ND 1 | ND 10 | ND 1 | ND 5 | ND 5 |
| CHLOROFORM (ug/l) | | ND 50 | 7 | 3 | 8 | 10 | 12 | 6.2 | 30 |
| ETHYL BENZENE (ug/l) | | 3000 | 36 | 50 | 1100 | 670 | 220 | 160 | 1500 |
| TRICHLOROETHYLENE (ug/l) | | 550 | 140 | 170 | 200 | 280 | 290 | 180 | 280 |
| TOLUENE (ug/l) | | 8300 | 130 | 25 | 330 | 160 | 220 | 240 | 3700 |
| XYLENE (ug/l) | | 10,000 | 100 | 30 | 300 | 300 | 300 | 731 | 2700 |
| METHYLENE CHLORIDE (ug/l) | | 100 | 12 | ND 1 | 17 | ND 10 | ND 1 | 27 | 140 |

NOTE: ND 1 = Compound was not detected at 1 ug/l.

# TABLE 5

SOUTHERN CALIFORNIA CHEMICAL CO., INC.

WATER QUALITY DATA

MONITORING WELL #4A

| | DATE SAMPLED | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 2/85 - 3/85 | 7/85 - 8/85 | 3/86 | 5/86 | 7/86 | 9/86 | 12/86 | 3/87 | 6/87 - 7/87 |
| COMPOUND | E.P.A. Indicator Parameters (CFR 40 265.92) | | | | | | | | |
| pH (units) | | 6.8 | 7.5 | | 7.6 | 7.5 | 7.7 | | 7.7 |
| TOC (mg/l) | | 40 | 8.3 | | ND 3 | ND 3 | ND 3 | | ND 3 |
| TOX (mg/l) | | ND .05 | ND .08 | | ND .08 | ND .08 | ND .08 | | .14 |
| SP. COND. (umhos/cm) | | 1500 | 1500 | | 850 | 1400 | 1525 | | 1600 |
| | Site Specific Indicator Parameters | | | | | | | | |
| CHROMIUM (TOTAL) (mg/l) | | ND .03 | ND .03 | | ND .03 | ND .03 | ND .03 | | ND .04 |
| CHROMIUM (HEX) (mg/l) | | ND .5 | | | ND .02 | ND .02 | ND .02 | | ND .02 |
| CADMIUM (mg/l) | | ND .01 | ND .01 | | ND .01 | ND .01 | ND .01 | | ND .01 |
| COPPER (mg/l) | | | ND .02 | | ND .02 | ND .04 | ND .03 | | ND .02 |
| ZINC (mg/l) | | | ND .03 | | ND .04 | ND .08 | ND .00 | | ND .03 |
| CHLORIDE (mg/l) | | | 100 | | 110 | 120 | 130 | | 160 |
| NITRATE as N (mg/l) | | 4.5 | 7.5 | | 6.1 | 4.7 | 6.3 | | 5.4 |
| NITRATE as NO3 (mg/l) | | 20 | 33 | | 27 | 21 | 29 | | 24 |
| NOTE: ND 1 = Compound was not detected at 1 ug/l. | | | | | | | | | |
| | Organic Compounds (E.P.A. Method 624) | | | | | | | | |
| 1,1-DICHLOROETHANE (ug/l) | | | 13 | | 11 | 3 | 19 | | 140 |
| 1,1-DICHLOROETHYLENE (ug/l) | | | 1 | | 2 | ND 1 | 2 | | 50 |
| 1,2-DICHLOROETHANE (ug/l) | | | ND 1 | | ND 1 | ND 1 | 2 | | 1.5 |
| BENZENE (ug/l) | | | 8 | | ND 1 | ND 1 | ND 1 | | ND .5 |
| CARBON TETRACHLORIDE (ug/l) | | | ND 1 | | ND 1 | ND 1 | ND 1 | | ND .5 |
| CHLOROFORM (ug/l) | | | ND 1 | | ND 1 | ND 1 | 2 | | 17 |
| ETHYL BENZENE (ug/l) | | | ND 1 | | ND 1 | ND 1 | ND 1 | | ND .5 |
| TRICHLOROETHYLENE (ug/l) | | | 6 | | 7 | 3 | 12 | | 82 |
| TOLUENE (ug/l) | | | ND 1 | | ND 1 | ND 1 | ND 1 | | 1.5 |
| XYLENE (ug/l) | | | ND 1 | | ND 1 | ND 1 | ---- | | ND .5 |
| METHYLENE CHLORIDE (ug/l) | | | ND 1 | | ND 1 | ND 1 | ND 1 | | 11 |

NOTE: ND 1 = Compound was not detected at 1 ug/l.

# TABLE 6

SOUTHERN CALIFORNIA CHEMICAL CO., INC.

WATER QUALITY DATA

MONITORING WELL #5

| | DATE SAMPLED | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 2/85 - 3/85 | 7/85 - 8/85 | 3/86 | 5/86 | 7/86 | 9/86 | 12/86 | 3/87 | 6/87 - 7/87 |
| COMPOUND | E.P.A. Indicator Parameters (CFR 40 265.92) | | | | | | | | |
| pH (Units) | 7.3 | | 7.4 | | 7.3 | 7.3 | 7.82 | 6.9 | 7.0 |
| TOC (mg/l) | ND 3 | | 4.8 | | 5 | 3 | ND 3 | ND 3 | ND 3 |
| TOX (mg/l) | .19 | | .16 | | .65 | .18 | .30 | .45 | .36 |
| SP. COND. (umhos/cm) | 1700 | | 1200 | | 1400 | 1100 | 1220 | 1400 | 1400 |
| | Site Specific Indicator Parameters | | | | | | | | |
| CHROMIUM (TOTAL) (mg/l) | ND .0005 | | ND .03 | | ND .03 | ND .03 | ND .03 | ND .04 | ND .04 |
| CHROMIUM (HEX) (mg/l) | ND .05 | | ND .02 | | ND .02 | ND .02 | ND .02 | ND .02 | ND .02 |
| CADMIUM (mg/l) | ND .0002 | | ND .009 | | ND .01 | ND .01 | ND .01 | ND .01 | ND .01 |
| COPPER (mg/l) | ND .08 | | ND .02 | | ND .02 | ND .04 | ND .04 | ND .02 | ND .02 |
| ZINC (mg/l) | ND .019 | | 0.18 | | ND .04 | ND .08 | ND .001 | ND .031 | ND .03 |
| CHLORIDE (mg/l) | 2.0 | | 66 | | 79 | 290 | 143.5 | 110 | 110 |
| NITRATE as N (mg/l) | 0.42 | | 8.8 | | 12 | 8.6 | 11.13 | 10 | 15 |
| NITRATE as NO3 (mg/l) | 1.9 | | 39 | | 55 | 38 | 49.3 | 45 | 65 |
| NOTE: ND 1 = Compound was not detected at 1 ug/l. | | | | | | | | | |
| | Organic Compounds (E.P.A. Method 624) | | | | | | | | |
| 1,1-DICHLOROETHANE (ug/l) | | ND 1 | ND 1 | | 2 | 2 | 7 | 4 | 5.4 |
| 1,1-DICHLOROETHYLENE (ug/l) | | ND 1 | ND 1 | | 3 | 3 | 4 | 2.7 | 5.2 |
| 1,2-DICHLOROETHANE (ug/l) | | ND 1 | ND 1 | | ND 1 | ND 1 | ND 1 | ND .5 | ND .5 |
| BENZENE (ug/l) | | 5 | ND 1 | | ND 1 | ND 1 | ND 1 | ND .5 | ND .5 |
| CARBON TETRACHLORIDE (ug/l) | | 3 | 11 | | 45.5 | 37 | 68 | 100 | 120 |
| CHLOROFORM (ug/l) | | 2 | 10 | | 14.5 | 16 | 43 | 48 | 50 |
| ETHYL BENZENE (ug/l) | | ND 1 | ND 1 | | ND 1 | 6 | ND 1 | ND .5 | ND .5 |
| TRICHLOROETHYLENE (ug/l) | | 10 | 24 | | 64 | 36 | 70 | 70 | 59 |
| TOLUENE (ug/l) | | 1 | ND 1 | | ND 1 | ND 1 | ND 1 | ND .5 | ND .5 |
| XYLENE (ug/l) | | ND 1 | ND 1 | | ND 1 | ND 1 | ---- | ND .5 | 7.3 |
| METHYLENE CHLORIDE (ug/l) | | ND 1 | ND 1 | | ND 1 | ND 1 | ND 1 | ND 2 | ND .5 |

NOTE: ND 1 = Compound was not detected at 1 ug/l.

# TABLE 7

SOUTHERN CALIFORNIA CHEMICAL CO., INC.

WATER QUALITY DATA

MONITORING WELL #6B

| | DATE SAMPLED | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 2/85 - 3/85 | 7/85 - 8/85 | 3/86 | 5/86 | 7/86 | 9/86 | 12/86 | 3/87 | 6/87 - 7/87 |
| COMPOUND | E.P.A. Indicator Parameters (CFR 40 265.92) | | | | | | | | |
| pH (units) | 7.6 | | 7.4 | | 7.5 | 7.8 | 7.6 | 7.1 | 7.4 |
| TOC (mg/l) | ND 3 | | 6.5 | | ND 3 | ND 3 | ND 3 | ND 3 | ND 3 |
| TOX (mg/l) | 0.1 | | ND .08 | | ND .08 | ND .08 | ND .08 | ND .08 | ND .09 |
| SP. COND. (uamos/cm) | 1400 | | 1300 | | 1400 | 1200 | 1425 | 1400 | 1600 |
| | Site Specific Indicator Parameters | | | | | | | | |
| CHROMIUM (TOTAL) (mg/l) | 0.0038 | | ND .03 | | ND .03 | ND .02 | ND .03 | ND .04 | ND .04 |
| CHROMIUM (HEX) (mg/l) | ND .05 | | ND .02 | | ND .02 | ND .02 | ND .02 | ND .02 | ND .02 |
| CADMIUM (mg/l) | ND .0002 | | ND .009 | | ND .01 | ND .01 | ND .01 | ND .01 | ND .01 |
| COPPER (mg/l) | ND .09 | | ND .02 | | ND .02 | ND .04 | ND .03 | ND .02 | ND .02 |
| ZINC (mg/l) | ND .03 | | ND .03 | | ND .04 | ND .08 | ND .007 | ND .03 | ND .03 |
| CHLORIDE (mg/l) | 79 | | 220 | | 82 | 100 | 140 | 92 | 130 |
| NITRATE as N (mg/l) | 6.9 | | 8.8 | | 7.0 | 5.2 | 6.1 | 7 | 8.4 |
| NITRATE as NO3 (mg/l) | 28 | | 39 | | 31 | 23 | 27 | 31 | 37 |
| NOTE: ND 1 = Compound was not detected at 1 ug/l. | | | | | | | | | |
| | Organic Compounds (E.P.A. Method 624) | | | | | | | | |
| 1,1-DICHLORDETHANE (ug/l) | | | ND 1 | | ND 1 | ND 1 | ND 1 | ND .5 | ND .5 |
| 1,1-DICHLORDETHYLENE (ug/l) | | | ND 1 | | ND 1 | ND 1 | ND 1 | ND .5 | ND .5 |
| 1,2-DICHLORDETHANE (ug/l) | | | ND 1 | | ND 1 | ND 1 | ND 1 | ND .5 | ND .5 |
| BENZENE (ug/l) | | | ND 1 | | ND 1 | ND 1 | ND 1 | ND .5 | ND .5 |
| CARBON TETRACHLORIDE (ug/l) | | | ND 1 | | ND 1 | ND 1 | ND 1 | ND .5 | ND .5 |
| CHLOROFORM (ug/l) | | | ND 1 | | ND 1 | ND 1 | ND 1 | ND .5 | ND .5 |
| ETHYL BENZENE (ug/l) | | | ND 1 | | ND 1 | ND 1 | ND 1 | ND .5 | 1.5 |
| TRICHLORDETHYLENE (ug/l) | | | 30 | | 19 | 23.5 | 24 | 21 | 20 |
| TOLUENE (ug/l) | | | ND 1 | | ND 1 | ND 1 | ND 1 | ND .5 | 0.8 |
| XYLENE (ug/l) | | | ND 1 | | ND 1 | ND 1 | ---- | ND .5 | 7.9 |
| METHYLENE CHLORIDE (ug/l) | | | ND 1 | | ND 1 | ND 1 | ND 1 | ND .5 | 2.6 |

NOTE: ND 1 = Compound was not detected at 1 ug/l.

# TABLE 8

SOUTHERN CALIFORNIA CHEMICAL CO., INC.

WATER QUALITY DATA

MONITORING WELL #7

| | DATE SAMPLED | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 2/85 - 3/85 | 7/85 - 8/85 | 3/86 | 5/86 | 7/86 | 9/86 | 12/86 | 3/87 | 6/87 - 7/87 |
| COMPOUND | E.P.A. Indicator Parameters (CFR 40 265.92) | | | | | | | | |
| pH (Units) | | 6.3 | 7.3 | | 7.4 | 7.2 | 7.3 | 6.5 | 6.8 |
| TOC (mg/l) | | 260 | 6.5 | | 5 | 17 | ND 3 | 43 | 7 |
| TOX (mg/l) | | 0.081 | ND .08 | | ND .08 | ND .08 | ND .08 | ND .08 | .11 |
| SP. COND. (umhos/cm) | | 2700 | 1700 | | 1900 | 5600 | 5850 | 3700 | 3300 |
| | Site Specific Indicator Parameters | | | | | | | | |
| CHROMIUM (TOTAL) (mg/l) | | ND .03 | ND .03 | | ND .03 | ND .03 | ND .03 | ND .04 | ND .04 |
| CHROMIUM (HEX) (mg/l) | | ND .5 | ND .02 | | ND .02 | ND .02 | ND .02 | ND .02 | ND .02 |
| CADMIUM (mg/l) | | ND .01 | ND .009 | | ND .01 | ND .01 | ND .01 | ND .01 | ND .01 |
| COPPER (mg/l) | | | ND .02 | | ND .02 | ND .04 | ND .03 | ND .02 | 0.08 |
| ZINC (mg/l) | | | ND .03 | | ND .04 | ND .04 | 0.02 | ND .03 | 0.04 |
| CHLORIDE (mg/l) | | 380 | 190 | | 250 | 1800 | 1700 | 630 | 610 |
| NITRATE as N (mg/l) | | 27 | 5.0 | | 4.2 | 2.7 | 4.4 | 19 | 25 |
| NITRATE as NO3 (mg/l) | | 120 | 22 | | 15 | 12 | 19.5 | 82 | 110 |

NOTE: ND 1 = Compound was not detected at 1 ug/l.

| | Organic Compounds (E.P.A. Method 624) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-DICHLOROETHANE (ug/l) | | 2 | | | 8 | 42 | 30 | 7.1 | 14 |
| 1,1-DICHLOROETHYLENE (ug/l) | | ND 1 | | | 2 | 5 | 6 | ND 5 | 6 |
| 1,2-DICHLOROETHANE (ug/l) | | ND 1 | | | ND 1 | 2 | ND 1 | ND 5 | ND .5 |
| BENZENE (ug/l) | | 64 | | | ND 1 | ND 1 | ND 1 | ND 5 | ND .5 |
| CARBON TETRACHLORIDE (ug/l) | | ND 1 | | | ND 1 | ND 1 | ND 1 | ND 5 | ND .5 |
| CHLOROFORM (ug/l) | | ND 1 | | | ND 1 | ND 1 | ND 1 | 8.2 | ND .5 |
| ETHYL BENZENE (ug/l) | | ND 1 | | | 4 | ND 1 | ND 1 | 1.0 | ND .5 |
| TRICHLOROETHYLENE (ug/l) | | 29 | | | 67 | 71 | 70 | 180 | 130 |
| TOLUENE (ug/l) | | 2 | | | 5 | ND 1 | ND 1 | 2.2 | 3.6 |
| XYLENE (ug/l) | | ND 1 | | | 4 | ND 1 | ---- | ND 5 | ND .5 |
| METHYLENE CHLORIDE (ug/l) | | ND 1 | | | ND 1 | ND 1 | ND 1 | ND 5 | ND .5 |

NOTE: ND 1 = Compound was not detected at 1 ug/l.

# TABLE 9

SOUTHERN CALIFORNIA CHEMICAL CO., INC.

WATER QUALITY DATA

MONITORING WELL #8

| COMPOUND | DATE SAMPLED 2/85 - 3/85 | 7/85 - 8/85 | 3/86 | 5/86 | 7/86 | 9/86 | 12/86 | 3/87 | 6/87 - 7/87 |
|---|---|---|---|---|---|---|---|---|---|
| E.P.A. Indicator Parameters (CFR 40 265.92) | | | | | | | | | |
| pH (Units) | | 6.6 | 7.5 | | 7.4 | 7.4 | 7.4 | 6.9 | 7.1 |
| TOC (mg/l) | | 99 | 7 | | 8 | ND 3 | ND 3 | ND 3 | 5 |
| TOX (mg/l) | | 0.44 | .09 | | ND .08 | .10 | .15 | ND .08 | .19 |
| SP. COND. (umhos/cm) | | 2800 | 1500 | | 1700 | 1600 | 1800 | 2000 | 2100 |
| Site Specific Indicator Parameters | | | | | | | | | |
| CHROMIUM (TOTAL) (mg/l) | | ND .05 | ND .03 | | ND .03 | ND .03 | ND .03 | ND .04 | ND .04 |
| CHROMIUM (HEX) (mg/l) | | ND .05 | ND .02 | | ND .02 | ND .02 | ND .02 | ND .02 | ND .02 |
| CADMIUM (mg/l) | | ND .01 | ND .009 | | ND .01 | ND .01 | ND .01 | ND .01 | ND .01 |
| COPPER (mg/l) | | | ND .02 | | ND .02 | ND .04 | ND .03 | ND .02 | ND .02 |
| ZINC (mg/l) | | | ND .03 | | ND .04 | ND .08 | ND .001 | ND .03 | ND .03 |
| CHLORIDE (mg/l) | | | 530 | | 170 | 270 | 250 | 300 | 300 |
| NITRATE as N (mg/l) | | 1.3 | 4.2 | | 3.2 | 2.7 | 3.2 | 2.5 | 2.2 |
| NITRATE as NO3 (mg/l) | | 5.8 | 39 | | 14 | 12 | 14.1 | 11 | 10 |
| Organic Compounds (E.P.A. Method 624) | | | | | | | | | |
| 1,1-DICHLOROETHANE (ug/l) | | | 41 | | 75 | 160 | 160 | 55 | 160 |
| 1,1-DICHLOROETHYLENE (ug/l) | | | 3 | | 8 | 17 | 19 | 5.6 | 29 |
| 1,2-DICHLOROETHANE (ug/l) | | | 1 | | 14 | 14 | 8 | 9.5 | 16 |
| BENZENE (ug/l) | | | ND 1 | | ND 1 | ND 1 | ND 1 | ND .5 | ND .5 |
| CARBON TETRACHLORIDE (ug/l) | | | ND 1 | | ND 1 | ND 1 | 6 | ND .5 | ND .5 |
| CHLOROFORM (ug/l) | | | ND 1 | | 2 | 2 | 2 | 3.6 | ND .5 |
| ETHYL BENZENE (ug/l) | | | ND 1 | | 2 | ND 1 | ND 1 | ND .5 | ND .5 |
| TRICHLOROETHYLENE (ug/l) | | | 19 | | 26 | 52 | 44 | 67 | 51 |
| TOLUENE (ug/l) | | | ND 1 | | 2 | ND 1 | ND 1 | 2.3 | ND .5 |
| XYLENE (ug/l) | | | ND 1 | | 1 | ND 1 | ---- | ND .5 | ND .5 |
| METHYLENE CHLORIDE (ug/l) | | | 5 | | ND 1 | ND 1 | ND 1 | ND .5 | 2.4 |

NOTE: ND 1 = Compound was not detected at 1 ug/l.

NOTE: ND 1 = Compound was not detected at 1 ug/l.

# TABLE 10

SOUTHERN CALIFORNIA CHEMICAL CO., INC.

WATER QUALITY DATA

MONITORING WELL 49

| | DATE SAMPLED | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 2/85 - 3/85 | 7/85 - 8/85 | 3/86 | 5/86 | 7/86 | 9/86 | 12/86 | 3/87 | 6/87 - 7/87 |
| COMPOUND | E.P.A. Indicator Parameters (CFR 40 265.92) | | | | | | | | |
| pH (units) | | 6.4 | 7.4 | | 7.3 | 7.0 | 7.4 | 6.9 | 6.8 |
| TOC (mg/l) | | 210 | 14 | | 29 | 2.8 | 24 | ND 3 | 42 |
| TOX (mg/l) | | 0.13 | .26 | | .12 | .28 | .37 | .37 | .48 |
| SP. COND. (umhos/cm) | | 2200 | 2800 | | 2000 | 2400 | 2675 | 2300 | 3200 |
| | Site Specific Indicator Parameters | | | | | | | | |
| CHROMIUM (TOTAL) (mg/l) | | ND .03 | ND .03 | | ND .03 | ND .03 | ND .03 | ND .04 | 0.12 |
| CHROMIUM (HEX) (mg/l) | | ND .5 | ND .02 | | ND .02 | 0.05 | ND .02 | ND .02 | 0.05 |
| CADMIUM (mg/l) | | ND .01 | ND .00 | | ND .01 | ND 1 | ND .01 | ND .01 | ND .01 |
| COPPER (mg/l) | | | ND .02 | | ND .02 | ND .04 | ND .03 | ND .02 | ND .02 |
| ZINC (mg/l) | | | ND .03 | | ND .04 | ND .09 | 0.018 | ND .03 | ND .03 |
| CHLORIDE (mg/l) | | 300 | 530 | | 250 | 720 | 670 | 470 | 640 |
| NITRATE as N (mg/l) | | 1.4 | 8.8 | | 3.2 | 1.4 | 3.72 | 4.1 | 2.9 |
| NITRATE as NO3 (mg/l) | | 6.3 | 39 | | 14 | 6.2 | 16.5 | 18 | 13 |
| NOTE: ND 1 = Compound was not detected at 1 ug/l. | | | | | | | | | |
| | Organic Compounds (E.P.A. Method 624) | | | | | | | | |
| 1,1-DICHLOROETHANE (ug/l) | | | 99 | | 50 | 360 | 250 | 110 | 140 |
| 1,1-DICHLOROETHYLENE (ug/l) | | | 18 | | 18 | 200 | 110 | 44 | 72 |
| 1,2-DICHLOROETHANE (ug/l) | | | 10 | | 13 | 90 | 52 | 90 | 69 |
| BENZENE (ug/l) | | | ND 1 | | ND 1 | ND 5 | ND 1 | ND .5 | ND 2.5 |
| CARBON TETRACHLORIDE (ug/l) | | | ND 1 | | ND 1 | ND 5 | ND 1 | ND .5 | ND 2.5 |
| CHLOROFORM (ug/l) | | | 20 | | 4 | 30 | 22 | 10 | 19 |
| ETHYL BENZENE (ug/l) | | | ND 1 | | ND 1 | ND 5 | ND 1 | ND .5 | ND 2.5 |
| TRICHLOROETHYLENE (ug/l) | | | 61 | | 3 | 550 | 240 | 150 | 160 |
| TOLUENE (ug/l) | | | ND 1 | | ND 1 | ND 5 | ND 1 | 0.7 | ND 2.5 |
| XYLENE (ug/l) | | | ND 1 | | ND 1 | ND 5 | ---- | ND .5 | ND 2.5 |
| METHYLENE CHLORIDE (ug/l) | | | 110 | | ND 1 | ND 5 | 18 | 29 | 33 |

NOTE: ND 1 = Compound was not detected at 1 ug/l.

# TABLE 11

SOUTHERN CALIFORNIA CHEMICAL CO., INC.

WATER QUALITY DATA

MONITORING WELL #10

| | DATE SAMPLED | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 2/85 - 3/85 | 7/85 - 8/85 | 3/86 | 5/86 | 7/86 | 9/86 | 12/86 | 3/87 | 6/87 - 7/87 |
| COMPOUND | E.P.A. Indicator Parameters (CFR 40 265.92) | | | | | | | | |
| pH (Units) | | 6.8 | 7.8 | | 7.6 | 7.4 | 7.6 | 7.4 | 7.2 |
| TOC (mg/l) | | 440 | 10 | | 130 | 103 | 135 | 33.8 | 158 |
| TOX (mg/l) | | 0.17 | ND .08 | | ND .08 | .14 | .15 | .20 | .62 |
| SP. COND. (umhos/cm) | | 2100 | 1300 | | 1600 | 1400 | 1550 | 1600 | 2100 |
| | Site Specific Indicator Parameters | | | | | | | | |
| CHROMIUM (TOTAL) (mg/l) | | ND .03 | ND .03 | | ND .03 | ND .03 | ND .03 | ND .04 | ND .04 |
| CHROMIUM (HEX) (mg/l) | | ND .5 | | | ND .02 | ND .02 | ND .02 | ND .02 | ND .02 |
| CADMIUM (mg/l) | | ND .01 | | | ND .01 | ND .01 | ND .01 | ND .01 | ND .01 |
| COPPER (mg/l) | | | ND .02 | | ND .02 | ND .04 | ND .03 | ND .02 | ND .02 |
| ZINC (mg/l) | | | ND .03 | | ND .04 | ND .08 | ND .00 | ND .03 | ND .03 |
| CHLORIDE (mg/l) | | | 150 | | 120 | 150 | 160 | 160 | 260 |
| NITRATE as N (mg/l) | | ND .1 | ND .1 | | 0.1 | ND .01 | ND .1 | ND .1 | ND .1 |
| NITRATE as NO3 (mg/l) | | ND 4.4 | ND 4.4 | | 0.6 | ND .04 | ND .4 | ND .4 | ND .4 |

NOTE: ND 1 = Compound was not detected at 1 ug/l.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Organic Compounds (E.P.A. Method 624) | | | | | | | | |
| 1,1-DICHLOROETHANE (ug/l) | | ND 50 | 2 | | 6 | ND 10 | 20 | ND 5 | 23 |
| 1,1-DICHLOROETHYLENE (ug/l) | | ND 50 | 1 | | 7 | 14 | ND 20 | ND 5 | 41 |
| 1,2-DICHLOROETHANE (ug/l) | | ND 50 | 17 | | 36 | 200 | 270 | 63 | 160 |
| BENZENE (ug/l) | | ND 50 | ND 1 | | ND 1 | ND 10 | ND 20 | ND 5 | ND 2.5 |
| CARBON TETRACHLORIDE (ug/l) | | ND 50 | ND 1 | | ND 1 | ND 10 | ND 20 | ND 5 | ND 2.5 |
| CHLOROFORM (ug/l) | | 50 | ND 1 | | ND 1 | ND 10 | ND 20 | ND 5 | 3.1 |
| ETHYL BENZENE (ug/l) | | 6500 | 68 | | ND 1 | 2200 | 1800 | 330 | 2000 |
| TRICHLOROETHYLENE (ug/l) | | 250 | 29 | | 36 | 93 | 120 | 62 | 160 |
| TOLUENE (ug/l) | | 17,000 | ND 1 | | ND 1 | 36 | 560 | ND 5 | 14 |
| XYLENE (ug/l) | | 20,000 | ND 1 | | 70 | 90 | 600 | 120 | 500 |
| METHYLENE CHLORIDE (ug/l) | | 100 | ND 1 | | ND 1 | ND 10 | ND 20 | ND 5 | 13 |

NOTE: ND 1 = Compound was not detected at 1 ug/l.

# TABLE 12

SOUTHERN CALIFORNIA CHEMICAL CO., INC.

WATER QUALITY DATA

MONITORING WELL #11

| COMPOUND | DATE SAMPLED 2/85 - 3/85 | 7/85 - 6/85 | 3/86 | 5/86 | 7/86 | 9/86 | 12/86 | 3/87 | 6/87 - 7/87 |
|---|---|---|---|---|---|---|---|---|---|
| E.P.A. Indicator Parameters (CFR 40 265.92) | | | | | | | | | |
| pH (Units) | | 6.6 | 7.8 | | 7.2 | 7.3 | 7.5 | 7.5 | 7.4 |
| TOC (mg/l) | | 54 | 13 | | 120 | 156 | 125 | 26.8 | 58 |
| TOX (mg/l) | | ND .05 | 0.1 | | ND .08 | ND .08 | .12 | .14 | .15 |
| SP. COND. (umhos/cm) | | 1600 | 1600 | | 1700 | 1600 | 1800 | 1700 | 2100 |
| Site Specific Indicator Parameters | | | | | | | | | |
| CHROMIUM (TOTAL) (mg/l) | | ND .03 | ND .03 | | ND .03 | ND .03 | ND .03 | ND .04 | ND .04 |
| CHROMIUM (HEX) (mg/l) | | ND .5 | | | ND .02 | ND .02 | ND .02 | ND .02 | ND .02 |
| CADMIUM (mg/l) | | ND .01 | ND .01 | | ND .01 | ND .01 | ND .01 | ND .01 | ND .01 |
| COPPER (mg/l) | | | ND .02 | | ND .02 | ND .04 | ND .03 | ND .02 | ND .02 |
| ZINC (mg/l) | | | ND .03 | | ND .04 | ND .05 | ND .001 | ND .03 | ND .03 |
| CHLORIDE (mg/l) | | 220 | 230 | | 180 | 230 | 240 | 170 | 270 |
| NITRATE as N (mg/l) | | 1.2 | 2.5 | | 1.1 | ND 1 | 0.1 | 1.2 | 0.7 |
| NITRATE as NO3 (mg/l) | | 5.2 | 11 | | 4.8 | ND .4 | 0.5 | 5.5 | 3.3 |
| Organic Compounds (E.P.A. Method 624) | | | | | | | | | |
| 1,1-DICHLOROETHANE (ug/l) | | | 10 | 4 | 10 | ND 200 | ND 100 | 6.9 | 12 |
| 1,1-DICHLOROETHYLENE (ug/l) | | | 8 | 2 | 5 | ND 200 | ND 100 | 5.0 | 11 |
| 1,2-DICHLOROETHANE (ug/l) | | | 8 | 31 | 17 | ND 200 | 130 | 95 | 21 |
| BENZENE (ug/l) | | | ND 1 | 3 | ND 1 | ND 200 | ND 100 | 1.5 | ND .5 |
| CARBON TETRACHLORIDE (ug/l) | | | ND 1 | ND 1 | ND 1 | ND 200 | ND 100 | ND .5 | ND .5 |
| CHLOROFORM (ug/l) | | | 3 | 3 | 10 | ND 200 | ND 100 | 3.3 | 3.5 |
| ETHYL BENZENE (ug/l) | | | 13 | 1800 | 2200 | 6400 | 3300 | ND .5 | 1200 |
| TRICHLOROETHYLENE (ug/l) | | | 110 | 36 | 76 | ND 200 | 180 | 46 | 81 |
| TOLUENE (ug/l) | | | ND 1 | 5400 | 5200 | 14,000 | 7500 | 3.6 | 360 |
| XYLENE (ug/l) | | | 20 | 4000 | 1500 | 11,000 | 3000 | 220 | 370 |
| METHYLENE CHLORIDE (ug/l) | | | ND 1 | ND 1 | ND 1 | ND 200 | ND 100 | 1.5 | 8.4 |

NOTE: ND 1 = Compound was not detected at 1 ug/l.

NOTE: ND 1 = Compound was not detected at 1 ug/l.

# TABLE 13

CHEMICAL ANALYSIS

OF

SPLIT SAMPLES

| COMPOUND | MW 4 | | MW 4A | | MW 7 | | MW 10 | | MW 11 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | A.T.I. | B & C | A.T.I. | B & C | A.T.I. | B & C | A.T.I. | B & C | A.T.I. | B & C |
| 1,1-DICHLOROETHANE (ug/l) | 190 | 100 | 94 | 140 | 17 | 14 | 59 | 23 | 25 | 12 |
| 1,1-DICHLOROETHYLENE (ug/l) | 97 | 94 | 23 | 50 | ND 4 | 6 | 44 | 41 | 15 | 11 |
| 1,2-DICHLOROETHANE (ug/l) | 87 | 74 | 1.5 | 1.5 | ND 4 | ND .5 | 200 | 160 | 28 | 21 |
| BENZENE (ug/l) | ND 100 | ND 5 | ND 2.5 | ND .5 | ND 10 | ND .5 | ND 50 | ND 2.5 | ND 25 | ND .5 |
| CARBON TETRACHLORIDE (ug/l) | ND 40 | ND 5 | ND 1 | ND .5 | ND 4 | ND .5 | ND 20 | ND 2.5 | ND 10 | ND .5 |
| CHLOROFORM (ug/l) | ND 40 | 30 | 3.9 | 17 | ND 4 | ND .5 | ND 20 | 3.1 | ND 10 | 3.5 |
| ETHYL BENZENE (ug/l) | 1400 | 1500 | ND 2.5 | ND .5 | ND 10 | ND .5 | ND 50 | 2000 | 1300 | 1200 |
| TRICHLOROETHYLENE (ug/l) | 360 | 280 | 69 | 82 | 130 | 130 | 230 | 160 | 110 | 81 |
| TOLUENE (ug/l) | 3100 | 3700 | ND 2.5 | 1.5 | ND 10 | 3.6 | ND 50 | 14 | 385 | 360 |
| XYLENE (ug/l) | 2650 | 2700 | 2.7 | ND .5 | ND 10 | ND .5 | 550 | 500 | 426 | 370 |
| METHYLENE CHLORIDE (ug/l) | ND 400 | 140 | ND 10 | 11 | ND 40 | ND 1 | ND 200 | 13 | ND 100 | 6.4 |

NOTE: ND 1 = Compound was not detected at 1 ug/l.

B & C = Brown & Caldwell Laboratories

A.T.I. = Analytical Technologies, Inc.

# TABLE 14

SEQUENCE OF SAMPLING

| COMPOUND | QC 1371 | MW-1 | MW-3 | MW-8 | QC 1439 | MW-11 | MW-10 | QC 1479 | MW-5 | MW-7 | MW-9 | QC 1534 | MW-6B | MW-2 | QC 1589 | MW-4A | MW-4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| pH (Units) | 5.3 | 7.0 | 7.0 | 7.1 | | 7.4 | 7.2 | | 7.0 | 6.8 | 6.8 | | 7.4 | 7.1 | | 7.7 | 6.2 |
| TOC (mg/l) | ND 3 | 13 | 21 | 5 | | 58 | 156 | | ND 3 | 7 | 42 | | ND 3 | ND 3 | | ND 3 | 133 |
| TOX (mg/l) | ND .08 | ND .08 | .15 | .19 | | .16 | .62 | | .36 | .11 | .46 | | ND .08 | ND .08 | | .14 | 2.1 |
| SP. COND. (umhos/cm) | 1 | 3400 | 2200 | 2100 | | 2100 | 2100 | | 1400 | 3300 | 3200 | | 1600 | 3400 | | 1600 | 11,000 |
| CHROMIUM (TOTAL) (mg/l) | ND .04 | ND .04 | ND .04 | ND .04 | | ND .04 | ND .04 | | ND .04 | ND .04 | 0.12 | | ND .04 | ND .04 | | ND .04 | 440 |
| CHROMIUM (HEX) (mg/l) | ND .02 | ND .02 | ND .02 | ND .02 | | ND .02 | ND .02 | | ND .02 | ND .02 | 0.05 | | ND .02 | ND .02 | | ND .02 | 47 |
| CADMIUM (mg/l) | ND .01 | ND .01 | ND .01 | ND .01 | | ND .01 | ND .01 | | ND .01 | ND .01 | ND .01 | | ND .01 | ND .01 | | ND .01 | ND .01 |
| COPPER (mg/l) | ND .02 | 0.10 | 0.02 | ND .02 | | ND .02 | ND .02 | | ND .02 | 0.08 | ND .02 | | ND .02 | ND .02 | | ND .02 | ND .02 |
| ZINC (mg/l) | ND .03 | 0.06 | ND .03 | ND .03 | | ND .03 | ND .03 | | ND .03 | 0.04 | ND .03 | | ND .03 | ND .03 | | ND .03 | ND .03 |
| CHLORIDE (mg/l) | 8.2 | 720 | 380 | 300 | | 270 | 260 | | 110 | 610 | 640 | | 130 | 700 | | 160 | 3500 |
| NITRATE as N (mg/l) | ND .1 | ND .1 | 3.8 | 2.2 | | 0.7 | ND .4 | | 15 | 25 | 2.9 | | 8.4 | 8.8 | | 5.4 | ND .7 |
| NITRATE as NO3 (mg/l) | ND .4 | ND .4 | 17 | 10 | | 3.3 | ND .1 | | 65 | 110 | 13 | | 37 | 39 | | 24 | ND 3 |

NOTE: ND 1 = Compound was not detected at 1 ug/l.

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-DICHLOROETHANE (ug/l) | ND .5 | ND .5 | 1.6 | 160 | ND .5 | 12 | 23 | ND .5 | 5.4 | 14 | 140 | ND .5 | ND .5 | 20 | ND .5 | 140 | 110 |
| 1,1-DICHLOROETHYLENE (ug/l) | ND .5 | ND .5 | 3.9 | 29 | ND .5 | 11 | 41 | ND .5 | 5.2 | 6 | 72 | ND .5 | ND .5 | 11 | ND .5 | 50 | 94 |
| 1,2-DICHLOROETHANE (ug/l) | ND .5 | 1.0 | 2.1 | 16 | ND .5 | 21 | 160 | ND .5 | ND .5 | ND .5 | 69 | ND .5 | ND .5 | 2.2 | ND .5 | 1.5 | 74 |
| BENZENE (ug/l) | ND .5 | ND .5 | ND .5 | ND .5 | ND .5 | ND 2.5 | ND 2.5 | ND .5 | ND .5 | ND .5 | ND .5 | ND .5 | ND .5 | ND .5 | ND .5 | ND .5 | ND 5 |
| CARBON TETRACHLORIDE (ug/l) | ND .5 | ND .5 | 77 | ND .5 | ND .5 | ND 2.5 | ND 2.5 | ND .5 | 120 | ND .5 | ND .5 | ND .5 | ND .5 | ND .5 | ND .5 | ND .5 | ND 5 |
| CHLOROFORM (ug/l) | 1.2 | ND .5 | 22 | ND .5 | ND .5 | 2.5 | 3.1 | ND .5 | 50 | ND .5 | 19 | ND .5 | ND .5 | 4.2 | ND .5 | 17 | 30 |
| ETHYL BENZENE (ug/l) | ND .5 | ND .5 | ND .5 | ND .5 | ND .5 | 1200 | 2000 | ND .5 | ND .5 | ND .5 | ND .5 | ND .5 | 1.5 | 6.2 | ND .5 | ND .5 | 1500 |
| TRICHLOROETHYLENE (ug/l) | ND .5 | 11 | 70 | 51 | ND .5 | 81 | 160 | ND .5 | 59 | 130 | 160 | ND .5 | 20 | 93 | ND .5 | 82 | 280 |
| TOLUENE (ug/l) | ND .5 | ND .5 | ND .5 | ND .5 | ND .5 | 360 | 14 | ND .5 | ND .5 | 3.6 | ND .5 | ND .5 | 0.8 | ND .5 | ND .5 | 1.5 | 3700 |
| XYLENE (ug/l) | ND .5 | ND .5 | ND .5 | ND .5 | ND .5 | 370 | 500 | ND .5 | 7.3 | ND .5 | ND .5 | ND .5 | 7.9 | ND .5 | ND .5 | ND .5 | 2700 |
| METHYLENE CHLORIDE (ug/l) | 22 | ND .5 | 2.2 | 2.4 | 2.0 | 8.4 | 13 | ND 1 | ND .5 | ND .5 | 33 | 19 | 2.6 | ND 1 | 15 | 11 | 140 |

NOTE: ND 1 = Compound was not detected at 1 ug/l.

# TABLE 15

CHEMICAL ANALYSIS OF

SPIKED SAMPLES

| COMPOUND | B & C Spike Calculated Concentration | B & C Analyzed Concentration | B & C % Difference from Calculated | A.T.I. Analyzed Concentration | A.T.I. % Difference from Calculated |
|---|---|---|---|---|---|
| TRICHLOROETHYLENE (ug/l) | 100 | 81 | 81% | 86 | 86% |
| TOLUENE (ug/l) | 500 | 770 | 154% | 470 | 94% |
| ETHYL BENZENE (ug/l) | 500 | 550 | 110% | 370 | 74% |

NOTE: A.T.I. = Analytical Technologies, Inc.

B & C = Brown & Caldwell Laboratories

# TABLE 16

GROUNDWATER LEVEL ELEVATIONS

(feet MSL)

| Well Number | Well Head Elevation (feet MSL) | (feet Below Ground Surface) Well Depth | Perforated Interval | 2-22-85 to 3-12-85 | 4-09-85 | 7-24-85 to 8-05-85 | 8-19-85 | 9-20-85 | 3-19-86 | 7-09-86 | 9-24-86 | 12-17-86 | 3-31-87 | 7/1/87 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 152.62 | 62.5 | 42.5-62.5 | 108.49 | 108.48 | 109.66 | 108.16 | 106.05 | 103.40 | 107.76 | 105.15 | 103.65 | 103.71 | 103.57 |
| 2 | 151.56 | 74.0 | 44-74 | 107.31 | 107.72 | 109.21 | 107.56 | 105.49 | 102.44 | 107.04 | 104.05 | 102.96 | 106.58 | 103.95 |
| 3 | 151.62 | 75.0 | 45-75 | 106.37 | 107.52 | 108.37 | 106.65 | 104.46 | 101.22 | 106.03 | 103.15 | 102.07 | 102.96 | 101.87 |
| 4 | 149.76 | 75.0 | 45-75 | 105.76 | 108.11 | 108.36 | 105.16 | 104.50 | 101.42 | 105.94 | 102.98 | 101.81 | 101.76 | 102.95 |
| 4A | 152.49 | 107.0 | 87-107 | | | 108.84 | 109.43 | 104.49 | 102.67 | 107.29 | 104.29 | 102.09 | | 104.19 |
| 5 | 153.21 | 75.0 | 45-75 | 105.71 | 106.02 | 107.68 | 106.03 | 103.84 | 100.46 | 105.40 | 102.49 | 101.41 | 101.37 | 98.51 |
| 6A | 149.31 | 30.0 | 10-30 | | 119.39 | | 120.91 | | | | | | | |
| 6B | 149.46 | 77.0 | 47-77 | 106.46 | 106.80 | | 107.81 | 104.92 | 101.46 | 106.02 | 103.21 | 102.16 | 101.95 | 103.11 |
| 7 | 149.27 | 75.0 | 45-75 | | | 107.48 | 105.34 | 104.33 | 101.07 | 105.73 | 102.83 | 101.57 | 101.52 | 99.20 |
| 8 | 149.53 | 71.0 | 41-71 | | | 107.95 | 106.66 | 104.78 | 101.65 | 106.26 | 103.17 | 101.96 | 101.68 | 101.52 |
| 9 | 151.14 | 77.0 | 47-77 | | | 108.35 | 106.98 | 104.25 | 102.14 | 106.72 | 103.64 | 102.74 | 104.02 | 103.53 |
| 10 | 151.60 | 75.0 | 45-75 | | | 107.88 | 106.94 | 104.87 | 102.80 | 106.26 | 103.15 | 102.40 | 102.62 | 102.14 |
| 11 | 152.80 | 75.5 | 55-75 | | | 108.38 | 107.17 | 105.03 | 101.96 | 106.61 | 103.34 | 102.65 | 102.91 | 102.41 |

NOTE: MSL = Elevations in feet above mean sea level.

KLEINFELDER

# APPENDIX A

# APPENDIX

## MONITORING WELL SAMPLING PROTOCOL

### III. Groundwater Sampling

#### A. Decontamination

The following procedure details the routine that is employed in decontamination of groundwater sampling equipment prior to sample collection:

1. Exterior surface of sampling tubes are decontaminated by steam-cleaning during withdrawal from very well.

2. Sample pump is disassembled and the used bladder removed.

3. All pump components are then steam-cleaned and rinsed in distilled water.

4. Pump is reassembled with a new bladder installed.

5. Teflon sampler lines are pressure washed with 5 to 10 gallons of clean, hot water through direct connection to steam-cleaner.

6. Five gallons of distilled water are then pumped through entire system.

7. Prior to sample collection, a minimum of five well volumes are purged from the well to permit collection of a representative groundwater sample from the aquifer penetrated.

#### B. Purge Volume Determination

The following procedure is followed to determine the appropriate purging volume prior to well sampling.

1. The depth-to-water is measured by a clean, electric water level indicator. Measurement datum is the top of fill ring or top of well protector.

2. Depth to the bottom of the well is measured by a clean tape and plump bob. If possible, this is compared to the well construction log to determine inconsistencies, i.e. damaged casing, sediment in casing, etc.

3. Water volume is calculated by multiplying total water depth by the inside diameter of the casing. This figure is one well volume.

C. Well Purging and Sampling

1. Prior to sampling, a minimum of three to five well volumes are purged from each well to ensure that water sampled is representative of the groundwater within the formation.

2. Measurements of pH, conductivity and temperature are taken at frequent intervals during the purge. Stabilization of these values indicates that representative formation fluids are being removed from the well.

3. In the event that the well is pumped dry, an alternate procedure will be followed. Once a well is pumped dry, the water that enters the well during recovery is, by definition, representative formation water. The well will, therefore, be pumped dry and allowed to recover to 80% or more of the original water level.

4. Purge water is pumped directly into barrels on site until the proper method of disposal is determined.

5. Samples pumped directly into sampling bottles prepared by the state certified laboratory contracted for the particular job were labeled and placed in refrigerated coolers for transport to the laboratory.

6. Samples are delivered directly to the lab on the same day of sampling by courier, whenever practical. If next day delivery is necessary, the samples are kept refrigerated at 4 degrees C overnight and delivered to the laboratory the following morning.

7. Samples are accompanied by a Chain of Custody form which documents the time, date and responsible person during each step of the transportation process.

8. The JHK coded sample numbering system allows identification of sample and client to JHK, while not revealing the client to the laboratory or other interested parties.

Water samples are numbered in the following manner:

W-XX-YY

Where:
W - designates water sample
XX - well number
YY - sequential sample number

For example, W-01-22 indicates a water sample from well number 1. The sample is the 22nd water sample taken at the site.

9. The complete information on the sample label includes:
   Date and time
   Client job number (never client name)
   Sample number
   Initials of sampler
   Analysis desired (if known)
   Preservatives in sample bottle (usually noted by lab)

10. Each sample bottle is given a separate sequential number.

# APPENDIX B

BROWN AND CALDWELL LABORATORIES
373 SOUTH FAIR OAKS AVENUE PASADENA, CA 91105 • (818) 795-7553

RECEIVED
AUG 04 1987
Ans'd.....

July 22, 1987

Lab No. P87-07-021
P87-07-040
P87-07-054

Mr. Ken Durand
Kleinfelder & Associates
901 West Victoria, Suite G
Compton, California 90220

Dear Mr. Durand:

Brown and Caldwell analyzed eighteen samples taken June 30 - July 2, 1987, for Project Q-1014-4. A summary of the methods used in the analsis is provided in the attached table.

After reviewing the data for sample "W-00-(1371 thru 1387)," we rechecked the 601 analysis with respect to the methylene chloride and chloroform values. In addition to analyzing the alternate vial, we also checked for cross-contamination as well as carry-over. We found no change in our initial reporting of these two 601 compounds. Our re-analysis verified the data as it stands in report P87-07-021-1.

Should you have any questions, please feel free to call us.

Very truly yours,

BROWN AND CALDWELL

Jane Freemyer

Jane Freemyer
Section Supervisor

JF:lah
Attachment

| ANALYTE | METHOD NO. | REFERENCE | DESCRIPTION |
|---|---|---|---|
| Hexavalent Chromium | 7196 | 4 | Colorimetric |
| Nitrate | 353.2 | 1 | Automated Cd reduction |
| Quadruplicate TOC | 415.1 | 1 | Combustion |
| Sulfite | 300.0 | 1 | Ion Chromatography |
| Quadruplicate Conductivity | 120.1 | 1 | Specific Conductance |
| Quadruplicate pH | 150.1 | 1 | Electrometric |
| Chloride | 325.3 | 1 | Titrimetric mercury nitrate |
| Sulfate | 375.4 | 1 | Turbidimetric |
| Quadruplicate TOX | 506 | 2 | Adsorption-pyrolysis |
| Cadmium | 213.1 | 1 | AA, Direct aspiration |
| Chromium | 218.1 | 1 | AA, Direct aspiration |
| Copper | 220.1 | 1 | AA, Direct aspiration |
| Zinc | 289.1 | 1 | AA, Direct aspiration |
| Volatile Purgeable Priority Pollutants | 624 | 3 | GC/MS for Volatile organics |

References:


1. USEPA-600/4-79-020, Methods for the Examination of Water and Wastewater, Mar 1983.

2. Standard Methods for the Examination of Water and Wastewater, 16th Edition, 1986.

3. 40 CFR, Part 136, Guidelines Establishing Test Procedures for the Analysis o Pollutants Under the Clean Water Act, Federal Register, October 26, 1984.

4. SW-846, Test Methods for Evaluating Solid Waste, July, 1982.

BROWN AND CALDWELL LABORATORIES
373 SOUTH FAIR OAKS AVENUE PASADENA, CA 91105 • (818) 795-7654

# ANALYTICAL REPORT

RECEIVED
AUG 04
Ans'd.....

LOG NO: P87-07-040

Received: 02 JUL 87
Reported: 17 JUL 87

Ken Durand
J. H. Kleinfelder & Associates
901 W. Victoria Street, Suite G
Compton, California 90220

Project: 50-1014-3

REPORT OF ANALYTICAL RESULTS



| LOG NO | SAMPLE DESCRIPTION, GROUND WATER SAMPLES | DATE SAMPLED |
|---|---|---|
| 07-040-1 | W-03-(1405-1421) 50-1014-3 | 01 JUL 87 |
| 07-040-2 | W-08-(1422-1438) 50-1014-3 | 01 JUL 87 |
| 07-040-3 | W-11-(1441-1459) 50-1014-3 | 01 JUL 87 |
| 07-040-4 | W-10-(1460-1478) 50-1014-3 | 01 JUL 87 |
| 07-040-5 | W-00-1439,1440 | 01 JUL 87 |

| PARAMETER | 07-040-1 | 07-040-2 | 07-040-3 | 07-040-4 | 07-040-5 |
|---|---|---|---|---|---|
| Hexavalent Chromium, mg/L | <0.02 | <0.02 | <0.02 | <0.02 | --- |
| Nitrate Nitrogen | | | | | |
| Nitrate (as NO3), mg/L | 17 | 10 | 3.3 | <0.4 | --- |
| Nitrate (as N), mg/L | 3.8 | 2.2 | 0.7 | <0.1 | --- |
| Quadruplicate TOC: | | | | | |
| TOC, Average, mg/L | 21 | 5 | 58 | 158 | --- |
| TOC, Standard Deviation, mg/L | 1 | 1 | 1 | 3 | --- |
| TOC, 1st Replicate, mg/L | 21 | 6 | 59 | 162 | --- |
| TOC, 2nd Replicate, mg/L | 21 | 6 | 57 | 156 | --- |
| TOC, 3rd Replicate, mg/L | 19 | 4 | 59 | 159 | --- |
| TOC, 4th Replicate, mg/L | 22 | 5 | 58 | 157 | --- |
| Quadruplicate Conductivity: | | | | | |
| Sp. Cond., Average, umhos/cm | 2200 | 2100 | 2100 | 2100 | --- |
| Sp. Cond., Std. Deviation, umhos/cm | 0 | 0 | 0 | 0 | --- |
| Sp. Cond., 1st Replicate, umhos/cm | 2200 | 2100 | 2100 | 2100 | --- |
| Sp. Cond., 2nd Replicate, umhos/cm | 2200 | 2100 | 2100 | 2100 | --- |
| Sp. Cond., 3rd Replicate, umhos/cm | 2200 | 2100 | 2100 | 2100 | --- |
| Sp. Cond., 4th Replicate, umhos/cm | 2200 | 2100 | 2100 | 2100 | --- |

BROWN AND CALDWELL LABORATORIES
373 SOUTH FAIR OAKS AVENUE PASADENA, CA 91105 • (818) 795-7553

**ANALYTICAL REPORT**

LOG NO: P87-07-040

Received: 02 JUL 87
Reported: 17 JUL 87

Ken Durand
J. H. Kleinfelder & Associates
901 W. Victoria Street, Suite G
Compton, California 90220

Project: 50-1014-3

REPORT OF ANALYTICAL RESULTS



| LOG NO | SAMPLE DESCRIPTION, GROUND WATER SAMPLES | DATE SAMPLED |
|---|---|---|
| 07-040-1 | W-03-(1405-1421) 50-1014-3 | 01 JUL 87 |
| 07-040-2 | W-08-(1422-1438) 50-1014-3 | 01 JUL 87 |
| 07-040-3 | W-11-(1441-1459) 50-1014-3 | 01 JUL 87 |
| 07-040-4 | W-10-(1460-1478) 50-1014-3 | 01 JUL 87 |
| 07-040-5 | W-00-1439,1440 | 01 JUL 87 |

| PARAMETER | 07-040-1 | 07-040-2 | 07-040-3 | 07-040-4 | 07-040-5 |
|---|---|---|---|---|---|
| Quadruplicate pH: | | | | | |
| pH, Average, Units | 7.0 | 7.1 | 7.4 | 7.2 | --- |
| pH, Standard Deviation, Units | 0.05 | 0 | 0.06 | 0 | --- |
| pH, 1st Replicate, mg/L | 7.1 | 7.1 | 7.4 | 7.2 | --- |
| pH, 2nd Replicate, Units | 7.0 | 7.1 | 7.3 | 7.2 | --- |
| pH, 3rd Replicate, Units | 7.0 | 7.1 | 7.3 | 7.2 | --- |
| pH, 4th Replicate, Units | 7.0 | 7.1 | 7.4 | 7.2 | --- |
| Chloride, mg/L | 380 | 300 | 270 | 260 | --- |
| Quadruplicate TOX: | | | | | |
| TOX, 1st Replicate, ug/L | 150 | 180 | 150 | 630 | --- |
| TOX, 2nd Replicate, ug/L | 150 | 170 | 190 | 650 | --- |
| TOX, 3rd Replicate, ug/L | 140 | 190 | 170 | 560 | --- |
| TOX, 4th Replicate, ug/L | 160 | 210 | 140 | 660 | --- |
| TOX, Average, ug/L | 150 | 190 | 160 | 620 | --- |
| TOX, Standard Deviation, ug/L | 8 | 20 | 20 | 50 | --- |
| Chromium, mg/L | <0.04 | <0.04 | <0.04 | <0.04 | --- |
| Copper, mg/L | 0.02 | <0.02 | <0.02 | <0.02 | --- |
| Zinc, mg/L | <0.03 | <0.03 | <0.03 | <0.03 | --- |
| Dissolved Digestion, Date | 07/08/87 | 07/08/87 | 07/08/87 | 07/08/87 | --- |

BROWN AND CALDWELL LABORATORIES

373 SOUTH FAIR OAKS AVENUE PASADENA, CA 91105 • (818) 795-7553

**ANALYTICAL REPORT**

LOG NO: P87-07-040

Received: 02 JUL 87
Reported: 17 JUL 87

Ken Durand
J. H. Kleinfelder & Associates
901 W. Victoria Street, Suite G
Compton, California 90220

Project: 50-1014-3

REPORT OF ANALYTICAL RESULTS



| LOG NO | SAMPLE DESCRIPTION, GROUND WATER SAMPLES | DATE SAMPLED |
|---|---|---|
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| 07-040-2 | W-08-(1422-1438) 50-1014-3 | 01 JUL 87 |
| 07-040-3 | W-11-(1441-1459) 50-1014-3 | 01 JUL 87 |
| 07-040-4 | W-10-(1460-1478) 50-1014-3 | 01 JUL 87 |
| 07-040-5 | W-00-1439,1440 | 01 JUL 87 |

| PARAMETER | 07-040-1 | 07-040-2 | 07-040-3 | 07-040-4 | 07-040-5 |
|---|---|---|---|---|---|
| Halocarbons (EPA 601) | | | | | |
| Date Extracted | 07/14/87 | 07/15/87 | 07/13/87 | 07/13/87 | 07/08/87 |
| Dilution Factor, Times 1 | 1 | 1 | 5 | 5 | 1 |
| 1,1,2,2-Tetrachloroethane, ug/L | <0.5 | <0.5 | <2.5 | <2.5 | <0.5 |
| 1,1,2-Trichloroethane, ug/L | <0.5 | <0.5 | <2.5 | <2.5 | <0.5 |
| 1,1-Dichloroethane, ug/L | 1.6 | 160 | 12 | 23 | <0.5 |
| 1,1-Dichloroethene, ug/L | 3.9 | 29 | 11 | 41 | <0.5 |
| 1,2-Dichlorobenzene, ug/L | <0.5 | <0.5 | <2.5 | <2.5 | <0.5 |
| 1,2-Dichloroethane, ug/L | 2.1 | 16 | 21 | 160 | <0.5 |
| trans-1,2-Dichloroethene, ug/L | <0.5 | 32 | <2.5 | <2.5 | <0.5 |
| 1,2-Dichloropropane, ug/L | <0.5 | <0.5 | <2.5 | <2.5 | <0.5 |
| 1,3-Dichlorobenzene, ug/L | <0.5 | <0.5 | <2.5 | <2.5 | <0.5 |
| 1,4-Dichlorobenzene, ug/L | <0.5 | <0.5 | <2.5 | <2.5 | <0.5 |
| 2-Chloroethylvinylether, ug/L | <0.5 | <0.5 | <2.5 | <2.5 | <0.5 |
| Bromodichloromethane, ug/L | <0.5 | <0.5 | <2.5 | <2.5 | <0.5 |
| Bromomethane, ug/L | <0.5 | <0.5 | <2.5 | <2.5 | <0.5 |
| Bromoform, ug/L | <0.5 | <0.5 | <2.5 | <2.5 | <0.5 |
| Chlorobenzene, ug/L | <0.5 | <0.5 | <2.5 | <2.5 | <0.5 |
| Carbon Tetrachloride, ug/L | 73 | <0.5 | <2.5 | <2.5 | <0.5 |
| Chloroethane, ug/L | <0.5 | <0.5 | <2.5 | <2.5 | <0.5 |
| Chloroform, ug/L | 22 | <0.5 | 3.5 | 3.1 | <0.5 |
| Chloromethane, ug/L | <0.5 | <0.5 | <2.5 | <2.5 | <0.5 |
| Dibromochloromethane, ug/L | <0.5 | <0.5 | <2.5 | <2.5 | <0.5 |

BROWN AND CALDWELL LABORATORIES
373 SOUTH FAIR OAKS AVENUE PASADENA, CA 91105 • (818) 795-7553

# ANALYTICAL REPORT

LOG NO: P87-07-040

Received: 02 JUL 87
Reported: 17 JUL 87

Ken Durand
J. H. Kleinfelder & Associates
901 W. Victoria Street, Suite G
Compton, California 90220

Project: 50-1014-3

REPORT OF ANALYTICAL RESULTS



| LOG NO | SAMPLE DESCRIPTION, GROUND WATER SAMPLES | DATE SAMPLED |
|---|---|---|
| 07-040-1 | W-03-(1405-1421) 50-1014-3 | 01 JUL 87 |
| 07-040-2 | W-08-(1422-1438) 50-1014-3 | 01 JUL 87 |
| 07-040-3 | W-11-(1441-1459) 50-1014-3 | 01 JUL 87 |
| 07-040-4 | W-10-(1460-1478) 50-1014-3 | 01 JUL 87 |
| 07-040-5 | W-00-1439,1440 | 01 JUL 87 |

| PARAMETER | 07-040-1 | 07-040-2 | 07-040-3 | 07-040-4 | 07-040-5 |
|---|---|---|---|---|---|
| Dichlorodifluoromethane, ug/L | <0.5 | <0.5 | <2.5 | <2.5 | <0.5 |
| Methylene chloride, ug/L | 2.2 | 2.4 | 8.4 | 13 | 2.0 |
| Tetrachloroethene, ug/L | <0.5 | <0.5 | <2.5 | <2.5 | <0.5 |
| 1,1,1-Trichloroethane, ug/L | <0.5 | 0.8 | <2.5 | 6.9 | <0.5 |
| Trichloroethylene, ug/L | 70 | 51 | 81 | 160 | <0.5 |
| Trichlorofluoromethane, ug/L | <0.5 | <0.5 | <2.5 | <2.5 | <0.5 |
| Vinyl chloride, ug/L | <0.5 | <0.5 | <2.5 | <2.5 | <0.5 |
| cis-1,3-Dichloropropene, ug/L | <0.5 | <0.5 | <2.5 | <2.5 | <0.5 |
| trans-1,3-Dichloropropene, ug/L | <0.5 | <0.5 | <2.5 | <2.5 | <0.5 |

BROWN AND CALDWELL LABORATORIES
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**ANALYTICAL REPORT**

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Received: 02 JUL 87
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Compton, California 90220

Project: 50-1014-3

REPORT OF ANALYTICAL RESULTS



| LOG NO | SAMPLE DESCRIPTION, GROUND WATER SAMPLES | DATE SAMPLED |
|---|---|---|
| 07-040-1 | W-03-(1405-1421) 50-1014-3 | 01 JUL 87 |
| 07-040-2 | W-08-(1422-1438) 50-1014-3 | 01 JUL 87 |
| 07-040-3 | W-11-(1441-1459) 50-1014-3 | 01 JUL 87 |
| 07-040-4 | W-10-(1460-1478) 50-1014-3 | 01 JUL 87 |
| 07-040-5 | W-00-1439,1440 | 01 JUL 87 |

| PARAMETER | 07-040-1 | 07-040-2 | 07-040-3 | 07-040-4 | 07-040-5 |
|---|---|---|---|---|---|
| Vol.Aromatics (EPA-602) | | | | | |
| Date Extracted | 07/14/87 | 07/13/87 | 07/13/87 | 07/13/87 | 07/08/87 |
| Dilution Factor, Times 1 | 1 | 1 | 5 | 5 | 1 |
| Chlorobenzene, ug/L | <0.5 | <0.5 | <2.5 | <2.5 | <0.5 |
| 1,2-Dichlorobenzene, ug/L | <0.5 | <0.5 | <2.5 | <2.5 | <0.5 |
| 1,3-Dichlorobenzene, ug/L | <0.5 | <0.5 | <2.5 | <2.5 | <0.5 |
| 1,4-Dichlorobenzene, ug/L | <0.5 | <0.5 | <2.5 | <2.5 | <0.5 |
| Benzene, ug/L | <0.5 | <0.5 | <2.5 | <2.5 | <0.5 |
| Ethylbenzene, ug/L | <0.5 | <0.5 | 1200 | 2000 | <0.5 |
| Toluene, ug/L | <0.5 | <0.5 | 360 | 14 | <0.5 |
| Additional Compounds: | | | | | |
| Total Xylene Isomers, ug/L | <0.5 | <0.5 | 370 | 500 | <0.5 |

BROWN AND CALDWELL LABORATORIES
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**ANALYTICAL REPORT**

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Compton, California 90220

Project: 50-1014-3

REPORT OF ANALYTICAL RESULTS



| LOG NO | SAMPLE DESCRIPTION, GROUND WATER SAMPLES | DATE SAMPLED |
|---|---|---|
| 07-040-6 | W-00-1479,1480 | 01 JUL 87 |

| PARAMETER | 07-040-6 |
|---|---|
| Halocarbons (EPA 601) | |
| Date Extracted | 07/08/87 |
| Dilution Factor, Times 1 | 1 |
| 1,1,2,2-Tetrachloroethane, ug/L | <0.5 |
| 1,1,2-Trichloroethane, ug/L | <0.5 |
| 1,1-Dichloroethane, ug/L | <0.5 |
| 1,1-Dichloroethene, ug/L | <0.5 |
| 1,2-Dichlorobenzene, ug/L | <0.5 |
| 1,2-Dichloroethane, ug/L | <0.5 |
| trans-1,2-Dichloroethene, ug/L | <0.5 |
| 1,2-Dichloropropane, ug/L | <0.5 |
| 1,3-Dichlorobenzene, ug/L | <0.5 |
| 1,4-Dichlorobenzene, ug/L | <0.5 |
| 2-Chloroethylvinylether, ug/L | <0.5 |
| Bromodichloromethane, ug/L | <0.5 |
| Bromomethane, ug/L | <0.5 |
| Bromoform, ug/L | <0.5 |
| Chlorobenzene, ug/L | <0.5 |
| Carbon Tetrachloride, ug/L | <0.5 |
| Chloroethane, ug/L | <0.5 |
| Chloroform, ug/L | <0.5 |
| Chloromethane, ug/L | <0.5 |
| Dibromochloromethane, ug/L | <0.5 |
| Dichlorodifluoromethane, ug/L | <0.5 |
| Methylene chloride, ug/L | <1 |
| Tetrachloroethene, ug/L | <0.5 |
| 1,1,1-Trichloroethane, ug/L | <0.5 |

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# ANALYTICAL REPORT

LOG NO: P87-07-040

Received: 02 JUL 87
Reported: 17 JUL 87

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Compton, California 90220

Project: 50-1014-3

REPORT OF ANALYTICAL RESULTS



| LOG NO | SAMPLE DESCRIPTION, GROUND WATER SAMPLES | DATE SAMPLED |
|---|---|---|
| 07-040-6 | W-00-1479,1480 | 01 JUL 87 |

| PARAMETER | 07-040-6 |
|---|---|
| Trichloroethylene, ug/L | <0.5 |
| Trichlorofluoromethane, ug/L | <0.5 |
| Vinyl chloride, ug/L | <0.5 |
| cis-1,3-Dichloropropene, ug/L | <0.5 |
| trans-1,3-Dichloropropene, ug/L | <0.5 |
| Vol.Aromatics (EPA-602) | |
| Date Extracted | 07/08/87 |
| Dilution Factor, Times 1 | 1 |
| Chlorobenzene, ug/L | <0.5 |
| 1,2-Dichlorobenzene, ug/L | <0.5 |
| 1,3-Dichlorobenzene, ug/L | <0.5 |
| 1,4-Dichlorobenzene, ug/L | <0.5 |
| Benzene, ug/L | <0.5 |
| Ethylbenzene, ug/L | <0.5 |
| Toluene, ug/L | <0.5 |
| Additional Compounds: | |
| Total Xylene Isomers, ug/L | <0.5 |

Robert Peak for
Edward Wilson, Laboratory Director

BROWN AND CALDWELL LABORATORIES
373 SOUTH FAIR OAKS AVENUE PASADENA, CA 91105 • (818) 795-7553

# ANALYTICAL REPORT

RECEIVED
AUG 04 1987
Ans'd.....

LOG NO: P87-07-021

Received: 01 JUL 87
Reported: 13 JUL 87

Ken Durand
J. H. Kleinfelder & Associates
901 W. Victoria Street, Suite G
Compton, California 90220

Purchase Order: Q1014-03

REPORT OF ANALYTICAL RESULTS



| LOG NO | SAMPLE DESCRIPTION, GROUND WATER SAMPLES | DATE SAMPLED |
|---|---|---|
| 07-021-1 | W-00-(1371 thru 1387) Q1014-03 | 30 JUN 87 |
| 07-021-2 | W-01-(1388 thru 1404) Q1014-03 | 30 JUN 87 |

| PARAMETER | 07-021-1 | 07-021-2 |
|---|---|---|
| Hexavalent Chromium, mg/L | <0.02 | <0.02 |
| Nitrate Nitrogen | | |
| Nitrate (as NO3), mg/L | <0.4 | <0.4 |
| Nitrate (as N), mg/L | <0.1 | <0.1 |
| Quadruplicate TOC: | | |
| TOC, Average, mg/L | <3 | 13 |
| TOC, Standard Deviation, mg/L | 0 | 1 |
| TOC, 1st Replicate, mg/L | <3 | 14 |
| TOC, 2nd Replicate, mg/L | <3 | 12 |
| TOC, 3rd Replicate, mg/L | <3 | 14 |
| TOC, 4th Replicate, mg/L | <3 | 12 |
| Quadruplicate Conductivity: | | |
| Sp. Cond., Average, umhos/cm | 1 | 3400 |
| Sp. Cond., Std. Deviation, umhos/cm | 0 | 0 |
| Sp. Cond., 1st Replicate, umhos/cm | 1 | 3400 |
| Sp. Cond., 2nd Replicate, umhos/cm | 1 | 3400 |
| Sp. Cond., 3rd Replicate, umhos/cm | 1 | 3400 |
| Sp. Cond., 4th Replicate, umhos/cm | 1 | 3400 |

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# ANALYTICAL REPORT

LOG NO: P87-07-021

Received: 01 JUL 87
Reported: 13 JUL 87

Ken Durand
J. H. Kleinfelder & Associates
901 W. Victoria Street, Suite G
Compton, California 90220

Purchase Order: Q1014-03



## REPORT OF ANALYTICAL RESULTS

| LOG NO | SAMPLE DESCRIPTION, GROUND WATER SAMPLES | DATE SAMPLED |
|---|---|---|
| 07-021-1 | W-00-(1371 thru 1387) Q1014-03 | 30 JUN 87 |
| 07-021-2 | W-01-(1388 thru 1404) Q1014-03 | 30 JUN 87 |

| PARAMETER | 07-021-1 | 07-021-2 |
|---|---|---|
| Quadruplicate pH: | | |
| pH, Average, Units | 5.3 | 7.0 |
| pH, Standard Deviation, Units | 0.12 | 0.08 |
| pH, 1st Replicate, Units | 5.4 | 6.9 |
| pH, 2nd Replicate, Units | 5.2 | 7.0 |
| pH, 3rd Replicate, Units | 5.2 | 7.0 |
| pH, 4th Replicate, Units | 5.4 | 7.1 |
| Chloride, mg/L | 8.2 | 720 |
| Quadruplicate TOX: | | |
| TOX, 1st Replicate, mg/L | <80 | <80 |
| TOX, 2nd Replicate, mg/L | <80 | <80 |
| TOX, 3rd Replicate, mg/L | <80 | <80 |
| TOX, 4th Replicate, mg/L | <80 | <80 |
| TOX, Average, mg/L | <80 | <80 |
| TOX, Standard Deviation, mg/L | 0 | 0 |
| Chromium, mg/L | <0.04 | <0.04 |
| Copper, mg/L | <0.02 | 0.10 |
| Zinc, mg/L | <0.03 | 0.06 |
| Dissolved Digestion, Date | 07/08/87 | 07/08/87 |

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**ANALYTICAL REPORT**

LOG NO: P87-07-021

Received: 01 JUL 87
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Purchase Order: Q1014-03

REPORT OF ANALYTICAL RESULTS



| LOG NO | SAMPLE DESCRIPTION, GROUND WATER SAMPLES | DATE SAMPLED |
|---|---|---|
| 07-021-1 | W-00-(1371 thru 1387) Q1014-03 | 30 JUN 87 |
| 07-021-2 | W-01-(1388 thru 1404) Q1014-03 | 30 JUN 87 |

| PARAMETER | 07-021-1 | 07-021-2 |
|---|---|---|
| Halocarbons (EPA 601) | | |
| Date Extracted | 07/07/87 | 07/07/87 |
| Dilution Factor, Times 1 | 1 | 1 |
| 1,1,2,2-Tetrachloroethane, ug/L | <0.5 | <0.5 |
| 1,1,2-Trichloroethane, ug/L | <0.5 | <0.5 |
| 1,1-Dichloroethane, ug/L | <0.5 | <0.5 |
| 1,1-Dichloroethene, ug/L | <0.5 | <0.5 |
| 1,2-Dichlorobenzene, ug/L | <0.5 | <0.5 |
| 1,2-Dichloroethane, ug/L | <0.5 | 1.0 |
| trans-1,2-Dichloroethene, ug/L | <0.5 | <0.5 |
| 1,2-Dichloropropane, ug/L | <0.5 | <0.5 |
| 1,3-Dichlorobenzene, ug/L | <0.5 | <0.5 |
| 1,4-Dichlorobenzene, ug/L | <0.5 | <0.5 |
| 2-Chloroethylvinylether, ug/L | <0.5 | <0.5 |
| Bromodichloromethane, ug/L | <0.5 | <0.5 |
| Bromomethane, ug/L | <0.5 | <0.5 |
| Bromoform, ug/L | <0.5 | <0.5 |
| Chlorobenzene, ug/L | <0.5 | <0.5 |
| Carbon Tetrachloride, ug/L | <0.5 | <0.5 |
| Chloroethane, ug/L | <0.5 | <0.5 |
| Chloroform, ug/L | 1.2 | <0.5 |
| Chloromethane, ug/L | <0.5 | <0.5 |
| Dibromochloromethane, ug/L | <0.5 | <0.5 |
| Dichlorodifluoromethane, ug/L | <0.5 | <0.5 |
| Methylene chloride, ug/L | 22 | <0.5 |
| Tetrachloroethene, ug/L | <0.5 | <0.5 |

BROWN AND CALDWELL LABORATORIES
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# ANALYTICAL REPORT

LOG NO: P87-07-021

Received: 01 JUL 87
Reported: 13 JUL 87

Ken Durand
J. H. Kleinfelder & Associates
901 W. Victoria Street, Suite G
Compton, California 90220

Purchase Order: Q1014-03

REPORT OF ANALYTICAL RESULTS



| LOG NO | SAMPLE DESCRIPTION, GROUND WATER SAMPLES | DATE SAMPLED |
|---|---|---|
| 07-021-1 | W-00-(1371 thru 1387) Q1014-03 | 30 JUN 87 |
| 07-021-2 | W-01-(1388 thru 1404) Q1014-03 | 30 JUN 87 |

| PARAMETER | 07-021-1 | 07-021-2 |
|---|---|---|
| 1,1,1-Trichloroethane, ug/L | <0.5 | <0.5 |
| Trichloroethylene, ug/L | <0.5 | 11 |
| Trichlorofluoromethane, ug/L | <0.5 | <0.5 |
| Vinyl chloride, ug/L | <0.5 | <0.5 |
| cis-1,3-Dichloropropene, ug/L | <0.5 | <0.5 |
| trans-1,3-Dichloropropene, ug/L | <0.5 | <0.5 |
| Vol.Aromatics (EPA-602) | | |
| Date Extracted | 07/07/87 | 07/07/87 |
| Dilution Factor, Times 1 | 1 | 1 |
| Chlorobenzene, ug/L | <0.5 | <0.5 |
| 1,2-Dichlorobenzene, ug/L | <0.5 | <0.5 |
| 1,3-Dichlorobenzene, ug/L | <0.5 | <0.5 |
| 1,4-Dichlorobenzene, ug/L | <0.5 | <0.5 |
| Benzene, ug/L | <0.5 | <0.5 |
| Ethylbenzene, ug/L | <0.5 | <0.5 |
| Toluene, ug/L | <0.5 | <0.5 |
| Additional Compounds: | | |
| Total Xylene Isomers, ug/L | <0.5 | <0.5 |

Robert Peak for
Edward Wilson, Laboratory Director

BROWN AND CALDWELL LABORATORIES
373 SOUTH FAIR OAKS AVENUE PASADENA, CA 91105 • (818) 795-7553

**ANALYTICAL REPORT**

LOG NO: P87-07-054

Received: 06 JUL 87
Reported: 20 JUL 87

Ken Durand
J. H. Kleinfelder & Associates
901 W. Victoria Street, Suite G
Compton, California 90220
CC: S.CALIF.CHEM

Project: Q1014-3

REPORT OF ANALYTICAL RESULTS



| LOG NO | SAMPLE DESCRIPTION, GROUND WATER SAMPLES | DATE SAMPLED |
|---|---|---|
| 07-054-6 | W-04A-(1570 thru 1588) Q1014-3 | 02 JUL 87 |
| 07-054-7 | W-4-(1591 thru 1610) Q1014-3 | 02 JUL 87 |
| 07-054-8 | W-00-1534,1535 Q1014-3 | 02 JUL 87 |
| 07-054-9 | 15-00-1589,1590 Q1014-3 | 02 JUL 87 |
| 07-054-10 | W-00-1611,1612 Q1014-3 | 02 JUL 87 |

| PARAMETER | 07-054-6 | 07-054-7 | 07-054-8 | 07-054-9 | 07-054-10 |
|---|---|---|---|---|---|
| Halocarbons (EPA 601) | | | | | |
| Date Extracted | 07/14/87 | 07/13/87 | 07/08/87 | 07/08/87 | 07/08/87 |
| Dilution Factor, Times 1 | 1 | 10 | 1 | 1 | 1 |
| 1,1,2,2-Tetrachloroethane, ug/L | <0.5 | <5 | <0.5 | <0.5 | <0.5 |
| 1,1,2-Trichloroethane, ug/L | <0.5 | <5 | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloroethane, ug/L | 140 | 110 | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloroethene, ug/L | 50 | 94 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichlorobenzene, ug/L | <0.5 | <5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichloroethane, ug/L | 1.5 | 74 | <0.5 | <0.5 | <0.5 |
| trans-1,2-Dichloroethene, ug/L | 24 | 20 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichloropropane, ug/L | <0.5 | <5 | <0.5 | <0.5 | <0.5 |
| 1,3-Dichlorobenzene, ug/L | <0.5 | <5 | <0.5 | <0.5 | <0.5 |
| 1,4-Dichlorobenzene, ug/L | <0.5 | <5 | <0.5 | <0.5 | <0.5 |
| 2-Chloroethylvinylether, ug/L | <0.5 | <5 | <0.5 | <0.5 | <0.5 |
| Bromodichloromethane, ug/L | <0.5 | <5 | <0.5 | <0.5 | <0.5 |
| Bromomethane, ug/L | <0.5 | <5 | <0.5 | <0.5 | <0.5 |
| Bromoform, ug/L | <0.5 | <5 | <0.5 | <0.5 | <0.5 |
| Chlorobenzene, ug/L | <0.5 | <5 | <0.5 | <0.5 | <0.5 |
| Carbon Tetrachloride, ug/L | <0.5 | <5 | <0.5 | <0.5 | <0.5 |
| Chloroethane, ug/L | <0.5 | <5 | <0.5 | <0.5 | <0.5 |
| Chloroform, ug/L | 17 | 30 | <0.5 | <0.5 | <0.5 |
| Chloromethane, ug/L | <0.5 | <5 | <0.5 | <0.5 | <0.5 |
| Dibromochloromethane, ug/L | <0.5 | <5 | <0.5 | <0.5 | <0.5 |

**BROWN AND CALDWELL** LABORATORIES

373 SOUTH FAIR OAKS AVENUE PASADENA, CA 91105 • (818) 795-7553

**ANALYTICAL REPORT**

LOG NO: P87-07-054

Received: 06 JUL 87
Reported: 20 JUL 87

Ken Durand
J. H. Kleinfelder & Associates
901 W. Victoria Street, Suite G
Compton, California 90220
CC: S.CALIF.CHEM

Project: Q1014-3

REPORT OF ANALYTICAL RESULTS



| LOG NO | SAMPLE DESCRIPTION, GROUND WATER SAMPLES | DATE SAMPLED |
|---|---|---|
| 07-054-6 | W-04A-(1570 thru 1588) Q1014-3 | 02 JUL 87 |
| 07-054-7 | W-4-(1591 thru 1610) Q1014-3 | 02 JUL 87 |
| 07-054-8 | W-00-1534,1535 Q1014-3 | 02 JUL 87 |
| 07-054-9 | 15-00-1589,1590 Q1014-3 | 02 JUL 87 |
| 07-054-10 | W-00-1611,1612 Q1014-3 | 02 JUL 87 |

| PARAMETER | 07-054-6 | 07-054-7 | 07-054-8 | 07-054-9 | 07-054-10 |
|---|---|---|---|---|---|
| Vol.Aromatics (EPA-602) | | | | | |
| Date Extracted | 07/14/87 | 07/13/87 | 07/08/87 | 07/08/87 | 07/08/87 |
| Dilution Factor, Times 1 | 1 | 10 | 1 | 1 | 1 |
| Chlorobenzene, ug/L | <0.5 | <5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichlorobenzene, ug/L | <0.5 | <5 | <0.5 | <0.5 | <0.5 |
| 1,3-Dichlorobenzene, ug/L | <0.5 | <5 | <0.5 | <0.5 | <0.5 |
| 1,4-Dichlorobenzene, ug/L | <0.5 | <5 | <0.5 | <0.5 | <0.5 |
| Benzene, ug/L | <0.5 | <5 | <0.5 | <0.5 | <0.5 |
| Ethylbenzene, ug/L | <0.5 | 1500 | <0.5 | <0.5 | 550 |
| Toluene, ug/L | 1.5 | 3700 | <0.5 | <0.5 | 770 |
| Additional Compounds: | | | | | |
| Total Xylene Isomers, ug/L | <0.5 | 2700 | <0.5 | <0.5 | <0.5 |

Nitrate detection limit for sample -7 is elevated due to chromate interference. -- J. Jones
Samples P87-07-054-3 and -7 had high matrix interference and were diluted. Detection limits are raised accordingly. -- E. Szeto
Amended report; Hexavalent chromium data corrected on P87-07-054-7. 8/18/87. --J. Freemyer

Edward Wilson, Laboratory Director

BROWN AND CALDWELL LABORATORIES
373 SOUTH FAIR OAKS AVENUE PASADENA, CA 91105 • (818) 795-7553

# ANALYTICAL REPORT

LOG NO: P87-07-054

Received: 06 JUL 87
Reported: 20 JUL 87

Ken Durand
J. H. Kleinfelder & Associates
901 W. Victoria Street, Suite G
Compton, California 90220
CC: S.CALIF.CHEM

Project: Q1014-3

REPORT OF ANALYTICAL RESULTS



| LOG NO | SAMPLE DESCRIPTION, GROUND WATER SAMPLES | DATE SAMPLED |
|---|---|---|
| 07-054-6 | W-04A-(1570 thru 1588) Q1014-3 | 02 JUL 87 |
| 07-054-7 | W-4-(1591 thru 1610) Q1014-3 | 02 JUL 87 |
| 07-054-8 | W-00-1534,1535 Q1014-3 | 02 JUL 87 |
| 07-054-9 | 15-00-1589,1590 Q1014-3 | 02 JUL 87 |
| 07-054-10 | W-00-1611,1612 Q1014-3 | 02 JUL 87 |

| PARAMETER | 07-054-6 | 07-054-7 | 07-054-8 | 07-054-9 | 07-054-10 |
|---|---|---|---|---|---|
| Dichlorodifluoromethane, ug/L | <0.5 | <5 | <0.5 | <0.5 | <0.5 |
| Methylene chloride, ug/L | 11 | 140 | 19 | 15 | 1.5 |
| Tetrachloroethene, ug/L | 1.8 | <5 | <0.5 | <0.5 | <0.5 |
| 1,1,1-Trichloroethane, ug/L | 16 | <5 | <0.5 | <0.5 | <0.5 |
| Trichloroethylene, ug/L | 82 | 280 | <0.5 | <0.5 | 81 |
| Trichlorofluoromethane, ug/L | <0.5 | <5 | <0.5 | <0.5 | <0.5 |
| Vinyl chloride, ug/L | <0.5 | <5 | <0.5 | <0.5 | <0.5 |
| cis-1,3-Dichloropropene, ug/L | <0.5 | <5 | <0.5 | <0.5 | <0.5 |
| trans-1,3-Dichloropropene, ug/L | <0.5 | <5 | <0.5 | <0.5 | <0.5 |

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# ANALYTICAL REPORT

LOG NO: P87-08-282

RECEIVED
AUG 31 1987
Ans'd.....

Received: 02 JUL 87
Reported: 19 AUG 87

Ken Durand
J. H. Kleinfelder & Associates
17100 Pioneer Blvd., Suite 350
Artesia, California 90701
CC: S.CALIF.CHEM

Project: Q1014-3

REPORT OF ANALYTICAL RESULTS



| LOG NO | SAMPLE DESCRIPTION, GROUND WATER SAMPLES | DATE SAMPLED |
|---|---|---|
| 08-282-1 | W-03-(1405-1421) 50-1014-3 | 01 JUL 87 |
| 08-282-2 | W-08-(1422-1438) 50-1014-3 | 01 JUL 87 |
| 08-282-3 | W-11-(1441-1459) 50-1014-3 | 01 JUL 87 |
| 08-282-4 | W-10-(1460-1478) 50-1014-3 | 01 JUL 87 |
| 08-282-5 | W-05-(1481-1497) Q1014-3 | 02 JUL 87 |

| PARAMETER | 08-282-1 | 08-282-2 | 08-282-3 | 08-282-4 | 08-282-5 |
|---|---|---|---|---|---|
| Cadmium, mg/L | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |

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Project: Q1014-3

REPORT OF ANALYTICAL RESULTS



| LOG NO | SAMPLE DESCRIPTION, GROUND WATER SAMPLES | DATE SAMPLED |
|---|---|---|
| 08-282-6 | W-07-(1498-1516) Q1014-3 | 02 JUL 87 |
| 08-282-7 | W-09-(1517-1533) Q1014-3 | 02 JUL 87 |
| 08-282-8 | W-6B-(1536-1552) Q1014-3 | 02 JUL 87 |
| 08-282-9 | W-02-(1553-1569) Q1014-3 | 02 JUL 87 |
| 08-282-10 | W-04A-(1570-1588) Q1014-3 | 02 JUL 87 |

| PARAMETER | 08-282-6 | 08-282-7 | 08-282-8 | 08-282-9 | 08-282-10 |
|---|---|---|---|---|---|
| Cadmium, mg/L | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |

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REPORT OF ANALYTICAL RESULTS



| LOG NO | SAMPLE DESCRIPTION, GROUND WATER SAMPLES | DATE SAMPLED |
|---|---|---|
| 08-282-11 | W-04-(1591-1610) Q1014-3 | 02 JUL 87 |

| PARAMETER | 08-282-11 |
|---|---|
| Cadmium, mg/L | <0.01 |

Edward Wilson, Laboratory Director

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# ANALYTICAL REPORT

8/21 Rick
P/S correct
This address
& ~~[illegible]~~ send it
back to
me
Thx. JK

LOG NO: P87-08-282

Received: 02 JUL 87
Reported: 19 AUG 87

Ken Durand
J. H. Kleinfelder & Associates
901 W. Victoria Street, Suite G
Compton, California 90220
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Project: Q1014-3

REPORT OF ANALYTICAL RESULTS



| LOG NO | SAMPLE DESCRIPTION, GROUND WATER SAMPLES | | DATE SAMPLED |
|---|---|---|---|
| 08-282-1 | W-03-(1405-1421) | 50-1014-3 | 01 JUL 87 |
| 08-282-2 | W-08-(1422-1438) | 50-1014-3 | 01 JUL 87 |
| 08-282-3 | W-11-(1441-1459) | 50-1014-3 | 01 JUL 87 |
| 08-282-4 | W-10-(1460-1478) | 50-1014-3 | 01 JUL 87 |
| 08-282-5 | W-05-(1481-1497) | Q1014-3 | 02 JUL 87 |

| PARAMETER | 08-282-1 | 08-282-2 | 08-282-3 | 08-282-4 | 08-282-5 |
|---|---|---|---|---|---|
| Cadmium, mg/L | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |

**BROWN AND CALDWELL** LABORATORIES

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| 08-282-9 | W-02-(1553-1569) Q1014-3 | 02 JUL 87 |
| 08-282-10 | W-04A-(1570-1588) Q1014-3 | 02 JUL 87 |

| PARAMETER | 08-282-6 | 08-282-7 | 08-282-8 | 08-282-9 | 08-282-10 |
|---|---|---|---|---|---|
| Cadmium, mg/L | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |

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REPORT OF ANALYTICAL RESULTS



| LOG NO | SAMPLE DESCRIPTION, GROUND WATER SAMPLES | DATE SAMPLED |
|---|---|---|
| 08-282-11 | W-04-(1591-1610) Q1014-3 | 02 JUL 87 |

| PARAMETER | 08-282-11 |
|---|---|
| Cadmium, mg/L | <0.01 |

Edward Wilson, Laboratory Director

AMENDED REPORT

8-18-87

RECEIVED
AUG 24 1987

**BROWN AND CALDWELL** LABORATORIES

**ANALYTICAL REPORT**

373 SOUTH FAIR OAKS AVENUE PASADENA, CA 91105 • (818) 795-7553

LOG NO: P87-07-054

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Project: Q1014-3

REPORT OF ANALYTICAL RESULTS



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| 07-054-3 | W-09-(1517 thru 1533) Q1014-3 | 02 JUL 87 |
| 07-054-4 | W-6B-(1536 thru 1552) Q1014-3 | 02 JUL 87 |
| 07-054-5 | W-02-(1553 thru 1569) Q1014-3 | 02 JUL 87 |

| PARAMETER | 07-054-1 | 07-054-2 | 07-054-3 | 07-054-4 | 07-054-5 |
|---|---|---|---|---|---|
| Hexavalent Chromium, mg/L | <0.02 | <0.02 | 0.05 | <0.02 | <0.02 |
| Nitrate Nitrogen | | | | | |
| Nitrate (as NO3), mg/L | 65 | 110 | 13 | 37 | 39 |
| Nitrate (as N), mg/L | 15 | 25 | 2.9 | 8.4 | 8.8 |
| Quadruplicate TOC: | | | | | |
| TOC, Average, mg/L | <3 | 7 | 42 | <3 | <3 |
| TOC, Standard Deviation, mg/L | 0 | 3 | 2 | 0 | 0 |
| TOC, 1st Replicate, mg/L | <3 | 8 | 45 | <3 | <3 |
| TOC, 2nd Replicate, mg/L | <3 | 10 | 40 | <3 | <3 |
| TOC, 3rd Replicate, mg/L | <3 | 6 | 41 | <3 | <3 |
| TOC, 4th Replicate, mg/L | <3 | 4 | 43 | <3 | <3 |
| Quadruplicate Conductivity: | | | | | |
| Sp. Cond., Average, umhos/cm | 1400 | 3300 | 3200 | 1600 | 3400 |
| Sp. Cond., Std. Deviation, umhos/cm | 0 | 0 | 0 | 50 | 82 |
| Sp. Cond., 1st Replicate, umhos/cm | 1400 | 3300 | 3200 | 1600 | 3400 |
| Sp. Cond., 2nd Replicate, umhos/cm | 1400 | 3300 | 3200 | 1600 | 3500 |
| Sp. Cond., 3rd Replicate, umhos/cm | 1400 | 3300 | 3200 | 1600 | 3400 |
| Sp. Cond., 4th Replicate, umhos/cm | 1400 | 3300 | 3200 | 1500 | 3300 |

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| 07-054-4 | W-6B-(1536 thru 1552) Q1014-3 | 02 JUL 87 |
| 07-054-5 | W-02-(1553 thru 1569) Q1014-3 | 02 JUL 87 |

| PARAMETER | 07-054-1 | 07-054-2 | 07-054-3 | 07-054-4 | 07-054-5 |
|---|---|---|---|---|---|
| Quadruplicate pH: | | | | | |
| pH, Average, Units | 7.0 | 6.8 | 6.8 | 7.4 | 7.1 |
| pH, Standard Deviation, Units | 0.06 | 0.06 | 0.06 | 0.13 | 0.19 |
| pH, 1st Replicate, Units | 7.0 | 6.9 | 6.8 | 7.3 | 7.0 |
| pH, 2nd Replicate, Units | 7.0 | 6.9 | 6.9 | 7.4 | 7.2 |
| pH, 3rd Replicate, Units | 7.1 | 6.8 | 6.8 | 7.4 | 7.4 |
| pH, 4th Replicate, Units | 7.1 | 6.8 | 6.9 | 7.6 | 7.0 |
| Chloride, mg/L | 110 | 610 | 640 | 130 | 700 |
| Quadruplicate TOX: | | | | | |
| TOX, 1st Replicate, ug/L | 370 | 110 | 500 | <80 | <80 |
| TOX, 2nd Replicate, ug/L | 340 | 120 | 450 | <80 | 90 |
| TOX, 3rd Replicate, ug/L | 370 | 130 | 470 | <80 | <80 |
| TOX, 4th Replicate, ug/L | 360 | 90 | 490 | <80 | <80 |
| TOX, Average, ug/L | 360 | 110 | 480 | <80 | <80 |
| TOX, Standard Deviation, ug/L | 10 | 20 | 20 | 0 | 30 |
| Chromium, mg/L | <0.04 | <0.04 | 0.12 | <0.04 | <0.04 |
| Copper, mg/L | <0.02 | 0.08 | <0.02 | <0.02 | <0.02 |
| Zinc, mg/L | <0.03 | 0.04 | <0.03 | <0.03 | <0.03 |
| Dissolved Digestion, Date | 07/08/87 | 07/08/87 | 07/08/87 | 07/08/87 | 07/08/87 |

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Project: Q1014-3

REPORT OF ANALYTICAL RESULTS



| LOG NO | SAMPLE DESCRIPTION, GROUND WATER SAMPLES | DATE SAMPLED |
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| 07-054-3 | W-09-(1517 thru 1533) Q1014-3 | 02 JUL 87 |
| 07-054-4 | W-6B-(1536 thru 1552) Q1014-3 | 02 JUL 87 |
| 07-054-5 | W-02-(1553 thru 1569) Q1014-3 | 02 JUL 87 |

| PARAMETER | 07-054-1 | 07-054-2 | 07-054-3 | 07-054-4 | 07-054-5 |
|---|---|---|---|---|---|
| Halocarbons (EPA 601) | | | | | |
| Date Extracted | 07/10/87 | 07/10/87 | 07/13/87 | 07/14/87 | 07/08/87 |
| Dilution Factor, Times 1 | 1 | 1 | 5 | 1 | 1 |
| 1,1,2,2-Tetrachloroethane, ug/L | <0.5 | <0.5 | <2.5 | <0.5 | <0.5 |
| 1,1,2-Trichloroethane, ug/L | <0.5 | <0.5 | <2.5 | <0.5 | <0.5 |
| 1,1-Dichloroethane, ug/L | 5.4 | 14 | 140 | <0.5 | 20 |
| 1,1-Dichloroethene, ug/L | 5.2 | 6.0 | 72 | <0.5 | 11 |
| 1,2-Dichlorobenzene, ug/L | <0.5 | <0.5 | <2.5 | <0.5 | <0.5 |
| 1,2-Dichloroethane, ug/L | <0.5 | <0.5 | 69 | <0.5 | 2.2 |
| trans-1,2-Dichloroethene, ug/L | <0.5 | 32 | <2.5 | <0.5 | <0.5 |
| 1,2-Dichloropropane, ug/L | <0.5 | <0.5 | <2.5 | <0.5 | <0.5 |
| 1,3-Dichlorobenzene, ug/L | <0.5 | <0.5 | <2.5 | <0.5 | <0.5 |
| 1,4-Dichlorobenzene, ug/L | <0.5 | <0.5 | <2.5 | <0.5 | <0.5 |
| 2-Chloroethylvinylether, ug/L | <0.5 | <0.5 | <2.5 | <0.5 | <0.5 |
| Bromodichloromethane, ug/L | <0.5 | <0.5 | <2.5 | <0.5 | <0.5 |
| Bromomethane, ug/L | <0.5 | <0.5 | <2.5 | <0.5 | <0.5 |
| Bromoform, ug/L | <0.5 | <0.5 | <2.5 | <0.5 | <0.5 |
| Chlorobenzene, ug/L | <0.5 | <0.5 | <2.5 | <0.5 | 0.9 |
| Carbon Tetrachloride, ug/L | 120 | <0.5 | <2.5 | <0.5 | <0.5 |
| Chloroethane, ug/L | <0.5 | <0.5 | <2.5 | <0.5 | <0.5 |
| Chloroform, ug/L | 50 | <0.5 | 19 | <0.5 | 4.2 |
| Chloromethane, ug/L | <0.5 | <0.5 | <2.5 | <0.5 | <0.5 |
| Dibromochloromethane, ug/L | <0.5 | <0.5 | <2.5 | <0.5 | <0.5 |

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| 07-054-3 | W-09-(1517 thru 1533) Q1014-3 | 02 JUL 87 |
| 07-054-4 | W-6B-(1536 thru 1552) Q1014-3 | 02 JUL 87 |
| 07-054-5 | W-02-(1553 thru 1569) Q1014-3 | 02 JUL 87 |

| PARAMETER | 07-054-1 | 07-054-2 | 07-054-3 | 07-054-4 | 07-054-5 |
|---|---|---|---|---|---|
| Dichlorodifluoromethane, ug/L | <0.5 | <0.5 | <2.5 | <0.5 | <0.5 |
| Methylene chloride, ug/L | <1 | <1 | 33 | 2.6 | <1 |
| Tetrachloroethene, ug/L | 1.2 | <0.5 | <2.5 | <0.5 | <0.5 |
| 1,1,1-Trichloroethane, ug/L | <0.5 | <0.5 | 10 | <0.5 | <0.5 |
| Trichloroethylene, ug/L | 59 | 130 | 160 | 20 | 93 |
| Trichlorofluoromethane, ug/L | <0.5 | <0.5 | <2.5 | <0.5 | <0.5 |
| Vinyl chloride, ug/L | <0.5 | <0.5 | <2.5 | <0.5 | <0.5 |
| cis-1,3-Dichloropropene, ug/L | <0.5 | <0.5 | <2.5 | <0.5 | <0.5 |
| trans-1,3-Dichloropropene, ug/L | <0.5 | <0.5 | <2.5 | <0.5 | <0.5 |

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| 07-054-4 | W-6B-(1536 thru 1552) Q1014-3 | 02 JUL 87 |
| 07-054-5 | W-02-(1553 thru 1569) Q1014-3 | 02 JUL 87 |

| PARAMETER | 07-054-1 | 07-054-2 | 07-054-3 | 07-054-4 | 07-054-5 |
|---|---|---|---|---|---|
| Vol.Aromatics (EPA-602) | | | | | |
| Date Extracted | 07/10/87 | 07/10/87 | 07/13/87 | 07/14/87 | 07/14/87 |
| Dilution Factor, Times 1 | 1 | 1 | 5 | 1 | 1 |
| Chlorobenzene, ug/L | <0.5 | <0.5 | <2.5 | <0.5 | <0.5 |
| 1,2-Dichlorobenzene, ug/L | <0.5 | <0.5 | <2.5 | <0.5 | <0.5 |
| 1,3-Dichlorobenzene, ug/L | <0.5 | <0.5 | <2.5 | <0.5 | <0.5 |
| 1,4-Dichlorobenzene, ug/L | <0.5 | <0.5 | <2.5 | <0.5 | <0.5 |
| Benzene, ug/L | <0.5 | <0.5 | <2.5 | <0.5 | <0.5 |
| Ethylbenzene, ug/L | <0.5 | <0.5 | <2.5 | 1.5 | 6.2 |
| Toluene, ug/L | <0.5 | 3.6 | <2.5 | 0.8 | <0.5 |
| Additional Compounds: | | | | | |
| Total Xylene Isomers, ug/L | 7.3 | <0.5 | <2.5 | 7.9 | <0.5 |

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| 07-054-8 | W-00-1534,1535 Q1014-3 | 02 JUL 87 |
| 07-054-9 | 15-00-1589,1590 Q1014-3 | 02 JUL 87 |
| 07-054-10 | W-00-1611,1612 Q1014-3 | 02 JUL 87 |

| PARAMETER | 07-054-6 | 07-054-7 | 07-054-8 | 07-054-9 | 07-054-10 |
|---|---|---|---|---|---|
| **Hexavalent Chromium, mg/L** | <0.02 | 430 | --- | --- | --- |
| Nitrate Nitrogen | | | | | |
| Nitrate (as NO3), mg/L | 24 | <3 | --- | --- | --- |
| Nitrate (as N), mg/L | 5.4 | <0.7 | --- | --- | --- |
| Quadruplicate TOC: | | | | | |
| TOC, Average, mg/L | <3 | 133 | --- | --- | --- |
| TOC, Standard Deviation, mg/L | 1 | 6 | --- | --- | --- |
| TOC, 1st Replicate, mg/L | 3 | 134 | --- | --- | --- |
| TOC, 2nd Replicate, mg/L | <3 | 136 | --- | --- | --- |
| TOC, 3rd Replicate, mg/L | <3 | 124 | --- | --- | --- |
| TOC, 4th Replicate, mg/L | <3 | 137 | --- | --- | --- |
| Quadruplicate Conductivity: | | | | | |
| Sp. Cond., Average, umhos/cm | 1600 | 11,000 | --- | --- | --- |
| Sp. Cond., Std. Deviation, umhos/cm | 0 | 500 | --- | --- | --- |
| Sp. Cond., 1st Replicate, umhos/cm | 1600 | 12,000 | --- | --- | --- |
| Sp. Cond., 2nd Replicate, umhos/cm | 1600 | 11,000 | --- | --- | --- |
| Sp. Cond., 3rd Replicate, umhos/cm | 1600 | 11,000 | --- | --- | --- |
| Sp. Cond., 4th Replicate, umhos/cm | 1600 | 11,000 | --- | --- | --- |

BROWN AND CALDWELL LABORATORIES
373 SOUTH FAIR OAKS AVENUE PASADENA, CA 91105 • (818) 795-7553

# ANALYTICAL REPORT

LOG NO: P87-07-054

Received: 06 JUL 87
Reported: 20 JUL 87

Ken Durand
J. H. Kleinfelder & Associates
901 W. Victoria Street, Suite G
Compton, California 90220
CC: S.CALIF.CHEM

Project: Q1014-3

REPORT OF ANALYTICAL RESULTS



| LOG NO | SAMPLE DESCRIPTION, GROUND WATER SAMPLES | DATE SAMPLED |
|---|---|---|
| 07-054-6 | W-04A-(1570 thru 1588) Q1014-3 | 02 JUL 87 |
| 07-054-7 | W-4-(1591 thru 1610) Q1014-3 | 02 JUL 87 |
| 07-054-8 | W-00-1534,1535 Q1014-3 | 02 JUL 87 |
| 07-054-9 | 15-00-1589,1590 Q1014-3 | 02 JUL 87 |
| 07-054-10 | W-00-1611,1612 Q1014-3 | 02 JUL 87 |

| PARAMETER | 07-054-6 | 07-054-7 | 07-054-8 | 07-054-9 | 07-054-10 |
|---|---|---|---|---|---|
| Quadruplicate pH: | | | | | |
| pH, Average, Units | 7.7 | 6.3 | --- | --- | --- |
| pH, Standard Deviation, Units | 0.15 | 0.05 | --- | --- | --- |
| pH, 1st Replicate, Units | 7.5 | 6.3 | --- | --- | --- |
| pH, 2nd Replicate, Units | 7.8 | 6.3 | --- | --- | --- |
| pH, 3rd Replicate, Units | 7.8 | 6.3 | --- | --- | --- |
| pH, 4th Replicate, Units | 7.6 | 6.4 | --- | --- | --- |
| Chloride, mg/L | 160 | 3500 | --- | --- | --- |
| Quadruplicate TOX: | | | | | |
| TOX, 1st Replicate, ug/L | 150 | 2100 | --- | --- | --- |
| TOX, 2nd Replicate, ug/L | 150 | 1900 | --- | --- | --- |
| TOX, 3rd Replicate, ug/L | 130 | 2300 | --- | --- | --- |
| TOX, 4th Replicate, ug/L | 130 | 2000 | --- | --- | --- |
| TOX, Average, ug/L | 140 | 2100 | --- | --- | --- |
| TOX, Standard Deviation, ug/L | 10 | 200 | --- | --- | --- |
| Chromium, mg/L | <0.04 | 440 | --- | --- | --- |
| Copper, mg/L | <0.02 | <0.02 | --- | --- | --- |
| Zinc, mg/L | <0.03 | <0.03 | --- | --- | --- |
| Dissolved Digestion, Date | 07/08/87 | 07/08/87 | --- | --- | --- |

P87-07-021

# CHAIN OF CUSTODY RECORD

RECEIVED
JUL 06 1987
Ans'd.

SAMPLERS: *(Signature)* Tom Mann

Phone:

SHIP TO: Brown & Caldwell
Pasadena Ca

ATTENTION:

Phone No.

**SHIPPING INFORMATION**

Shipper: Kleinfelder
Address: Compton Ca
Date Shipped: 7/1/87
Shipment Service: BEC
Airbill No.
Cooler No.

| Relinquished by: *(Signature)* | Received by: *(Signature)* | Date/Time |
|---|---|---|
| Tom Mann | Brian Carroll | 7/1/87 1451 |
| Brian Carroll | Robin McRae | 7/1/87 1557 |
| | | |
| | Receive for laboratory by*: *(Signature)* | |

*Analysis laboratory should complete, "sample condition upon receipt", section below, sign and return original (white) copy to J. H. KLEINFELDER & ASSOCIATES, 901 W. Victoria Street, Suite G, Compton, CA 90220.

| Sample Number | Site Identification | Date Sampled | Analysis Requested | Sample Condition Upon Receipt |
|---|---|---|---|---|
| W-00-1371 | C1514-03 | 6/[illegible] | EPA 601 & | |
| 1372 | | | 602 | |
| 1373 | | | TOC | |
| 1374 | | | | |
| 1375 | | | | |
| 1376 | | | | |
| 1377 | | | TOX | |
| 1378 | | | | |
| 1379 | | | | |
| 1380 | | | | |
| 1381 | | | Cond & pH | |
| 1382 | | | | |
| 1383 | | | | |
| 1384 | | | | |

LAB INSTRUCTIONS: Laboratory reports should reference and be billed by site ID# and contain the following:

(1) summary of analytical methodology and QA work (blanks, spikes, duplicates)
(2) dates for (a) sampling, (b) lab receipt, (c) extraction, (d) injection/analysis
(3) detection limits for all constituents analyzed for and reporting of all constituents detected which were not specifically designated

(4)

(5)

White - J. H. Kleinfelder & Associates  Canary - Laboratory Courtesy Copy  Pink - Sampler

# CHAIN OF CUSTODY RECORD

P87-07-021

SAMPLERS: *(Signature)* Sam Mont

Phone:

SHIP TO: Brown & Caldwell
Pasadena CA

ATTENTION:

Phone No.

**SHIPPING INFORMATION**

Shipper: Kleinfelder
Address: Compton CA
Date Shipped: 7/1/87
Shipment Service: B&C
Airbill No.:
Cooler No.:

| Relinquished by: *(Signature)* | Received by: *(Signature)* | Date/Time |
|---|---|---|
| Sam Mont | Brian Carroll | 7/1/87 1451 |
| Brian Carroll | Ron McRae | 7/1/87 1550 |
| | | |
| | Receive for laboratory by*: *(Signature)* | |

*Analysis laboratory should complete, "sample condition upon receipt", section below, sign and return original (white) copy to J. H. KLEINFELDER & ASSOCIATES, 901 W. Victoria Street, Suite G, Compton, CA 90220.

| Sample Number | Site Identification | Date Sampled | Analysis Requested | Sample Condition Upon Receipt |
|---|---|---|---|---|
| W-[illegible]-1385 | Q/UM-3 | 1/30/87 | N & $NO_3$ | |
| 1386 | | | Cl $Cr^{+6}$ | |
| 1387 | | | Cr, Copper, Zinc | |
| W-01-1388 | | | EPA Gal & | |
| 1389 | | | GOZ | |
| 1390 | | | TOC | |
| 1391 | | | | |
| 1392 | | | | |
| 1393 | | | | |
| 1394 | | | TOX | |
| [illegible] | | | | |
| 1396 | | | | |
| 1397 | | | | |
| 1398 | | | pH Cond | |

LAB INSTRUCTIONS: Laboratory reports should reference and be billed by site ID# and contain the following:

(1) summary of analytical methodology and QA work (blanks, spikes, duplicates)
(2) dates for (a) sampling, (b) lab receipt, (c) extraction, (d) injection/analysis
(3) detection limits for all constituents analyzed for and reporting of all constituents detected which were not specifically designated

(4)

(5)

White - J. H. Kleinfelder & Associates  Canary - Laboratory Courtesy Copy  Pink - Sampler

# CHAIN OF CUSTODY RECORD

P87-07-021

SAMPLERS: *(Signature)* Sam Mont

Phone:

SHIP TO: Brian F Caldwell
Pasadena CA

ATTENTION:

Phone No.

**SHIPPING INFORMATION**

Shipper: Kleinfelder

Address: Compton CA

Date Shipped: 7/1/87

Shipment Service: BFC

Airbill No.

Cooler No.

| Relinquished by: *(Signature)* | Received by: *(Signature)* | Date/Time |
|---|---|---|
| Sam Mont | Brian Carroll | 7/1/87 1451 |
| Brian Carroll | Ryan McKee | 7/1/87 155 |
| | | |
| | Receive for laboratory by*: *(Signature)* | |

*Analysis laboratory should complete, "sample condition upon receipt", section below, sign and return original (white) copy to J. H. KLEINFELDER & ASSOCIATES, 901 W. Victoria Street, Suite G, Compton, CA 90220.

| Sample Number | Site Identification | Date Sampled | Analysis Requested | Sample Condition Upon Receipt |
|---|---|---|---|---|
| W-01-1399 | G/014-3 | 6/3/87 | Grid pH cond | |
| 1400 | | | | |
| 1401 | | | | |
| 1402 | | | NH3 + NO3 | |
| 1403 | | | Cl + Cr+6 | |
| 1404 | | | Cr, Cu, Zn | |

LAB INSTRUCTIONS: Laboratory reports should reference and be billed by site ID# and contain the following:

(1) summary of analytical methodology and QA work (blanks, spikes, duplicates)
(2) dates for (a) sampling, (b) lab receipt, (c) extraction, (d) injection/analysis
(3) detection limits for all constituents analyzed for and reporting of all constituents detected which were not specifically designated

(4)

(5)

White - J. H. Kleinfelder & Associates  Canary - Laboratory Courtesy Copy  Pink - Sampler

# CHAIN OF CUSTODY RECORD

P87-07-040

SAMPLERS: *(Signature)* Som Mons

Phone:

SHIP TO: Brown & Caldwell
Pasadena Ca

ATTENTION:

Phone No.

**SHIPPING INFORMATION**

RECEIVED
JUL 13 1987

Shipper [illegible] Ans'd.

Address Compton

Date Shipped 6/2/87

Shipment Service [illegible]

Airbill No.

Cooler No.

| Relinquished by: *(Signature)* | Received by: *(Signature)* | Date/Time |
|---|---|---|
| Som Mons | Brian Carroll | 7/2/87 1356 |
| Brian Carroll | Ryan McRae | 7/2/87 1440 |
| | | |
| | Receive for laboratory by*: *(Signature)* | |

*Analysis laboratory should complete, "sample condition upon receipt", section below, sign and return original (white) copy to J. H. KLEINFELDER & ASSOCIATES, 901 W. Victoria Street, Suite G, Compton, CA 90220.

| Sample Number | Site Identification | Date Sampled | Analysis Requested | Sample Condition Upon Receipt |
|---|---|---|---|---|
| W-03-1405 | 50-1114-3 | 6/4/87 | EPA 601 & | |
| 1406 | | | 602 | |
| 1407 | | | 601 | |
| 1408 | | | | |
| 1409 | | | | |
| 1410 | | | | |
| 1411 | | | 601 | |
| 1412 | | | | |
| 1413 | | | | |
| 1414 | | | | |
| 1415 | | | [illegible] | |
| 1416 | | | | |
| 1417 | | | | |
| 1418 | | | | |

LAB INSTRUCTIONS: Laboratory reports should reference and be billed by site ID# and contain the following:

(1) summary of analytical methodology and QA work (blanks, spikes, duplicates)
(2) dates for (a) sampling, (b) lab receipt, (c) extraction, (d) injection/analysis
(3) detection limits for all constituents analyzed for and reporting of all constituents detected which were not specifically designated

(4)

(5)

White - J. H. Kleinfelder & Associates  Canary - Laboratory Courtesy Copy  Pink - Sampler

# CHAIN OF CUSTODY RECORD P87-07-040

SAMPLERS: *(Signature)* Sam Mont

Phone:

SHIP TO: Brown & Caldwell
Pasadena Ca

ATTENTION:

Phone No.

**SHIPPING INFORMATION**

Shipper: Kleinfelder
Address: Compton
Date Shipped: 6/2/87
Shipment Service:
Airbill No.:
Cooler No.:

| Relinquished by: *(Signature)* | Received by: *(Signature)* | Date/Time |
|---|---|---|
| Sam Mont | Brian Carroll | 7/2/87 1356 |
| Relinquished by: *(Signature)* Brian Carroll | Received by: *(Signature)* Ron McRae | Date/Time 7/2/87 1445 |
| Relinquished by: *(Signature)* | Received by: *(Signature)* | Date/Time |
| Relinquished by: *(Signature)* | Receive for laboratory by*: *(Signature)* | Date/Time |

*Analysis laboratory should complete, "sample condition upon receipt", section below, sign and return original (white) copy to J. H. KLEINFELDER & ASSOCIATES, 901 W. Victoria Street, Suite G, Compton, CA 90220.

| Sample Number | Site Identification | Date Sampled | Analysis Requested | Sample Condition Upon Receipt |
|---|---|---|---|---|
| W-03 1419 | 50-1014-3 | 6/1/87 | N & NO3 | |
| 1420 | | | CL & Cr+6 | |
| 1421 | | | Cr, Cu, Zn | |
| W-08-1422 | | | EPA 601 & | |
| 1423 | | | 602 | |
| 1424 | | | TOC | |
| 1425 | | | | |
| 1426 | | | | |
| 1427 | | | | |
| 1428 | | | | |
| 1429 | | | | |
| 1430 | | | | |
| 1431 | | | | |
| 1432 | | | Pb cond | |

LAB INSTRUCTIONS: Laboratory reports should reference and be billed by site ID# and contain the following:

(1) summary of analytical methodology and QA work (blanks, spikes, duplicates)
(2) dates for (a) sampling, (b) lab receipt, (c) extraction, (d) injection/analysis
(3) detection limits for all constituents analyzed for and reporting of all constituents detected which were not specifically designated

(4)

(5)

White - J. H. Kleinfelder & Associates  Canary - Laboratory Courtesy Copy  Pink - Sampler

# CHAIN OF CUSTODY RECORD

P87-07-040

SAMPLERS: *(Signature)* Sam Mon

Phone:

SHIP TO: Brown & Caldwell
Pasadena CA

ATTENTION:

Phone No.

**SHIPPING INFORMATION**

Shipper: Kleinfelder

Address: Compton

Date Shipped: 6/2/87

Shipment Service:

Airbill No.:

Cooler No.:

| Relinquished by: *(Signature)* | Received by: *(Signature)* | Date/Time |
|---|---|---|
| | Brian Carroll | 7/2/87 1356 |
| Relinquished by: *(Signature)* Brian Carroll | Received by: *(Signature)* Ron McRae | Date/Time 7/2/87 1440 |
| Relinquished by: *(Signature)* | Received by: *(Signature)* | Date/Time |
| Relinquished by: *(Signature)* | Receive for laboratory by*: *(Signature)* | Date/Time |

*Analysis laboratory should complete, "sample condition upon receipt", section below, sign and return original (white) copy to J. H. KLEINFELDER & ASSOCIATES, 901 W. Victoria Street, Suite G, Compton, CA 90220.

| Sample Number | Site Identification | Date Sampled | Analysis Requested | Sample Condition Upon Receipt |
|---|---|---|---|---|
| W-05-1433 | SO-1014-3 | 6/1/87 | pH cond | |
| 1434 | | | | |
| 1435 | | | | |
| 1436 | | | N & $NO_3$ | |
| 1437 | | | CL + $Cr^{+6}$ | |
| 1438 | | | Cr, Cu, Zn | |
| W-00-1439 | | | EPA 601 + | |
| W-00-1440 | | | 602 | |
| W-11-1441 | | | EPA 601 + | |
| 1442 | | | 602 | |
| ~~1443~~ | | | | |
| ~~1444~~ | | | | |
| 1445 | | | TOC | |
| 1446 | | | | |

LAB INSTRUCTIONS: Laboratory reports should reference and be billed by site ID# and contain the following:

(1) summary of analytical methodology and QA work (blanks, spikes, duplicates)
(2) dates for (a) sampling, (b) lab receipt, (c) extraction, (d) injection/analysis
(3) detection limits for all constituents analyzed for and reporting of all constituents detected which were not specifically designated

(4)

(5)

White - J. H. Kleinfelder & Associates  Canary - Laboratory Courtesy Copy  Pink - Sampler

# CHAIN OF CUSTODY RECORD

SAMPLERS: *(Signature)* Sam Mow

Phone:

SHIP TO: Brown & Caldwell
Pasadena Ca

ATTENTION:

Phone No.

**SHIPPING INFORMATION**

Shipper: Kleinfelder

Address: Compton

Date Shipped: 6/2/87

Shipment Service:

Airbill No.:

Cooler No.:

| Relinquished by: *(Signature)* | Received by: *(Signature)* | Date/Time |
|---|---|---|
| Sam Mow | Brian Carroll | 7/2/87 1356 |
| Relinquished by: *(Signature)* | Received by: *(Signature)* | Date/Time |
| Brian Carroll | Ron McRae | 7/2/87 1440 |
| Relinquished by: *(Signature)* | Received by: *(Signature)* | Date/Time |
| Relinquished by: *(Signature)* | Receive for laboratory by*: *(Signature)* | Date/Time |

*Analysis laboratory should complete, "sample condition upon receipt", section below, sign and return original (white) copy to J. H. KLEINFELDER & ASSOCIATES, 901 W. Victoria Street, Suite G, Compton, CA 90220.

| Sample Number | Site Identification | Date Sampled | Analysis Requested | Sample Condition Upon Receipt |
|---|---|---|---|---|
| W-11-1447 | 50-1914.3 | 6/1/87 | Grid TOC | |
| 1448 | | | | |
| 1449 | | | TOX | |
| 1450 | | | | |
| 1451 | | | | |
| 1452 | | | | |
| 1453 | | | [illegible] | |
| 1454 | | | | |
| 1455 | | | | |
| 1456 | | | | |
| 1457 | | | [illegible] | |
| 1458 | | | [illegible] | |
| 1459 | | | Cr, Cu, Zn | |
| W-10-1460 | | | EPA 601 | |

LAB INSTRUCTIONS: Laboratory reports should reference and be billed by site ID# and contain the following:

(1) summary of analytical methodology and QA work (blanks, spikes, duplicates)
(2) dates for (a) sampling, (b) lab receipt, (c) extraction, (d) injection/analysis
(3) detection limits for all constituents analyzed for and reporting of all constituents detected which were not specifically designated

(4)

(5)

White - J. H. Kleinfelder & Associates  Canary - Laboratory Courtesy Copy  Pink - Sampler

# CHAIN OF CUSTODY RECORD P87-07-040

SAMPLERS: *(Signature)*

Phone:

SHIP TO:

ATTENTION:

Phone No.

**SHIPPING INFORMATION**

Shipper

Address Compton

Date Shipped 6/2/87

Shipment Service

Airbill No.

Cooler No.

| Relinquished by: *(Signature)* | Received by: *(Signature)* | Date/Time |
|---|---|---|
| | | 7/2/87 1356 |
| Relinquished by: *(Signature)* | Received by: *(Signature)* | Date/Time |
| | | 7/2/87 1450 |
| Relinquished by: *(Signature)* | Received by: *(Signature)* | Date/Time |
| Relinquished by: *(Signature)* | Receive for laboratory by*: *(Signature)* | Date/Time |

*Analysis laboratory should complete, "sample condition upon receipt", section below, sign and return original (white) copy to J. H. KLEINFELDER & ASSOCIATES, 901 W. Victoria Street, Suite G, Compton, CA 90220.

| Sample Number | Site Identification | Date Sampled | Analysis Requested | Sample Condition Upon Receipt |
|---|---|---|---|---|
| W-10 1461 | | | EPA 602 | |
| ~~1462~~ | | | | |
| ~~1463~~ | | | | |
| 1464 | | | TOC | |
| 1465 | | | | |
| 1466 | | | | |
| 1467 | | | | |
| 1468 | | | TOC | |
| 1469 | | | | |
| 1470 | | | | |
| 1471 | | | | |
| 1472 | | | | |
| 1473 | | | | |
| 1474 | | | | |

LAB INSTRUCTIONS: Laboratory reports should reference and be billed by site ID# and contain the following:

(1) summary of analytical methodology and QA work (blanks, spikes, duplicates)
(2) dates for (a) sampling, (b) lab receipt, (c) extraction, (d) injection/analysis
(3) detection limits for all constituents analyzed for and reporting of all constituents detected which were not specifically designated

(4)

(5)

White - J. H. Kleinfelder & Associates  Canary - Laboratory Courtesy Copy  Pink - Sampler

# CHAIN OF CUSTODY RECORD P87-07-040

SAMPLERS: *(Signature)* [signature]

Phone:

SHIP TO: Brown & Caldwell, Pasadena CA

ATTENTION:

Phone No.

**SHIPPING INFORMATION**

Shipper: Kleinfelder

Address: Compton

Date Shipped: 7/2/87

Shipment Service:

Airbill No.:

Cooler No.:

| Relinquished by: *(Signature)* | Received by: *(Signature)* | Date/Time |
|---|---|---|
| [signature] | Brian Carroll | 7/2/87 1356 |
| Relinquished by: *(Signature)* | Received by: *(Signature)* | Date/Time |
| Brian Carroll | Ron McRae | 7/2/87 1440 |
| Relinquished by: *(Signature)* | Received by: *(Signature)* | Date/Time |
| | | |
| Relinquished by: *(Signature)* | Receive for laboratory by*: *(Signature)* | Date/Time |
| | | |

*Analysis laboratory should complete, "sample condition upon receipt", section below, sign and return original (white) copy to J. H. KLEINFELDER & ASSOCIATES, 901 W. Victoria Street, Suite G, Compton, CA 90220.

| Sample Number | Site Identification | Date Sampled | Analysis Requested | Sample Condition Upon Receipt |
|---|---|---|---|---|
| W-10 1475 | 50-10143 | 6/1/87 | 2H Cond | |
| 1476 | | | Cl, Cr+6 | |
| 1477 | | | N & NO3 | |
| 1478 | | | Cr, Cu, Zn | |
| W-00-1479 | | | EPA 601 | |
| 1480 | | | 602 | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

LAB INSTRUCTIONS: Laboratory reports should reference and be billed by site ID# and contain the following:

(1) summary of analytical methodology and QA work (blanks, spikes, duplicates)
(2) dates for (a) sampling, (b) lab receipt, (c) extraction, (d) injection/analysis
(3) detection limits for all constituents analyzed for and reporting of all constituents detected which were not specifically designated

(4)

(5)

White - J. H. Kleinfelder & Associates  Canary - Laboratory Courtesy Copy  Pink - Sampler

# CHAIN OF CUSTODY RECORD #87-07-054

SAMPLERS: *(Signature)* [illegible]

Phone:

SHIP TO:
[illegible] & [illegible]
Pasadena CA

ATTENTION:

Phone No.

**SHIPPING INFORMATION**

Shipper: Kleinfelder

Address: Compton CA

Date Shipped: 7/2/87

Shipment Service:

Airbill No.:

Cooler No.:

| Relinquished by: *(Signature)* | Received by: *(Signature)* | Date/Time |
|---|---|---|
| [illegible] | [illegible] | 7-3-87 1400 |
| Relinquished by: *(Signature)* | Received by: *(Signature)* | Date/Time |
| Relinquished by: *(Signature)* | Received by: *(Signature)* | Date/Time |
| Relinquished by: *(Signature)* | Receive for laboratory by*: *(Signature)* | Date/Time |

*Analysis laboratory should complete, "sample condition upon receipt", section below, sign and return original (white) copy to J. H. KLEINFELDER & ASSOCIATES, 901 W. Victoria Street, Suite G, Compton, CA 90220.

| Sample Number | Site Identification | Date Sampled | Analysis Requested | Sample Condition Upon Receipt |
|---|---|---|---|---|
| W-05-1481 | Q 1014.3 | 7/1/87 | EPA 601 & | |
| 1482 | | | 602 | |
| 1483 | | | TOC | |
| 1484 | | | | |
| 1485 | | | | |
| 1486 | | | | |
| 1487 | | | TOX | |
| 1488 | | | | |
| 1489 | | | | |
| 1490 | | | | |
| 1491 | | | pH | |
| 1492 | | | | |
| 1493 | | | | |
| 1494 | | | | |

LAB INSTRUCTIONS: Laboratory reports should reference and be billed by site ID# and contain the following:

(1) summary of analytical methodology and QA work (blanks, spikes, duplicates)
(2) dates for (a) sampling, (b) lab receipt, (c) extraction, (d) injection/analysis
(3) detection limits for all constituents analyzed for and reporting of all constituents detected which were not specifically designated
(4) Send invoice to Southern California Gas
(5) Send results to [illegible]

White - J. H. Kleinfelder & Associates  Canary - Laboratory Courtesy Copy  Pink - Sampler

# CHAIN OF CUSTODY RECORD

PS7-07-054

SAMPLERS: *(Signature)* [signature]

Phone:

SHIP TO:

Brown & Caldwell

Pasadena CA

ATTENTION:

Phone No.

**SHIPPING INFORMATION**

Shipper Kleinfelder

Address Compton CA

Date Shipped 7/2/87

Shipment Service

Airbill No.

Cooler No.

| Relinquished by: *(Signature)* | Received by: *(Signature)* | Date/Time |
|---|---|---|
| [signature] | [signature] | 7-3-87 NOON |
| Relinquished by: *(Signature)* | Received by: *(Signature)* | Date/Time |
| Relinquished by: *(Signature)* | Received by: *(Signature)* | Date/Time |
| Relinquished by: *(Signature)* | Receive for laboratory by*: *(Signature)* | Date/Time |

*Analysis laboratory should complete, "sample condition upon receipt", section below, sign and return original (white) copy to J. H. KLEINFELDER & ASSOCIATES, 901 W. Victoria Street, Suite G, Compton, CA 90220.

| Sample Number | Site Identification | Date Sampled | Analysis Requested | Sample Condition Upon Receipt |
|---|---|---|---|---|
| W-05-1495 | 1014-3 | 7/2/87 | N & NO3 | |
| 1496 | | | CL & Cr+6 | |
| 1497 | | | Cr, Cu, Zn | |
| W-07-1498 | | | EPA 601 | |
| 1499 | | | + 602 | |
| 1500 | | | | |
| 1501 | | | | |
| 1502 | | | TOC | |
| 1503 | | | | |
| 1504 | | | | |
| 1505 | | | | |
| 1506 | | | TOX | |
| 1507 | | | | |
| 1508 | | | | |

LAB INSTRUCTIONS: Laboratory reports should reference and be billed by site ID# and contain the following:

(1) summary of analytical methodology and QA work (blanks, spikes, duplicates)
(2) dates for (a) sampling, (b) lab receipt, (c) extraction, (d) injection/analysis
(3) detection limits for all constituents analyzed for and reporting of all constituents detected which were not specifically designated

(4)

(5)

White - J. H. Kleinfelder & Associates  Canary - Laboratory Courtesy Copy  Pink - Sampler

# CHAIN OF CUSTODY RECORD P87-07-054

SAMPLERS: *(Signature)* Sam Mars

Phone:

SHIP TO: Brown & Caldwell
Pasadena CA

ATTENTION:

Phone No.

**SHIPPING INFORMATION**

Shipper Kleinfelder

Address Compton Ca

Date Shipped 7/2/87

Shipment Service

Airbill No.

Cooler No.

| Relinquished by: *(Signature)* | Received by: *(Signature)* | Date/Time |
|---|---|---|
| Sam Mars | [signature] | 7-3-87 noon |
| Relinquished by: *(Signature)* | Received by: *(Signature)* | Date/Time |
| Relinquished by: *(Signature)* | Received by: *(Signature)* | Date/Time |
| Relinquished by: *(Signature)* | Receive for laboratory by*: *(Signature)* | Date/Time |

*Analysis laboratory should complete, "sample condition upon receipt", section below, sign and return original (white) copy to J. H. KLEINFELDER & ASSOCIATES, 901 W. Victoria Street, Suite G, Compton, CA 90220.

| Sample Number | Site Identification | Date Sampled | Analysis Requested | Sample Condition Upon Receipt |
|---|---|---|---|---|
| W-07-1509 | Q 1014-3 | 7/2/87 | TOX | |
| 1510 | | | pH Cond | |
| 1511 | | | | |
| 1512 | | | | |
| 1513 | | | | |
| 1514 | | | N & $NO_3$ | |
| 1515 | | | Cl & $Cr^{+6}$ | |
| 1516 | | | Cr, Cu, Zn | |
| W-09-1517 | | | EPA 601 | |
| 1518 | | | & 602 | |
| 1519 | | | TOC | |
| 1520 | | | | |
| 1521 | | | | |
| 1522 | | | | |

LAB INSTRUCTIONS: Laboratory reports should reference and be billed by site ID# and contain the following:

(1) summary of analytical methodology and QA work (blanks, spikes, duplicates)
(2) dates for (a) sampling, (b) lab receipt, (c) extraction, (d) injection/analysis
(3) detection limits for all constituents analyzed for and reporting of all constituents detected which were not specifically designated

(4)

(5)

White - J. H. Kleinfelder & Associates  Canary - Laboratory Courtesy Copy  Pink - Sampler

# CHAIN OF CUSTODY RECORD P87-07-054

SAMPLERS: *(Signature)* Sam Mars

Phone:

SHIP TO:

Brown & Caldwell
Pasadena CA

ATTENTION:

Phone No.

**SHIPPING INFORMATION**

Shipper Kleinfelder

Address Compton CA

Date Shipped 7/2/87

Shipment Service

Airbill No.

Cooler No.

| Relinquished by: *(Signature)* | Received by: *(Signature)* | Date/Time |
|---|---|---|
| Sam Mars | [signature] | 7-3-87 NAN |
| Relinquished by: *(Signature)* | Received by: *(Signature)* | Date/Time |
| Relinquished by: *(Signature)* | Received by: *(Signature)* | Date/Time |
| Relinquished by: *(Signature)* | Receive for laboratory by*: *(Signature)* | Date/Time |

*Analysis laboratory should complete, "sample condition upon receipt", section below, sign and return original (white) copy to J. H. KLEINFELDER & ASSOCIATES, 901 W. Victoria Street, Suite G, Compton, CA 90220.

| Sample Number | Site Identification | Date Sampled | Analysis Requested | Sample Condition Upon Receipt |
|---|---|---|---|---|
| W-09-1523 | Q 1014-3 | 7/2/87 | TOX | |
| 1524 | | | Quid | |
| 1525 | | | | |
| 1526 | | | | |
| 1527 | | | pH Cond | |
| 1528 | | | Quid | |
| 1529 | | | | |
| 1530 | | | | |
| 1531 | | | N & NO3 | |
| 1532 | | | Cl & Cr+6 | |
| 1533 | | | Cr, Cu, Zn | |
| W-00-1534 | | | EPA 601 & | |
| 1535 | | | 601 | |
| W-60-1536 | | | EPA 601 | |

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(5)

White - J. H. Kleinfelder & Associates  Canary - Laboratory Courtesy Copy  Pink - Sampler

# CHAIN OF CUSTODY RECORD P87-07-054

SAMPLERS: *(Signature)* [signature]

Phone:

SHIP TO: Brown & Caldwell
Pasadena Ca

ATTENTION:

Phone No.

**SHIPPING INFORMATION**

Shipper Kleinfelder

Address Compton Ca

Date Shipped 7/2/87

Shipment Service

Airbill No.

Cooler No.

| Relinquished by: *(Signature)* | Received by: *(Signature)* | Date/Time |
|---|---|---|
| [signature] | [signature] | 7-3-87 [illegible] |
| Relinquished by: *(Signature)* | Received by: *(Signature)* | Date/Time |
| Relinquished by: *(Signature)* | Received by: *(Signature)* | Date/Time |
| Relinquished by: *(Signature)* | Receive for laboratory by*: *(Signature)* | Date/Time |

*Analysis laboratory should complete, "sample condition upon receipt", section below, sign and return original (white) copy to J. H. KLEINFELDER & ASSOCIATES, 901 W. Victoria Street, Suite G, Compton, CA 90220.

| Sample Number | Site Identification | Date Sampled | Analysis Requested | Sample Condition Upon Receipt |
|---|---|---|---|---|
| W-6B-1537 | G1014-3 | 7/2/87 | EPA 602 | |
| 1538 | | | TOC | |
| 1539 | | | | |
| 1540 | | | | |
| 1541 | | | | |
| 1542 | | | TOC | |
| 1543 | | | | |
| 1544 | | | | |
| 1545 | | | | |
| 1546 | | | [illegible] | |
| 1547 | | | | |
| 1548 | | | | |
| 1549 | | | | |
| 1550 | | | NF Nitz | |

LAB INSTRUCTIONS: Laboratory reports should reference and be billed by site ID# and contain the following:

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(5)

White - J. H. Kleinfelder & Associates  Canary - Laboratory Courtesy Copy  Pink - Sampler

# CHAIN OF CUSTODY RECORD P87-07-054

SAMPLERS: *(Signature)* [illegible]

Phone:

SHIP TO:

Brown & Caldwell

Pasadena Ca

ATTENTION:

Phone No.

**SHIPPING INFORMATION**

Shipper [illegible]

Address [illegible]

Date Shipped [illegible]

Shipment Service

Airbill No.

Cooler No.

| Relinquished by: *(Signature)* | Received by: *(Signature)* | Date/Time |
|---|---|---|
| [illegible] | [illegible] | 7-30-87 [illegible] |
| Relinquished by: *(Signature)* | Received by: *(Signature)* | Date/Time |
| Relinquished by: *(Signature)* | Received by: *(Signature)* | Date/Time |
| Relinquished by: *(Signature)* | Receive for laboratory by*: *(Signature)* | Date/Time |

*Analysis laboratory should complete, "sample condition upon receipt", section below, sign and return original (white) copy to J. H. KLEINFELDER & ASSOCIATES, 901 W. Victoria Street, Suite G, Compton, CA 90220.

| Sample Number | Site Identification | Date Sampled | Analysis Requested | Sample Condition Upon Receipt |
|---|---|---|---|---|
| W-GB-1551 | Q1014-3 | 7/2/87 | CC & [illegible] | |
| ↓ ↓ 1552 | | | [illegible] | |
| W-02 1553 | | | EPA 601 | |
| 1554 | | | & 602 | |
| 1555 | | | TOC | |
| 1556 | | | | |
| 1557 | | | | |
| 1558 | | | | |
| 1559 | | | TOC | |
| 1560 | | | | |
| 1561 | | | | |
| 1562 | | | | |
| 1563 | | | ph [illegible] | |
| 1564 | | | | |

LAB INSTRUCTIONS: Laboratory reports should reference and be billed by site ID# and contain the following:

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(4)

(5)

White - J. H. Kleinfelder & Associates  Canary - Laboratory Courtesy Copy  Pink - Sampler

# CHAIN OF CUSTODY RECORD P87-07-054

SAMPLERS: *(Signature)* Sam Mont

Phone:

SHIP TO: Brown & Caldwell Pasadena

ATTENTION:

Phone No.

**SHIPPING INFORMATION**

Shipper Kleinfelder

Address Compton Ca

Date Shipped 7/2/87

Shipment Service

Airbill No.

Cooler No.

| Relinquished by: *(Signature)* | Received by: *(Signature)* | Date/Time |
|---|---|---|
| Sam Mont | [illegible] | 7-3-87 1005 |
| Relinquished by: *(Signature)* | Received by: *(Signature)* | Date/Time |
| Relinquished by: *(Signature)* | Received by: *(Signature)* | Date/Time |
| Relinquished by: *(Signature)* | Receive for laboratory by*: *(Signature)* | Date/Time |

*Analysis laboratory should complete, "sample condition upon receipt", section below, sign and return original (white) copy to J. H. KLEINFELDER & ASSOCIATES, 901 W. Victoria Street, Suite G, Compton, CA 90220.

| Sample Number | Site Identification | Date Sampled | Analysis Requested | Sample Condition Upon Receipt |
|---|---|---|---|---|
| W-02 1565 | Q1[illegible]3 | 7/2/87 | pH Cond | |
| 1566 | | | | |
| 1567 | | | N & $NO_3$ | |
| 1568 | | | CL & CN | |
| 1569 | | | Cr, Cu, Zn | |
| W-04A-1570 | | | EPA [illegible] | |
| 1571 | | | [illegible] | |
| ~~1572~~ | | | | |
| 1573 | | | | |
| 1574 | | | [illegible] | |
| 1575 | | | [illegible] | |
| 1576 | | | | |
| 1577 | | | | |
| 1578 | | | [illegible] | |

LAB INSTRUCTIONS: Laboratory reports should reference and be billed by site ID# and contain the following:

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(4)

(5)

White - J. H. Kleinfelder & Associates  Canary - Laboratory Courtesy Copy  Pink - Sampler

# CHAIN OF CUSTODY RECORD P87-07-054

SAMPLERS: *(Signature)* [illegible]

Phone:

SHIP TO:

Brown & Caldwell
Pasadena CA

ATTENTION:

Phone No.

**SHIPPING INFORMATION**

Shipper Kleinfelder

Address Compton CA

Date Shipped 7/7/87

Shipment Service

Airbill No.

Cooler No.

| Relinquished by: *(Signature)* | Received by: *(Signature)* | Date/Time |
|---|---|---|
| [illegible] | [illegible] | 7-3-87 Noon |
| Relinquished by: *(Signature)* | Received by: *(Signature)* | Date/Time |
| Relinquished by: *(Signature)* | Received by: *(Signature)* | Date/Time |
| Relinquished by: *(Signature)* | Receive for laboratory by*: *(Signature)* | Date/Time |

*Analysis laboratory should complete, "sample condition upon receipt", section below, sign and return original (white) copy to J. H. KLEINFELDER & ASSOCIATES, 901 W. Victoria Street, Suite G, Compton, CA 90220.

| Sample Number | Site Identification | Date Sampled | Analysis Requested | Sample Condition Upon Receipt |
|---|---|---|---|---|
| W-04A/1579 | [illegible] | 7/7/87 | [illegible] | |
| 1580 | | | | |
| 1581 | | | | |
| 1582 | | | pb cool | |
| 1583 | | | | |
| 1584 | | | | |
| 1585 | | | | |
| 1586 | | | N & NO3 | |
| 1587 | | | CL & Cr+6 | |
| 1588 | | | Cu Cd Zn | |

LAB INSTRUCTIONS: Laboratory reports should reference and be billed by site ID# and contain the following:

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White - J. H. Kleinfelder & Associates  Canary - Laboratory Courtesy Copy  Pink - Sampler

# CHAIN OF CUSTODY RECORD P87-07-054

SAMPLERS: *(Signature)* [signature]

Phone:

SHIP TO:

Brown & Caldwell
Pasadena CA

ATTENTION:

Phone No.

**SHIPPING INFORMATION**

Shipper Kleinfelder

Address Compton

Date Shipped 7/7/87

Shipment Service

Airbill No.

Cooler No.

| Relinquished by: *(Signature)* | Received by: *(Signature)* | Date/Time |
|---|---|---|
| [signature] | [signature] | 7-3-87 Noon |
| Relinquished by: *(Signature)* | Received by: *(Signature)* | Date/Time |
| Relinquished by: *(Signature)* | Received by: *(Signature)* | Date/Time |
| Relinquished by: *(Signature)* | Receive for laboratory by*: *(Signature)* | Date/Time |

*Analysis laboratory should complete, "sample condition upon receipt", section below, sign and return original (white) copy to J. H. KLEINFELDER & ASSOCIATES, 901 W. Victoria Street, Suite G, Compton, CA 90220.

| Sample Number | Site Identification | Date Sampled | Analysis Requested | Sample Condition Upon Receipt |
|---|---|---|---|---|
| 15-00-1589 | Q1014-3 | 7/7/87 | EPA 601 E | |
| 1590 | | | 601 | |
| W-4-1591 | | | EPA 601 | |
| 1592 | | | 3 601 | |
| ~~1593~~ | | | | |
| ~~1594~~ | | | | |
| 1595 | | | TCX | |
| 1596 | | | | |
| 1597 | | | | |
| 1598 | | | | |
| 1599 | | | TCX | |
| 1600 | | | | |
| 1601 | | | | |
| 1602 | | | | |

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(4)

(5)

White - J. H. Kleinfelder & Associates  Canary - Laboratory Courtesy Copy  Pink - Sampler

# CHAIN OF CUSTODY RECORD

P87-07-054

SAMPLERS: *(Signature)* [signature]

Phone:

SHIP TO: Brown & Caldwell, Pasadena CA

ATTENTION:

Phone No.

**SHIPPING INFORMATION**

Shipper: Kleinfelder

Address: Compton

Date Shipped: 7/3/87

Shipment Service:

Airbill No.:

Cooler No.:

| Relinquished by: *(Signature)* | Received by: *(Signature)* | Date/Time |
|---|---|---|
| [signature] | [signature] | 7-3-87 Noon |
| Relinquished by: *(Signature)* | Received by: *(Signature)* | Date/Time |
| Relinquished by: *(Signature)* | Received by: *(Signature)* | Date/Time |
| Relinquished by: *(Signature)* | Receive for laboratory by*: *(Signature)* | Date/Time |

*Analysis laboratory should complete, "sample condition upon receipt", section below, sign and return original (white) copy to J. H. KLEINFELDER & ASSOCIATES, 901 W. Victoria Street, Suite G, Compton, CA 90220.

| Sample Number | Site Identification | Date Sampled | Analysis Requested | Sample Condition Upon Receipt |
|---|---|---|---|---|
| W-4-1603 | Q 1014-3 | 7/9/87 | ph cond | |
| 1604 | | | | |
| 1605 | | | | |
| 1606 | | | | |
| 1607 | | | N & Mg | |
| 1608 | | | CC + CO | |
| 1609 | | | | |
| ~~[illegible]~~ W-1610 | | | EPA 601 & 602 | |
| W-00-1611 | | | EPA 601 & 602 | |
| 1612 | | | | |
| ~~[illegible]~~ | | | | |
| ~~[illegible]~~ | | | | |

LAB INSTRUCTIONS: Laboratory reports should reference and be billed by site ID# and contain the following:

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(4)

(5)

White - J. H. Kleinfelder & Associates  Canary - Laboratory Courtesy Copy  Pink - Sampler