SOUTHERN CALIFORNIA CHEMICAL

A DIVISION OF CP CHEMICALS, INC.

8851 DICE ROAD • SANTA FE SPRINGS, CALIFORNIA 90670-0118

January 09, 1990

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Dear Messrs. Yacoub and Hinton:

Enclosed is the October 1989 quarterly sampling report for Southern California Chemical, Santa Fe Springs facility. The report includes results of analyses of water samples and water level measurements obtained October 23, 1989 through October 26, 1989 from the on-site monitoring wells.

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

Very truly yours,

Milt Giorgetta

Milt Giorgetta
Plant Manager

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Enclosure

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OCTOBER 1989
QUARTERLY SAMPLING REPORT
SOUTHERN CALIFORNIA CHEMICAL
SANTA FE SPRINGS, CALIFORNIA

Prepared for:

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1.0 INTRODUCTION

This report summarizes the fourteenth RCRA quarterly ground water monitoring sampling and analyses period at Southern California Chemical (SCC), Santa Fe Springs, California. Contained herein are the results of laboratory analyses of ground water samples and water level measurements obtained during the period October 23 to October 26, 1989.

The purpose of the ground water sampling program, which began in February 1985, is to monitor ground water quality and establish a database of the compounds in the ground water beneath the site. The primary goals of the program are (a) to assess the location and concentration of chromium and cadmium contamination, (b) to detect and evaluate water quality changes, and (c) to characterize background water quality.

In addition to the data obtained during the October 1989 sampling, this report contains plot plans showing contaminant distribution (Appendix A) and a summary of all previous sampling data (Appendix B). Copies of the original laboratory results are included in Appendices C and D. Chain-of-custody records for the October 1989 sampling are included in Appendix E.

2.0 MONITOR WELL SAMPLING

Ground water sampling, utilizing existing on-site monitoring wells, was conducted by CDM field personnel during the period of October 23 to October 26, 1989. Field activities were performed in general accordance with the sampling protocol as outlined in the unapproved, RCRA Facility Investigation (RFI) Workplan (CDM, November 1989).

Twelve monitor wells were sampled as part of this program (Figure A-1, Appendix A). Of these, 11 are screened in the upper portion of the Hollydale aquifer. The 12th well, MW-4A, is screened in the lower portion of the Hollydale aquifer. An additional monitoring well, MW-06A, historically has not been sampled for ground water analysis since it is a dry well. The well is screened in the lower portion of the uppermost aquifer, the Gage Aquifer, which is dry below the site.

As outlined in the Kleinfelder QAPP, certain analyses have been performed on a quarterly schedule, while others have recently been done on a biannual schedule, coinciding with quarterly sampling (effective September 1988). Ground water sampling, utilizing monitoring wells MW-1 through MW-6B, was initiated at the site by J. H. Kleinfelder and Associates (Kleinfelder) at the end of February, 1985. Six additional wells (MW-4A and MW-7 through MW-11) were installed at the site in July 1985, thereby increasing the total number of active wells to 12. Quarterly sampling of all 12 wells was initiated in March 1986. Commencing with the January 1989 sampling event, Camp Dresser & McKee Inc. (CDM) has been responsible for all ground water monitoring activities at the facility. A detailed listing of analytical parameters per sampling event has been provided in Table 2-1.

As in the past, the Regional Water Quality Control Board (RWQCB), and California Department of Health Services (DHS) were notified prior to commencement of sampling activities and were provided the opportunity to observe sampling and to collect duplicate and/or split samples. No representatives from either agency were present at any time during sampling. In addition to these agencies, EPA was also notified of the sampling program. Similarly, no representatives from that agency were present at anytime during sampling.

TABLE 2-1

SCC GROUND WATER MONITORING PROGRAM

Sampling Event	Appendix III Parameters	Water Quality Parameters	Indicators Parameters	Cd, Cr Cu, Zn	Hexavalent Chromium	Chloride	Nitrate	Volatile Organics	Comments
3/85	X (includes Cd & total Cr)	X	QUAD	Cu&ZN*	X*	X	X*	—	Sampled wells MW1,2,3,4, 5,&6B. Sulfide, nickel and * requested by DOHS and RWQCB.
7/85	—	—	QUAD	Cd,Cr	X	—	X	—	Sampled wells MW-4A,7,8,9, 10 and 11.
3/86	X	X	QUAD	Cu&Zn	X	X	X	—	Sampled 12 wells (MW1,2, 3,4,4A,5,6B,7,8,9,10 and 11).
7/86	—	—	QUAD	X	X	X	X	624	Sampled all 12 wells (as previous).
9/86	—	—	QUAD	X	X	X	X	624	" " " " " " "
12/86	—	—	QUAD	X	X	X	X	624	" " " " " " "
3/87	—	—	QUAD	X	X	X	X	601/602	Sampled 11 wells, not 4A
7/87	—	—	QUAD	X	X	X	X	601/602	After July 1987, all 12 wells were sampled during each event.
10/87	—	—	QUAD	X	X	X	X	601/602	
2/88	—	—	QUAD	X	X	X	X	601/602	
6/88	—	—	X (not QUAD)	X	X	X	X	601/602	Performed statistical analysis (t-test) on Indicator Parameters (IPs).

TABLE 2-1

SCC GROUND WATER MONITORING PROGRAM

Sampling Event	Appendix III Parameters	Water Quality Parameters	Indicators Parameters	Cd, Cr Cu, Zn	Hexavalent Chromium	Chloride	Nitrate	Volatile Organics	Comments
9/88	—	—	—	X	X	X	X	601/602	IPs & volatile organics from MW1, 2,4A, 5, 6, 7 analyzed semi-annually in June/Dec.
1/89	—	—	QUAD	X	X	X	X	601/602	After January 1989, volatile organics analyzed for all 12 wells.
4/89	—	—	—	X	X	X	X	601/602	
7/89	—	—	QUAD	X	X	X	X	601/602	
10/89	—	—	—	X	X	X	X	601/602	Performed statistical analysis of January through July 1989 data (IPs, total and hexavalent chromium).

Appendix III Parameters - As, Ba, Cd, Cr, F, Pb, Hg, N, Se, Ag, Endin, Lindane, Methoxychlor, Toxaphene, 2,4,D, 2,4,5TP (Silvex), Radium, Gross Alpha & Beta, turbidity, coliform bacteria

Water Quality Parameters. - Cl, Fe, Mn, Phenols, Na, SO_4

Indicator Parameters (IP) - TOX, TOC, pH, EC

624 = Volatile organics analysis

601/602 - Purgeable halocarbons/aromatics analysis

2.1 Sampling Procedure

To ensure continuity with previous quarterly samplings, field sampling and decontamination procedures, as detailed in the RFI Workplan, were based on procedures established by Kleinfelder in their unapproved Quality Assurance Project Plan (QAPP, May 1988) with some minor modifications. Sampling practices included efforts to detect floating product and hydrocarbon vapors at each well, measurement of the static water level and total depth of each well for calculating pre-sampling evacuation volumes, purging and sampling of ground water for laboratory analysis, decontamination of sampling equipment, and correct handling of sample containers. Deviations from the Kleinfelder QAPP were generally limited to implementation and decontamination of the submersible sampling pump systems. This was necessitated by a change in design of the pump system beginning with the April 1989 sampling period. Details of these deviations are discussed in Sections 2.1.3 and 2.2.

2.1.1 Detection of Organic Vapors and Immiscible Layers

Due to the known presence of organic compounds in the ground water in the Hollydale aquifer, efforts were made to determine if organic well vapors and immiscible floating product layers could be detected in the field. Prior to opening a monitor well for sampling, the air immediately above the well was monitored for organic vapors through the use of a photoionization detector (PID) equipped with a 10.0 eV lamp. The head space of each well was checked for volatile organic vapors by inserting the intake tube of the PID into the well head immediately after removing the monitoring well security plate and opening the casing cap. The maximum and average reading values for each well were recorded in the field log book.

The depth to static water level was measured to the nearest 0.01 foot using a decontaminated electric water level sounder. These data were subsequently input in calculations for determining wetted casing volumes and for use in determining ground water elevations at the facility.

A decontaminated, 2-inch diameter, clear teflon bailer, equipped with a bottom ball-check valve, was lowered and immersed into the ground water approximately half its length and brought up to the surface. Although none were observed, field personnel were prepared to record the thickness of floating product or note any iridescence on the water surface.

2.1.2 Purge Volume Determination

The total depth of each monitoring well was measured by lowering the water level sounder line until the sounder weights could be felt contacting the well bottom. This value was compared with the total depth of the well casing, as it had been constructed, to determine the amount of sediment fill present in each well. One wetted casing volume was then calculated by using the following formula:

$$1v = \pi \times r^2 \times L$$

where: 1v = one wetted casing volume
L = length of wetted casing
π = 3.142
r = inside radius of the casing

2.1.3 Ground Water Purging and Sampling

A decontaminated 40-inch bladder pump consisting of a teflon bladder fitted inside a stainless steel pump body was lowered to the approximate middle of the wetted, open screened casing of each well, where feasible. The air supply and sample discharge lines were constructed of teflon as well. Prior designs of the bladder pump included separate teflon-coated air supply and sample discharge lines. A design change involved the use of coaxial tubing wherein the sample discharge line was encased within the air supply line. To ensure quality control on decontamination of the assembly, the inner surface of the sample discharge line and the outer surface of the air supply line were teflon coated. This ensured that all surfaces coming into contact with ground water would be teflon coated. In addition, the longer 4-inch diameter wells were evacuated more effectively and efficiently by using the bladder pump's ability to be extended from a 40-inch to a 72-inch assembly and used as an air lift pump. A reduction to the

40-inch bladder assembly and final well evacuation was done prior to extracting samples for laboratory analysis.

Field parameters (pH, specific conductance [EC], temperature, salinity, and visual characteristics) were monitored and recorded at appropriate intervals during the purging of ground water from each well. Prior to evacuating the ground water, the EC and pH meters were calibrated and checked with appropriate calibration solutions. Ground water was purged until the parameters had stabilized and a minimum of three saturated well casing volumes had been evacuated. All purge water collected from each well was contained and labeled in SCC-supplied 55-gallon barrels for treatment and disposal by SCC at the on-site wastewater treatment facilities.

Ground water samples were discharged directly into previously labeled sample bottles which were then placed inside plastic zip-lock baggies and placed in an ice-cooled chest. Samples for metals analyses (cadmium, copper, zinc and total chromium [Cd, Cu, Zn and Cr, respectively]) were field filtered with a sterile, 0.45-micron, in-line filter as the appropriate bottles were filled. Precautions were taken to ensure that no head-space or bubbles were present in sample vials for volatile organic compound analysis.

Ground water samples were collected in the following sequence as determined in the Kleinfelder QAPP:

- EPA Method 601/602
- Metals (Cd, Cu, Zn, Cr)
- Hexavalent Chromium
- Chloride/Nitrate

Ground water sample bottles were numbered using the following format:

(e.g.) SCC-MW01-005

Where:

SCC - designates site acronym
MW01 - designates sample location number (MW = Monitoring Well)
EB - designates equipment blank sample

SP - designates spiked samples
TB - designates travel blanks
DIW - designates de-ionized water sample
005 - designates sequential sample number (per sampling event)

This was the fourth round of sampling conducted by CDM, however, since a 003 sequence number had been assigned to several quality assurance samples during the April sampling event, a 005 sequence number was assigned to all ground water samples collected during this round. Sample label information included date and time of sampling, CDM sample number, and analytical parameters.

2.1.4 Sample Handling

All sample containers that were collected from each well were accompanied by chain-of-custody forms that indicated the label information as well as the responsible person during each step of the transportation process. All samples were hand-delivered to the appropriate laboratories on the day that they were collected, and a copy of the chain-of-custody for that day was retained by CDM field personnel. The laboratories were notified at the time of delivery that one or more Cr(VI) sample(s) were contained in the shipment to ensure that the samples would be analyzed within the prescribed 24-hour holding period.

2.2 Equipment Decontamination Procedures

The following sections describe the procedures utilized to decontaminate ground water sampling equipment.

2.2.1 Sampling Pump/Lines Decontamination

The bladder pump assembly and coaxial tubing were decontaminated to reduce the possibility of cross-contamination between monitoring wells. The first step in the decontamination procedure was to connect the steam cleaner directly to the pump assembly via a quick coupler, and steam clean the interior of the pump and discharge line. The sample pump was then disconnected from the coaxial tubing and disassembled into its components.

The components were scrubbed with a laboratory grade detergent solution (Alconox) and rinsed with fresh tap water. They were then sprayed with methanol and double-rinsed with deionized water (DIW). The exterior of the coaxial tubing was also scrubbed with a detergent solution and steam cleaned. The pump assembly was then reassembled and reattached to the coaxial tubing.

The final decontamination step was accomplished by submerging the pump into a decontaminated polyvinylchloride tube containing DIW and pumping approximately 5 gallons of DIW through the system. An additional five gallons of DIW were then pumped to allow the collection of equipment blanks. A sample of the DIW was taken to perform confirmation analyses for comparison in the event of anomalous laboratory results.

The decontamination of the exterior pump line was performed over a plastic waterproof tarp. The tarp was placed on a gently sloping surface and bermed up at the lower edges, allowing the decontamination water to flow away from the equipment being cleaned. The spent water was recovered and stored in 55-gallon drums for treatment by SCC in the facility's wastewater treatment system.

2.2.2 Accessory Sampling Equipment Decontamination

Accessory sampling equipment such as the teflon bailer and the water level sounder were decontaminated to prevent cross-contamination between the monitoring wells. With the exception of steam-cleaning, the bailer was disassembled and decontaminated exactly as the bladder pump assembly components. The teflon bailer was not steam-cleaned because initial attempts showed that the high temperatures would have melted the bailer.

The water level sounder was decontaminated between wells by scrubbing with detergent solution followed by steam-cleaning.

3.0 LABORATORY TESTING

Two laboratories were utilized as a quality control measure intended to ensure the accuracy of the laboratory analyses performed on the ground water samples. Analytical and duplicate testing was provided by ENSECO Laboratories (ENSECO), Garden Grove, California. West Coast Analytical Services (WCAS) of Santa Fe Springs, California prepared spike samples that were submitted to ENSECO for assessment of analytical consistency. Spike sample preparation and analysis is discussed in Section 4.2.

During the October quarterly sampling event, a total of 23 water samples were submitted for laboratory analysis. Seventeen samples consisting of 12 monitor well (MW) samples, two duplicate monitor well samples (MW-3 and 4), two equipment blanks (EB), and one deionized water (DIW) sample were collected and submitted to ENSECO for analysis of purgeable halocarbons/ aromatics (601/602), cadmium, total and hexavalent chromium, copper, zinc, chloride and nitrate. Four travel blanks (TB) were also submitted to ENSECO for analysis of purgeable halocarbons/ aromatics. WCAS prepared a spiked sample (SP) for analysis of purgeable aromatics and metals by both ENSECO and WCAS.

The October 1989 ground water analytical results are discussed in Section 6.0 and summarized in Tables 6-1 through 6-3. Quality assurance analytical results (duplicates, equipment blanks, travel blanks, and spiked samples) are discussed in Section 4.0 and summarized in Tables 4-1 through 4-3. Historical Kleinfelder and CDM ground water analytical data are summarized in Appendix B. Individual analytical reports for October 1989 are located in Appendices C and D. Chain-of-custody records are located in Appendix E.

4.0 QUALITY ASSURANCE

To verify the accuracy and validity of analytical data resulting from laboratory testing, certain quality assurance procedures were implemented. These procedures included the use of duplicate samples, spiked samples, equipment blanks, travel blanks, and the use of chain-of-custody forms.

4.1 Duplicate Samples

Duplicate ground water samples from two of the twelve monitoring wells were submitted to ENSECO for analysis. Several procedural changes in QA protocols were implemented during the July 1989 sampling event. Previously, up to four duplicate samples per sampling event had been submitted to the laboratory, with the collection of 1 duplicate sample to every three monitor well samples. Standard accepted practice is to submit one duplicate sample for every tenth sample, a ratio of 1 to 10. The previous frequency was determined to be excessive and was revised to reflect current accepted practice. All other subsequent duplicate samples will be collected at the 1 in 10 frequency.

Another change was the submittal of the monitor well samples and duplicate samples to only one laboratory. Previous sampling and analysis utilized a second laboratory to perform duplicate testing. Again, standard practice is to send duplicate samples to the laboratory performing the primary analysis, as a check on the laboratory's precision. During the April 1989 sampling, ENSECO was the primary laboratory, with CKY utilized to perform duplicate testing. It was not possible to resolve discrepancies and inconsistencies which existed in the duplicate analytical results because it could not be determined which analytical data was erroneous. For this reason, it was decided to submit all subsequent monitor well and duplicate samples to the same laboratory.

During the October 1989 round of sampling, two duplicate samples were collected from monitoring wells MW-3 and MW-4. The duplicate samples from wells MW-3 and MW-4 were submitted to the analytical laboratory as blind

samples, and were designated MW-30 and MW-31, respectively, on the Chain of Custody forms. Monitor well MW-4 was selected because it generally yields the poorest quality ground water, and MW-3 was selected because of the detection of elevated levels of several purgeable halocarbon compounds during the previous July 1989 sampling. The results of the duplicate analyses have been compiled in Tables 4-1 through 4-3.

As can be seen by an examination of the tables, with minor exception, the results of the duplicate analyses are in close agreement. The presence of ethylbenzene and total xylenes in well MW-3 at concentrations of 1,600 and 150 micrograms per liter ($\mu g/l$), respectively, resulted in an increase in the detection limit for that sample from 1 to 100 $\mu g/l$ for most purgeable halogenated/aromatic compounds. Ethylbenzene and total xylenes were detected in the duplicate sample for well MW-3 at concentrations of 1,700 and 160 $\mu g/l$, respectively. The duplicate results were between 6 and 7 percent higher than the original results. As shown in Table 5-1 of the RFI Workplan, duplicate values which occur in the range $\pm$ 20 percent are acceptable, therefore, the difference is not considered significant.

The original and duplicate purgeable halocarbon results for well MW-4 were identical, with one exception. The compound 1,2-dichloroethane was detected in both samples at concentrations of 70 and 80 $\mu g/l$, respectively. The duplicate result was 14 percent higher than the original result, well within the acceptable range. Purgeable aromatic compounds were not detected in the original sample, but were detected in the duplicate sample at concentrations of 6 (benzene) and 20 $\mu g/l$ (toluene and total xylenes). The duplicate results, therefore, ranged from 20 to 200 percent higher, with the toluene and total xylene results falling outside the acceptable range. It should be noted that the reported concentrations were not much higher than the 10 $\mu g/l$ detection limit. This is not, therefore, considered indicative of an analytical problem because the results were relatively close to the method detection limit and all other duplicate purgeable organics results were in such close agreement.

The results of the metals analyses for both duplicate samples were identical. The reported chloride concentrations for well MW-4 and its

TABLE 4-1
SOUTHERN CALIFORNIA CHEMICAL
OCTOBER 1989 QUARTERLY SAMPLING
PURGEABLE HALOCARBONS ANALYTICAL RESULTS
QUALITY ASSURANCE SAMPLES

COMPOUND	DIW01	EB01	EB02	MW03 *	MW03(Dup)*	MW04	MW04(Dup)	TB01	TB02	TB03	TB04
Chloromethane	< 1.00	< 1.00	< 1.00	< 100.00	< 100.00	< 10.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00
Bromomethane	< 1.00	< 1.00	< 1.00	< 100.00	< 100.00	< 10.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00
Vinyl Chloride	< 1.00	< 1.00	< 1.00	< 100.00	< 100.00	< 10.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00
Chloroethane	< 1.00	< 1.00	< 1.00	< 100.00	< 100.00	< 10.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00
Methylene Chloride	< 1.00	< 1.00	< 1.00	< 100.00	< 100.00	30.00	30.00	< 1.00	< 1.00	< 1.00	< 1.00
Trichlorofluoromethane	< 1.00	< 1.00	< 1.00	< 100.00	< 100.00	< 10.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00
1,1-Dichloroethene	< 1.00	< 1.00	< 1.00	< 100.00	< 100.00	60.00	60.00	< 1.00	< 1.00	< 1.00	< 1.00
1,1-Dichloroethane	< 1.00	< 1.00	< 1.00	< 100.00	< 100.00	100.00	100.00	< 1.00	< 1.00	< 1.00	< 1.00
trans-1,2-Dichloroethene	< 1.00	< 1.00	< 1.00	< 100.00	< 100.00	20.00	20.00	< 1.00	< 1.00	< 1.00	< 1.00
Chloroform	9.00	< 1.00	8.00	< 100.00	< 100.00	= 10.00	= 10.00	< 1.00	< 1.00	< 1.00	< 1.00
1,2-Dichloroethane	< 1.00	< 1.00	< 1.00	< 100.00	< 100.00	70.00	80.00	< 1.00	< 1.00	< 1.00	< 1.00
1,1,1-Trichloroethane	< 1.00	< 1.00	< 1.00	< 100.00	< 100.00	= 10.00	= 10.00	< 1.00	< 1.00	< 1.00	< 1.00
Carbon Tetrachloride	< 1.00	< 1.00	< 1.00	< 100.00	< 100.00	< 10.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00
Bromodichloromethane	6.00	< 1.00	5.00	< 100.00	< 100.00	< 10.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00
1,2-Dichloropropane	< 1.00	< 1.00	< 1.00	< 100.00	< 100.00	< 10.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00
cis-1,3-Dichloropropene	< 1.00	< 1.00	< 1.00	< 100.00	< 100.00	< 10.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00
Trichloroethene	< 1.00	< 1.00	< 1.00	< 100.00	< 100.00	250.00	250.00	< 1.00	< 1.00	< 1.00	< 1.00
Dibromochloromethane	6.00	< 1.00	< 1.00	< 100.00	< 100.00	< 10.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00
1,1,2-Trichloroethane	NR	< 1.00	5.00	< 100.00	< 100.00	< 10.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00
trans-1,3-Dichloropropene	NR	< 1.00	< 1.00	< 100.00	< 100.00	< 10.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00
2-Chloroethylvinyl ether	< 1.00	< 1.00	< 1.00	< 100.00	< 100.00	< 10.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00
Bromoform	< 1.00	< 1.00	< 1.00	< 100.00	< 100.00	< 10.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00
Tetrachloroethene	< 1.00	< 1.00	< 1.00	< 100.00	< 100.00	< 10.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00
1,1,2,2-Tetrachloroethane	< 1.00	< 1.00	< 1.00	< 100.00	< 100.00	< 10.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00
Chlorobenzene	< 1.00	< 1.00	< 1.00	< 100.00	< 100.00	< 10.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00
1,3-Dichlorobenzene	< 1.00	< 1.00	< 1.00	< 100.00	< 100.00	< 10.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00
1,2-Dichlorobenzene	< 1.00	< 1.00	< 1.00	< 100.00	< 100.00	< 10.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00
1,4-Dichlorobenzene	< 1.00	< 1.00	< 1.00	< 100.00	< 100.00	< 10.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00

Note: All results in micrograms per liter (ug/l)
Laboratory analysis performed by Enseco.
< Denotes non-detection at indicated detection limit
= Compound concentration is equal to detection limit
* Higher detection limits due to sample matrix
NR=Not Reported, compound coelutes with Dibromochloromethane and is combined with that result.

DIW=De-ionized Water
EB=Equipment Blank
TB=Travel Blank
MW=Monitor Well
MW(Dup)=Monitor Well (Duplicate)

TABLE 4-2
SOUTHERN CALIFORNIA CHEMICAL
OCTOBER 1989 QUARTERLY SAMPLING
PURGEABLE AROMATICS ANALYTICAL RESULTS
QUALITY ASSURANCE SAMPLES

COMPOUND	DIW01	EB01	EB02	MW03	MW03(Dup)	MW04	MW04(Dup)	WCAS	SP01	TB01	TB02	TB03	TB04
Benzene	< 0.50	< 0.50	< 0.50	< 50.00	< 50.00	< 5.00	6.00	73.00	50.00	< 0.50	< 0.50	< 0.50	< 0.50
Toluene	< 1.00	< 1.00	< 1.00	< 100.00	< 100.00	< 10.00	20.00	78.00	70.00	< 1.00	< 1.00	< 1.00	< 1.00
Ethylbenzene	< 1.00	4.00	< 1.00	1600.00	1700.00	< 10.00	< 10.00	66.00	80.00	< 1.00	6.00	< 1.00	< 1.00
Xylenes, Total	< 1.00	< 1.00	< 1.00	150.00	160.00	< 10.00	20.00	432.00	500.00	< 1.00	< 1.00	< 1.00	< 1.00

Note: All results in micrograms per liter (ug/l)
< Denotes non-detection at indicated detection limit
Laboratory analysis performed by Enseco, with the exception of WCAS which was the spiked sample prepared and analyzed by West Coast Analytical Service.

DIW=De-ionized Water
EB=Equipment Blank
MW=Monitor Well
MW(Dup)=Monitor Well (Duplicate)
SP=Spiked sample
TB=Travel Blank

TABLE 4-3
SOUTHERN CALIFORNIA CHEMICAL
OCTOBER 1989 QUARTERLY SAMPLING
METALS, CHLORIDE AND NITRATE ANALYTICAL RESULTS
QUALITY ASSURANCE SAMPLES

COMPOUND	DIW01	EB01	EB02	MW03	MW03(Dup)	MW04	MW04(Dup)	WCAS	SP01
Cadmium	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.07	0.07	0.47	0.47
Chromium, Hexavalent	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	110.00	110.00	0.91	1.00
Chromium, Total	< 0.02	< 0.02	0.03	< 0.02	< 0.02	120.00	120.00	5.20	4.80
Copper	< 0.05	< 0.50	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	1.60	1.40
Zinc	< 0.02	< 0.02	0.02	< 0.02	< 0.02	0.04	0.04	2.80	2.60
Chloride	1.00	0.50	0.10	470.00	445.00	1400.00	810.00	NA	NA
Nitrate (Nitrogen)	< 0.20	< 0.20	< 0.20	1.90	1.80	0.60	0.60	NA	NA

Note: All results in milligrams per liter (mg/l)
< Denotes non-detection at indicated detection limit
Laboratory analysis performed by Enseco, with the exception of WCAS which was the spiked sample prepared and analyzed by West Coast Analytical Service.
NA= Not Analyzed

DIW=De-ionized Water
EB=Equipment Blank
MW=Monitor Well
MW(Dup)=Monitor Well (Duplicate)
SP=Spiked sample

duplicate were 1,400 and 810 milligrams per liter (mg/l), respectively. The duplicate value was 58 percent less than the original value, and therefore fell outside the acceptable limit.

4.2 Spiked Samples

Two sets of spiked samples were prepared by WCAS for analysis of purgeable aromatics, cadmium, chromium (total and hexavalent), copper and zinc. One set of spiked samples (SP-01) was submitted to ENSECO as a QA/QC check. WCAS also analyzed a set (WCAS) in order to verify the spiked concentrations of their prepared samples. The results have been tabulated in Tables 4-2 and 4-3. Percent recoveries for ENSECO were within acceptable ranges, ranging from 68 to 121 percent for BTEX compounds, and from 88 to 110 percent for the five metals. According to Table 5-1 of the RFI Workplan, acceptable recovery values range from 60 to 140 percent for purgeable aromatics, 85 to 120 percent for hexavalent chromium, and from 75 to 125 percent for the other four metals.

4.3 Equipment Blank and Deionized Water Samples

Two equipment blanks were collected in order to verify that cross-contamination between wells did not occur during sampling. The equipment blank was obtained by pumping deionized water through the decontaminated sample pump and lines. The samples were collected in the appropriate containers and submitted for laboratory analysis. One equipment blank was collected from each sampling pump immediately after decontamination was completed. Sample EB-01 was collected prior to sampling well MW-11, and EB-02 was collected after sampling well MW-4. Equipment blanks were submitted to the laboratory for analysis of purgeable halocarbons/ aromatics, cadmium, chromium (total and hexavalent), copper, zinc, chloride and nitrate. In addition, a sample was collected from the deionized source water used for decontamination. The DIW sample was analyzed for the parameters noted above. Low levels (less than 10 μg/l) of purgeable halocarbon compounds detected in EB-02 were also detected in the DIW sample. Therefore, the compounds were present in the deionized water which was used to fill the equipment blanks and is not indicative of a cross-contamination

problem. Ethylbenzene was detected in EB-01, and total chromium and zinc were detected in EB-02 either at or slightly above the detection limits for those compounds. Because of the low concentrations, the detections are considered neither significant nor indicative of a cross- contamination problem.

4.4 Travel Blanks

The detection of compounds in travel blanks is generally indicative of systematic contamination from sample transport, laboratory glassware cleaning, laboratory storage, or analytical procedures. For each day of sampling, one laboratory prepared travel blank consisting of organic-free water was labeled and submitted for purgeable halocarbon and aromatic volatile organic analysis by EPA Methods 601/602. Tables 4-1 and 4-2 show the results of travel blank analyses. Each travel blank was stored with the days' samples to be analyzed for volatile organic compounds. An examination of the tables reveals that, with the exception of the detection of a minor amount of ethylbenzene detected at 6 $\mu g/l$ in TB-02, no purgeable halocarbon/aromatic compounds were detected in any of the four travel blanks. The detected concentration of ethylbenzene at a concentration slightly above the detection limit is considered minimal and is not believed to be indicative of a cross-contamination problem.

4.5 Steam Cleaner Sample

During the three previous sampling events, a sample was collected from the steam cleaner in order to verify that the rental equipment was not a source of contamination. Steam cleaner samples were obtained from the end of the discharge nozzle and were analyzed for purgeable halocarbons/aromatics, cadmium, chromium (total and hexavalent), copper, zinc, chloride and nitrate. An evaluation of the historical steam cleaner data verified that the rental unit was not a source of contamination. Therefore, starting with the October 1989 sampling, the collection of a steam cleaner sample for analysis was discontinued. In the event that the quality of the water discharged from the steam cleaner during subsequent rounds is suspect, additional samples will be collected as appropriate.

4.6 Sample Control

All samples were labeled immediately prior to sampling with a waterproof pen. Samples were transported under chain-of-custody and hand delivered by CDM personnel to the laboratories in ice-cooled chests. Copies of the chain-of-custody records are included in Appendix E.

5.0 GROUND WATER ELEVATION

Prior to the initiation of well evacuation procedures, the depth to ground water was measured in each monitoring well. Ground water elevations were calculated by subtracting the depth to static water level from the surveyed elevation of the corresponding monitor well. The elevation of the ground water surface decreased at each well since the previous July 1989 Quarterly Sampling. This decrease ranged between 2.24 and 3.46 feet, with an average decrease of 3.15 feet. During the previous July sampling, an average one foot decrease in ground water elevation was noted. The ground water elevation of deep well MW-4A was a minimal 0.16 feet higher than the shallow well at that location during the most recent sampling. As has been observed during prior sampling events, no water was detected in monitoring well MW-06A which is screened in the Gage formation.

Table 5-1 lists the depths to water and ground water elevations for each well. Figure A-2 shows the approximate ground water surface elevation of the Upper Hollydale Aquifer. The contours were drawn based on a three-point solution using wells MW-1, MW-5 and MW-6B. The elevation for deep well MW-4A was not included on the figure. An examination of the ground water elevation at each well location illustrates that all data points fall within the appropriate ground water elevation contours as drawn. In several instances (ex. MW-2 and MW-8), the data points do not "fit" within the contour lines as well as would be expected. As was noted during the July sampling, the value for well MW-02 once more appears to be erroneous. The field notes were checked and no obvious errors were found. As stated in the July 1989 quarterly sampling report, apparent discrepancies could potentially be attributable to user error in measuring the water depths in wells or to an erroneous data base of casing elevations. At this point, expectations are that all existing wells will be resurveyed when new wells are installed during the forthcoming RCRA Facility Investigation. In spite of potential error, the contours still indicate that the approximate direction of ground water flow is towards the southwest at a gradient of 0.4 foot per 100 feet.

TABLE 5-1

GROUND WATER ELEVATION DATA
OCTOBER 1989 QUARTERLY SAMPLING
SOUTHERN CALIFORNIA CHEMICAL

Well No.	Well Headspace* (ppm)	Total Depth Constructed (ft)	Total Depth Measured (ft)	Casing Fill (ft)	M.P. Elevation (ft)	Depth to Water (ft)	G.W. Elevation (ft)
1	0	62.5	62.4	0.1	152.60	55.84	96.76
2	81	74.0	70.8	3.2	151.56	56.26	95.30
3	60	75.0	70.5	4.5	151.62	56.87	94.75
4	0	75.0	67.7	7.3	149.76	54.84	94.92
4A	0	107.0	107.5	0	152.49	57.41	95.08
5	0	75.0	73.7	1.3	153.21	59.02	94.19
6A	0	30.0	29.2	0.8	149.31	dry	dry
6B	0	77.0	70.2	6.8	149.46	54.11	95.35
7	29	75.0	74.9	0.1	149.27	54.55	94.72
8	55	71.0	70.3	0.7	149.53	54.63	94.90
9	34	77.0	74.6	2.4	151.14	55.52	95.62
10	0	75.0	74.6	0.4	151.60	56.26	95.34
11	218	75.5	75.2	0.3	152.80	57.03	95.77

NR = No Reading

M.P. = Measuring Point (well head)

G.W. = Groundwater

* = Measured with PID prior to sampling, maximum reading.

Of the 12 ground water monitoring wells completed in the Hollydale Aquifer, 10 are perforated in the approximate interval from 45 to 75 feet below ground surface. The exceptions are wells MW-01 and MW-04A which are perforated in the intervals from 42 to 62 feet and 87 to 107 feet, respectively. During the January 1989 round of sampling, the ground water elevation at well MW-04 (shallow) was a minimal 0.09 feet higher than the ground water elevation at well MW-04A (deep). In April 1989, ground water elevation at the shallow well was 0.91 feet higher than the deep well. During the July and October rounds of sampling, the ground water elevation of the deep well was 0.11 and 0.16 feet higher than the shallow well, respectively. It is not known at the present time whether the increase is due to differences in well construction, measurement error, seasonal variations or other unknown factors. Subsequent measurements at the location will allow for a determination of whether the observed difference is reflective of actual conditions or other factors.

6.0 GROUND WATER QUALITY

Based upon the results of laboratory testing performed on the ground water samples collected January 1989 from the on-site monitor wells, the presence of two contaminant plumes in the Hollydale Aquifer was reaffirmed. Historically, these plumes have been present at varying concentrations and lateral extent. In January 1989, one plume consisting primarily of site-specific indicator parameters (metals), was aligned in a northeasterly direction in the vicinity of wells MW-04 and MW-09. The other, consisting of organic compounds, was similarly aligned along the northern boundary of the site property with the highest concentrations found in wells MW-03, MW-04, and MW-11.

Analytical results from the 12 wells sampled during the October 1989 quarterly monitoring have been compiled in Tables 6-1 through 6-3. As can be seen from an examination of the analytical data, significant amounts of total and hexavalent chromium and trichloroethene were detected at well MW-04 (shallow). This finding is consistent with previous rounds of sampling. In addition, a significant concentration of ethylbenzene (1600μg/l) was detected at well MW-03. The following sections will describe both metals and purgeable halocarbon/aromatics analytical results in detail.

6.1 Site-Specific Indicator Parameters

<u>Hexavalent Chromium (Cr[VI])</u>

Elevated levels of Cr(VI) were found to be present in MW-04 and MW-09 during the January 1989 sampling. Cr(VI) was originally detected in MW-04 at a concentration of 500 mg/l in June, 1985, and has fluctuated between 33 (January 1989 data) and 500 mg/l since. In order to compare the analytical data from the most recent sampling events (January, April and July 1989) with the October 1989 data, Table 6-4 was compiled. The table compares parameters of interest (hexavalent and total chromium, cadmium, zinc, purgeable aromatics and trichloroethene) at selected well locations. Wells were selected based on an evaluation of their relative position and past

TABLE 6-1
SOUTHERN CALIFORNIA CHEMICAL
OCTOBER 1989 QUARTERLY SAMPLING
PURGEABLE HALOCARBONS ANALYTICAL RESULTS
MONITOR WELL SAMPLES

COMPOUND	MW01	MW02	MW03 *	MW04	MW04A	MW05	MW06B	MW07	MW08	MW09	MW10	MW11
Chloromethane	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
Bromomethane	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
Vinyl Chloride	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
Chloroethane	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
Methylene Chloride	< 1.00	< 1.00	< 100.00	30.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	15.00	< 10.00	< 10.00
Trichlorofluoromethane	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
1,1-Dichloroethene	< 1.00	< 1.00	< 100.00	60.00	< 1.00	< 1.00	< 1.00	< 1.00	4.00	40.00	< 10.00	< 10.00
1,1-Dichloroethane	< 1.00	< 1.00	< 100.00	100.00	< 1.00	10.00	< 1.00	4.00	40.00	90.00	< 10.00	< 10.00
trans-1,2-Dichloroethene	< 1.00	< 1.00	< 100.00	20.00	< 1.00	< 1.00	< 1.00	2.00	8.00	< 10.00	< 10.00	< 10.00
Chloroform	< 1.00	< 1.00	< 100.00	= 10.00	< 1.00	31.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
1,2-Dichloroethane	< 1.00	< 1.00	< 100.00	70.00	< 1.00	10.00	< 1.00	< 1.00	< 1.00	< 10.00	50.00	70.00
1,1,1-Trichloroethane	< 1.00	< 1.00	< 100.00	= 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	= 10.00	< 10.00
Carbon Tetrachloride	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	39.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
Bromodichloromethane	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
1,2-Dichloropropane	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
cis-1,3-Dichloropropene	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
Trichloroethene	12.00	35.00	< 100.00	250.00	3.00	15.00	29.00	44.00	22.00	110.00	70.00	35.00
Dibromochloromethane	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
1,1,2-Trichloroethane	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
trans-1,3-Dichloropropene	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
2-Chloroethylvinyl ether	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
Bromoform	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
Tetrachloroethene	3.00	2.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	3.00	= 1.00	< 10.00	< 10.00	< 10.00
1,1,2,2-Tetrachloroethane	NR	NR	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	NR	NR	< 10.00	< 10.00	< 10.00
Chlorobenzene	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
1,3-Dichlorobenzene	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
1,2-Dichlorobenzene	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00
1,4-Dichlorobenzene	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00	< 10.00

Note: All results in micrograms per liter (ug/l)
Laboratory analysis performed by Enseco.
< Denotes non-detection at indicated detection limit

= Compound concentration is equal to detection limit
* Higher detection limits due to sample matrix
NR=Not Reported, compound coelutes with Tetrachloroethene and is combined with that result.

TABLE 6-2
SOUTHERN CALIFORNIA CHEMICAL
OCTOBER 1989 QUARTERLY SAMPLING
PURGEABLE AROMATICS ANALYTICAL RESULTS
MONITOR WELL SAMPLES

COMPOUND	MW01	MW02	MW03	MW04	MW04A	MW05	MW06B	MW07	MW08	MW09	MW10	MW11
Benzene	< 0.50	< 0.50	< 50.00	< 5.00	< 0.50	0.60	< 0.50	< 0.50	< 0.50	< 0.50	< 5.00	< 5.00
Toluene	< 1.00	< 1.00	< 100.00	< 10.00	< 1.00	< 1.00	< 0.10	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00
Ethylbenzene	< 1.00	< 1.00	1600.00	< 10.00	< 1.00	< 1.00	< 0.10	< 1.00	< 1.00	< 1.00	190.00	200.00
Xylenes, Total	< 1.00	< 1.00	150.00	< 10.00	< 1.00	< 1.00	< 0.10	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00

Note: All results in micrograms per liter (ug/l)
< Denotes non-detection at indicated detection limit
Laboratory analysis performed by Enseco.

TABLE 6-3
SOUTHERN CALIFORNIA CHEMICAL
OCTOBER 1989 QUARTERLY SAMPLING
METALS, CHLORIDE AND NITRATE ANALYTICAL RESULTS
MONITOR WELL SAMPLES

COMPOUND	MW01	MW02	MW03	MW04	MW4A	MW05	MW06B	MW07	MW08	MW09	MW10	MW11
Cadmium	< 0.01	< 0.01	< 0.01	0.07	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chromium, Hexavalent	< 0.05	< 0.05	< 0.05	110.00	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	2.50	< 0.05	< 0.05
Chromium, Total	< 0.02	< 0.02	< 0.02	120.00	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	1.80	< 0.02	< 0.02
Copper	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Zinc	0.11	< 0.02	< 0.02	0.04	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Chloride	710.00	100.00	470.00	1400.00	110.00	120.00	75.00	550.00	160.00	520.00	230.00	110.00
Nitrate (Nitrogen)	3.30	6.50	1.90	0.60	4.40	4.20	7.80	4.70	4.90	6.80	0.20	1.10

Note: All results in milligrams per liter (mg/l)
< Denotes non-detection at indicated detection limit
Laboratory analysis performed by Enseco.

TABLE 6-4 SELECTED WELLS/PARAMETERS COMPARISON (1989 Data)

MONITOR WELL No. / Date	METALS Hexavalent Chromium	METALS Total Chromium	METALS Cadmium	METALS Zinc	PURGEABLE AROMATICS Benzene	PURGEABLE AROMATICS Toluene	PURGEABLE AROMATICS Ethyl-benzene	PURGEABLE AROMATICS Total Xylenes	PURG. HALOCARBONS Trichloro-ethene
MW - 1									
Jan-89	ND	0.014	ND	0.015	ND	ND	ND	ND	19
Apr-89	ND	0.1	ND	ND	ND	ND	ND	3	23
Jul-89	ND	0.06	0.01	0.06	ND	ND	ND	ND	13
Oct-89	ND	ND	ND	0.11	ND	ND	ND	ND	12
MW - 2									
Jan-89	0.017	0.022	ND	ND	ND	ND	ND	ND	60
Apr-89	ND	0.05	ND	ND	ND	ND	ND	ND	45
Jul-89	ND	0.06	ND	0.04	ND	ND	ND	ND	67
Oct-89	ND	ND	ND	ND	ND	ND	ND	ND	35
MW - 3									
Jan-89	ND	ND	ND	ND	7.4	17	4900	1500	74
Apr-89	ND	0.07	ND	ND	ND	ND	1200	60	110
Jul-89	ND	0.06	ND	0.2	ND	ND	ND	ND	120
Oct-89	ND	ND	ND	ND	<50	<100	1600	150	<100
MW - 4									
Jan-89	33	400	0.028	0.007	ND	10	15	29	120
Apr-89	43	100	0.05	ND	ND	23	15	50	280
Jul-89	120	98	0.08	0.09	ND	ND	140	40	290
Oct-89	110	120	0.07	0.04	ND	ND	ND	ND	250
MW - 7									
Jan-89	ND	ND	ND	ND	ND	1.4	1.2	3.6	35
Apr-89	ND	0.02	ND	ND	ND	ND	ND	1	47
Jul-89	ND	0.03	ND	ND	ND	ND	ND	ND	25
Oct-89	ND	ND	ND	ND	ND	ND	ND	ND	44
MW - 9									
Jan-89	0.45	0.33	ND	0.008	ND	ND	ND	ND	55
Apr-89	ND	0.06	ND	ND	ND	ND	ND	ND	24
Jul-89	ND	0.17	ND	0.08	ND	ND	ND	ND	57
Oct-89	2.5	1.8	ND	ND	ND	ND	ND	ND	110
MW - 11									
Jan-89	ND	ND	ND	ND	ND	ND	43	1.5	34
Apr-89	ND	0.04	ND	ND	ND	7500	2600	11000	39
Jul-89	ND	ND	ND	0.05	ND	ND	ND	90	29
Oct-89	ND	ND	ND	ND	ND	ND	200	ND	35

NOTE: Concentrations reported in mg/l for all metals and ug/l for purgeable aromatics/halocarbons.

indications of contamination. Well MW-1 was selected because of its upgradient location. Wells MW-2, MW-3 and MW-11 were selected because of their position along the northern border of the site and significant past detections of purgeable aromatic compounds. Well MW-4 was included in the comparison because it historically yields the highest chromium concentrations. Well MW-9 was selected because of its location downgradient from the former chromic acid underground storage tank. Well MW-7 was chosen because of its position adjacent to the ferric chloride area.

During the January and April 1989 sampling events, the concentration of Cr(VI) in MW-04 had significantly decreased since the September 1988 sampling when it was detected at 170 mg/l. During the July 1989 sampling, the concentration increased significantly to 120 mg/l. At the present time, its concentration has remained fairly stable at 110 mg/l. In September 1986, Cr(VI) in MW-09 was detected at a concentration of 0.05 mg/l, with fluctuations between non-detected and 2.50 mg/l since. During the April and July 1989 sampling, it was not detected at a method detection limit of 0.05 mg/l. Cr(VI) was detected, however, during the October 1989 sampling at a concentration of 2.5 mg/l. It should be noted that the water discharged from well MW-09 was slightly greenish yellow in color. The discoloration did not change significantly during the evacuation of 40 gallons (slightly more than three saturated casing volumes) of water from the well. This was the first time discoloration typical of chromium contamination was observed by CDM sampling team members in an on-site well other than well MW-04. It was not detected in any of the remaining monitoring wells above the method detection limit of 0.05 mg/l in April, July or October 1989. Figure A-3 in Appendix A shows the concentration of Cr(VI) detected at wells MW-4 and MW-9 during the October 1989 sampling.

Total Chromium (Cr[T])

Historically, Cr(T) has been present at elevated concentrations in ground water samples collected from monitoring wells MW-04 and MW-09. Cr(T) was initially detected in MW-04 at a concentration of 500 mg/l in June 1985, with fluctuations between 61 and 550 mg/l since. Cr(T) was initially detected in MW-09 at a concentration of 0.12 mg/l in June 1987, with

fluctuations between 0.06 and 2.75 mg/l (September 1988) since. The most recent analytical results from the October 1989 sampling event show that the concentration of Cr(T) has remained relatively stable at MW-4 and increased an order of magnitude at MW-9.

The July analytical data showed that, with the exception of well MW-11, Cr(T) was detected in all on-site wells. During the October 1989 sampling, Cr(T) was detected only in wells MW-4 and MW-9. Figure A-4 shows the concentrations of Cr(T) detected during the October 1989 sampling.

In previous reports (February 1988, June 1988) Kleinfelder attributed the apparent rise in Cr(T) concentrations after February 1988 to a change in sample preparation, and not a change in ground water quality. Brown & Caldwell, the laboratory that Kleinfelder selected as their analytical laboratory prior to February 1988, used a modification of EPA Method 3010 sample preparation in which the sample was not mixed prior to analysis. CRL, the laboratory that Kleinfelder selected as their analytical laboratory beginning in February 1988, prepared samples in strict accordance with EPA Method 3010. This method requires that samples are well-mixed, keeping all solids in suspension prior to removal of the sample from the sample container. It was believed that this mixing of the sample yielded Cr(T) concentrations that included suspended sediments. Hence, Kleinfelder began in May 1988, the practice of field filtering the ground water samples to be analyzed for metals through a 0.45-micron screen. All samples collected for metals analyses during the October 1989 sampling were filtered in the field using a sterile 0.45-micron filter.

It is interesting to note that during the April 1989 sampling, total chromium was detected in all 12 monitor well samples. During the July 1989 sampling, it was detected in 11 of the 12 on-site wells. During the October 1989 sampling, it was detected only in wells MW-4 and MW-9. A federal MCL (maximum contamination limit) for chromium has been established at 0.05 mg/l. The fact that total chromium has historically been detected in the upgradient wells MW-01 and MW-02 and in the other ten on-site wells, could be indicative of a regional ground water contamination problem.

Total chromium has consistently been detected in well MW-4 since the inception of ground water monitoring in 1985, and first appeared in 1987 and 1988 at other well locations. Based on a review of the available data, it cannot be established at the present time whether a regional problem does exist. This issue should be resolved during subsequent ground water sampling at the site.

Cadmium (Cd)

Prior to the July 1989 sampling, cadmium had only been detected in ground water samples collected from monitoring well MW-04. Cadmium was initially detected in MW-04 at a concentration 0.78 mg/l in June 1985 with fluctuations between non-detection and 0.92 mg/l (July 1985) since. The concentration of cadmium had increased slightly at well MW-04 during the first three quarters of 1989, however, the most recent sampling shows it to be relatively stable. During the July 1989 sampling cadmium was also detected for the first time, (0.01 mg/l) in well MW-01 at the method detection limit. A federal MCL of 0.010 mg/l has been established for cadmium. Figure A-5 shows the concentration of cadmium which was detected at well MW-04 during the October 1989 sampling.

Zinc (Zn)

Isolated detections of zinc in ground water have occurred in samples from each well since the inception of the quarterly ground water monitoring program. Concentrations have ranged from non-detections at less than 0.001 mg/l to 0.35 mg/l. The most consistent detections have occurred in ground water samples collected from monitoring well MW-01. The concentration of zinc in MW-01 decreased from 0.08 mg/l in September 1988 to 0.015 mg/l in January 1989. During the October 1989 sampling, zinc was detected in the well at a concentration of 0.11 mg/l. At these low levels, the occurrence of zinc does not appear to be of significant concern. A federal MCL of 5.0 mg/l has been established for zinc. Figure A-6 shows that zinc was detected only in wells MW-1 and MW-4 during the October 1989 sampling.

6.2 Organic Compounds

Reportedly, organic chemicals have not historically been used on-site in any of the production processes by SCC. Two 10,000 gallon underground storage tanks (diesel and gasoline), however, were located in the approximate center of the facility, due east of the drum wash area. During tank removal operations in July 1989, petroleum hydrocarbon contamination was discovered in the tank excavation. SCC is in the process of investigating the extent of contamination. Historically, organic compounds have been detected in ground water underlying the facility in the Hollydale aquifer, varying in both concentration and lateral extent. The primary organic compounds of concern are the purgeable aromatic compounds and the chlorinated solvent trichloroethylene (TCE), and various forms of dichloroethane and dichloroethene. The individual compounds and the concentrations they have been detected at will be discussed in the following paragraphs.

Ethylbenzene

During the January 1989 sampling, ethylbenzene was detected in wells MW-03, -4, -7, -10 and -11 at concentrations of 4,900, 15, 1.2, 0.54 and 43 $\mu g/l$, respectively. The April 1989 analytical results revealed that the concentration at MW-04 remained the same, while concentrations decreased at MW-03 and increased significantly at MW-11. Ethylbenzene was not detected in the remaining nine wells. During the July 1989 sampling event, ethylbenzene was detected in well MW-4 at a concentration of 140 $\mu g/l$, a significant increase from the previous two rounds. Ethylbenzene was not detected in the remaining 11 wells. During the October 1989 sampling, it was detected in wells MW-3, MW-10 and MW-11 at concentrations of 1600, 190 and 200 $\mu g/l$, respectively. As can be seen by an examination of Table 6-4, significant concentrations of ethylbenzene have been detected at well MW-3 during three of the last four sampling events. Concentrations from the October 1989 sampling are illustrated in Figure A-7 of Appendix A.

Total Xylenes

During the January 1989 sampling, total xylenes were detected in wells MW-03, -4, -4a, -7, -8, and -11, at concentrations of 1,500, 29, 1.3, 3.6, 1.6 and 1.5 μg/l, respectively. The April 1989 analytical results revealed that xylene concentrations decreased in wells MW-03 and -7 to 60 and 1.0 μg/l, respectively, and were not detected at all in wells MW-4a and -8. Concentrations increased significantly at well MW-11 and increased slightly to 50 μg/l at well MW-4. Total xylenes were not detected in the remaining six wells. During the July 1989 sampling, total xylenes were detected only in wells MW-4, -10 and -11 at concentrations of 40, 30 and 90 μg/l, respectively. During the October 1989 sampling, xylenes were detected at a concentration of 150 μg/l only in well MW-3. Concentrations from the October 1989 sampling are illustrated in Figure A-8 of Appendix A.

Toluene

Toluene was detected during the January 1989 sampling at wells MW-03, -4, and -7, at concentrations of 17, 10 and 1.4 μg/l, respectively. The April 1989 analytical results revealed that the concentrations at wells MW-03 and -7 declined to nondetectable levels, while the concentration at MW-4 increased slightly to 23 μg/l. Toluene was not detected at well MW-11 in January 1989, however, during the April 1989 sampling a significant concentration was found. During the July and October 1989 sampling events, toluene was not detected in any of the 12 on-site wells. Non-detections from the October 1989 sampling are illustrated in Figure A-9 of Appendix A.

Benzene

The appearance of benzene, a known carcinogen, has been very erratic throughout the course of the ground water monitoring program. Benzene has never been detected in wells MW-01, -2, -6b, -8, -9 and -10. In most cases where benzene has historically been detected, reported values have ranged from not detected to a maximum of 20 μg/l. During the January 1989 sampling event, benzene was detected in wells MW-03 and -5 at concentrations of 7.4 and 0.9 μg/l, respectively. Benzene was not detected in any

of the 12 wells during the April or July 1989 sampling events. During the October 1989 sampling, it was detected at a concentration of 0.06 μg/l (slightly above the 0.05 μg/l detection limit) in well MW-5. Concentrations from the October 1989 sampling are illustrated in Figure A-10 of Appendix A.

Trichloroethylene

As illustrated in Figure A-11 of Appendix A, trichloroethylene (TCE) was detected in 11 of the 12 ground water monitoring wells. Because of the increased detection limit (100 μg/l), TCE was not detected in well MW-3. During the January, April and July 1989 quarterly sampling events, TCE was also found in all 12 on-site ground water monitoring wells. TCE concentrations in January 1989 ranged from a high of 120 μg/l in the shallow well at MW-04 to a low of 6.7 μg/l in the deep well at that location. In April 1989, the concentrations at those locations ranged from a high of 280 to a low of 7 μg/l, respectively. In July and October 1989, the concentrations were comparable, ranging from a high of 290 and 250 to a low of 5 and 3 μg/l, respectively, at those locations. Numerous other purgeable halocarbon compounds were also detected in several of the on-site wells at concentrations ranging from 2 to 100 μg/l during the October 1989 sampling. Various forms of dichloroethane and dichloroethene, degradation products of trichloroethane and trichloroethene, were the more common of the other constituents detected.

As was the case with total chromium, the detection of TCE at all locations could be indicative of a regional ground water purgeable organic contamination problem. At the present time, it cannot be stated with absolute certainty that a regional problem exists. A review of the analytical results contained in Appendix B reveals that, with minor exceptions, TCE has historically been detected in all on-site monitor wells, including upgradient wells. It would seem that the problem exists well beyond the boundaries of the subject facility. Subsequent ground water sampling, possibly in conjunction with a review of available literature for the surrounding area, should allow for resolution of this issue.

7.0 ASSESSMENT QUARTERLY GROUND WATER MONITORING PROGRAM STATUS

To date, CDM has implemented the field sampling protocols outlined in the unapproved Kleinfelder QAPP with minor modification. CDM has also submitted for regulatory approval a Sampling and Analysis Plan, a Quality Assurance/ Quality Control Plan, a Health and Safety Plan, and a Data Management Plan as components of the Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) Workplan promulgated by an Administrative Order on Consent, dated December 8, 1988 by EPA. When the RFI Workplan is granted final approval, subsequent quarterly ground water sampling programs will follow the specifications and procedures which are contained therein. CDM offers no warranty, expressed or implied, as to the adequacy, accurateness, or appropriateness of the unapproved Kleinfelder QAPP. This document was used as guidance simply on the basis of it being the status quo guidance document for quarterly sampling procedures at SCC in lieu of following procedures outlined in a document approved for the purposes of conducting the pending RCRA Facility Investigation.

8.0 REFERENCES

Camp Dresser & McKee Inc., RCRA Facility Investigation Work Plan, Southern California Chemical, November 28, 1989.

Camp Dresser & McKee Inc., Current Conditions Report, Southern California Chemical, November 1989.

J.H. Kleinfelder & Associates, Quality Assurance Project Plan, Southern California Chemical, May 1988.

APPENDIX A

FIGURES

A-1 Monitoring Well Location Map

A-2 Ground Water Elevation, Hollydale Aquifer, October 1989

A-3 Concentration of Hexavalent Chromium in Ground Water, October 1989

A-4 Concentration of Total Chromium in Ground Water, October 1989

A-5 Concentration of Cadmium in Ground Water, October 1989

A-6 Concentration of Zinc in Ground Water, October 1989

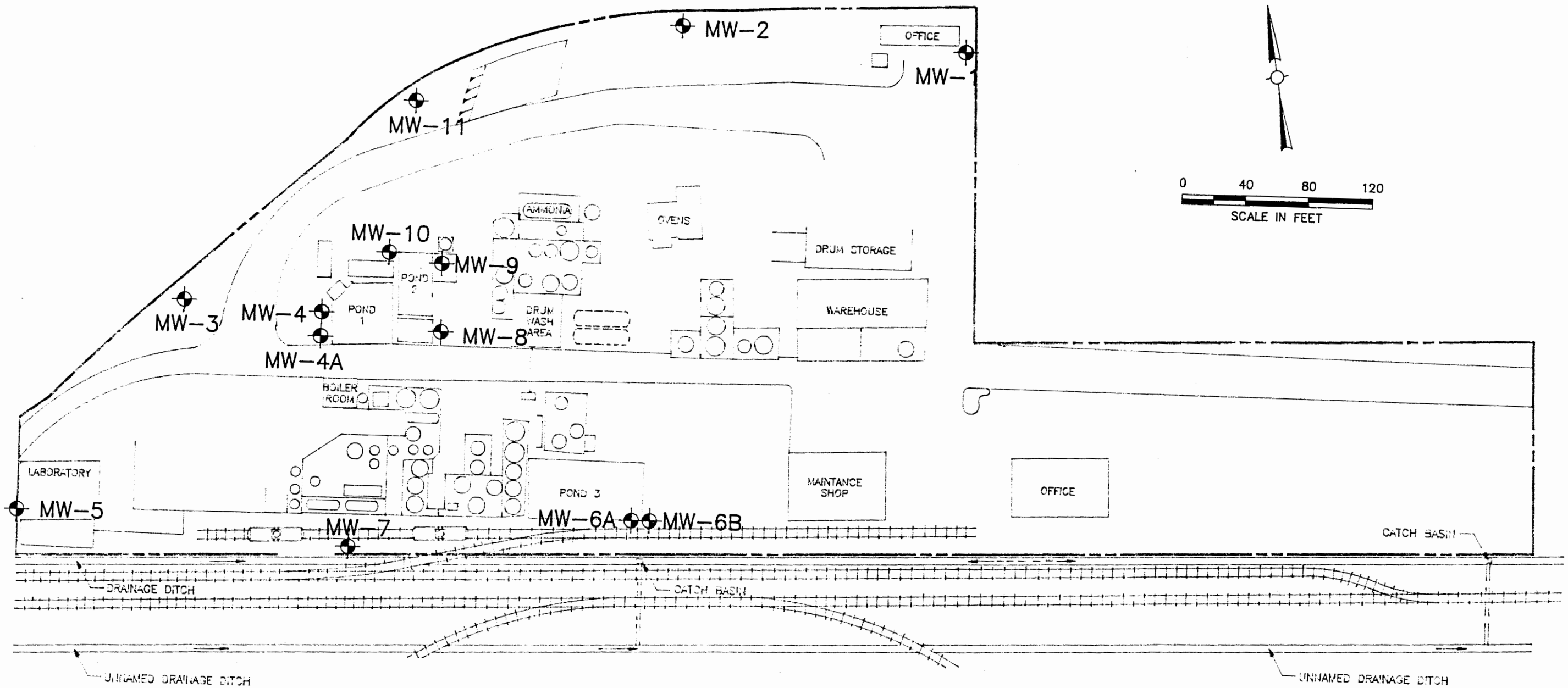
A-7 Concentration of Ethylbenzene in Ground Water, October 1989

A-8 Concentration of Total Xylenes in Ground Water, October 1989

A-9 Concentration of Toluene in Ground Water, October 1989

A-10 Concentration of Benzene in Ground Water, October 1989

A-11 Concentration of Trichloroethene in Ground Water, October 1989



LEGEND

APPROXIMATE MONITORING WELL LOCATION

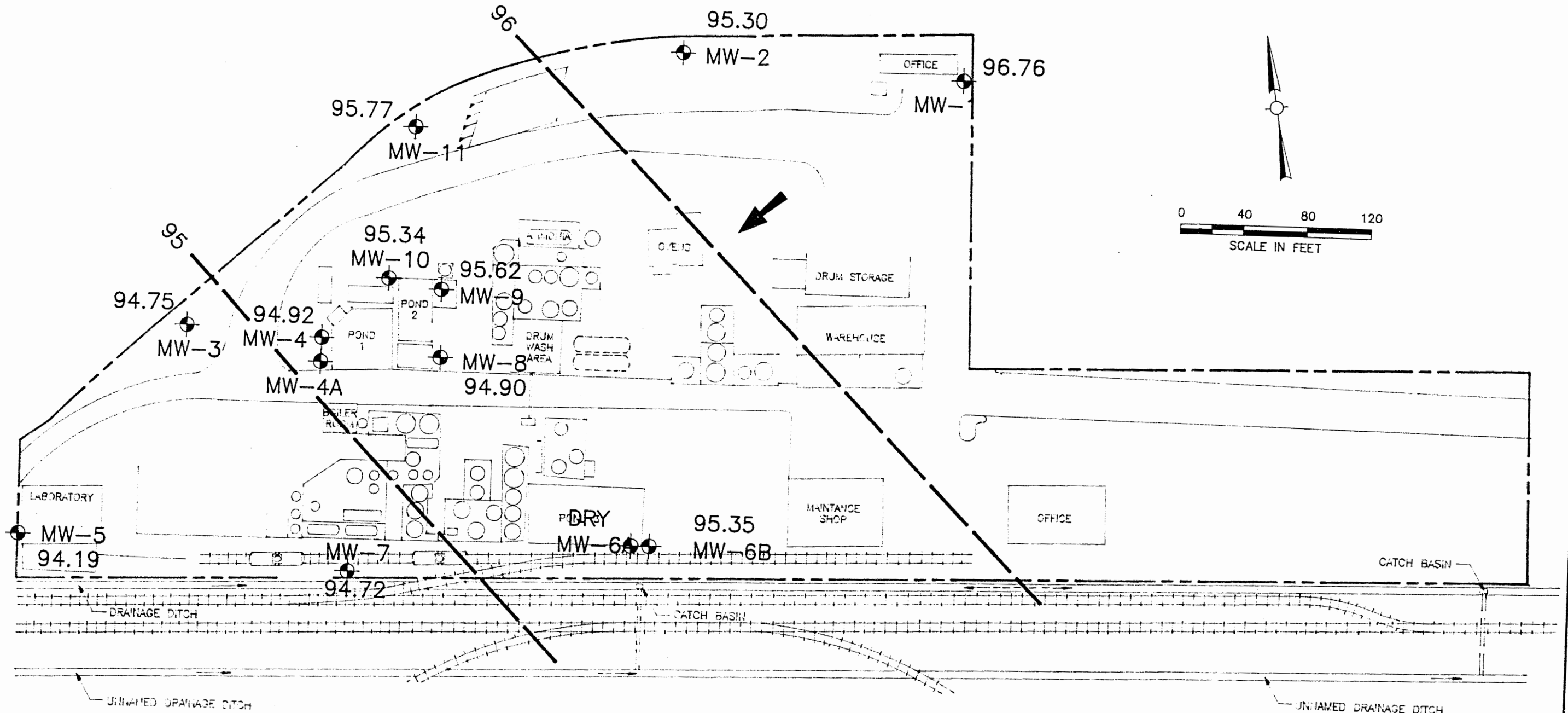
Base map adapted from Figure 2 of the Current Conditions Report (CDM, Nov. 89)

SOUTHERN CALIFORNIA CHEMICAL

MONITORING WELL LOCATION MAP

environmental engineers, scientists, planners, & management consultants CDM

FIGURE A-1



LEGEND

APPROXIMATE MONITORING WELL LOCATION

95 — APPROXIMATE GROUNDWATER ELEVATION CONTOUR (FEET MSL)

GENERAL DIRECTION OF GROUND WATER FLOW

NOTE:
CONTOURS BASED ON THREE-POINT SOLUTION USING WELLS MW-1, MW-5 AND MW-6B.

Base map adapted from Figure 2 of the Current Conditions Report (CDM, Nov. 89)

SOUTHERN CALIFORNIA CHEMICAL

GROUND WATER ELEVATION
HOLLYDALE AQUIFER

OCTOBER 1989

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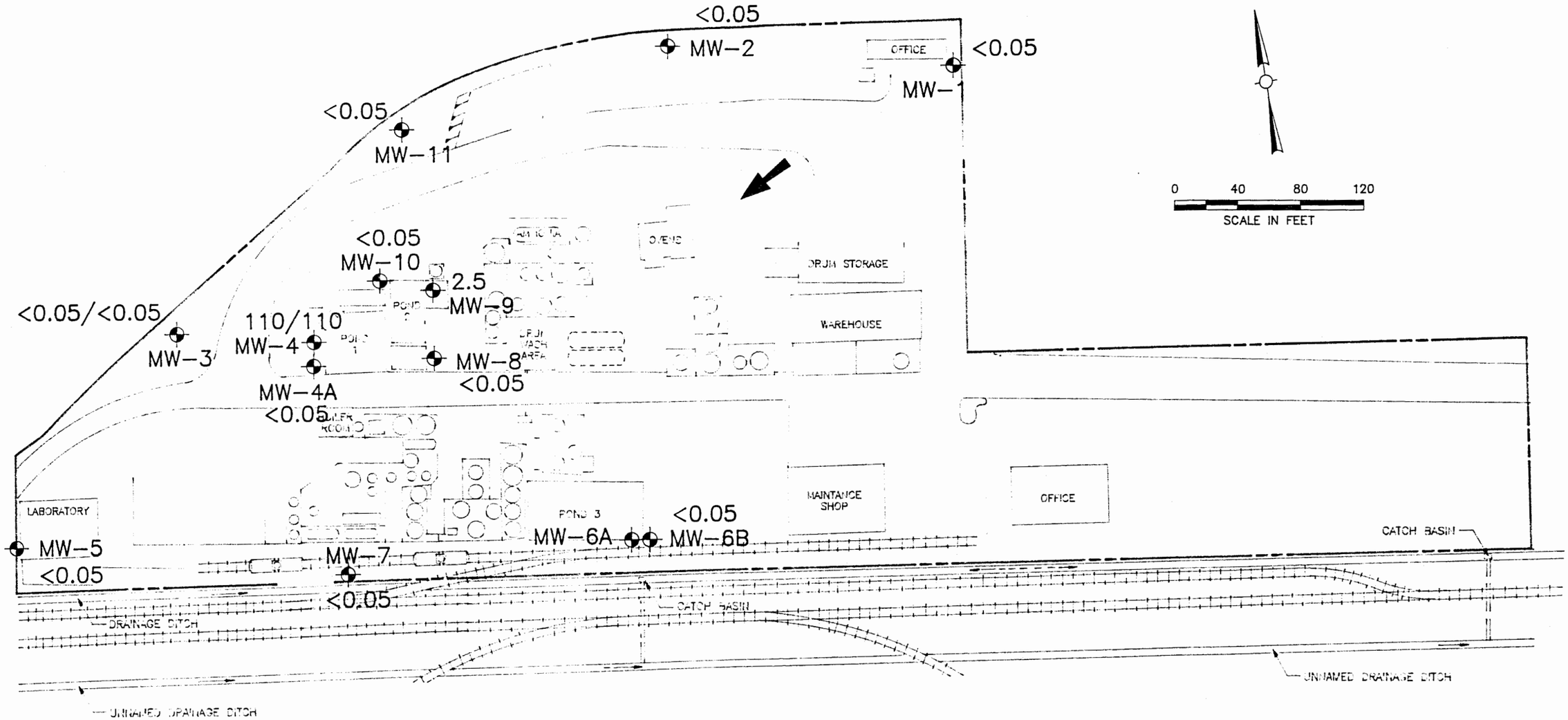
FIGURE A-2



LEGEND

⊕	APPROXIMATE MONITORING WELL LOCATION
<0.05	VALUES EXPRESSED IN MILLIGRAMS PER LITER
←	GENERAL DIRECTION OF GROUND WATER FLOW
5/5	DUPLICATE RESULTS

Base map adapted from Figure 2 of the Current Conditions Report (CDM, Nov. 89)

SOUTHERN CALIFORNIA CHEMICAL

CONCENTRATION OF HEXAVALENT CHROMIUM IN GROUND WATER

OCTOBER 1989

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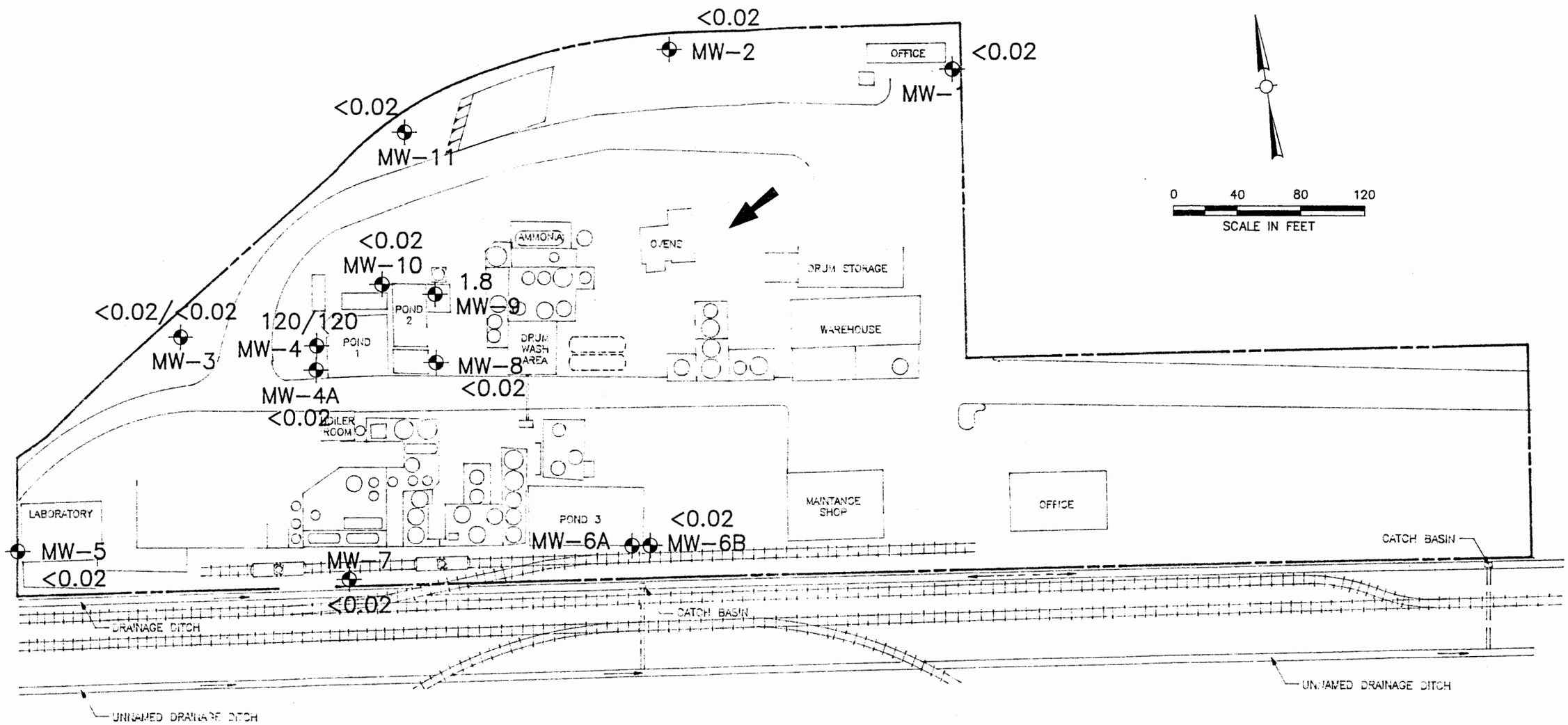
FIGURE A-3



LEGEND

⊕	APPROXIMATE MONITORING WELL LOCATION
<0.05	VALUES EXPRESSED IN MILLIGRAMS PER LITER
◄	GENERAL DIRECTION OF GROUND WATER FLOW
5/5	DUPLICATE RESULTS

Base map adapted from Figure 2 of the Current Conditions Report (CDM, Nov. 89)

SOUTHERN CALIFORNIA CHEMICAL

CONCENTRATION OF TOTAL CHROMIUM IN GROUND WATER

OCTOBER 1989

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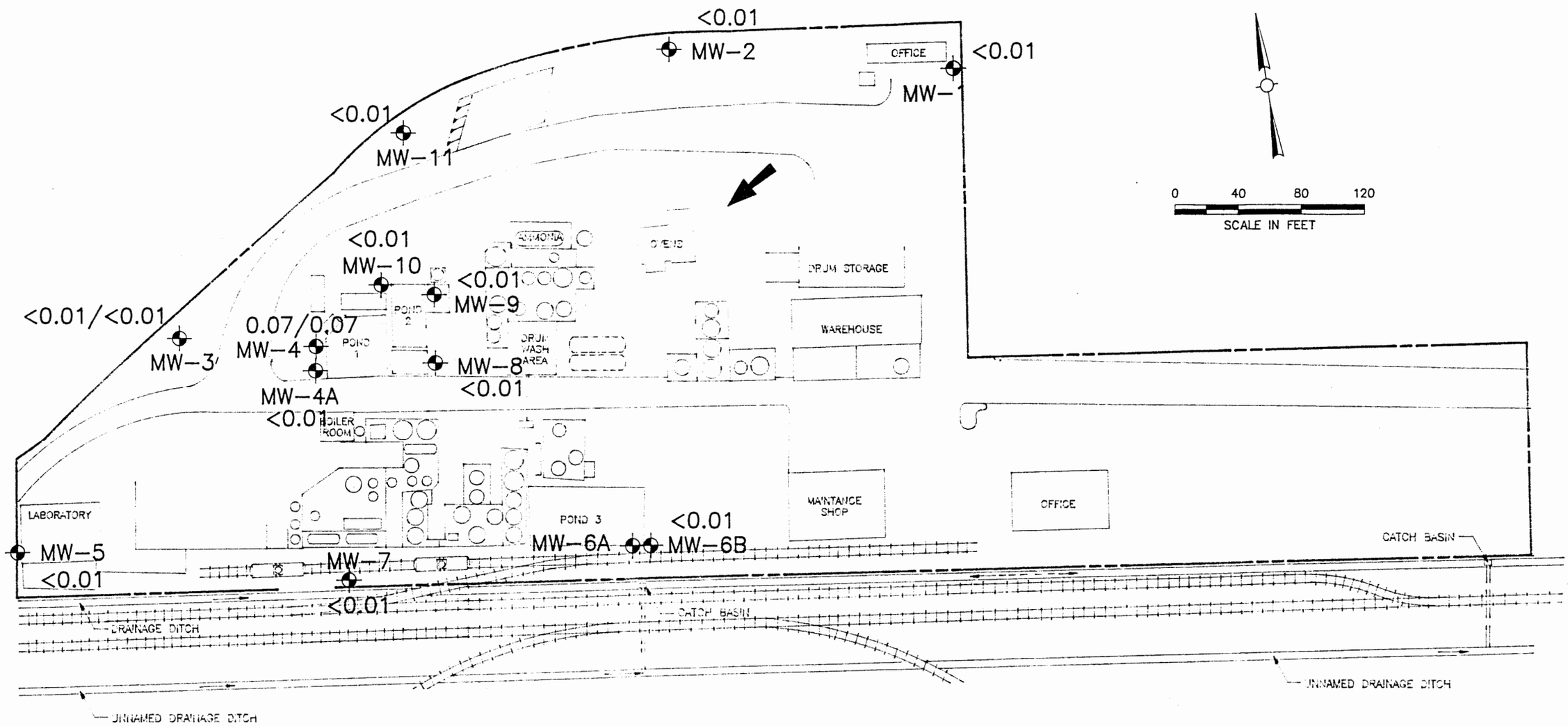
FIGURE A-4



LEGEND

⊕	APPROXIMATE MONITORING WELL LOCATION
<0.05	VALUES EXPRESSED IN MILLIGRAMS PER LITER
➡	GENERAL DIRECTION OF GROUND WATER FLOW
5/5	DUPLICATE RESULTS

Base map adapted from Figure 2 of the Current Conditions Report (CDM, Nov. 89)

SOUTHERN CALIFORNIA CHEMICAL

CONCENTRATION OF CADMIUM
IN GROUND WATER

OCTOBER 1989

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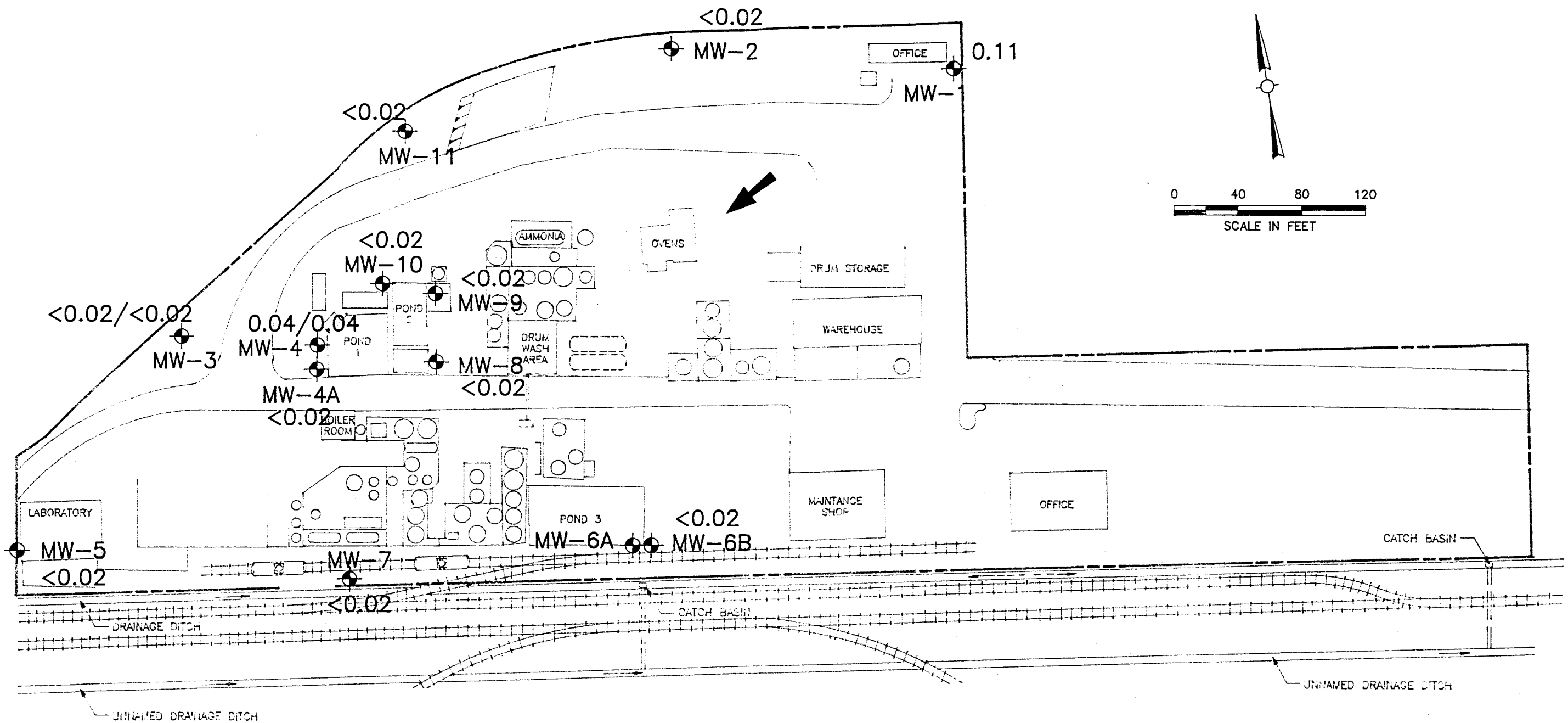
FIGURE A-5



LEGEND

⊕	APPROXIMATE MONITORING WELL LOCATION
<0.05	VALUES EXPRESSED IN MILLIGRAMS PER LITER
←	GENERAL DIRECTION OF GROUND WATER FLOW
5/5	DUPLICATE RESULTS

Base map adapted from Figure 2 of the Current Conditions Report (CDM, Nov. 89)

SOUTHERN CALIFORNIA CHEMICAL

CONCENTRATION OF ZINC
IN GROUND WATER

OCTOBER 1989

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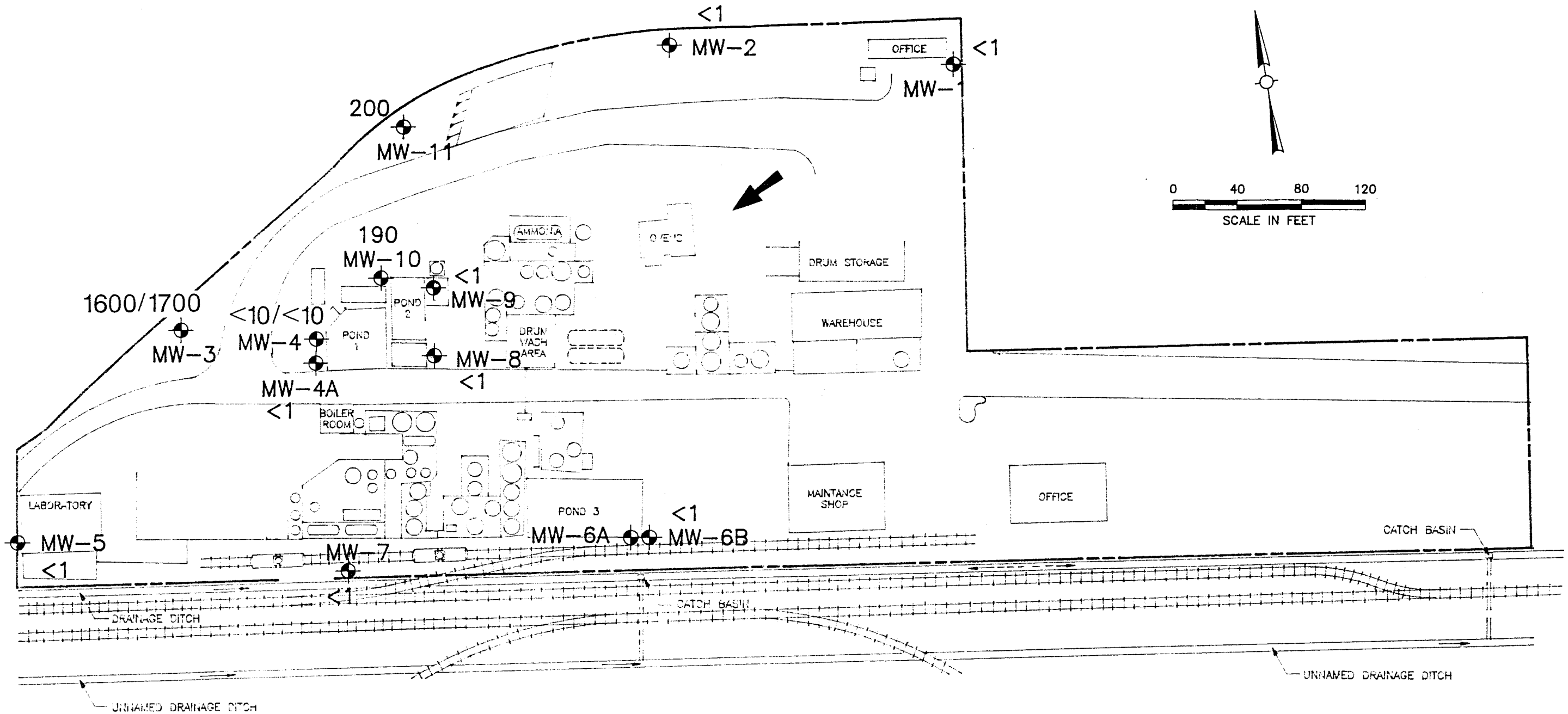
FIGURE A-6



LEGEND

⊕	APPROXIMATE MONITORING WELL LOCATION
<10	VALUES EXPRESSED IN MICROGRAMS PER LITER
➡	GENERAL DIRECTION OF GROUND WATER FLOW
5/5	DUPLICATE RESULTS

Base map adapted from Figure 2 of the Current Conditions Report (CDM, Nov. 89)

SOUTHERN CALIFORNIA CHEMICAL

CONCENTRATION OF ETHYLBENZENE
IN GROUND WATER

OCTOBER 1989

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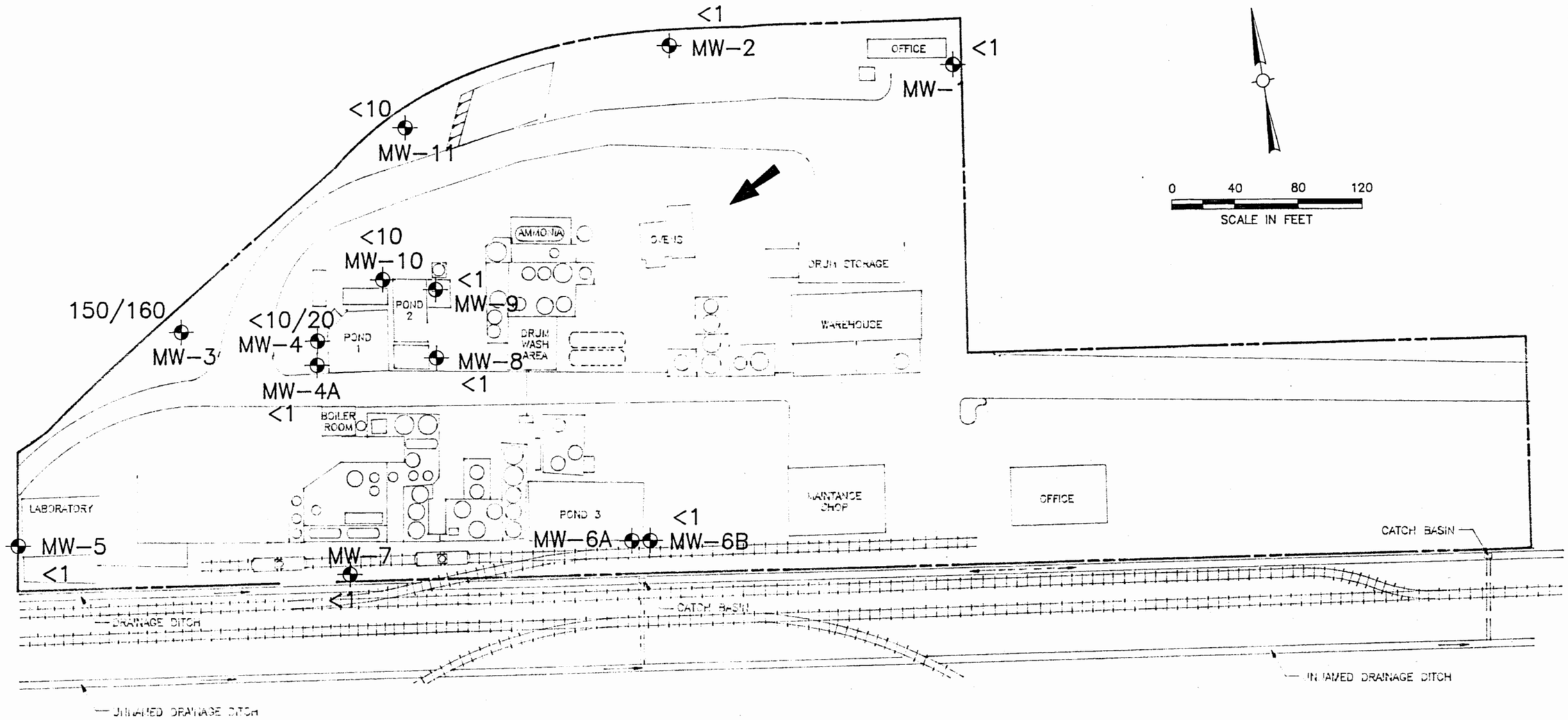
FIGURE A-7



LEGEND

⊕	APPROXIMATE MONITORING WELL LOCATION
<10	VALUES EXPRESSED IN MICROGRAMS PER LITER
←	GENERAL DIRECTION OF GROUND WATER FLOW
5/5	DUPLICATE RESULTS

Base map adapted from Figure 2 of the Current Conditions Report (CDM, Nov. 89)

SOUTHERN CALIFORNIA CHEMICAL

CONCENTRATION OF TOTAL XYLENES IN GROUND WATER

OCTOBER 1989

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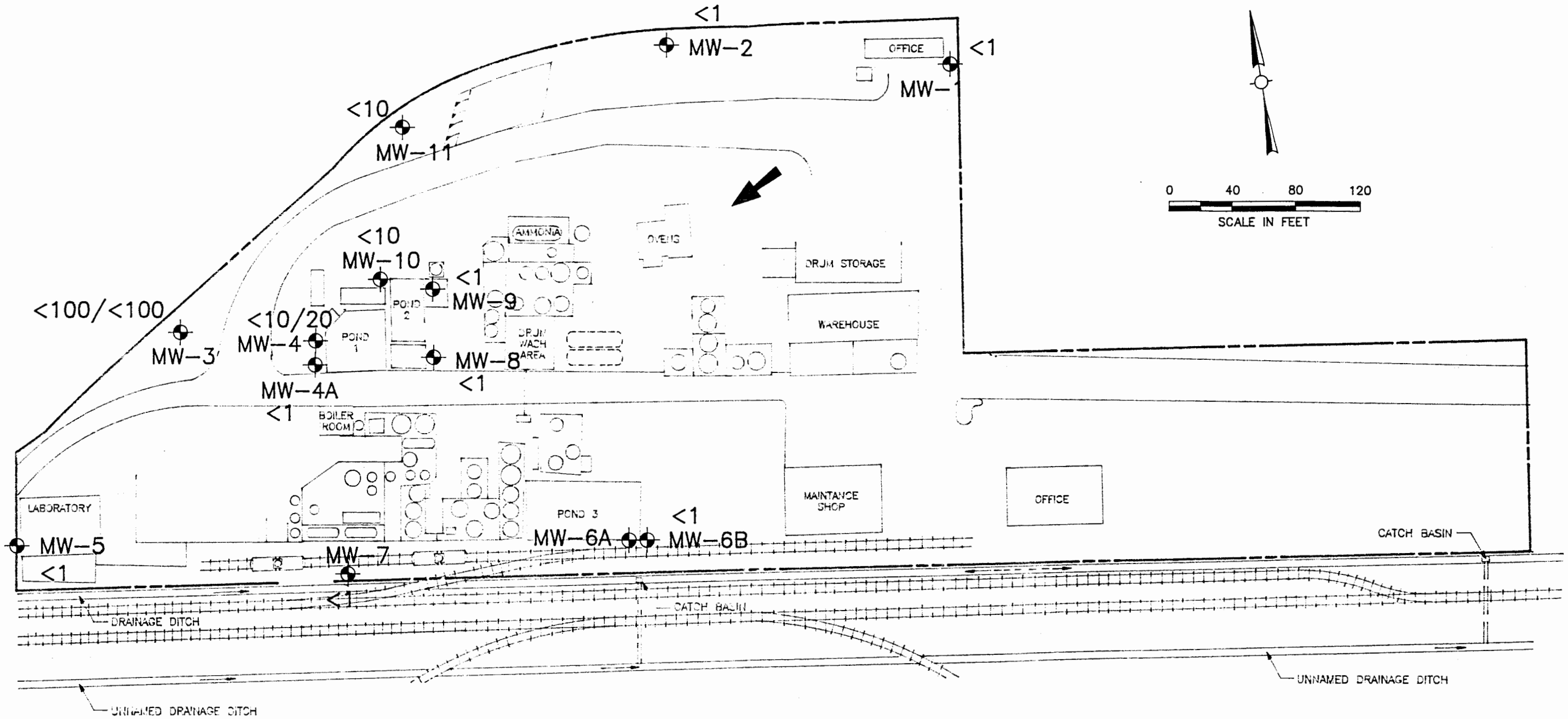
FIGURE A-8



LEGEND

⊕	APPROXIMATE MONITORING WELL LOCATION
<10	VALUES EXPRESSED IN MICROGRAMS PER LITER
◄	GENERAL DIRECTION OF GROUND WATER FLOW
5/5	DUPLICATE RESULTS

Base map adapted from Figure 2 of the Current Conditions Report (CDM, Nov. 89)

SOUTHERN CALIFORNIA CHEMICAL

CONCENTRATION OF TOLUENE
IN GROUND WATER

OCTOBER 1989

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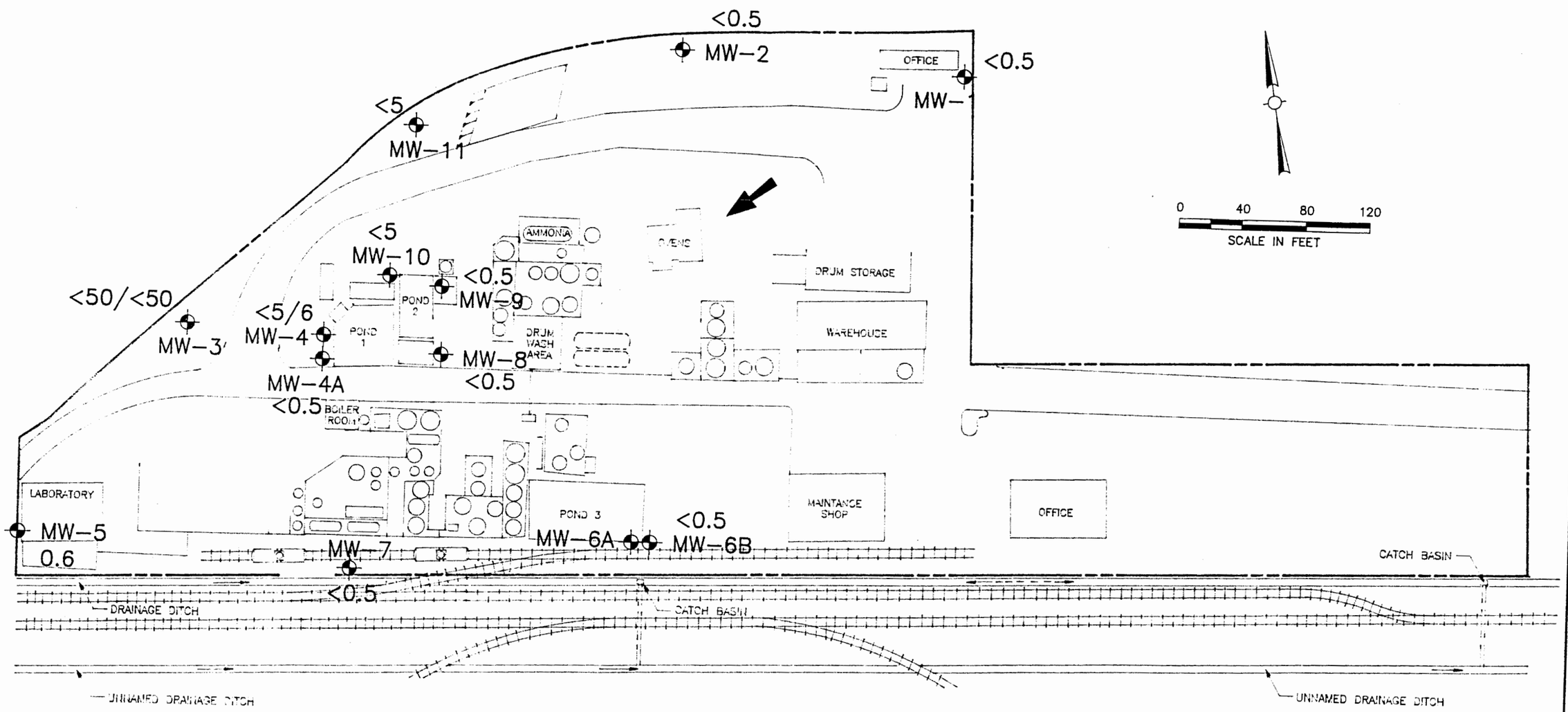
FIGURE A-9



LEGEND

⊕	APPROXIMATE MONITORING WELL LOCATION
<10	VALUES EXPRESSED IN MICROGRAMS PER LITER
➡	GENERAL DIRECTION OF GROUND WATER FLOW
5/5	DUPLICATE RESULTS

Base map adapted from Figure 2 of the Current Conditions Report (CDM, Nov. 89)

SOUTHERN CALIFORNIA CHEMICAL

CONCENTRATION OF BENZENE
IN GROUND WATER

OCTOBER 1989

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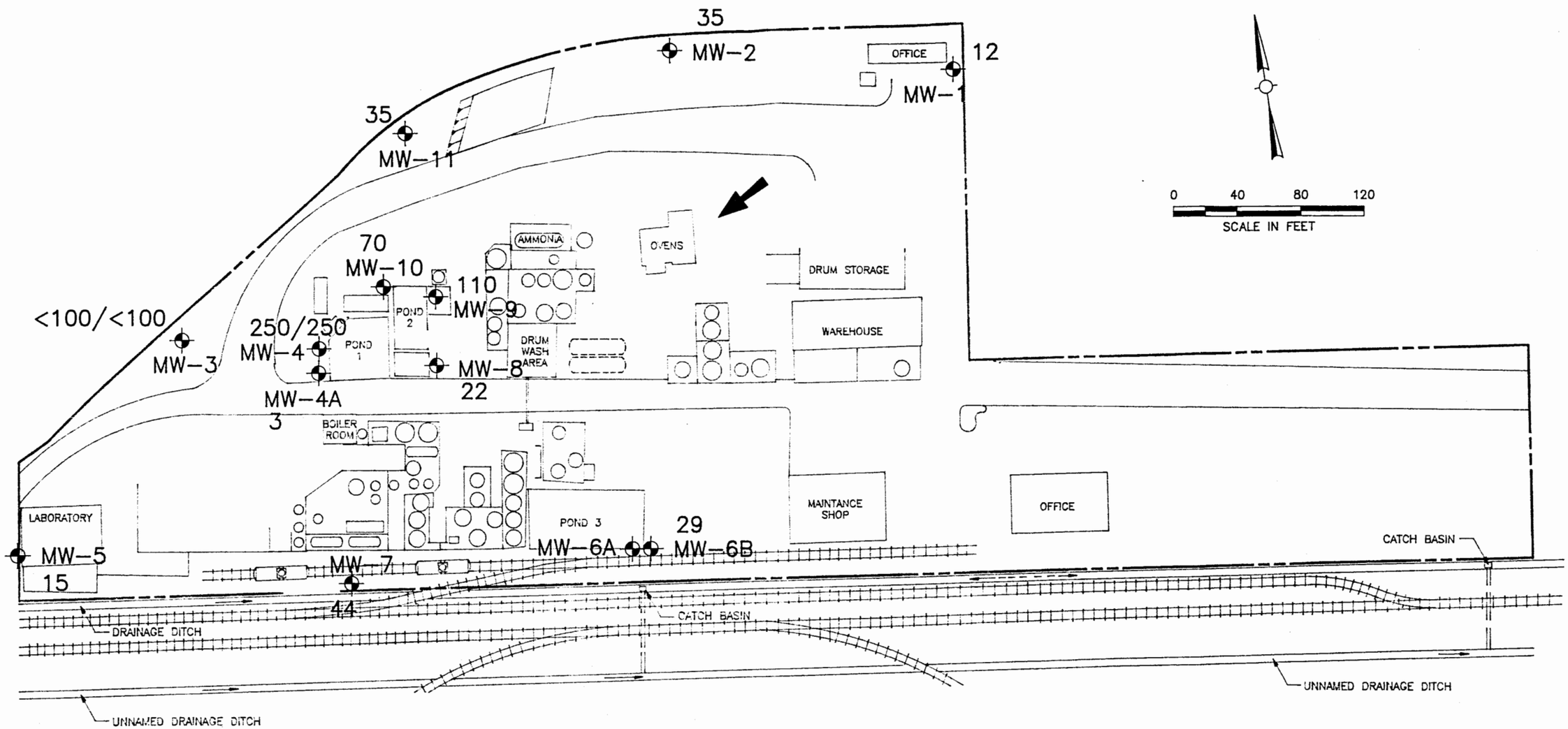
FIGURE A-10



LEGEND

⊕	APPROXIMATE MONITORING WELL LOCATION
<10	VALUES EXPRESSED IN MICROGRAMS PER LITER
←	GENERAL DIRECTION OF GROUND WATER FLOW
5/5	DUPLICATE RESULTS

Base map adapted from Figure 2 of the Current Conditions Report (CDM, Nov. 89)

SOUTHERN CALIFORNIA CHEMICAL

CONCENTRATION OF TRICHLOROETHENE IN GROUND WATER

OCTOBER 1989

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FIGURE A-11

APPENDIX B

HISTORIC GROUND WATER ANALYSES DATA

July 1989 Monitor Well Results

TABLE 6-1
SOUTHERN CALIFORNIA CHEMICAL
JULY 1989 QUARTERLY SAMPLING
PURGEABLE HALOCARBONS ANALYTICAL RESULTS
MONITOR WELL SAMPLES

COMPOUND	MW01	MW02	MW03	MW04	MW4a	MW05	MW6b	MW07	MW08	MW09	MW10	MW11
Chloromethane	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
Bromomethane	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
Vinyl Chloride	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
Chloroethane	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
Methylene Chloride	< 1.00	< 1.00	20.00	170.00	2.70	< 1.00	< 1.00	< 1.00	< 1.00	3.00	38.00	1.00
Trichlorofluoromethane	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
1,1-Dichloroethene	< 1.00	< 1.00	< 10.00	50.00	< 1.00	2.00	1.00	1.00	14.00	14.00	15.00	2.00
1,1-Dichloroethane	< 1.00	1.00	< 10.00	80.00	< 1.00	4.00	< 1.00	15.00	74.00	28.00	12.00	4.00
trans-1,2-Dichloroethene	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	3.00	15.00	3.00	< 10.00	< 1.00
Chloroform	< 1.00	< 1.00	33.00	< 20.00	< 1.00	57.00	< 1.00	< 1.00	3.00	4.00	< 10.00	1.00
1,2-Dichloroethane	< 1.00	< 1.00	< 10.00	120.00	< 1.00	< 1.00	< 1.00	< 1.00	10.00	37.00	150.00	7.00
1,1,1-Trichloroethane	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	4.00	< 10.00	< 1.00
Carbon Tetrachloride	< 1.00	< 1.00	60.00	< 20.00	< 1.00	94.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
Bromodichloromethane	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
1,2-Dichloropropane	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
cis-1,3-Dichloropropene	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
Trichloroethene	13.00	67.00	120.00	290.00	5.00	46.00	29.00	25.00	43.00	57.00	180.00	29.00
Dibromochloromethane	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
1,1,2-Trichloroethane	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
trans-1,3-Dichloropropene	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
2-Chloroethylvinyl ether	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
Bromoform	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
Tetrachloroethene	1.00	1.00	< 10.00	< 20.00	< 1.00	2.00	6.00	1.00	2.00	2.00	< 10.00	1.00
1,1,2,2-Tetrachloroethane	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
Chlorobenzene	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
1,3-Dichlorobenzene	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
1,2-Dichlorobenzene	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00
1,4-Dichlorobenzene	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 1.00

Note: All results in micrograms per liter (ug/l).
< Denotes non-detection at indicated detection limit.
Laboratory analysis performed by ENSECO.

TABLE 6-2
SOUTHERN CALIFORNIA CHEMICAL
JULY 1989 QUARTERLY SAMPLING
PURGEABLE AROMATICS ANALYTICAL RESULTS
MONITOR WELL SAMPLES

COMPOUND	MW01	MW02	MW03	MW04	MW4a	MW05	MW6b	MW07	MW08	MW09	MW10	MW11
Benzene	< 0.70	< 0.70	< 7.00	< 14.00	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70	< 7.00	< 7.00
Toluene	< 1.00	< 1.00	< 10.00	< 20.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00
Ethylbenzene	< 1.00	< 1.00	< 10.00	140.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 10.00	< 10.00
Xylenes, Total	< 1.00	< 1.00	< 10.00	40.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	30.00	90.00

Note: All results in micrograms per liter (ug/l).
< Denotes non-detection at indicated detection limit.
Laboratory analysis performed by ENSECO.

TABLE 6-4
SOUTHERN CALIFORNIA CHEMICAL
JULY 1989 QUARTERLY SAMPLING
RCRA INDICATOR PARAMETERS (QUADRUPLICATE ANALYSES)
MONITOR WELL SAMPLES

COMPOUND	MW01	MW02	MW03	MW04	MW04a	MW05
TOX 1 (mg/l)	0.05	0.08	0.13	0.30 <	0.01	0.20
TOX 2 (mg/l)	0.10	0.08	0.08	0.30 <	0.01	0.20
TOX 3 (mg/l)	0.07	0.08	0.14	0.10 <	0.01	0.20
TOX 4 (mg/l)	0.05	0.06	0.08	0.10 <	0.01	0.15
pH 1 (lab units)	7.11	7.32	7.05	6.67	7.44	6.83
pH 2 (lab units)	7.07	7.33	7.05	6.67	7.42	6.77
pH 3 (lab units)	7.08	7.32	7.04	6.67	7.42	6.80
pH 4 (lab units)	7.07	7.34	7.06	6.67	7.43	6.78
EC 1 (umhos/cm)	2100.00	1200.00	1800.00	3200.00	1200.00	1500.00
EC 2 (umhos/cm)	2030.00	1100.00	1800.00	3200.00	1200.00	1500.00
EC 3 (umhos/cm)	2010.00	1200.00	1800.00	3100.00	1200.00	1500.00
EC 4 (umhos/cm)	2100.00	1200.00	1800.00	3100.00	1300.00	1500.00
TOC 1 (mg/l)	8.00 <	1.00	17.00	140.00 <	1.00 <	1.00
TOC 2 (mg/l)	9.00 <	1.00	17.00	170.00 <	1.00 <	1.00
TOC 3 (mg/l)	8.00 <	1.00	17.00	130.00 <	1.00 <	1.00
TOC 4 (mg/l)	8.00 <	1.00	18.00	70.00 <	1.00 <	1.00

Note: Laboratory analysis performed by ENSECO.
< Denotes non-detection at indicated detection limit.

TABLE 6-3
SOUTHERN CALIFORNIA CHEMICAL
JULY 1989 QUARTERLY SAMPLING
METALS, CLORIDE AND NITRATE ANALYTICAL RESULTS
MONITOR WELL SAMPLES

COMPOUND	MW01	MW02	MW03	MW04	MW4a	MW05	MW6b	MW07	MW08	MW09	MW10	MW11
Cadmium	0.01<	0.01<	0.01	0.08<	0.01<	0.01<	0.01<	0.01<	0.01<	0.01<	0.01<	0.01
Chromium, Hexavalent	< 0.05<	0.05<	0.05	120.00<	0.05<	0.05<	0.05<	0.05<	0.05<	0.05<	0.05<	0.05
Chromium, Total	0.06	0.06	0.06	98.00	0.13	0.04	0.04	0.03	0.06	0.17	0.11<	0.02
Copper	0.03<	0.02<	0.02	0.06<	0.05<	0.05<	0.05<	0.05	0.02	0.02<	0.05	0.13
Zinc	0.06	0.04	0.20	0.09	0.08	0.09	0.09<	0.04	0.05	0.08	0.15	0.05
Chloride	490.00	130.00	380.00	900.00	120.00	120.00	82.00	300.00	270.00	190.00	180.00	140.00
Nitrate (Nitrogen)	4.60	6.90	3.40	0.60<	0.20	10.40	9.20	4.50	32.00	3.20<	0.20	0.20

Note: All results in milligrams per liter (mg/l).
< Denotes non-detection at indicated detection limit.
Laboratory analysis performed by ENSECO.

TABLE 6-4
SOUTHERN CALIFORNIA CHEMICAL
JULY 1989 QUARTERLY SAMPLING
RCRA INDICATOR PARAMETERS (QUADRUPLICATE ANALYSES)
MONITOR WELL SAMPLES

COMPOUND	MW01	MW02	MW03	MW04	MW04a	MW05
TOX 1 (mg/l)	0.05	0.08	0.13	0.30<	0.01	0.20
TOX 2 (mg/l)	0.10	0.08	0.08	0.30<	0.01	0.20
TOX 3 (mg/l)	0.07	0.08	0.14	0.10<	0.01	0.20
TOX 4 (mg/l)	0.05	0.06	0.08	0.10<	0.01	0.15
pH 1 (lab units)	7.11	7.32	7.05	6.67	7.44	6.83
pH 2 (lab units)	7.07	7.33	7.05	6.67	7.42	6.77
pH 3 (lab units)	7.08	7.32	7.04	6.67	7.42	6.80
pH 4 (lab units)	7.07	7.34	7.06	6.67	7.43	6.78
EC 1 (umhos/cm)	2100.00	1200.00	1800.00	3200.00	1200.00	1500.00
EC 2 (umhos/cm)	2030.00	1100.00	1800.00	3200.00	1200.00	1500.00
EC 3 (umhos/cm)	2010.00	1200.00	1800.00	3100.00	1200.00	1500.00
EC 4 (umhos/cm)	2100.00	1200.00	1800.00	3100.00	1300.00	1500.00
TOC 1 (mg/l)	8.00<	1.00	17.00	140.00<	1.00<	1.00
TOC 2 (mg/l)	9.00<	1.00	17.00	170.00<	1.00<	1.00
TOC 3 (mg/l)	8.00<	1.00	17.00	130.00<	1.00<	1.00
TOC 4 (mg/l)	8.00<	1.00	18.00	70.00<	1.00<	1.00

Note: Laboratory analysis performed by ENSECO.
< Denotes non-detection at indicated detection limit.

TABLE 6-4 (continued)
SOUTHERN CALIFORNIA CHEMICAL
JULY 1989 QUARTERLY SAMPLING
RCRA INDICATOR PARAMETERS (QUADRUPLICATE ANALYSES)
MONITOR WELL SAMPLES

COMPOUND	MW6b	MW07	MW08	MW09	MW10	MW11
TOX 1 (mg/l)	0.03	0.40	0.13	0.22	0.10	0.33
TOX 2 (mg/l)	0.13	< 0.01	0.16	0.20	0.20	0.07
TOX 3 (mg/l)	0.90	0.03	0.17	0.33	0.10	0.05
TOX 4 (mg/l)	< 0.01	0.14	0.14	0.45	0.10	0.14
pH 1 (lab units)	7.30	7.68	7.28	7.18	7.30	7.43
pH 2 (lab units)	7.28	7.71	7.33	7.15	7.31	7.42
pH 3 (lab units)	7.32	7.64	7.30	7.17	7.31	7.46
pH 4 (lab units)	7.26	7.62	7.19	7.19	7.31	7.43
EC 1 (umhos/cm)	1200.00	1900.00	1700.00	1500.00	1300.00	1400.00
EC 2 (umhos/cm)	1200.00	1900.00	1700.00	1500.00	1400.00	1400.00
EC 3 (umhos/cm)	1200.00	1900.00	1600.00	1500.00	1500.00	1400.00
EC 4 (umhos/cm)	1200.00	2000.00	1700.00	1400.00	1400.00	1400.00
TOC 1 (mg/l)	< 1.00	< 1.00	4.00	11.00	90.00	10.00
TOC 2 (mg/l)	< 1.00	< 1.00	4.00	13.00	1.00	9.00
TOC 3 (mg/l)	< 1.00	< 1.00	4.00	12.00	70.00	9.00
TOC 4 (mg/l)	< 1.00	< 1.00	3.00	12.00	1.00	9.00

Note: Laboratory analysis performed by ENSECO.
< Denotes non-detection at indicated detection limit.

April 1989 Monitor Well Results

TABLE 6-1
SOUTHERN CALIFORNIA CHEMICAL
APRIL 1989 QUARTERLY SAMPLING
PURGEABLE HALOCARBONS ANALYTICAL RESULTS

COMPOUND	MW01	MW02	MW03*	MW04	MW4a	MW05	MW6b	MW07	MW08	MW09	MW10	MW11*
Chloromethane	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
Bromomethane	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
Vinyl Chloride	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
Chloroethane	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
Methylene Chloride	< 1.00	< 1.00	< 5.00	94.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
Trichlorofluoromethane	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
1,1-Dichloroethene	< 1.00	< 1.00	23.00	55.00	< 1.00	< 1.00	= 1.00	< 1.00	6.00	4.00	< 1.00	20.00
1,1-Dichloroethane	< 1.00	< 1.00	11.00	92.00	< 1.00	< 1.00	< 1.00	4.00	36.00	5.00	< 1.00	8.80
trans-1,2-Dichloroethene	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	2.00	< 1.00	< 1.00	< 1.00	< 5.00
Chloroform	< 1.00	< 1.00	35.00	12.00	< 1.00	73.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	15.00
1,2-Dichloroethane	< 1.00	< 1.00	36.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	8.00	< 1.00	12.00
1,1,1-Trichloroethane	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
Carbon Tetrachloride	< 1.00	< 1.00	47.00	< 5.00	< 1.00	140.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
Bromodichloromethane	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
1,2-Dichloropropane	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
cis-1,3-Dichloropropene	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
Trichloroethene	23.00	45.00	110.00	280.00	7.00	65.00	37.00	47.00	23.00	24.00	23.00	39.00
Dibromochloromethane	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
1,1,2-Trichloroethane	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
trans-1,3-Dichloropropene	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
2-Chloroethylvinyl ether	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
Bromoform	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
Tetrachloroethene	4.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	3.00	2.00	< 1.00	< 1.00	5.00	< 5.00
1,1,2,2-Tetrachloroethane	NR	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	NR	NR	< 1.00	< 1.00	NR	< 5.00
Chlorobenzene	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
1,3-Dichlorobenzene	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
1,2-Dichlorobenzene	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00
1,4-Dichlorobenzene	< 1.00	< 1.00	< 5.00	< 5.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 5.00

< Denotes non-detection at indicated detection limit
= Compound concentration is equal to detection limit
* Duplicate sample analytical results (performed by CKY)
NR Denotes not reported, compound coelutes with Tetrachloroethene and is combined with that result.

Note: All results in micrograms per liter (ug/l)
Laboratory analysis performed by ENSECO except where noted

TABLE 6-2
SOUTHERN CALIFORNIA CHEMICAL
APRIL 1989 QUARTERLY SAMPLING
PURGEABLE AROMATICS ANALYTICAL RESULTS

COMPOUND	MW01	MW02	MW03	MW04	MW4a	MW05	MW6b	MW07	MW08	MW09	MW10	MW11
Benzene	< 0.70	< 1.00	< 50.00	< 5.00	< 0.70	< 1.00	< 0.70	< 0.70	< 1.00	< 0.70	< 0.70	< 500.00
Toluene	< 1.00	< 1.00	< 50.00	23.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	7500.00
Ethylbenzene	< 1.00	< 1.00	1200.00	15.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	2600.00
Xylenes, Total	3.00	< 1.00	60.00	50.00	< 1.00	< 1.00	< 1.00	= 1.00	< 1.00	< 1.00	7.00	11000.00

< Denotes non-detection at indicated detection limit
= Compound concentration is equal to detection limit

Note: All results in micrograms per liter (ug/l)
Laboratory analysis performed by ENSECO

TABLE 6-3
SOUTHERN CALIFORNIA CHEMICAL
APRIL 1989 QUARTERLY SAMPLING
METALS, CHLORIDE AND NITRATE ANALYTICAL RESULTS

COMPOUND	MW01	MW02	MW03	MW04	MW4a	MW05	MW6b	MW07	MW08	MW09	MW10	MW11
Cadmium	< 0.01	< 0.01	< 0.01	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chromium, total	0.10	0.05	0.07	100.00	0.05	0.04	0.06	= 0.02	0.03	0.06	0.08	0.04
Copper	< 0.02	< 0.02	< 0.02	= 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Zinc	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Chromium, hexavalent	< 0.05	< 0.05	< 0.05	43.00	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Chloride	660.00	150.00	420.00	990.00	120.00	80.00	85.00	180.00	120.00	140.00	270.00	120.00
Nitrate (Nitrogen)	< 0.20	7.00	3.10	0.90	5.50	8.20	8.80	3.40	2.80	4.10	6.30	1.70

January 1989 Monitor Well Results

TABLE 3-1 PRIMARY SAMPLE ANALYSES

				January 1989 Quarterly Sampling								
					Southern California Chemical							
				HALOGENATED VOLATILE ORGANIC COMPOUNDS *								
				(Concentrations in ug/l)								
COMPOUND	MW01	MW02	MW03	MW04	MWO4A	MWO5	MWO6B	MWO7	MWO8	MWO9	MW10	MW11
Dichlorodifluoromethane*	ND .02	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
Methyl Chloride	ND .02	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
Vinyl Chloride	ND .01	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
Methyl Bromide	ND .02	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
Chloroethane	ND .01	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
Trichlorofluoromethane	ND .05	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
1,1-Dichloroethene	ND .01	ND 0.2	ND 0.2	2 2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
Methylene Chloride	ND 1.0	ND 0.2	3.2	1 4	ND 0.2	2.1	ND 0.2	2.2	ND 0.2	1 6	ND 0.2	1
trans-1,2-Dichloroethene	ND .01	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
1,1-Dichloroethane	ND .01	ND 0.2	4.4	3 6	ND 0.2	ND 0.2	ND 0.2	2.9	3 0	3 4	2.8	3.2
Chloroform	0.2	ND 0.2	1 3	3.7	ND 0.2	7.4	ND 0.2	ND 0.2	ND 0.2	8.9	ND 0.2	0.88
1,1,1-Trichloroethane	ND .01	ND 0.2	ND 0.2	0.68	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	2.9	ND 0.2	ND 0.2
Carbon Tetrachloride	ND .01	ND 0.2	1 5	ND 0.2	ND 0.2	5.6	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
1,2-Dichloroethane	0.7	ND 0.2	2 4 0	2 0	ND 0.2	2 9	ND 0.2	ND 0.2	ND 0.2	4.3	3.7	2 1
Trichloroethene	1 9	6 0	7 4	1 2 0	6.7	5.9	5 7	3 5	6 9	5 5	3 2	3 4
1,2-Dichloropropane	ND .02	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
Dichlorobromoethane	ND .01	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
2-Chloroethylvinylether	ND 10.0	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
cis-1,3-Dichloropropene	ND .01	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
trans-1,3-Dichloropropene	ND .01	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
1,1,2-Trichloroethane	ND .01	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
Tetrachloroethene	2.8	1.8	4.6	1.6	ND 0.2	ND 0.2	7	2.1	4.3	3.1	1.2	ND 0.2
Dibromochloroethane	ND .01	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
Chlorobenzene	ND .01	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
Bromoform	ND .02	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
1,1,2,2-Tetrachloroethane	ND .02	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
1,3-Dichlorobenzene	ND .01	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
1,4-Dichlorobenzene	ND .01	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
1,2-Dichlorobenzene	ND .01	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2

* Analyzed for Montgomery Laboratories by Vista Laboratories, Wheat Ridge, Colorado.

TABLE 3-1 PRIMARY SAMPLE ANALYSES (cont'd)

				January 1989 Quarterly Sampling								
					Southern California Chemical							
		AROMATIC VOLATILE ORGANICS, TOTAL ORGANIC CARBON & TOTAL ORGANIC HALOGENS										
COMPOUND	MW01	MW02	MW03	MW04	MWO4A	MWO5	MWO6B	MWO7	MWO8	MWO9	MW10	MW11
PURGEABLE AROMATICS *												
(Concentrations in ug/l)												
1,3-Dichlorobenzene	ND .01	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5
1,4-Dichlorobenzene	ND .01	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5
1,2-Dichlorobenzene	ND .01	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5
Total Xylenes	ND .01	ND 0.5	1500	29	1.3	ND 1.0	ND 1.0	3.6	1.6	ND 1.0	ND 1.0	1.5
Benzene	ND .01	ND 0.5	7.4	ND 0.5	ND 0.5	0.9	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5
Toluene	ND .01	ND 0.5	17	10	ND 0.5	ND 0.5	ND 0.5	1.4	ND 0.5	ND 0.5	ND 0.5	ND 0.5
Ethylbenzene	ND .01	ND 0.5	4900	15	ND 0.5	ND 0.5	ND 0.5	1.2	ND 0.5	ND 0.5	0.54	43
TOTAL ORGANIC CARBON **												
(Concentrations in mg/l)												
TOC #1	6.9	ND 0.5	160.0	16.0	ND 0.5	65.0	ND 0.5	3.6	1.1	2.1	2.0	5.4
TOC #2	7.8	ND 0.5	160.0	14.0	ND 0.5	64.0	ND 0.5	3.7	1.2	1.7	1.9	5.8
TOC #3	7.1	ND 0.5	160.0	14.0	ND 0.5	63.0	ND 0.5	3.6	1.2	1.8	2.0	5.3
TOC #4	7.6	ND 0.5	160.0	13.0	ND 0.5	63.0	ND 0.5	3.5	1.2	1.5	2.0	5.2
TOTAL ORGANIC HALOGEN **												
(Concentrations in ug/l)												
TOX #1	62	50	220	360	49	58	46	90	130	180	38	58
TOX #2	42	47	230	260	38	42	48	42	110	170	36	38
TOX #3	41	57	220	270	19	42	36	80	92	170	33	40
TOX #4	45	39	220	300	29	37	46	130	130	150	51	46

* Analyzed for Montgomery Laboratories by Vista Laboratories, Wheat Ridge, CO; ** Analyzed by Montgomery Laboratories.

TABLE 3-1 PRIMARY SAMPLE ANALYSES (cont'd)

January 1989 Quarterly Sampling
Southern California Chemical

METALS, pH AND ELECTRIC CONDUCTIVITY *

COMPOUND	MW01	MW02	MW03	MW04	MWO4A	MWO5	MWO6B	MWO7	MWO8	MWO9	MW10	MW11
METALS (mg/l)												
Chromium VI (hex)	ND .01	0.017	ND .01	33.0	0.01	ND .010	ND .010	ND .010	ND .010	0.45	ND .010	ND .010
Chlorine	524.0	77.0	302.0	418.0	105.0	98.0	66.0	744.0	145.0	248.0	139.0	110.0
Nitrate (N)	5.2	7.4	0.92	ND 0.2	5.9	0.3	8.7	5.4	5.4	7.8	0.43	2.0
Nitrate (NO3)	22.9	33.0	4.0	ND 0.9	26.0	1.3	38.0	24.0	24.0	34.0	1.9	8.8
Chromium (total)	0.014	0.022	ND .014	400	ND .014	ND .014	ND .014	ND .014	ND .014	0.33	0.029	ND .014
Cadmium	ND .003	ND .003	ND .003	0.028	ND .003	ND .003	ND .003	ND .003	ND .003	ND .003	ND .003	ND .003
Zinc	0.015	ND .006	ND .006	0.007	0.008	ND .006	0.021	ND .006	0.009	0.008	ND .006	ND .006
Copper	ND .009	ND .009	ND .009	ND .009	ND .009	ND .009	ND .009	ND .009	ND .009	ND .009	ND .009	ND .009
pH												
Analysis #1	7.1	7.5	7.1	7.1	7.7	7.4	7.4	9.1	7.4	7.3	7.8	7.6
Analysis #2	7.1	7.5	7.1	7.1	7.7	7.4	7.4	9.1	7.4	7.3	7.8	7.6
Analysis #3	7.1	7.5	7.1	7.1	7.7	7.4	7.4	9.1	7.4	7.3	7.8	7.6
Analysis #4	7.1	7.5	7.1	7.1	7.7	7.4	7.4	9.1	7.4	7.3	7.8	7.6
EC (umohs/cm)												
Analysis #1	2530	1320	1950	2120	1470	1370	1290	3390	1420	1700	1410	1480
Analysis #2	2500	1320	1890	2120	1470	1370	1290	3390	1420	1680	1410	1480
Analysis #3	2520	1320	1900	2120	1470	1370	1290	3390	1430	1680	1410	1480
Analysis #4	2560	1320	1890	2120	1470	1370	1290	3390	1430	1680	1410	1480

* Analyzed by Montgomery Laboratories.

Kleinfelder Analytical Data

TABLE 1
WATER-QUALITY DATA
MONITORING WELL #1
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03

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	10/87	2/88	5/88	6/88	9/88
EPA Indicator Measurement (CFR 40 265.92)														
pH (units)	7.3		7.1		7.2	7.0	7.38	6.8	7.0	6.9	7.1		7.05	
TOC (mg/l)	3.7		19		35	21	ND 3	ND 3	13	32	10		8.5	
TOX (mg/l)	ND.05		ND.08		ND.08	ND.08	ND.08	ND.08	ND.08	ND.08	0.1		0.038	
Sp. Cond. (umhos/cm)	2300		3400		1650	3600	3200	2800	3400	3800	2975		2500	
Site-Specific Indicator Chemicals														
Chromium (total) (mg/l)	ND.0005		ND.03		ND.03	ND.03	ND.03	ND.04	ND.04	ND.04	0.08	ND.02	0.03	0.07
Chromium (HEX) (mg/l)	ND.05		ND.02		ND.02	ND.02	ND.02	ND.02	ND.02	ND.02	ND.1		ND.05	ND.05
Cadmium (mg/l)	ND.0002		ND.009		ND.02	ND.01	ND.01	ND.01	ND.01	ND.02	ND.02		ND.01	ND.01
Copper (mg/l)	ND.08		ND.02		ND.01	ND.04	ND.04	ND.02	0.10	ND.02	0.04			ND.02
Zinc (mg/l)	ND.019		0.18		0.04	ND.08	0.018	ND.03	0.06	ND.03	0.04		0.07	0.08
Chloride (mg/l)	330		300		650	920	700	570	720	770	430		460	630
Nitrate as N (mg/l)	7.0		3.7		0.5	1.3	4.06	5.3	ND.1	2.3	4.5		5.2	2.9
Nitrate as NO_3 (mg/l)	31		17		18	11	18	23	ND.4	11	19		23	

Note: ND 1 = Chemical was not detected at 1 mg/l.

Organic Compounds (EPA Method 624)														
1,1-Dichloroethane (ug/l)			ND1		ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1	
1,1-Dichloroethylene (ug/l)			ND1		ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1	
1,2-Dichloroethane (ug/l)			ND1		ND1	2	1	0.5	1	1	ND1		ND1	
Benzene (ug/l)			ND1		ND1	ND1	ND1	ND.5	ND.5	ND.5	ND.7		ND.7	
Carbon Tetrachloride (ug/l)			ND1		ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1	
Chloroform (ug/l)			ND1		ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1	
Ethylbenzene (ug/l)			ND1		ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1	
Trichloroethylene (ug/l)			16		16	18	18	9	11	2.4	4		15	
Toluene (ug/l)			ND1		ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1	
Xylene (ug/l)			ND1		ND1	ND1		ND.5	ND.5	ND.5	ND1		ND1	
Methylene Chloride (ug/l)			ND1		ND1	ND1	ND1	ND2	ND.5	1.7	ND1		ND1	

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

TABLE 2
WATER-QUALITY DATA
MONITORING WELL #2
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03

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	10/87	2/88	5/88	6/88	9/88
EPA Indicator Measurement (CFR 40 265.92)														
pH (units)	7.0		7.4		7.7	7.4	7.68	7.1	7.1	7.12	7.27		7.35	
TOC (mg/l)	34		4.8		ND3	ND3	ND3	ND3	ND3	ND3	ND1		ND1	
TOX (mg/l)	ND.05		ND.08		ND.08	ND.08	ND.08	ND.08	ND.08	ND.08	0.04		0.032	
Sp. Cond. (umhos/cm)	2300		1900		1800	2100	2280	1900	3400	1500	1550		1500	
Site-Specific Indicator Chemicals														
Chromium (total) (mg/l)	ND.0005	ND.033	ND.03		ND.03	ND.03	ND.03	ND.04	ND.04	ND.04	0.05	ND.02	ND.02	0.06
Chromium (HEX) (mg/l)	ND.05	ND.033	ND.03		ND.02	ND.02	ND.02	ND.02	ND.02	ND.02	ND.1		ND.05	ND.05
Cadmium (mg/l)	ND.0002		ND.009		ND.01	ND.03	ND.01	ND.01	ND.01	ND.02	ND.02		ND.01	ND.01
Copper (mg/l)	ND.08		ND.02		ND.02	ND.04	ND.04	ND.02	ND.02	ND.02	0.04			ND.02
Zinc (mg/l)	ND.019		ND.03		ND.04	ND.08	0.021	ND.031	ND.031	ND.03	0.03		ND.02	0.03
Chloride (mg/l)	270		180		220	410	510	250	700	180	110		160	160
Nitrate as N (mg/l)	2.1		5.8		5.4	5.0	6.25	7.2	8.8	7.2	7.2		7.2	7.1
Nitrate as NO_3 (mg/l)	9.1		26		24	22	27.7	32	39	32	32		32	

Note: ND 1 = Chemical was not detected at 1 mg/l.

Organic Compounds (EPA Method 624)														
1,1-Dichloroethane (ug/l)		4	3		ND1	5	9	21	20	2.5	ND1		ND1	
1,1-Dichloroethylene (ug/l)		3	ND1		ND1	3	5	0.9	11	0.94	ND1		ND1	
1,2-Dichloroethane (ug/l)		ND1	ND1		3	1	ND1	ND.5	2.2	ND.5	ND1		ND1	
Benzene (ug/l)		ND1	ND1		ND1	ND1	ND1	ND.5	ND.5	ND.5	ND.7		ND.7	
Carbon Tetrachloride (ug/l)		ND1	ND1		ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1	
Chloroform (ug/l)		ND1	ND1		ND1	2	2	1	ND.5	0.73	ND1		ND1	
Ethylbenzene (ug/l)		ND1	ND1		3	2	ND1	ND.5	6.2	ND.5	ND1		ND1	
Trichloroethylene (ug/l)		21	22		12	38	67	20	93	40	5		23	
Toluene (ug/l)		ND1	ND1		3	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1	
Xylene (ug/l)		ND1	ND1		2	ND1		ND.5	ND.5	ND.5	ND1		ND1	
Methylene Chloride (ug/l)		ND1	ND1		ND1	ND1	ND1	ND2	ND.5	11	ND1		ND1	

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

TABLE 3
WATER-QUALITY DATA
MONITORING WELL #3
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03

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	10/87	2/88	5/88	6/88	9/88
EPA Indicator Measurement (CFR 40 265.92)														
pH (units)	7.4		7.0		7.2	7.2	7.55	6.9	7.0	5.9	6.78		7.10	
TOC (mg/l)	16		190		44	29	31	20.5	21	50	135		81	
TOX (mg/l)	0.17		ND.08		.18	.17	.21	.22	.15	.27	.10		0.24	
Sp. Cond. (umhos/cm)	1700		1500		2200	2200	2400	2300	2200	3300	1575		2100	
Site-Specific Indicator Chemicals														
Chromium (total) (mg/l)	ND.0005	ND.033	ND.03		ND.03	ND.03	ND.03	ND.04	ND.04	ND.04	.08	ND.02	ND.02	0.07
Chromium (HEX) (mg/l)	ND.05	ND.033	ND.02		ND.02	ND.02	ND.02	ND.02	ND.02	ND.02	ND.4		ND.05	ND.05
Cadmium (mg/l)	ND.0002	ND.011	ND .009		ND.01	ND.01	ND.01	ND.01	ND.01	ND.02	ND.02		ND.01	ND.01
Copper (mg/l)	ND.08		ND.02		ND.02	ND.04	ND.04	ND.02	ND.02	ND.02	ND.02		0.02	0.02
Zinc (mg/l)	ND.019		0.26		ND.04	ND.08	0.021	ND.031	ND.031	ND.03	ND.02		0.04	0.02
Chloride (mg/l)	170		76		400	520	550	420	380	740	190		350	840
Nitrate as N (mg/l)	3.0		ND 1		6.5	4.1	4.81	3.4	3.8	5.2	ND.2		2.7	4.8
Nitrate as NO_3 (mg/l)	13		ND4.4		29	18	21.3	15	17	23	ND1		12	

Note: ND 1 = Chemical was not detected at 1 mg/l.

Organic Compounds (EPA Method 624)													
1,1-Dichloroethane (ug/l)	6	ND50	5	4	5	5	4	1.6	6.9	ND10		ND50	ND25
1,1-Dichloroethylene (ug/l)	14	ND50	11	7	13	17	7.8	3.9	15	ND10		ND50	ND25
1,2-Dichloroethane (ug/l)	ND1	ND50	9	6	7	11	18	2.11	ND.5	36		ND50	ND25
Benzene (ug/l)	9	ND50	3	ND1	3	2	ND.5	ND.5	ND.5	ND10		ND35	ND17
Carbon Tetrachloride (ug/l)	73	ND50	78	110	58	87	50	73	87	ND10		ND50	ND25
Chloroform (ug/l)	46	ND50	36	97	33	45	20	22	ND.5	ND10		ND50	ND25
Ethylbenzene (ug/l)	ND1	95000	1100	ND1	310	4	ND.5	ND.5	290	8500		1700	1000
Trichloroethylene (ug/l)	320	ND50	160	170	200	160	98	70	150	14		150	150
Toluene (ug/l)	2	15000	11	ND1	ND1	ND1	ND.5	ND.5	ND.5	8500		550	ND25
Xylene (ug/l)	ND1	20000	2000	ND1	10		ND.5	ND.5	ND.5	23000		850	200
Methylene Chloride (ug/l)	ND1	ND50	ND1	ND1	2	ND1	ND2	ND2	9.6	ND10		ND50	100

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

TABLE 4
WATER-QUALITY DATA
MONITORING WELL #4
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03

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	10/87	2/88	5/88	6/88	9/88
EPA Indicator Measurement (CFR 40 265.92)														
pH (units)	6.3		7.1		7.1	6.6	7.4	6.7	6.3	6.3	6.6		6.55	
TOC (mg/l)	36		26		110	79	98	26.5	133	90	46		57	
TOX (mg/l)	ND .05		.26		.19	2.3	1.40	.68	2.10	1.3	.36		0.73	
Sp. Cond. (umhos/cm)	6400		3600		3500	4250	4950	4000	11000	7300	4625		5900	
Site-Specific Indicator Chemicals														
Chromium (total) (mg/l)	500	550	61		120	180	170	98	440	190	140	238	218	180
Chromium (HEX) (mg/l)	500	500			120	180	170	100	430	232	140		84	170
Cadmium (mg/l)	0.78	0.92	0.035		0.04	0.09	0.07	0.05	ND .01	.33	.06		0.13	0.12
Copper (mg/l)	ND .08		ND .02		ND .02	ND .04	ND .03	ND .02	ND .02	ND .02	ND .03		0.04	ND.02
Zinc (mg/l)	0.06		ND .03		ND .04	ND .08	ND .007	ND .03	ND .03	ND .03	ND .03		0.15	ND.02
Chloride (mg/l)	2300		1100		770	1300	1400	960	3500	1800	790		1600	1400
Nitrate as N (mg/l)	18	12	ND 13		0.5	1.3	1.1	ND .1	ND .7	1.3	.2		0.75	3.9
Nitrate as NO_3 (mg/l)	81	55	ND 55		2.4	5.6	5.0	ND .4	ND 3	5.8	1.1		3.3	

Note: ND 1 = Chemical was not detected at 1 mg/l.

Organic Compounds (EPA Method 624)													
1,1-Dichloroethane (ug/l)	100	100	42	57	61	120	27	110	120	70		130	100
1,1-Dichloroethylene (ug/l)	100	42	34	41	61	67	20	94	110	56		60	50
1,2-Dichloroethane (ug/l)	ND 50	17	34	61	12	140	74	74	100	35		90	70
Benzene (ug/l)	ND 50	16	9	ND 1	ND 10	5	ND 5	ND 5	ND .5	ND 14		20	ND.7
Carbon Tetrachloride (ug/l)	ND 50	ND 1	ND 1	ND 1	ND 10	ND 1	ND 5	ND 5	1.5	ND 20		ND 10	ND10
Chloroform (ug/l)	ND 50	7	3	8	10	12	6.2	30	23	ND 20		23	ND10
Ethylbenzene (ug/l)	3000	36	50	1100	670	220	160	1500	380	70		40	ND10
Trichloroethylene (ug/l)	550	140	170	200	280	290	180	280	190	110		250	250
Toluene (ug/l)	8300	130	25	330	260	220	240	3700	580	180		90	ND10
Xylene (ug/l)	10000	100	30	300	300	300	731	2700	570	200		120	40
Methylene Chloride (ug/l)	100	12	ND 1	17	ND 10	ND 1	27	140	110	ND 20		110	70

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

TABLE 5
WATER-QUALITY DATA
MONITORING WELL #4A
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03

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	10/87	2/88	5/88	6/88	9/88
EPA Indicator Measurement (CFR 40 265.92)														
pH (units)		6.8	7.5		7.6	7.5	7.7		7.7	7.2	7.3		7.45	
TOC (mg/l)		40	8.3		ND3	ND3	ND3		ND3	ND3	ND1		ND1	
TOX (mg/l)		ND.05	ND.08		ND.08	ND.08	ND.08		.14	ND.03	ND.01		0.15	
Sp. Cond. (umhos/cm)		1500	1500		850	1400	1525		1600	1700	1662		1550	
Site-Specific Indicator Chemicals														
Chromium (total) (mg/l)		ND.03	ND.03		ND.03	ND.03	ND.03		ND.04	ND.04	.03	.02	ND.02	0.06
Chromium (HEX) (mg/l)		ND.5			ND.02	ND.02	ND.02		ND.02	ND.02	ND.1		ND.05	ND.05
Cadmium (mg/l)		ND.01	ND.01		ND.01	ND.01	ND.01		ND.01	ND.02	ND.02		ND.01	ND.01
Copper (mg/l)			ND.02		ND.02	ND.04	ND.03		ND.02	ND.02	ND.02		0.02	ND.02
Zinc (mg/l)			ND.03		ND.04	ND.08	ND.007		ND.03	ND.03	ND.02		ND.02	0.02
Chloride (mg/l)			100		110	120	130		160	129	97		100	160
Nitrate as N (mg/l)		4.5	7.5		6.1	4.7	6.3		5.4	6.1	3.8		6.1	6.3
Nitrate as NO_3 (mg/l)		20	33		27	21	28		24	27	17		27	

Note: ND 1 = Chemical was not detected at 1 mg/l.

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	10/87	2/88	5/88	6/88	9/88
Organic Compounds (EPA Method 624)														
1,1-Dichloroethane (ug/l)			13		11	3	19		140	1.2	ND1		ND10	
1,1-Dichloroethylene (ug/l)			1		2	ND1	2		50	ND.5	ND1		ND10	
1,2-Dichloroethane(ug/l)			ND1		ND1	ND1	2		1.5	ND.5	ND1		ND10	
Benzene (ug/l)			8		ND1	ND1	ND1		ND.5	ND.5	ND.7		ND7	
Carbon Tetrachloride (ug/l)			ND1		ND1	ND1	ND1		ND.5	ND.5	ND1		ND10	
Chloroform (ug/l)			ND1		ND1	ND1	2		17	ND.5	ND1		ND10	
Ethylbenzene (ug/l)			ND1		ND1	ND1	ND1		ND.5	ND.5	ND1		ND10	
Trichloroethylene (ug/l)			8		7	3	12		82	3.2	ND1		ND20	
Toluene (ug/l)			ND1		ND1	ND1	ND1		1.5	ND.5	ND1		ND10	
Xylene (ug/l)			ND1		ND1	ND1			ND.5	ND.5	ND1		ND10	
Methylene Chloride (ug/l)			ND1		ND1	ND1	ND1		11	ND.5	ND1		100	

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

TABLE 6
WATER-QUALITY DATA
MONITORING WELL #5
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03

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	10/87	2/88	5/88	6/88	9/88
EPA Indicator Measurement (CFR 40 265.92)														
pH (units)	7.3		7.4		7.3	7.3	7.82	6.9	7.0	7.6	7.06		7.10	
TOC (mg/l)	ND3		4.8		5	3	ND3	ND3	ND3	5	7		21	
TOX (mg/l)	.19		.16		.65	.18	.30	.45	.36	ND.03	.3		0.13	
Sp. Cond. (umhos/cm)	1700		1200		1400	1100	1220	1400	1400	1300	1537		1400	
Site-Specific Indicator Chemicals														
Chromium (total) (mg/l)	ND.0005		ND.03		ND.03	ND.03	ND.03	ND.04	ND.04	ND.04	.1	ND.02	0.05	0.05
Chromium (HEX) (mg/l)	ND.05		ND.02		ND.02	ND.02	ND.02	ND.02	ND.02	ND.02	ND.1		ND.1	ND.05
Cadmium (mg/l)	ND.0002		ND.009		ND.01	ND.01	ND.01	ND.01	ND.01	ND.02	ND.02		ND.01	ND.01
Copper (mg/l)	ND.08		ND.02		ND.02	ND.04	ND.04	ND.02	ND.02	ND.02	ND.02		ND.02	ND.02
Zinc (mg/l)	ND.019		0.18		ND.04	ND.08	ND.001	ND.031	ND.03	ND.03	.4		ND.02	ND.02
Chloride (mg/l)	2.0		66		79	290	143.5	110	110	100	90		91	93
Nitrate as N (mg/l)	0.42		8.8		12	8.6	11.13	10	15	3.4	5		14	3.6
Nitrate as NO_3 (mg/l)	1.9		39		55	38	49.3	45	65	24	22		3.1	

Note: ND 1 = Chemical was not detected at 1 mg/l.

Organic Compounds (EPA Method 624)														
1,1-Dichloroethane (ug/l)		ND1	ND 1		2	2	7	4	5.4	.29	ND1		ND1	
1,1-Dichloroethylene (ug/l)		ND1	ND1		3	3	4	2.7	5.2	.25	ND1		ND1	
1,2-Dichloroethane (ug/l)		ND1	ND1		ND1	ND1	ND1	ND.5	ND.5	ND.3	ND1		7	
Benzene (ug/l)		5	ND1		ND1	ND1	ND1	ND.5	ND.5	ND.5	ND.7		ND.7	
Carbon Tetrachloride (ug/l)		3	11		45.5	37	68	100	120	99	20		26	
Chloroform (ug/l)		2	10		14.5	16	43	48	50	95	10		18	
Ethylbenzene (ug/l)		ND1	ND1		ND1	6	ND1	ND.5	ND.5	ND.5	ND1		ND1	
Trichloroethylene (ug/l)		10	24		64	36	70	70	59	26	5		18	
Toluene (ug/l)		1	ND1		ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1	
Xylene (ug/l)		ND1	ND1		ND1	ND1		ND.5	7.3	ND.5	ND1		ND1	
Methylene Chloride (ug/l)		ND1	ND1		ND1	ND1	ND1	ND2	ND.5	4.3	ND1		ND1	

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

TABLE 7
WATER-QUALITY DATA
MONITORING WELL #6B
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03

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	10/87	2/88	5/88	6/88	9/88
EPA Indicator Measurement (CFR 40 265.92)														
pH (units)	7.6		7.4		7.5	7.8	7.6	7.1	7.4	7.1	7.13		7.10	
TOC (mg/l)	ND3		6.5		ND3	ND3	ND3	ND3	ND3	9	ND1		ND1	
TOX (mg/l)	0.1		ND.08		ND.08	ND.08	ND.08	ND.08	ND.08	ND.03	.02		ND.01	
Sp. Cond. (umhos/cm)	1400		1300		1400	1200	1425	1400	1600	1400	1265		1300	
Site-Specific Indicator Chemicals														
Chromium (total) (mg/l)	0.0038		ND.03		ND .03	ND.02	ND.03	ND.04	ND.04	ND.04	.02	ND.02	ND.02	0.05
Chromium (HEX) (mg/l)	ND.05		ND.02		ND.02	ND.02	ND.02	ND.02	ND.02	ND.02	ND.1		ND.03	ND.05
Cadmium (mg/l)	ND.0002		ND.009		ND.01	ND.01	ND.01	ND.01	ND.01	ND.02	ND.02		ND.01	ND.01
Copper (mg/l)	ND.08		ND.02		ND.02	ND.04	ND.03	ND.02	ND.02	ND.02	ND.02		ND.02	ND.02
Zinc (mg/l)	ND.03		ND.03		ND.04	ND.08	ND.007	ND.03	ND.03	ND.03	ND.02		.02	ND.02
Chloride (mg/l)	79		220		82	100	140	92	130	94	61		89	100
Nitrate as N (mg/l)	6.9		8.8		7.0	5.2	6.1	7	8.4	8.4	8.4		7.3	8.0
Nitrate as NO_3 (mg/l)	28		39		31	23	27	31	37	37	37		32	

Note: ND 1 = Chemical was not detected at 1 mg/l.

Organic Compounds (EPA Method 624)														
1,1-Dichloroethane (ug/l)			ND1		ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1	
1,1-Dichloroethylene (ug/l)			ND1		ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1	
1,2-Dichloroethane (ug/l)			ND1		ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1	
Benzene (ug/l)			ND1		ND1	ND1	ND1	ND.5	ND.5	ND.5	ND.7		ND.7	
Carbon Tetrachloride (ug/l)			ND1		ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1	
Chloroform (ug/l)			ND1		ND1	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1	
Ethylbenzene (ug/l)			ND1		ND1	ND1	ND1	ND.5	1.5	ND.5	ND1		ND1	
Trichloroethylene (ug/l)			30		19	23.5	24	21	20	33	22		21	
Toluene (ug/l)			ND1		ND1	ND1	ND1	ND.5	0.8	ND.5	ND1		ND1	
Xylene (ug/l)			ND1		ND1	ND1		ND.5	7.9	ND.5	ND1		ND1	
Methylene Chloride (ug/l)			ND1		ND1	ND1	ND1	ND.5	2.6	1.2	ND1		ND1	

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

TABLE 8
WATER-QUALITY DATA
MONITORING WELL #7
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03

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	10/87	2/88	5/88	6/88	9/88
EPA Indicator Measurement (CFR 40 265.92)														
pH (units)		6.3	7.3		7.4	7.2	7.3	6.5	6.8	7.3	8.94		6.95	
TOC (mg/l)		260	6.5		5	17	ND3	43	7	5	2		4.9	
TOX (mg/l)		0.081	ND.08		ND.08	ND.08	ND.08	ND.08	.11	ND.03	.08		0.18	
Sp. Cond. (umhos/cm)		2700	1700		1900	5600	5850	3700	3300	5000	8500		2800	
Site-Specific Indicator Chemicals														
Chromium (total) (mg/l)		ND.03	ND.03		ND.03	ND.03	ND.03	ND.04	ND.04	ND.04	.02	ND.02	0.07	0.04
Chromium (HEX) (mg/l)		ND.5	ND.02		ND.02	ND.02	ND.02	ND.02	ND.02	ND.02	ND.1		ND.1	ND.05
Cadmium (mg/l)		ND.01	ND.009		ND.01	ND.01	ND.01	ND.01	ND.01	ND.02	ND.02		ND.01	ND.01
Copper (mg/l)			ND.02		ND.02	ND.04	ND.03	ND.02	0.08	ND.02	ND.02		ND.02	ND.02
Zinc (mg/l)			ND.03		ND.04	ND.04	0.022	ND.03	0.04	ND.03	ND.02		ND.02	ND.02
Chloride (mg/l)		380	190		280	1800	1700	630	610	1200	1900		570	1400
Nitrate as N (mg/l)		27	5.0		4.3	2.7	4.4	19	25	1.1	ND0.2		ND.2	5.5
Nitrate as NO_3 (mg/l)		120	22		19	12	19.5	82	110	19	ND1		ND1	

Note: ND 1 = Chemical was not detected at 1 mg/l.

COMPOUND	2/85-3/85	7/85-8/85	3/86	5/86	7/86	9/86	12/86	3/87	6/87-7/87	10/87	2/88	5/88	6/88	9/88
Organic Compounds (EPA Method 624)														
1,1-Dichloroethane (ug/l)		2			8	42	30	7.1	14	6	ND1		ND1	
1,1-Dichloroethylene (ug/l)		ND1			2	5	6	ND5	6	.55	ND1		ND1	
1,2-Dichloroethane (ug/l)		ND1			ND1	2	ND1	ND5	ND.5	ND.5	ND1		ND1	
Benzene (ug/l)		64			ND1	ND1	ND1	ND5	ND.5	ND.5	ND.7		ND.7	
Carbon Tetrachloride (ug/l)		ND1			ND1	ND1	ND1	ND5	ND.5	ND.5	ND1		ND1	
Chloroform (ug/l)		ND1			ND1	ND1	ND1	8.2	ND.5	ND.5	ND1		ND1	
Ethylbenzene (ug/l)		ND1			4	ND1	ND1	1.0	ND.5	ND.5	ND1		ND1	
Trichloroethylene (ug/l)		29			67	71	70	180	130	35	24		100	
Toluene (ug/l)		2			5	ND1	ND1	2.2	3.6	ND.5	ND1		ND1	
Xylene (ug/l)		ND1			4	ND1		ND5	ND.5	ND.5	ND1		ND1	
Methylene Chloride (ug/l)		ND1			ND1	ND1	ND1	ND5	ND.5	1.1	ND1		ND1	

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

TABLE 9
WATER-QUALITY DATA
MONITORING WELL #8
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03

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	10/87	2/88	5/88	6/88	9/88
EPA Indicator Measurement (CFR 40 265.92)														
pH (units)		6.6	7.5		7.4	7.4	7.4	6.9	7.1	7.1	7.23		7.25	
TOC (mg/l)		99	7		8	ND3	ND3	ND3	5	ND3	ND1		1.5	
TOX (mg/l)		0.44	.09		ND.08	.10	.15	ND.08	.19	ND.08	.04		.06	
Sp. Cond. (umhos/cm)		2800	1500		1700	1600	1800	2000	2100	1300	1550		1,600	
Site-Specific Indicator Chemicals														
Chromium (total) (mg/l)		ND.05	ND.03		ND.03	ND.03	ND.03	ND.04	ND.04	ND.04	.03	ND.02	ND.02	0.05
Chromium (HEX) (mg/l)		ND.05	ND.02		ND.02	ND.02	ND.02	ND.02	ND.02	ND.02	ND.1		ND.05	ND.05
Cadmium (mg/l)		ND.01	ND.009		ND.01	ND.01	ND.01	ND.01	ND.01	ND.02	ND.02		ND.01	ND.01
Copper (mg/l)			ND.02		ND.02	ND.04	ND.03	ND.02	ND.02	ND.02	ND.02		ND.02	ND.02
Zinc (mg/l)			ND.03		ND.04	ND.08	ND.001	ND.03	ND.03	ND.03	ND.02		0.05	0.04
Chloride (mg/l)			530		170	270	250	300	300	120	140		190	130
Nitrate as N (mg/l)		1.3	4.2		3.2	2.7	3.2	2.5	2.2	4.3	4.5		3.7	5.7
Nitrate as NO_3 (mg/l)		5.8	39		14	12	14.1	11	10	19	20		16	

Note: ND 1 = Chemical was not detected at 1 mg/l.

Organic Compounds (EPA Method 624)														
1,1-Dichloroethane (ug/l)			41		76	160	160	55	160	45	50		42	2
1,1-Dichloroethylene (ug/l)			3		8	17	19	5.6	29	5.5	2.8		6	ND1
1,2-Dichloroethane (ug/l)			1		14	14	8	9.5	16	ND.5	ND1		3	30
Benzene (ug/l)			ND1		ND1	ND1	ND1	ND.5	ND.5	ND.5	ND.7		ND.7	ND.7
Carbon Tetrachloride (ug/l)			ND1		ND1	ND1	8	ND.5	ND.5	ND.5	ND1		ND1	ND1
Chloroform (ug/l)			ND1		2	2	2	5.6	ND.5	0.55	ND1		ND1	ND1
Ethylbenzene (ug/l)			ND1		2	ND1	ND1	ND.5	ND.5	ND.5	ND1		ND1	ND1
Trichloroethylene (ug/l)			19		28	52	44	67	51	25	17		27	20
Toluene (ug/l)			ND1		3	ND1	ND1	2.3	ND.5	ND.5	ND1		ND1	ND1
Xylene (ug/l)			ND1		1	ND1		ND.5	ND.5	ND.5	ND1		ND1	ND1
Methylene Chloride (ug/l)			5		ND1	ND1	ND1	ND.5	2.4	3.0	ND1		ND1	ND1	ND1

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

TABLE 10
WATER-QUALITY DATA
MONITORING WELL #9
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03

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	10/87	2/88	5/88	6/88	9/88
EPA Indicator Measurement (CFR 40 265.92)														
pH (units)		6.4	7.4		7.3	7.0	7.4	6.9	6.8	6.9	7.15		7.0	
TOC (mg/l)		210	14		28	2.8	24	ND3	42	15	3		4.0	
TOX (mg/l)		0.13	.26		.12	.28	.37	.37	.48	.28	.16		0.22	
Sp. Cond. (umhos/cm)		2200	2800		2000	2400	2675	2500	3200	3100	2075		1950	
Site-Specific Indicator Chemicals														
Chromium (total) (mg/l)		ND.03	ND.03		ND.03	ND.03	ND.03	ND.04	0.12	.94	1.30	2.42	1.66	2.75
Chromium (HEX) (mg/l)		ND.05	ND.02		ND.02	0.05	ND.02	ND.02	0.05	.59	1.30		0.8	1.5
Cadmium (mg/l)		ND.01	ND.00		ND.01	ND1	ND.01	ND.01	ND.01	ND.02	ND.02		ND.01	ND.01
Copper (mg/l)			ND.02		ND.02	ND.04	ND.03	ND.02	ND.02	ND.02	ND.02		ND.02	ND.02
Zinc (mg/l)			ND.03		ND.04	ND.08	0.018	ND.03	ND.03	ND.03	ND.02		0.05	0.03
Chloride (mg/l)		300	530		250	720	670	470	640	630	290		290	490
Nitrate as N (mg/l)		1.4	8.8		3.2	1.4	3.72	4.1	2.9	8.4	7.2		5.0	7.6
Nitrate as NO_3 (mg/l)		6.3	39		14	6.2	16.5	18	13	37	32		22	
Organic Compounds (EPA Method 624)														
1,1-Dichloroethane (ug/l)			99		50	360	250	110	140	130	40		ND10	90
1,1-Dichloroethylene (ug/l)			18		18	200	110	44	72	84	50		29	30
1,2-Dichloroethane (ug/l)			10		13	90	52	90	69	ND.5	6		90	ND10
Benzene (ug/l)			ND1		ND1	ND5	ND1	ND.5	ND2.5	ND.5	ND.7		ND7	ND7
Carbon Tetrachloride (ug/l)			ND1		ND1	ND5	ND1	ND.5	ND2.5	ND.5	ND1		ND10	ND10
Chloroform (ug/l)			20		4	30	22	10	19	28	13		ND10	10
Ethylbenzene (ug/l)			ND1		ND1	ND5	ND1	ND.5	ND2.5	ND.5	ND1		ND10	ND10
Trichloroethylene (ug/l)			61		3	550	240	150	160	150	17		120	90
Toluene (ug/l)			ND1		ND1	ND5	ND1	0.7	ND2.5	ND.5	ND1		ND10	ND10
Xylene (ug/l)			ND1		ND1	ND5		ND.5	ND2.5	ND.5	ND1		ND10	ND10
Methylene Chloride (ug/l)			110		ND1	ND5	18	29	33	83	35		ND10	10

Note: ND 1 = Chemical was not detected at 1 mg/l.

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

TABLE 11
WATER-QUALITY DATA
MONITORING WELL #10
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03

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	10/87	2/88	5/88	6/88	9/88
	EPA Indicator Measurement (CFR 40 265.92)													
pH (units)		6.8	7.8		7.6	7.4	7.8	7.4	7.2	7.1	7.51		7.20	
TOC (mg/l)		440	10		130	103	135	33.8	158	56	7		29	
TOX (mg/l)		0.17	ND.08		ND.08	.14	.15	.20	.62	.18	.06		0.22	
Sp. Cond. (umhos/cm)		2100	1300		1600	1400	1550	1600	2100	1900	1355		1800	
	Site-Specific Indicator Chemicals													
Chromium (total) (mg/l)		ND.03	ND.03		ND.03	ND.03	ND.03	ND.04	ND.04	ND.04	.08	.05	0.05	0.06
Chromium (HEX) (mg/l)		ND.5			ND.02	ND.02	ND.02	ND.02	ND.02	ND.02	ND.1		ND.05	ND.05
Cadmium (mg/l)		ND.01			ND.01	ND.01	ND.01	ND.01	ND.01	ND.02	ND.02		ND.01	ND.01
Copper (mg/l)			ND.02		ND.02	ND.04	ND.03	ND.02	ND.02	ND.02	ND.02		0.05	ND.02
Zinc (mg/l)			ND.03		ND.04	ND.08	ND.007	ND.03	ND.03	ND.03	ND.02		0.35	ND.02
Chloride (mg/l)			150		120	150	160	160	260	230	100		210	230
Nitrate as N (mg/l)		ND.1	ND.1		0.1	ND.01	ND.1	ND.1	ND.1	ND.1	ND.2		ND.2	ND.2
Nitrate as NO_3 (mg/l)		ND4.4	ND4.4		0.6	ND.04	ND.4	ND.4	ND.4	ND.4	ND1		ND1	

Note: ND 1 = Chemical was not detected at 1 mg/l.

	Organic Compounds (EPA Method 624)												
1,1-Dichloroethane (ug/l)	ND50	2	6	ND10	20	ND5	23	21	3.7		32	ND5
1,1-Dichloroethylene (ug/l)	ND50	1	7	14	ND20	ND5	41	28	ND1		21	ND5
1,2-Dichloroethane (ug/l)	ND50	17	86	200	270	63	160	93	15		70	40
Benzene (ug/l)	ND50	ND1	ND1	ND10	ND20	ND5	ND2.5	ND.5	ND.7		ND7	ND3
Carbon Tetrachloride (ug/l)	ND50	ND1	ND1	ND10	ND20	ND5	ND2.5	ND.5	ND1		ND10	ND5
Chloroform (ug/l)	50	ND1	ND1	ND10	ND20	ND5	3.1	2.3	ND1		ND10	ND5
Ethylbenzene (ug/l)	6500	68	ND1	2200	1800	330	2000	360	ND1		ND10	ND5
Trichloroethylene (ug/l)	250	29	56	93	120	62	160	130	14		90	60
Toluene (ug/l)	17000	ND1	ND1	36	560	ND5	14	ND.5	ND1		ND10	ND5
Xylene (ug/l)	20000	ND1	70	90	600	120	500	ND.5	ND1		ND10	ND5
Methylene Chloride (ug/l)	100	ND1	ND1	ND10	ND20	ND5	13	1.8	ND1		ND10	14

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

TABLE 12
WATER-QUALITY DATA
MONITORING WELL #11
SOUTHERN CALIFORNIA CHEMICAL
PROJECT 50-1014-03

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	10/87	2/88	5/88	6/88	9/88
EPA Indicator Measurement (CFR 40 265.92)														
pH (units)		6.6	7.8		7.2	7.3	7.5	7.5	7.4	7.4	7.34		7.45	
TOC (mg/l)		54	13		120	156	125	26.8	58	61	12		20	
TOX (mg/l)		ND.05	0.1		ND.08	ND.08	.12	.14	.15	ND.08	.07		0.078	
Sp. Cond. (umhos/cm)		1600	1600		1700	1600	1800	1700	2100	1600	1895		1500	
Site-Specific Indicator Chemicals														
Chromium (total) (mg/l)		ND.03	ND.03		ND.03	ND.03	ND.03	ND.04	ND.04	ND.04	.04	ND.02	ND.02	0.05
Chromium (HEX) (mg/l)		ND.5			ND.02	ND.02	ND.02	ND.02	ND.02	ND.02	ND.1		ND.05	ND.05
Cadmium (mg/l)		ND.01	ND.01		ND.01	ND.01	ND.01	ND.01	ND.01	ND.02	ND.02		ND.01	ND.01
Copper (mg/l)			ND.02		ND.02	ND.04	ND.03	ND.02	ND.02	ND.02	ND.02		ND.01	ND.02
Zinc (mg/l)			ND.03		ND.04	ND.08	ND.001	ND.03	ND.03	ND.03	ND.02		ND.02	0.02
Chloride (mg/l)		220	230		180	230	240	170	270	110	86		120	110
Nitrate as N (mg/l)		1.2	2.5		1.1	ND1	0.1	1.2	0.7	1.5	2.2		1.5	1.7
Nitrate as NO_3 (mg/l)		5.2	11		4.8	ND.4	0.5	5.5	3.3	6.8	9.6		65	

Note: ND 1 = Chemical was not detected at 1 mg/l.

Organic Compounds (EPA Method 624)														
1,1-Dichloroethane (ug/l)			10	4	10	ND200	ND100	6.9	12	2.3	2.5		ND10	ND5
1,1-Dichloroethylene (ug/l)			8	2	5	ND200	ND100	5.0	11	2.6	2.3		ND10	ND5
1,2-Dichloroethane (ug/l)			8	31	17	ND200	130	95	21	89	21		ND10	60
Benzene (ug/l)			ND1	3	ND1	ND200	ND100	1.5	ND.5	ND.5	ND.7		ND7	ND3
Carbon Tetrachloride (ug/l)			ND1	ND1	ND1	ND200	ND100	ND.5	ND.5	ND.5	ND1		ND10	ND5
Chloroform (ug/l)			3	3	10	ND200	ND100	3.3	3.5	1.0	ND1		ND10	ND5
Ethylbenzene (ug/l)			13	1800	2200	6400	3300	ND.5	1200	180	17		ND10	130
Trichloroethylene (ug/l)			110	36	76	ND200	180	46	81	36	20		70	30
Toluene (ug/l)			ND1	5400	5200	14000	7500	3.6	360	ND.5	ND1		ND10	ND5
Xylene (ug/l)			20	4000	1500	10000	3000	220	370	ND.5	ND1		110	ND5
Methylene Chloride (ug/l)			ND1	ND1	ND1	ND200	ND100	1.8	8.4	ND.5	3		ND10	16

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

APPENDIX C

ENESCO ANALYTICAL REPORTS

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7440 Lincoln Way • Garden Grove, CA 92641
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FAX: (714) 891-5917

NOV 9 1989

November 7, 1989

CAMP DRESSER & MCKEE, INC.
18881 VON KARMEN, SUITE 650
IRVINE, CA 92715
ATTN: MR. DAVE CHAMBERLIN

Analysis No.: G-8929615-001/003
Date Sampled: 23-OCT-1989
Date Sample Rec'd: 23-OCT-1989
Project: (2279.111.GW.SAMP)
SOUTHERN CALIFORNIA CHEMICAL

Enclosed with this letter is the report on the chemical and physical analyses on the samples from ANALYSIS NO: G-8929615-001/003 shown above.

The samples were received by CRL in a chilled state, intact and with the chain-of-custody record attached.

Please note that ND( ) means not detected at the detection limit expressed within the parentheses.

Joan R De La Rosa
Reviewed

Paul Christi
Approved

The Report Cover Letter is an integral part of this report.
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FAX: (714) 891-5917

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Laboratory Report

CAMP DRESSER & MCKEE, INC.
18881 VON KARMEN, SUITE 650
IRVINE, CA 92715
ATTN: MR. BILL GROVE

Analysis No.: G-8929615-001/002
Date Sampled: 23-OCT-1989
Date Sample Rec'd: 23-OCT-1989
Date Analyzed: 24-OCT-1989
Sample Type: LIQUID

Project: (2279.111.GW.SAMP) SOUTHERN CALIFORNIA CHEMICAL

Sample ID	Chloride mg/L EPA 300.0	Nitrate (Nitrogen) mg/L EPA 300.0	Chromium, Hexavalent mg/L EPA 7196
CDM-SCC-MW02-005	100.	6.5	ND(0.05)
CDM-SCC-MW01-005	710.	3.3	ND(0.05)
Blank	ND(0.1)	ND(0.2)	ND(0.05)

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Laboratory Report

CAMP DRESSER & MCKEE, INC.
18881 VON KARMEN, SUITE 650
IRVINE, CA 92715
ATTN: MR. BILL GROVE

Analysis No.: G-8929615-001/003
Date Sampled: 23-OCT-1989
Date Sample Rec'd: 23-OCT-1989
Date Analyzed: 24-OCT-1989
Sample Type: LIQUID

Project: (2279.111.GW.SAMP) SOUTHERN CALIFORNIA CHEMICAL

Sample ID	Benzene ug/L EPA 602	Toluene ug/L EPA 602	Ethylbenzene ug/L EPA 602	Xylenes, Total ug/L EPA 602
CDM-SCC-MW02-005	ND(0.5)	ND(1)	ND(1)	ND(1)
CDM-SCC-MW01-005	ND(0.5)	ND(1)	ND(1)	ND(1)
CDM-SCC-TB01-005	ND(0.5)	ND(1)	ND(1)	ND(1)
Blank	ND(0.5)	ND(1)	ND(1)	ND(1)

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Laboratory Report

CAMP DRESSER & MCKEE, INC.
18881 VON KARMEN, SUITE 650
IRVINE, CA 92715
ATTN: MR. BILL GROVE

Analysis No.: G-8929615-001/002
Date Sampled: 23-OCT-1989
Date Sample Rec'd: 23-OCT-1989
Date Analyzed: 31-OCT-1989
Sample Type: LIQUID

Project: (2279.111.GW.SAMP) SOUTHERN CALIFORNIA CHEMICAL

Sample ID	Cadmium mg/L EPA 200.7	Chromium (Total) mg/L EPA 200.7	Copper mg/L EPA 200.7	Zinc mg/L EPA 200.7
CDM-SCC-MW02-005	ND(0.01)	ND(0.02)	ND(0.05)	ND(0.02)
CDM-SCC-MW01-005	ND(0.01)	ND(0.02)	ND(0.05)	0.11
Blank	ND(0.01)	ND(0.02)	ND(0.05)	ND(0.02)

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Laboratory Report

CAMP DRESSER & MCKEE, INC.
18881 VON KARMEN, SUITE 650
IRVINE, CA 92715
ATTN: MR. BILL GROVE

Analysis No.: G-8929615-001
Date Sampled: 23-OCT-1989
Date Sample Rec'd: 23-OCT-1989
Date Analyzed: 24-OCT-1989
Sample Type: LIQUID

Project: (2279.111.GW.SAMP) SOUTHERN CALIFORNIA CHEMICAL
Sample ID: CDM-SCC-MW02-005

Halogenated Volatile Organics, EPA 601

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	1
Bromomethane	ND	ND	1
Vinyl Chloride	ND	ND	1
Chloroethane	ND	ND	1
Methylene Chloride	ND	ND	1
Trichlorofluoromethane	ND	ND	1
1,1-Dichloroethene	ND	ND	1
1,1-Dichloroethane	ND	ND	1
trans-1,2-Dichloroethene	ND	ND	1
Chloroform	ND	ND	1
1,2-Dichloroethane	ND	ND	1
1,1,1-Trichloroethane	ND	ND	1
Carbon Tetrachloride	ND	ND	1
Bromodichloromethane	ND	ND	1
1,2-Dichloropropane	ND	ND	1
cis-1,3-Dichloropropene	ND	ND	1
Trichloroethene	35.	ND	1
Dibromochloromethane	ND	ND	1
1,1,2-Trichloroethane	ND	ND	1
trans-1,3-Dichloropropene	ND	ND	1
2-Chloroethylvinyl ether	ND	ND	1
Bromoform	ND	ND	1
Tetrachloroethene	2.*	ND	1
1,1,2,2-Tetrachloroethane	*	ND	1
Chlorobenzene	ND	ND	1
1,3-Dichlorobenzene	ND	ND	1
1,2-Dichlorobenzene	ND	ND	1
1,4-Dichlorobenzene	ND	ND	1

*Tetrachloroethene and 1,1,2,2-Tetrachloroethane co-elute.
Total response reported as Tetrachloroethene.

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Laboratory Report

CAMP DRESSER & MCKEE, INC.
18881 VON KARMEN, SUITE 650
IRVINE, CA 92715
ATTN: MR. BILL GROVE

Analysis No.: G-8929615-002
Date Sampled: 23-OCT-1989
Date Sample Rec'd: 23-OCT-1989
Date Analyzed: 24-OCT-1989
Sample Type: LIQUID

Project: (2279.111.GW.SAMP) SOUTHERN CALIFORNIA CHEMICAL
Sample ID: CDM-SCC-MW01-005

Halogenated Volatile Organics, EPA 601

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	1
Bromomethane	ND	ND	1
Vinyl Chloride	ND	ND	1
Chloroethane	ND	ND	1
Methylene Chloride	ND	ND	1
Trichlorofluoromethane	ND	ND	1
1,1-Dichloroethene	ND	ND	1
1,1-Dichloroethane	ND	ND	1
trans-1,2-Dichloroethene	ND	ND	1
Chloroform	ND	ND	1
1,2-Dichloroethane	ND	ND	1
1,1,1-Trichloroethane	ND	ND	1
Carbon Tetrachloride	ND	ND	1
Bromodichloromethane	ND	ND	1
1,2-Dichloropropane	ND	ND	1
cis-1,3-Dichloropropene	ND	ND	1
Trichloroethene	12.	ND	1
Dibromochloromethane	ND	ND	1
1,1,2-Trichloroethane	ND	ND	1
trans-1,3-Dichloropropene	ND	ND	1
2-Chloroethylvinyl ether	ND	ND	1
Bromoform	ND	ND	1
Tetrachloroethene	3.*	ND	1
1,1,2,2-Tetrachloroethane	*	ND	1
Chlorobenzene	ND	ND	1
1,3-Dichlorobenzene	ND	ND	1
1,2-Dichlorobenzene	ND	ND	1
1,4-Dichlorobenzene	ND	ND	1

*Tetrachloroethene and 1,1,2,2-Tetrachloroethane co-elute.
Total response reported as Tetrachloroethene.

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Laboratory Report

CAMP DRESSER & MCKEE, INC.
18881 VON KARMEN, SUITE 650
IRVINE, CA 92715
ATTN: MR. BILL GROVE

Analysis No.: G-8929615-003
Date Sampled: 23-OCT-1989
Date Sample Rec'd: 23-OCT-1989
Date Analyzed: 24-OCT-1989
Sample Type: LIQUID

Project: (2279.111.GW.SAMP) SOUTHERN CALIFORNIA CHEMICAL
Sample ID: CDM-SCC-TB01-005

Halogenated Volatile Organics, EPA 601

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	1
Bromomethane	ND	ND	1
Vinyl Chloride	ND	ND	1
Chloroethane	ND	ND	1
Methylene Chloride	ND	ND	1
Trichlorofluoromethane	ND	ND	1
1,1-Dichloroethene	ND	ND	1
1,1-Dichloroethane	ND	ND	1
trans-1,2-Dichloroethene	ND	ND	1
Chloroform	ND	ND	1
1,2-Dichloroethane	ND	ND	1
1,1,1-Trichloroethane	ND	ND	1
Carbon Tetrachloride	ND	ND	1
Bromodichloromethane	ND	ND	1
1,2-Dichloropropane	ND	ND	1
cis-1,3-Dichloropropene	ND	ND	1
Trichloroethene	ND	ND	1
Dibromochloromethane	ND	ND	1
1,1,2-Trichloroethane	ND	ND	1
trans-1,3-Dichloropropene	ND	ND	1
2-Chloroethylvinyl ether	ND	ND	1
Bromoform	ND	ND	1
Tetrachloroethene	ND	ND	1
1,1,2,2-Tetrachloroethane	ND	ND	1
Chlorobenzene	ND	ND	1
1,3-Dichlorobenzene	ND	ND	1
1,2-Dichlorobenzene	ND	ND	1
1,4-Dichlorobenzene	ND	ND	1

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Laboratory Report

CAMP DRESSER & MCKEE, INC.
18881 VON KARMEN, SUITE 650
IRVINE, CA 92715
ATTN: MR. BILL GROVE

Analysis No.: G-8929615-001/003
Date Sampled: 23-OCT-1989
Date Sample Rec'd: 23-OCT-1989
Sample Type: LIQUID

Project: (2279.111.GW.SAMP) SOUTHERN CALIFORNIA CHEMICAL

QA/QC Summary

Date	Parameter (Method)	QC Type	Average Spike Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
31-OCT-1989	CADMIUM (EPA 200.7)	L	98	72-141	0.	25
31-OCT-1989	CHROMIUM (EPA 200.7)	L	100	69-148	4.	30
31-OCT-1989	COPPER (EPA 200.7)	L	92	68-129	2.	25
31-OCT-1989	ZINC (EPA 200.7)	L	94	73-138	11.	25
24-OCT-1989	CHLORIDE (EPA 300.0)	L	107	77-124	2.	18
26-OCT-1989	NITRATE (EPA 300.0)	L	103	74-132	1.	15
24-OCT-1989	1,1-DICHLOROETHENE (EPA 601)	L	74	60-120	5.	40
24-OCT-1989	TRICHLOROETHENE (EPA 601)	L	110	60-120	18.	40
24-OCT-1989	CHLOROBENZENE (EPA 601)	L	64	60-120	25.	40
24-OCT-1989	TOLUENE (EPA 602)	L	80	60-120	10.	40
24-OCT-1989	ETHYLBENZENE (EPA 602)	L	62	60-120	19.	40
24-OCT-1989	XYLENES, TOTAL (EPA 602)	L	71	60-120	14.	40
25-OCT-1989	CHROMIUM, HEXAVALENT (EPA 7196)	L	94	60-130	9.	40

M = Matrix Spike
L = Laboratory Control Sample Spike

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FAX: (714) 891-5917

NOV 9 1989

November 7, 1989

CAMP DRESSERS & MCKEE, INC.
18881 VON KARMEN, SUITE 650
IRVINE, CA 92715
ATTN: MR. DAVE CHAMBERLIN

Analysis No.: G-8929718-001/006
Date Sampled: 24-OCT-1989
Date Sample Rec'd: 24-OCT-1989
Project: SOUTHERN CALIFORNIA CHEMICAL

Enclosed with this letter is the report on the chemical and physical analyses on the samples from ANALYSIS NO: G-8929718-001/006 shown above.

The samples were received by CRL in a chilled state, intact and with the chain-of-custody record attached.

Please note that ND( ) means not detected at the detection limit expressed within the parentheses.

Joan R. DeLaCosta
Reviewed

Paul Christi
Approved

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Laboratory Report

CAMP DRESSER & MCKEE, INC.
18881 VON KARMEN, SUITE 650
IRVINE, CA 92715
ATTN: MR. DAVE CHAMBERLIN

Analysis No.: G-8929718-001/005
Date Sampled: 24-OCT-1989
Date Sample Rec'd: 24-OCT-1989
Date Analyzed: 27-OCT-1989
26-OCT-1989
Sample Type: LIQUID

Project: SOUTHERN CALIFORNIA CHEMICAL

Sample ID	Chloride mg/L EPA 300.0	Nitrate (Nitrogen) mg/L EPA 300.0	Chromium, Hexavalent mg/L EPA 7196
CDM-SCC-EB01-005	0.5	ND(0.2)	ND(0.05)
CDM-SCC-MW04A-005	110.	4.4	ND(0.05)
CDM-SCC-MW30-005	445.	1.8	ND(0.05)
CDM-SCC-MW03-005	470.	1.9	ND(0.05)
CDM-SCC-MW11-005	110.	1.1	ND(0.05)
Blank	ND(0.1)	ND(0.2)	ND(0.05)

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Laboratory Report

CAMP DRESSER & MCKEE, INC.
18881 VON KARMEN, SUITE 650
IRVINE, CA 92715
ATTN: MR. DAVE CHAMBERLIN

Analysis No.: G-8929718-001
Date Sampled: 24-OCT-1989
Date Sample Rec'd: 24-OCT-1989
Date Analyzed: 26-OCT-1989
Sample Type: LIQUID

Project: SOUTHERN CALIFORNIA CHEMICAL
Sample ID: CDM-SCC-EB01-005

Halogenated Volatile Organics, EPA 601

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	1
Bromomethane	ND	ND	1
Vinyl Chloride	ND	ND	1
Chloroethane	ND	ND	1
Methylene Chloride	ND	ND	1
Trichlorofluoromethane	ND	ND	1
1,1-Dichloroethene	ND	ND	1
1,1-Dichloroethane	ND	ND	1
trans-1,2-Dichloroethene	ND	ND	1
Chloroform	ND	ND	1
1,2-Dichloroethane	ND	ND	1
1,1,1-Trichloroethane	ND	ND	1
Carbon Tetrachloride	ND	ND	1
Bromodichloromethane	ND	ND	1
1,2-Dichloropropane	ND	ND	1
cis-1,3-Dichloropropene	ND	ND	1
Trichloroethene	ND	ND	1
Dibromochloromethane	ND	ND	1
1,1,2-Trichloroethane	ND	ND	1
trans-1,3-Dichloropropene	ND	ND	1
2-Chloroethylvinyl ether	ND	ND	1
Bromoform	ND	ND	1
Tetrachloroethene	ND	ND	1
1,1,2,2-Tetrachloroethane	ND	ND	1
Chlorobenzene	ND	ND	1
1,3-Dichlorobenzene	ND	ND	1
1,2-Dichlorobenzene	ND	ND	1
1,4-Dichlorobenzene	ND	ND	1

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Laboratory Report

CAMP DRESSER & MCKEE, INC.
18881 VON KARMEN, SUITE 650
IRVINE, CA 92715
ATTN: MR. DAVE CHAMBERLIN

Analysis No.: G-8929718-002
Date Sampled: 24-OCT-1989
Date Sample Rec'd: 24-OCT-1989
Date Analyzed: 26-OCT-1989
Sample Type: LIQUID

Project: SOUTHERN CALIFORNIA CHEMICAL
Sample ID: CDM-SCC-MW04A-005

Halogenated Volatile Organics, EPA 601

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	1
Bromomethane	ND	ND	1
Vinyl Chloride	ND	ND	1
Chloroethane	ND	ND	1
Methylene Chloride	ND	ND	1
Trichlorofluoromethane	ND	ND	1
1,1-Dichloroethene	ND	ND	1
1,1-Dichloroethane	ND	ND	1
trans-1,2-Dichloroethene	ND	ND	1
Chloroform	ND	ND	1
1,2-Dichloroethane	ND	ND	1
1,1,1-Trichloroethane	ND	ND	1
Carbon Tetrachloride	ND	ND	1
Bromodichloromethane	ND	ND	1
1,2-Dichloropropane	ND	ND	1
cis-1,3-Dichloropropene	ND	ND	1
Trichloroethene	3.	ND	1
Dibromochloromethane	ND	ND	1
1,1,2-Trichloroethane	ND	ND	1
trans-1,3-Dichloropropene	ND	ND	1
2-Chloroethylvinyl ether	ND	ND	1
Bromoform	ND	ND	1
Tetrachloroethene	ND	ND	1
1,1,2,2-Tetrachloroethane	ND	ND	1
Chlorobenzene	ND	ND	1
1,3-Dichlorobenzene	ND	ND	1
1,2-Dichlorobenzene	ND	ND	1
1,4-Dichlorobenzene	ND	ND	1

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FAX: (714) 891-5917

Laboratory Report

CAMP DRESSER & MCKEE, INC.
18881 VON KARMEN, SUITE 650
IRVINE, CA 92715
ATTN: MR. DAVE CHAMBERLIN

Analysis No.: G-8929718-003
Date Sampled: 24-OCT-1989
Date Sample Rec'd: 24-OCT-1989
Date Analyzed: 30-OCT-1989
Sample Type: LIQUID

Project: SOUTHERN CALIFORNIA CHEMICAL
Sample ID: CDM-SCC-MW30-005

Halogenated Volatile Organics, EPA 601

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	100
Bromomethane	ND	ND	100
Vinyl Chloride	ND	ND	100
Chloroethane	ND	ND	100
Methylene Chloride	ND	ND	100
Trichlorofluoromethane	ND	ND	100
1,1-Dichloroethene	ND	ND	100
1,1-Dichloroethane	ND	ND	100
trans-1,2-Dichloroethene	ND	ND	100
Chloroform	ND	ND	100
1,2-Dichloroethane	ND	ND	100
1,1,1-Trichloroethane	ND	ND	100
Carbon Tetrachloride	ND	ND	100
Bromodichloromethane	ND	ND	100
1,2-Dichloropropane	ND	ND	100
cis-1,3-Dichloropropene	ND	ND	100
Trichloroethene	ND	ND	100
Dibromochloromethane	ND	ND	100
1,1,2-Trichloroethane	ND	ND	100
trans-1,3-Dichloropropene	ND	ND	100
2-Chloroethylvinyl ether	ND	ND	100
Bromoform	ND	ND	100
Tetrachloroethene	ND	ND	100
1,1,2,2-Tetrachloroethane	ND	ND	100
Chlorobenzene	ND	ND	100
1,3-Dichlorobenzene	ND	ND	100
1,2-Dichlorobenzene	ND	ND	100
1,4-Dichlorobenzene	ND	ND	100

NOTE: Higher detection limits due to sample matrix.

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Laboratory Report

CAMP DRESSER & MCKEE, INC.
18881 VON KARMEN, SUITE 650
IRVINE, CA 92715
ATTN: MR. DAVE CHAMBERLIN

Analysis No.: G-8929718-004
Date Sampled: 24-OCT-1989
Date Sample Rec'd: 24-OCT-1989
Date Analyzed: 30-OCT-1989
Sample Type: LIQUID

Project: SOUTHERN CALIFORNIA CHEMICAL
Sample ID: CDM-SCC-MW03-005

Halogenated Volatile Organics, EPA 601

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	100
Bromomethane	ND	ND	100
Vinyl Chloride	ND	ND	100
Chloroethane	ND	ND	100
Methylene Chloride	ND	ND	100
Trichlorofluoromethane	ND	ND	100
1,1-Dichloroethene	ND	ND	100
1,1-Dichloroethane	ND	ND	100
trans-1,2-Dichloroethene	ND	ND	100
Chloroform	ND	ND	100
1,2-Dichloroethane	ND	ND	100
1,1,1-Trichloroethane	ND	ND	100
Carbon Tetrachloride	ND	ND	100
Bromodichloromethane	ND	ND	100
1,2-Dichloropropane	ND	ND	100
cis-1,3-Dichloropropene	ND	ND	100
Trichloroethene	ND	ND	100
Dibromochloromethane	ND	ND	100
1,1,2-Trichloroethane	ND	ND	100
trans-1,3-Dichloropropene	ND	ND	100
2-Chloroethylvinyl ether	ND	ND	100
Bromoform	ND	ND	100
Tetrachloroethene	ND	ND	100
1,1,2,2-Tetrachloroethane	ND	ND	100
Chlorobenzene	ND	ND	100
1,3-Dichlorobenzene	ND	ND	100
1,2-Dichlorobenzene	ND	ND	100
1,4-Dichlorobenzene	ND	ND	100

NOTE: Higher detection limits due to sample matrix.

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Laboratory Report

CAMP DRESSER & MCKEE, INC.
18881 VON KARMEN, SUITE 650
IRVINE, CA 92715
ATTN: MR. DAVE CHAMBERLIN

Analysis No.: G-8929718-005
Date Sampled: 24-OCT-1989
Date Sample Rec'd: 24-OCT-1989
Date Analyzed: 27-OCT-1989
Sample Type: LIQUID

Project: SOUTHERN CALIFORNIA CHEMICAL
Sample ID: CDM-SCC-MW11-005

Halogenated Volatile Organics, EPA 601

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	10
Bromomethane	ND	ND	10
Vinyl Chloride	ND	ND	10
Chloroethane	ND	ND	10
Methylene Chloride	ND	ND	10
Trichlorofluoromethane	ND	ND	10
1,1-Dichloroethene	ND	ND	10
1,1-Dichloroethane	ND	ND	10
trans-1,2-Dichloroethene	ND	ND	10
Chloroform	ND	ND	10
1,2-Dichloroethane	70.	ND	10
1,1,1-Trichloroethane	ND	ND	10
Carbon Tetrachloride	ND	ND	10
Bromodichloromethane	ND	ND	10
1,2-Dichloropropane	ND	ND	10
cis-1,3-Dichloropropene	ND	ND	10
Trichloroethene	35.	ND	10
Dibromochloromethane	ND	ND	10
1,1,2-Trichloroethane	ND	ND	10
trans-1,3-Dichloropropene	ND	ND	10
2-Chloroethylvinyl ether	ND	ND	10
Bromoform	ND	ND	10
Tetrachloroethene	ND	ND	10
1,1,2,2-Tetrachloroethane	ND	ND	10
Chlorobenzene	ND	ND	10
1,3-Dichlorobenzene	ND	ND	10
1,2-Dichlorobenzene	ND	ND	10
1,4-Dichlorobenzene	ND	ND	10

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Laboratory Report

CAMP DRESSER & MCKEE, INC.
18881 VON KARMEN, SUITE 650
IRVINE, CA 92715
ATTN: MR. DAVE CHAMBERLIN

Analysis No.: G-8929718-006
Date Sampled: 24-OCT-1989
Date Sample Rec'd: 24-OCT-1989
Date Analyzed: 26-OCT-1989
Sample Type: LIQUID

Project: SOUTHERN CALIFORNIA CHEMICAL
Sample ID: CDM-SCC-TB02-005

Halogenated Volatile Organics, EPA 601

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	1
Bromomethane	ND	ND	1
Vinyl Chloride	ND	ND	1
Chloroethane	ND	ND	1
Methylene Chloride	ND	ND	1
Trichlorofluoromethane	ND	ND	1
1,1-Dichloroethene	ND	ND	1
1,1-Dichloroethane	ND	ND	1
trans-1,2-Dichloroethene	ND	ND	1
Chloroform	ND	ND	1
1,2-Dichloroethane	ND	ND	1
1,1,1-Trichloroethane	ND	ND	1
Carbon Tetrachloride	ND	ND	1
Bromodichloromethane	ND	ND	1
1,2-Dichloropropane	ND	ND	1
cis-1,3-Dichloropropene	ND	ND	1
Trichloroethene	ND	ND	1
Dibromochloromethane	ND	ND	1
1,1,2-Trichloroethane	ND	ND	1
trans-1,3-Dichloropropene	ND	ND	1
2-Chloroethylvinyl ether	ND	ND	1
Bromoform	ND	ND	1
Tetrachloroethene	ND	ND	1
1,1,2,2-Tetrachloroethane	ND	ND	1
Chlorobenzene	ND	ND	1
1,3-Dichlorobenzene	ND	ND	1
1,2-Dichlorobenzene	ND	ND	1
1,4-Dichlorobenzene	ND	ND	1

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Laboratory Report

CAMP DRESSER & MCKEE, INC.
18881 VON KARMEN, SUITE 650
IRVINE, CA 92715
ATTN: MR. DAVE CHAMBERLIN

Analysis No.: G-8929718-001/006
Date Sampled: 24-OCT-1989
Date Sample Rec'd: 24-OCT-1989
Date Analyzed: 26-OCT-1989
30-OCT-1989
27-OCT-1989
Sample Type: LIQUID

Project: SOUTHERN CALIFORNIA CHEMICAL

Sample ID	Benzene ug/L EPA 602	Toluene ug/L EPA 602	Ethylbenzene ug/L EPA 602	Xylenes, Total ug/L EPA 602
CDM-SCC-EB01-005	ND(0.5)	ND(1)	4.	ND(1)
CDM-SCC-MW04A-005	ND(0.5)	ND(1)	ND(1)	ND(1)
CDM-SCC-MW30-005	ND(50)	ND(100)	1,700.	160.
CDM-SCC-MW03-005	ND(50)	ND(100)	1,600.	150.
CDM-SCC-MW11-005	ND(5)	ND(10)	200.	ND(10)
CDM-SCC-TB02-005	ND(0.5)	ND(1)	6.	ND(1)
Blank	ND(0.5)	ND(1)	ND(1)	ND(1)

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CAMP DRESSER & MCKEE, INC.
18881 VON KARMEN, SUITE 650
IRVINE, CA 92715
ATTN: MR. DAVE CHAMBERLIN

Analysis No.: G-8929718-001/005
Date Sampled: 24-OCT-1989
Date Sample Rec'd: 24-OCT-1989
Date Analyzed: 1-NOV-1989
28-OCT-1989
Sample Type: LIQUID

Project: SOUTHERN CALIFORNIA CHEMICAL

Sample ID	Cadmium mg/L EPA 200.7	Chromium (Total) mg/L EPA 200.7	Copper mg/L EPA 200.7	Zinc mg/L EPA 200.7
CDM-SCC-EB01-005	ND(0.01)	ND(0.02)	ND(0.5)	ND(0.02)
CDM-SCC-MW04A-005	ND(0.01)	ND(0.02)	ND(0.05)	ND(0.02)
CDM-SCC-MW30-005	ND(0.01)	ND(0.02)	ND(0.05)	ND(0.02)
CDM-SCC-MW03-005	ND(0.01)	ND(0.02)	ND(0.05)	ND(0.02)
CDM-SCC-MW11-005	ND(0.01)	ND(0.02)	ND(0.05)	ND(0.02)
Blank	ND(0.01)	ND(0.02)	ND(0.5)	ND(0.02)

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Laboratory Report

CAMP DRESSER & MCKEE, INC.
18881 VON KARMEN, SUITE 650
IRVINE, CA 92715
ATTN: MR. DAVE CHAMBERLIN
Project: SOUTHERN CALIFORNIA CHEMICAL

Analysis No.: G-8929718-001/006
Date Sampled: 24-OCT-1989
Date Sample Rec'd: 24-OCT-1989
Sample Type: LIQUID

QA/QC Summary

Date	Parameter (Method)	QC Type	Average Spike Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
1-NOV-1989	CADMIUM (EPA 200.7)	L	98	72-141	1.	25
1-NOV-1989	CHROMIUM (EPA 200.7)	L	96	69-148	2.	30
1-NOV-1989	COPPER (EPA 200.7)	L	92	68-129	1.	25
1-NOV-1989	ZINC (EPA 200.7)	L	94	73-138	1.	25
30-OCT-1989	CHLORIDE (EPA 300.0)	L	95	77-124	1.	18
30-OCT-1989	NITRATE (EPA 300.0)	L	101	74-132	1.	15
26-OCT-1989	1,1-DICHLOROETHENE (EPA 601)	L	74	60-120	8.	40
30-OCT-1989	1,1-DICHLOROETHENE (EPA 601)	L	79	60-120	20.	40
27-OCT-1989	1,1-DICHLOROETHENE (EPA 601)	L	75	60-120	1.	40
30-OCT-1989	TRICHLOROETHENE (EPA 601)	L	104	60-120	20.	40
26-OCT-1989	TRICHLOROETHENE (EPA 601)	L	99	60-120	21.	40
27-OCT-1989	TRICHLOROETHENE (EPA 601)	L	102	60-120	8.	40
26-OCT-1989	CHLOROBENZENE (EPA 601)	L	79	60-120	22.	40
30-OCT-1989	CHLOROBENZENE (EPA 601)	L	66	60-120	24.	40
27-OCT-1989	CHLOROBENZENE (EPA 601)	L	85	60-120	5.	40
30-OCT-1989	TOLUENE (EPA 602)	L	73	60-120	15.	40
26-OCT-1989	TOLUENE (EPA 602)	L	78	60-120	13.	40
27-OCT-1989	TOLUENE (EPA 602)	L	69	60-120	4.	40
26-OCT-1989	ETHYLBENZENE (EPA 602)	L	84	60-120	6.	40
30-OCT-1989	ETHYLBENZENE (EPA 602)	L	74	60-120	19.	40
27-OCT-1989	ETHYLBENZENE (EPA 602)	L	75	60-120	8.	40
30-OCT-1989	XYLENES, TOTAL (EPA 602)	L	84	60-120	13.	40
26-OCT-1989	XYLENES, TOTAL (EPA 602)	L	90	60-120	17.	40
27-OCT-1989	XYLENES, TOTAL (EPA 602)	L	65	60-120	5.	40
26-OCT-1989	CHROMIUM, HEXAVALENT (EPA 7196)	L	99	60-130	2.	40

M = Matrix Spike
L = Laboratory Control Sample Spike

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NOV 1 - 1989

November 7, 1989

CAMP DRESSER & MCKEE, INC.
18881 VON KARMAN, SUITE 650
IRVINE, CA 92715
ATTN: MR. DAVE CHAMBERLIN

Analysis No.: G-8929822-001/007
Date Sampled: 25-OCT-1989
Date Sample Rec'd: 25-OCT-1989
Project: SOUTHERN CALIFORNIA CHEMICAL

Enclosed with this letter is the report on the chemical and physical analyses on the samples from ANALYSIS NO: G-8929822-001/007 shown above.

The samples were received by CRL in a chilled state, intact and with the chain-of-custody record attached.

Please note that ND( ) means not detected at the detection limit expressed within the parentheses.

Lauri Cullen
Reviewed

Paul Christi
Approved

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Laboratory Report

CAMP DRESSER & MCKEE, INC.
18881 VON KARMAN, SUITE 650
IRVINE, CA 92715
ATTN: MR. DAVE CHAMBERLIN

Analysis No.: G-8929822-001/006
Date Sampled: 25-OCT-1989
Date Sample Rec'd: 25-OCT-1989
Date Analyzed: 1-NOV-1989
Sample Type: LIQUID

Project: SOUTHERN CALIFORNIA CHEMICAL

Sample ID	Cadmium mg/L EPA 200.7	Chromium (Total) mg/L EPA 200.7	Copper mg/L EPA 200.7	Zinc mg/L EPA 200.7
CDM-SCC-MW06B-005	ND(0.01)	ND(0.02)	ND(0.05)	ND(0.02)
CDM-SCC-MW07-005	ND(0.01)	ND(0.02)	ND(0.05)	ND(0.02)
CDM-SCC-MW08-005	ND(0.01)	ND(0.02)	ND(0.05)	ND(0.02)
CDM-SCC-MW09-005	ND(0.01)	1.8	ND(0.05)	ND(0.02)
CDM-SCC-DIW01-005	ND(0.01)	ND(0.02)	ND(0.05)	ND(0.02)
CDM-SCC-SP01-005	0.47	4.8	1.4	2.6
Blank	ND(0.01)	ND(0.02)	ND(0.05)	ND(0.02)

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Laboratory Report

CAMP DRESSER & MCKEE, INC.
18881 VON KARMAN, SUITE 650
IRVINE, CA 92715
ATTN: MR. DAVE CHAMBERLIN

Analysis No.: G-8929822-001/006
Date Sampled: 25-OCT-1989
Date Sample Rec'd: 25-OCT-1989
Date Analyzed: 27-OCT-1989
26-OCT-1989
Sample Type: LIQUID

Project: SOUTHERN CALIFORNIA CHEMICAL

Sample ID	Chloride mg/L EPA 300.0	Nitrate (Nitrogen) mg/L EPA 300.0	Chromium, Hexavalent mg/L EPA 7196
CDM-SCC-MW06B-005	75.	7.8	ND(0.05)
CDM-SCC-MW07-005	550.	4.7	ND(0.05)
CDM-SCC-MW08-005	160.	4.9	ND(0.05)
CDM-SCC-MW09-005	520.	6.8	2.5
CDM-SCC-DIW01-005	1.	ND(0.2)	ND(0.05)
CDM-SCC-SP01-005	2.		1.0
Blank	ND(0.1)	ND(0.2)	ND(0.05)

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Laboratory Report

CAMP DRESSER & MCKEE, INC.
18881 VON KARMAN, SUITE 650
IRVINE, CA 92715
ATTN: MR. DAVE CHAMBERLIN

Analysis No.: G-8929822-001/007
Date Sampled: 25-OCT-1989
Date Sample Rec'd: 25-OCT-1989
Date Analyzed: 30-OCT-1989
Sample Type: LIQUID

Project: SOUTHERN CALIFORNIA CHEMICAL

Sample ID	Benzene ug/L EPA 602	Toluene ug/L EPA 602	Ethylbenzene ug/L EPA 602	Xylenes, Total ug/L EPA 602
CDM-SCC-MW06B-005	ND(0.5)	ND(1)	ND(1)	ND(1)
CDM-SCC-MW07-005	ND(0.5)	ND(1)	ND(1)	ND(1)
CDM-SCC-MW08-005	ND(0.5)	ND(1)	ND(1)	ND(1)
CDM-SCC-MW09-005	ND(0.5)	ND(1)	ND(1)	ND(1)
CDM-SCC-DIW01-005	ND(0.5)	ND(1)	ND(1)	ND(1)
CDM-SCC-TB03-005	ND(0.5)	ND(1)	ND(1)	ND(1)
Blank	ND(0.5)	ND(1)	ND(1)	ND(1)

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Laboratory Report

CAMP DRESSER & MCKEE, INC.
18881 VON KARMAN, SUITE 650
IRVINE, CA 92715
ATTN: MR. DAVE CHAMBERLIN

Analysis No.: G-8929822-001
Date Sampled: 25-OCT-1989
Date Sample Rec'd: 25-OCT-1989
Date Analyzed: 30-OCT-1989
Sample Type: LIQUID

Project: SOUTHERN CALIFORNIA CHEMICAL
Sample ID: CDM-SCC-MW06B-005

Halogenated Volatile Organics, EPA 601

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	1
Bromomethane	ND	ND	1
Vinyl Chloride	ND	ND	1
Chloroethane	ND	ND	1
Methylene Chloride	ND	ND	1
Trichlorofluoromethane	ND	ND	1
1,1-Dichloroethene	ND	ND	1
1,1-Dichloroethane	ND	ND	1
trans-1,2-Dichloroethene	ND	ND	1
Chloroform	ND	ND	1
1,2-Dichloroethane	ND	ND	1
1,1,1-Trichloroethane	ND	ND	1
Carbon Tetrachloride	ND	ND	1
Bromodichloromethane	ND	ND	1
1,2-Dichloropropane	ND	ND	1
cis-1,3-Dichloropropene	ND	ND	1
Trichloroethene	29.	ND	1
Dibromochloromethane	ND	ND	1
1,1,2-Trichloroethane	ND	ND	1
trans-1,3-Dichloropropene	ND	ND	1
2-Chloroethylvinyl ether	ND	ND	1
Bromoform	ND	ND	1
Tetrachloroethene	ND	ND	1
1,1,2,2-Tetrachloroethane	ND	ND	1
Chlorobenzene	ND	ND	1
1,3-Dichlorobenzene	ND	ND	1
1,2-Dichlorobenzene	ND	ND	1
1,4-Dichlorobenzene	ND	ND	1

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FAX: (714) 891-5917

Laboratory Report

CAMP DRESSER & MCKEE, INC.
18881 VON KARMAN, SUITE 650
IRVINE, CA 92715
ATTN: MR. DAVE CHAMBERLIN

Analysis No.: G-8929822-002
Date Sampled: 25-OCT-1989
Date Sample Rec'd: 25-OCT-1989
Date Analyzed: 30-OCT-1989
Sample Type: LIQUID

Project: SOUTHERN CALIFORNIA CHEMICAL
Sample ID: CDM-SCC-MW07-005

Halogenated Volatile Organics, EPA 601

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	1
Bromomethane	ND	ND	1
Vinyl Chloride	ND	ND	1
Chloroethane	ND	ND	1
Methylene Chloride	ND	ND	1
Trichlorofluoromethane	ND	ND	1
1,1-Dichloroethene	ND	ND	1
1,1-Dichloroethane	4.	ND	1
trans-1,2-Dichloroethene	2.	ND	1
Chloroform	ND	ND	1
1,2-Dichloroethane	ND	ND	1
1,1,1-Trichloroethane	ND	ND	1
Carbon Tetrachloride	ND	ND	1
Bromodichloromethane	ND	ND	1
1,2-Dichloropropane	ND	ND	1
cis-1,3-Dichloropropene	ND	ND	1
Trichloroethene	44.	ND	1
Dibromochloromethane	ND	ND	1
1,1,2-Trichloroethane	ND	ND	1
trans-1,3-Dichloropropene	ND	ND	1
2-Chloroethylvinyl ether	ND	ND	1
Bromoform	ND	ND	1
Tetrachloroethene	3.*	ND	1
1,1,2,2-Tetrachloroethane	*	ND	1
Chlorobenzene	ND	ND	1
1,3-Dichlorobenzene	ND	ND	1
1,2-Dichlorobenzene	ND	ND	1
1,4-Dichlorobenzene	ND	ND	1

* Tetrachloroethene and 1,1,2,2-Tetrachloroethane co-elute.
Total response reported as Tetrachloroethene.

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Laboratory Report

CAMP DRESSER & MCKEE, INC.
18881 VON KARMAN, SUITE 650
IRVINE, CA 92715
ATTN: MR. DAVE CHAMBERLIN

Analysis No.: G-8929822-003
Date Sampled: 25-OCT-1989
Date Sample Rec'd: 25-OCT-1989
Date Analyzed: 30-OCT-1989
Sample Type: LIQUID

Project: SOUTHERN CALIFORNIA CHEMICAL
Sample ID: CDM-SCC-MW08-005

Halogenated Volatile Organics, EPA 601

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	1
Bromomethane	ND	ND	1
Vinyl Chloride	ND	ND	1
Chloroethane	ND	ND	1
Methylene Chloride	ND	ND	1
Trichlorofluoromethane	ND	ND	1
1,1-Dichloroethene	4.	ND	1
1,1-Dichloroethane	40.	ND	1
trans-1,2-Dichloroethene	8.	ND	1
Chloroform	ND	ND	1
1,2-Dichloroethane	ND	ND	1
1,1,1-Trichloroethane	ND	ND	1
Carbon Tetrachloride	ND	ND	1
Bromodichloromethane	ND	ND	1
1,2-Dichloropropane	ND	ND	1
cis-1,3-Dichloropropene	ND	ND	1
Trichloroethene	22.	ND	1
Dibromochloromethane	ND	ND	1
1,1,2-Trichloroethane	ND	ND	1
trans-1,3-Dichloropropene	ND	ND	1
2-Chloroethylvinyl ether	ND	ND	1
Bromoform	ND	ND	1
Tetrachloroethene	1.*	ND	1
1,1,2,2-Tetrachloroethane	*	ND	1
Chlorobenzene	ND	ND	1
1,3-Dichlorobenzene	ND	ND	1
1,2-Dichlorobenzene	ND	ND	1
1,4-Dichlorobenzene	ND	ND	1

* Tetrachloroethene and 1,1,2,2-Tetrachloroethane co-elute.
Total response reported as Tetrachloroethene.

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Laboratory Report

CAMP DRESSER & MCKEE, INC.
18881 VON KARMAN, SUITE 650
IRVINE, CA 92715
ATTN: MR. DAVE CHAMBERLIN

Analysis No.: G-8929822-004
Date Sampled: 25-OCT-1989
Date Sample Rec'd: 25-OCT-1989
Date Analyzed: 30-OCT-1989
Sample Type: LIQUID

Project: SOUTHERN CALIFORNIA CHEMICAL
Sample ID: CDM-SCC-MW09-005

Halogenated Volatile Organics, EPA 601

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	10
Bromomethane	ND	ND	10
Vinyl Chloride	ND	ND	10
Chloroethane	ND	ND	10
Methylene Chloride	15.	ND	10
Trichlorofluoromethane	ND	ND	10
1,1-Dichloroethene	40.	ND	10
1,1-Dichloroethane	90.	ND	10
trans-1,2-Dichloroethene	ND	ND	10
Chloroform	ND	ND	10
1,2-Dichloroethane	ND	ND	10
1,1,1-Trichloroethane	ND	ND	10
Carbon Tetrachloride	ND	ND	10
Bromodichloromethane	ND	ND	10
1,2-Dichloropropane	ND	ND	10
cis-1,3-Dichloropropene	ND	ND	10
Trichloroethene	110.	ND	10
Dibromochloromethane	ND	ND	10
1,1,2-Trichloroethane	ND	ND	10
trans-1,3-Dichloropropene	ND	ND	10
2-Chloroethylvinyl ether	ND	ND	10
Bromoform	ND	ND	10
Tetrachloroethene	ND	ND	10
1,1,2,2-Tetrachloroethane	ND	ND	10
Chlorobenzene	ND	ND	10
1,3-Dichlorobenzene	ND	ND	10
1,2-Dichlorobenzene	ND	ND	10
1,4-Dichlorobenzene	ND	ND	10

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Laboratory Report

CAMP DRESSER & MCKEE, INC.
18881 VON KARMAN, SUITE 650
IRVINE, CA 92715
ATTN: MR. DAVE CHAMBERLIN

Analysis No.: G-8929822-005
Date Sampled: 25-OCT-1989
Date Sample Rec'd: 25-OCT-1989
Date Analyzed: 30-OCT-1989
Sample Type: LIQUID

Project: SOUTHERN CALIFORNIA CHEMICAL
Sample ID: CDM-SCC-DIW01-005

Halogenated Volatile Organics, EPA 601

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	1
Bromomethane	ND	ND	1
Vinyl Chloride	ND	ND	1
Chloroethane	ND	ND	1
Methylene Chloride	ND	ND	1
Trichlorofluoromethane	ND	ND	1
1,1-Dichloroethene	ND	ND	1
1,1-Dichloroethane	ND	ND	1
trans-1,2-Dichloroethene	ND	ND	1
Chloroform	9.	ND	1
1,2-Dichloroethane	ND	ND	1
1,1,1-Trichloroethane	ND	ND	1
Carbon Tetrachloride	ND	ND	1
Bromodichloromethane	6.	ND	1
1,2-Dichloropropane	ND	ND	1
cis-1,3-Dichloropropene	ND	ND	1
Trichloroethene	ND	ND	1
Dibromochloromethane	6.*	ND	1
1,1,2-Trichloroethane	*	ND	1
trans-1,3-Dichloropropene	*	ND	1
2-Chloroethylvinyl ether	ND	ND	1
Bromoform	ND	ND	1
Tetrachloroethene	ND	ND	1
1,1,2,2-Tetrachloroethane	ND	ND	1
Chlorobenzene	ND	ND	1
1,3-Dichlorobenzene	ND	ND	1
1,2-Dichlorobenzene	ND	ND	1
1,4-Dichlorobenzene	ND	ND	1

* Dibromochloromethane, 1,1,2-Trichloroethane and Trans-1,3-Dichloropropene coelute. Total response reported as Dibromochloromethane.

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Laboratory Report

CAMP DRESSER & MCKEE, INC.
18881 VON KARMAN, SUITE 650
IRVINE, CA 92715
ATTN: MR. DAVE CHAMBERLIN

Analysis No.: G-8929822-007
Date Sampled: 25-OCT-1989
Date Sample Rec'd: 25-OCT-1989
Date Analyzed: 30-OCT-1989
Sample Type: LIQUID

Project: SOUTHERN CALIFORNIA CHEMICAL
Sample ID: CDM-SCC-TB03-005

Halogenated Volatile Organics, EPA 601

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	1
Bromomethane	ND	ND	1
Vinyl Chloride	ND	ND	1
Chloroethane	ND	ND	1
Methylene Chloride	ND	ND	1
Trichlorofluoromethane	ND	ND	1
1,1-Dichloroethene	ND	ND	1
1,1-Dichloroethane	ND	ND	1
trans-1,2-Dichloroethene	ND	ND	1
Chloroform	ND	ND	1
1,2-Dichloroethane	ND	ND	1
1,1,1-Trichloroethane	ND	ND	1
Carbon Tetrachloride	ND	ND	1
Bromodichloromethane	ND	ND	1
1,2-Dichloropropane	ND	ND	1
cis-1,3-Dichloropropene	ND	ND	1
Trichloroethene	ND	ND	1
Dibromochloromethane	ND	ND	1
1,1,2-Trichloroethane	ND	ND	1
trans-1,3-Dichloropropene	ND	ND	1
2-Chloroethylvinyl ether	ND	ND	1
Bromoform	ND	ND	1
Tetrachloroethene	ND	ND	1
1,1,2,2-Tetrachloroethane	ND	ND	1
Chlorobenzene	ND	ND	1
1,3-Dichlorobenzene	ND	ND	1
1,2-Dichlorobenzene	ND	ND	1
1,4-Dichlorobenzene	ND	ND	1

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Laboratory Report

CAMP DRESSER & MCKEE, INC.
18881 VON KARMAN, SUITE 650
IRVINE, CA 92715
ATTN: MR. DAVE CHAMBERLIN
Project: SOUTHERN CALIFORNIA CHEMICAL

Analysis No.: G-8929822-001/007
Date Sampled: 25-OCT-1989
Date Sample Rec'd: 25-OCT-1989
Sample Type: LIQUID

QA/QC Summary

Date	Parameter (Method)	QC Type	Average Spike Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
1-NOV-1989	CADMIUM (EPA 200.7)	L	85	72-141	6.	25
1-NOV-1989	CHROMIUM (EPA 200.7)	L	93	69-148	8.	30
1-NOV-1989	COPPER (EPA 200.7)	L	77	68-129	10.	25
1-NOV-1989	ZINC (EPA 200.7)	L	85	73-138	10.	25
30-OCT-1989	CHLORIDE (EPA 300.0)	L	95	77-124	1.	18
30-OCT-1989	NITRATE (EPA 300.0)	L	101	74-132	3.	15
30-OCT-1989	1,1-DICHLOROETHENE (EPA 601)	L	88	60-120	27.	40
30-OCT-1989	TRICHLOROETHENE (EPA 601)	L	106	60-120	19.	40
30-OCT-1989	CHLOROBENZENE (EPA 601)	L	87	60-120	16.	40
30-OCT-1989	TOLUENE (EPA 602)	L	88	60-120	18.	40
30-OCT-1989	ETHYLBENZENE (EPA 602)	L	103	60-120	33.	40
30-OCT-1989	XYLENES, TOTAL (EPA 602)	L	110	60-120	18.	40
26-OCT-1989	CHROMIUM, HEXAVALENT (EPA 7196)	L	99	60-130	2.	40

M = Matrix Spike
L = Laboratory Control Sample Spike

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NOV 27 1989

November 21, 1989

CAMP DRESSER & MCKEE, INC.
18881 VON KARMEN, SUITE 650
IRVINE, CA 92715
ATTN: MR. DAVE CHAMBERLIN

Analysis No.: G-8929929-001/007
Date Sampled: 25/26-OCT-1989
Date Sample Rec'd: 26-OCT-1989
Project: SOUTHERN CALIFORNIA CHEMICAL

Enclosed with this letter is the report on the chemical and physical analyses on the samples from ANALYSIS NO: G-8929929-001/007 shown above.

The samples were received by CRL in a chilled state, intact and with the chain-of-custody record attached.

Please note that ND( ) means not detected at the detection limit expressed within the parentheses.

Reviewed

Approved

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Laboratory Report

CAMP DRESSER & MCKEE, INC.
18881 VON KARMEN, SUITE 650
IRVINE, CA 92715
ATTN: MR. DAVE CHAMBERLIN

Analysis No.: G-8929929-001/007
Date Sampled: 26-OCT-1989
25-OCT-1989
Date Sample Rec'd: 26-OCT-1989
Date Analyzed: 31-OCT-1989
Sample Type: LIQUID

Project: SOUTHERN CALIFORNIA CHEMICAL

Sample ID	Benzene ug/L EPA 602	Toluene ug/L EPA 602	Ethylbenzene ug/L EPA 602	Xylenes, Total ug/L EPA 602
CDM-SCC-MW04-005	ND(5)	ND(10)	ND(10)	ND(10)
CDM-SCC-MW05-005	0.6	ND(1)	ND(1)	ND(1)
CDM-SCC-MW10-005	ND(5)	ND(10)	190.	ND(10)
CDM-SCC-MW31-005	6.	20.	ND(10.)	20.
CDM-SCC-EB02-005	ND(0.5)	ND(1)	ND(1)	ND(1)
CDM-SCC-TB04-005	ND(0.5)	ND(1)	ND(1)	ND(1)
CDM-SCC-SP01-005	50	70	80	500
Blank	ND(5)	ND(10)	ND(10)	ND(10)

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Laboratory Report

CAMP DRESSER & MCKEE, INC.
18881 VON KARMEN, SUITE 650
IRVINE, CA 92715
ATTN: MR. DAVE CHAMBERLIN

Analysis No.: G-8929929-001
Date Sampled: 26-OCT-1989
Date Sample Rec'd: 26-OCT-1989
Date Analyzed: 31-OCT-1989
Sample Type: LIQUID

Project: SOUTHERN CALIFORNIA CHEMICAL
Sample ID: CDM-SCC-MW04-005

Halogenated Volatile Organics, EPA 601

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	10
Bromomethane	ND	ND	10
Vinyl Chloride	ND	ND	10
Chloroethane	ND	ND	10
Methylene Chloride	30.	ND	10
Trichlorofluoromethane	ND	ND	10
1,1-Dichloroethene	60.	ND	10
1,1-Dichloroethane	100.	ND	10
trans-1,2-Dichloroethene	20.	ND	10
Chloroform	10.	ND	10
1,2-Dichloroethane	70.	ND	10
1,1,1-Trichloroethane	10.	ND	10
Carbon Tetrachloride	ND	ND	10
Bromodichloromethane	ND	ND	10
1,2-Dichloropropane	ND	ND	10
cis-1,3-Dichloropropene	ND	ND	10
Trichloroethene	250.	ND	10
Dibromochloromethane	ND	ND	10
1,1,2-Trichloroethane	ND	ND	10
trans-1,3-Dichloropropene	ND	ND	10
2-Chloroethylvinyl ether	ND	ND	10
Bromoform	ND	ND	10
Tetrachloroethene	ND	ND	10
1,1,2,2-Tetrachloroethane	ND	ND	10
Chlorobenzene	ND	ND	10
1,3-Dichlorobenzene	ND	ND	10
1,2-Dichlorobenzene	ND	ND	10
1,4-Dichlorobenzene	ND	ND	10

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Laboratory Report

CAMP DRESSER & MCKEE, INC.
18881 VON KARMEN, SUITE 650
IRVINE, CA 92715
ATTN: MR. DAVE CHAMBERLIN

Analysis No.: G-8929929-002
Date Sampled: 26-OCT-1989
Date Sample Rec'd: 26-OCT-1989
Date Analyzed: 31-OCT-1989
Sample Type: LIQUID

Project: SOUTHERN CALIFORNIA CHEMICAL
Sample ID: CDM-SCC-MW05-005

Halogenated Volatile Organics, EPA 601

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	1
Bromomethane	ND	ND	1
Vinyl Chloride	ND	ND	1
Chloroethane	ND	ND	1
Methylene Chloride	ND	ND	1
Trichlorofluoromethane	ND	ND	1
1,1-Dichloroethene	ND	ND	1
1,1-Dichloroethane	10.	ND	1
trans-1,2-Dichloroethene	ND	ND	1
Chloroform	31.	ND	1
1,2-Dichloroethane	10.	ND	1
1,1,1-Trichloroethane	ND	ND	1
Carbon Tetrachloride	39.	ND	1
Bromodichloromethane	ND	ND	1
1,2-Dichloropropane	ND	ND	1
cis-1,3-Dichloropropene	ND	ND	1
Trichloroethene	15.	ND	1
Dibromochloromethane	ND	ND	1
1,1,2-Trichloroethane	ND	ND	1
trans-1,3-Dichloropropene	ND	ND	1
2-Chloroethylvinyl ether	ND	ND	1
Bromoform	ND	ND	1
Tetrachloroethene	ND	ND	1
1,1,2,2-Tetrachloroethane	ND	ND	1
Chlorobenzene	ND	ND	1
1,3-Dichlorobenzene	ND	ND	1
1,2-Dichlorobenzene	ND	ND	1
1,4-Dichlorobenzene	ND	ND	1

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Laboratory Report

CAMP DRESSER & MCKEE, INC.
18881 VON KARMEN, SUITE 650
IRVINE, CA 92715
ATTN: MR. DAVE CHAMBERLIN

Analysis No.: G-8929929-003
Date Sampled: 26-OCT-1989
Date Sample Rec'd: 26-OCT-1989
Date Analyzed: 31-OCT-1989
Sample Type: LIQUID

Project: SOUTHERN CALIFORNIA CHEMICAL
Sample ID: CDM-SCC-MW10-005

Halogenated Volatile Organics, EPA 601

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	10
Bromomethane	ND	ND	10
Vinyl Chloride	ND	ND	10
Chloroethane	ND	ND	10
Methylene Chloride	ND	ND	10
Trichlorofluoromethane	ND	ND	10
1,1-Dichloroethene	ND	ND	10
1,1-Dichloroethane	ND	ND	10
trans-1,2-Dichloroethene	ND	ND	10
Chloroform	ND	ND	10
1,2-Dichloroethane	50.	ND	10
1,1,1-Trichloroethane	10.	ND	10
Carbon Tetrachloride	ND	ND	10
Bromodichloromethane	ND	ND	10
1,2-Dichloropropane	ND	ND	10
cis-1,3-Dichloropropene	ND	ND	10
Trichloroethene	70.	ND	10
Dibromochloromethane	ND	ND	10
1,1,2-Trichloroethane	ND	ND	10
trans-1,3-Dichloropropene	ND	ND	10
2-Chloroethylvinyl ether	ND	ND	10
Bromoform	ND	ND	10
Tetrachloroethene	ND	ND	10
1,1,2,2-Tetrachloroethane	ND	ND	10
Chlorobenzene	ND	ND	10
1,3-Dichlorobenzene	ND	ND	10
1,2-Dichlorobenzene	ND	ND	10
1,4-Dichlorobenzene	ND	ND	10

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Laboratory Report

CAMP DRESSER & MCKEE, INC.
18881 VON KARMEN, SUITE 650
IRVINE, CA 92715
ATTN: MR. DAVE CHAMBERLIN

Analysis No.: G-8929929-004
Date Sampled: 26-OCT-1989
Date Sample Rec'd: 26-OCT-1989
Date Analyzed: 31-OCT-1989
Sample Type: LIQUID

Project: SOUTHERN CALIFORNIA CHEMICAL
Sample ID: CDM-SCC-MW31-005

Halogenated Volatile Organics, EPA 601

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	10
Bromomethane	ND	ND	10
Vinyl Chloride	ND	ND	10
Chloroethane	ND	ND	10
Methylene Chloride	30.	ND	10
Trichlorofluoromethane	ND	ND	10
1,1-Dichloroethene	60.	ND	10
1,1-Dichloroethane	100.	ND	10
trans-1,2-Dichloroethene	20.	ND	10
Chloroform	10.	ND	10
1,2-Dichloroethane	80.	ND	10
1,1,1-Trichloroethane	10.	ND	10
Carbon Tetrachloride	ND	ND	10
Bromodichloromethane	ND	ND	10
1,2-Dichloropropane	ND	ND	10
cis-1,3-Dichloropropene	ND	ND	10
Trichloroethene	250.	ND	10
Dibromochloromethane	ND	ND	10
1,1,2-Trichloroethane	ND	ND	10
trans-1,3-Dichloropropene	ND	ND	10
2-Chloroethylvinyl ether	ND	ND	10
Bromoform	ND	ND	10
Tetrachloroethene	ND	ND	10
1,1,2,2-Tetrachloroethane	ND	ND	10
Chlorobenzene	ND	ND	10
1,3-Dichlorobenzene	ND	ND	10
1,2-Dichlorobenzene	ND	ND	10
1,4-Dichlorobenzene	ND	ND	10

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Enseco - CRL / South Coast
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (213) 598-0458 • (800) LAB-1-CRL
FAX: (714) 891-5917

Laboratory Report

CAMP DRESSER & MCKEE, INC.
18881 VON KARMEN, SUITE 650
IRVINE, CA 92715
ATTN: MR. DAVE CHAMBERLIN

Analysis No.: G-8929929-005
Date Sampled: 26-OCT-1989
Date Sample Rec'd: 26-OCT-1989
Date Analyzed: 31-OCT-1989
Sample Type: LIQUID

Project: SOUTHERN CALIFORNIA CHEMICAL
Sample ID: CDM-SCC-EB02-005

Halogenated Volatile Organics, EPA 601

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	1
Bromomethane	ND	ND	1
Vinyl Chloride	ND	ND	1
Chloroethane	ND	ND	1
Methylene Chloride	ND	ND	1
Trichlorofluoromethane	ND	ND	1
1,1-Dichloroethene	ND	ND	1
1,1-Dichloroethane	ND	ND	1
trans-1,2-Dichloroethene	ND	ND	1
Chloroform	8.	ND	1
1,2-Dichloroethane	ND	ND	1
1,1,1-Trichloroethane	ND	ND	1
Carbon Tetrachloride	ND	ND	1
Bromodichloromethane	5.	ND	1
1,2-Dichloropropane	ND	ND	1
cis-1,3-Dichloropropene	ND	ND	1
Trichloroethene	ND	ND	1
Dibromochloromethane	ND	ND	1
1,1,2-Trichloroethane	5.	ND	1
trans-1,3-Dichloropropene	ND	ND	1
2-Chloroethylvinyl ether	ND	ND	1
Bromoform	ND	ND	1
Tetrachloroethene	ND	ND	1
1,1,2,2-Tetrachloroethane	ND	ND	1
Chlorobenzene	ND	ND	1
1,3-Dichlorobenzene	ND	ND	1
1,2-Dichlorobenzene	ND	ND	1
1,4-Dichlorobenzene	ND	ND	1

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FAX: (714) 891-5917

Laboratory Report

CAMP DRESSER & MCKEE, INC.
18881 VON KARMEN, SUITE 650
IRVINE, CA 92715
ATTN: MR. DAVE CHAMBERLIN

Analysis No.: G-8929929-006
Date Sampled: 26-OCT-1989
Date Sample Rec'd: 26-OCT-1989
Date Analyzed: 31-OCT-1989
Sample Type: LIQUID

Project: SOUTHERN CALIFORNIA CHEMICAL
Sample ID: CDM-SCC-TB04-005

Halogenated Volatile Organics, EPA 601

Units: ug/L

Parameter	Result	Blank	Detection Limit
Chloromethane	ND	ND	1
Bromomethane	ND	ND	1
Vinyl Chloride	ND	ND	1
Chloroethane	ND	ND	1
Methylene Chloride	ND	ND	1
Trichlorofluoromethane	ND	ND	1
1,1-Dichloroethene	ND	ND	1
1,1-Dichloroethane	ND	ND	1
trans-1,2-Dichloroethene	ND	ND	1
Chloroform	ND	ND	1
1,2-Dichloroethane	ND	ND	1
1,1,1-Trichloroethane	ND	ND	1
Carbon Tetrachloride	ND	ND	1
Bromodichloromethane	ND	ND	1
1,2-Dichloropropane	ND	ND	1
cis-1,3-Dichloropropene	ND	ND	1
Trichloroethene	ND	ND	1
Dibromochloromethane	ND	ND	1
1,1,2-Trichloroethane	ND	ND	1
trans-1,3-Dichloropropene	ND	ND	1
2-Chloroethylvinyl ether	ND	ND	1
Bromoform	ND	ND	1
Tetrachloroethene	ND	ND	1
1,1,2,2-Tetrachloroethane	ND	ND	1
Chlorobenzene	ND	ND	1
1,3-Dichlorobenzene	ND	ND	1
1,2-Dichlorobenzene	ND	ND	1
1,4-Dichlorobenzene	ND	ND	1

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FAX: (714) 891-5917

Laboratory Report

CAMP DRESSER & MCKEE, INC.
18881 VON KARMEN, SUITE 650
IRVINE, CA 92715
ATTN: MR. DAVE CHAMBERLIN

Analysis No.: G-8929929-001/005
Date Sampled: 26-OCT-1989
Date Sample Rec'd: 26-OCT-1989
Date Analyzed: 16-NOV-1989
Sample Type: LIQUID

Project: SOUTHERN CALIFORNIA CHEMICAL

Sample ID	Cadmium mg/L EPA 200.7	Chromium (Total) mg/L EPA 200.7	Copper mg/L EPA 200.7	Zinc mg/L EPA 200.7
CDM-SCC-MW04-005	0.07	120.	ND(0.05)	0.04
CDM-SCC-MW05-005	ND(0.01)	ND(0.02)	ND(0.05)	ND(0.02)
CDM-SCC-MW10-005	ND(0.01)	ND(0.02)	ND(0.05)	ND(0.02)
CDM-SCC-MW31-005	0.07	120.	ND(0.05)	0.04
CDM-SCC-EB02-005	ND(0.01)	0.03	ND(0.05)	0.02
Blank	ND(0.02)	ND(0.02)	ND(0.05)	ND(0.02)

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Laboratory Report

CAMP DRESSER & MCKEE, INC.
18881 VON KARMEN, SUITE 650
IRVINE, CA 92715
ATTN: MR. DAVE CHAMBERLIN

Analysis No.: G-8929929-001/005
Date Sampled: 26-OCT-1989
Date Sample Rec'd: 26-OCT-1989
Date Analyzed: 27-OCT-1989
Sample Type: LIQUID

Project: SOUTHERN CALIFORNIA CHEMICAL

Sample ID	Chloride mg/L EPA 300.0	Nitrate (Nitrogen) mg/L EPA 300.0	Chromium, Hexavalent mg/L EPA 7196
CDM-SCC-MW04-005	1,400.	0.6	110.
CDM-SCC-MW05-005	120.	4.2	ND(0.05)
CDM-SCC-MW10-005	230.	0.2	ND(0.05)
CDM-SCC-MW31-005	810.	0.6	110.
CDM-SCC-EB02-005	0.1	ND(0.2)	ND(0.05)
Blank	ND(0.10)	ND(0.2)	ND(0.05)

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FAX: (714) 891-5917

Laboratory Report

CAMP DRESSER & MCKEE, INC.
18881 VON KARMEN, SUITE 650
IRVINE, CA 92715
ATTN: MR. DAVE CHAMBERLIN

Analysis No.: G-8929929-001/007
Date Sampled: 26-OCT-1989
25-OCT-1989
Date Sample Rec'd: 26-OCT-1989
Sample Type: LIQUID

Project: SOUTHERN CALIFORNIA CHEMICAL

QA/QC Summary

Date	Parameter (Method)	QC Type	Average Spike Recovery	Acceptable Range	Relative Percent Difference	Acceptable Range
16-NOV-1989	CADMIUM (EPA 200.7)	L	102	72-141	5.	25
16-NOV-1989	CHROMIUM (EPA 200.7)	L	103	69-148	3.	30
16-NOV-1989	COPPER (EPA 200.7)	L	87	68-129	2.	25
16-NOV-1989	ZINC (EPA 200.7)	L	95	73-138	3.	25
31-OCT-1989	CHLORIDE (EPA 300.0)	L	96	77-124	4.	18
31-OCT-1989	NITRATE (EPA 300.0)	L	99	74-132	0.	15
31-OCT-1989	1,1-DICHLOROETHENE (EPA 601)	L	75	60-120	15.	40
31-OCT-1989	TRICHLOROETHENE (EPA 601)	L	116	60-120	1.	40
31-OCT-1989	CHLOROBENZENE (EPA 601)	L	72	60-120	10.	40
31-OCT-1989	TOLUENE (EPA 602)	L	66	60-120	15.	40
31-OCT-1989	ETHYLBENZENE (EPA 602)	L	64	60-120	13.	40
31-OCT-1989	XYLENES, TOTAL (EPA 602)	L	75	60-120	24.	40
27-OCT-1989	CHROMIUM, HEXAVALENT (EPA 7196)	L	100	60-130	12.	40

M = Matrix Spike
L = Laboratory Control Sample Spike

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APPENDIX D

WCAS ANALYTICAL REPORTS

October 31, 1989

WCAS
WEST COAST ANALYTICAL SERVICE, INC.
ANALYTICAL CHEMISTS

CAMP DRESSER & MCKEE, INC.
1881 Von Karman Ave., Suite 650
Irvine, CA 92715

NOV 1 1989

Attn: Bill Grove

JOB NO. 13993

A

LABORATORY REPORT

Samples Received: Five (5) samples
Date Received: 10/24/89
Purchase Order No: 33702

The samples were analyzed as follows:

Samples Analyzed	Analysis	Results
One (1) sample	Volatile Aromatics by EPA 602	Data Sheet
One (1) sample	Selected Metals by ICPMS	Table I
One (1) sample	Hexavalent Chromium by EPA 7196/IC	Table II

Michael Shelton
Senior Chemist

D. J. Northington, Ph.D.
Technical Director

9840 Alburtis Avenue • Santa Fe Springs, California 90670 • 213/948-2225 • FAX 213/948-5850

WEST COAST ANALYTICAL SERVICE, INC.

CAMP DRESSER & MCKEE, INC.
Mr. Bill Grove

Job # 13993
October 31, 1989

LABORATORY REPORT

TABLE I

Parts Per Million (mg/L)

Total Metals

Sample ID	Cadmium	Copper	Chromium	Zinc
1	0.47	1.6	5.2	2.8
Detection Limit	0.0001	0.0001	0.0008	0.0004

Date Analyzed: 10-26-89

TABLE II

Parts Per Billion (ug/L)

Sample ID 2

Hexavalent Chromium	910.
Detection Limit	2.

Date Analyzed:10-25-89

Client: CAMP DRESSER & MCKEE
Job No: 13993
Date Analyzed: 27-Oct-89
Analysis: EPA 602 (8020)

Sample: 3
Matrix: Water
Samp Amt: 0.5 ml
Dil Fact: 1

Compound	Concentration ug/L	Detection Limits
Benzene	73	2
Toluene	78	2
Chlorobenzene	ND	6
Ethylbenzene	66	2
Total Xylenes	432	2
1,3-Dichlorobenzene	ND	2
1,4-Dichlorobenzene	ND	2
1,2-Dichlorobenzene	ND	2

ND-Not Detected. The limit of detection is reported above.

APPENDIX E

COMPLETED COC FORMS

Enseco

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☐ 9537 Telstar Ave., Unit 118, El Monte, CA 91731, (818) 442-9400
☐ Mobile Labs, (800) ENSECO-8

CHAIN OF CUSTODY RECORD

Date 10-23-89 Page 1 of 1

Lab Number

CLIENT Camp Dresser + McKee

ADDRESS RE: Southern California Chemical.

PROJECT NAME 2279.111.1 GW.SAMP

CONTRACT / PURCHASE ORDER / QUOTE # C1017891.JRD

PROJECT MANAGER Dave Chamberlin

PHONE NUMBER 714.752.5452

SITE CONTACT Bill Grove

ANALYSES

Sample No. / Identification	Date	Time	Lab Sample Number	SAMPLE TYPE LIQ.	AIR	SOLID	No. of Containers	601/602	NO3	Cr+6 + Cl same	Cr total, Cu, Cd, Zn field filtered				Sample Condition/ REMARKS
CDM.SCC.MW02.005	10/23/89	1630		✓			2	X							40 ml VOA
									X						250 ml poly
										X					500 ml poly
											X				500 ml Poly
															Key
CDM.SCC.MW01.005	10/23/89	1230		✓			2	X							40 ml VOA
									X						250 ml poly
										X					500 ml poly
											X				500 ml poly
CDM.SCC.TB01.005	10/23/89			✓			2	X							40 ml VOA

SAMPLERS: (Signature) B Grove

Relinquished by: (Signature) B Grove

Received by: (Signature) | Date | Time

Received by: (Signature) | Date | Time

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Enseco Terms and Conditions, unless a contract or purchase order has been executed and is cited above.

Relinquished by: (Signature)	Date	Time	Received for Laboratory by:	Date RECEIVED	Time	Date ACCEPTED	Time
	10-23	6:45 pm		10-23-89	6:45 pm		

Method of Shipment: Personal Delivery

Special Instructions: Cr+6 24 hour holding time.

SAMPLE DISPOSITION:
1. Storage time requested: _____ days
(Samples will be stored for 30 days without additional charges; thereafter storage charges will be billed at the published rates.)
2. Sample to be returned to client: Y N
(Enseco will dispose of unreturned samples at no extra charge. Disposal will be by incineration wherever possible; otherwise, as appropriate, according to legal requirements.)

DISTRIBUTION: White with report, Yellow to Enseco, Pink to Courier, Gold to Sample Control

Enseco

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☐ Mobile Labs, (800) ENSECO-8

CHAIN OF CUSTODY RECORD

Date 10-24-89 Page 1 of 3

Lab Number 929718

CLIENT Camp Dresser & Mckee

ADDRESS 18881 Von Karman Suite 650

PROJECT NAME Southern California Chem.

CONTRACT / PURCHASE ORDER / QUOTE #

PROJECT MANAGER Dave Chamberlin

PHONE NUMBER 714-752-5452

SITE CONTACT Bill Grove

ANALYSES

Sample No. / Identification	Date 1989	Time	Lab Sample Number	SAMPLE TYPE LIQ.	AIR	SOLID	No. of Containers	601/602	NO3 as N	Cd, Cu, Zn, Cr (Total) * Cr+6, Cl *				Sample Condition/ REMARKS
CDM-SCC-EB01-005	10/24	1600		X			2	X						40ml VOA
↓	↓	↓		↓			1		X					250ml poly
							1			X				500ml poly
							1				X			500ml poly
CDM-SCC-MW04A-005	10/24	1200					2	X						40ml VOA
↓	↓	↓					1		X					250ml poly
							1			X				500ml poly
							1				X			500ml Poly
CDM SCC-TB02-005	10/24	—		↓			2	X						40ml VOA

SAMPLERS: (Signature) B Grove K. Trieberg

Relinquished by: (Signature) B Grove

Received by: (Signature) | Date | Time

Received by: (Signature) | Date | Time

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Enseco Terms and Conditions, unless a contract or purchase order has been executed and is cited above.

Relinquished by: (Signature) | Date | Time

Received for Laboratory by: [signature]

Date	RECEIVED	Time	Date	ACCEPTED	Time
10-24-89		1835			

Method of Shipment: Personal Delivery

Special Instructions: *A Cr+6 has a 24 hour holding time!

SAMPLE DISPOSITION:
1. Storage time requested:_____days
(Samples will be stored for 30 days without additional charges; thereafter storage charges will be billed at the published rates.)
2. Sample to be returned to client: Y N
(Enseco will dispose of unreturned samples at no extra charge. Disposal will be by incineration wherever possible; otherwise, as appropriate, according to legal requirements.)

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☐ Mobile Labs, (800) ENSECO-8

CHAIN OF CUSTODY RECORD

Date 10-24-89 Page 2 of 3

Lab Number 929718

CLIENT: CDM

ADDRESS:

PROJECT NAME: Southern California Chem.

CONTRACT / PURCHASE ORDER / QUOTE #:

PROJECT MANAGER: Dave Chamberlin

PHONE NUMBER: 714-752-5452

SITE CONTACT: Bill Grove

ANALYSES: 601/602, NO3 as N, Cd, Cu, Zn, Cr (total), Cr+6, Cl

Sample No. / Identification	Date 1989	Time	Lab Sample Number	SAMPLE TYPE LIQ.	AIR	SOLID	No. of Containers	601/602	NO3 as N	Cd, Cu, Zn, Cr (total)	* Cr+6	Cl				Sample Condition/ REMARKS
CDM-SCC-MW3Ø-005	10/24	0900		X			2	X								40ml VOA
DUP OF MWØ3							1		X							250ml poly
							1			X						500ml poly
							1				X					500ml poly
CDM-SCC-MWØ3-005		1130					2	X								40ml VOA
							1		X							250ml poly
							1			X						500ml poly
							1				X					500ml poly

SAMPLERS: (Signature) Bfrome K. Inalang

Received by: (Signature)

Date | Time

Relinquished by: (Signature) Bfrome

Received by: (Signature)

Date 10-24 | Time 1835

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Relinquished by: (Signature)

Date | Time

Received for Laboratory by:

Date RECEIVED	Time	Date ACCEPTED	Time
10-24-89	1835		

Method of Shipment: Personal delivery

Special Instructions: * Cr+6 has a 24 hour holding time!

SAMPLE DISPOSITION:
1. Storage time requested: _____ days
(Samples will be stored for 30 days without additional charges; thereafter storage charges will be billed at the published rates.)
2. Sample to be returned to client: Y N
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CHAIN OF CUSTODY RECORD

Date 10·24·89 Page 3 of 3

Lab Number 929718

CLIENT CDM

ADDRESS

PROJECT NAME Southern Calif. Chemical

CONTRACT / PURCHASE ORDER / QUOTE #

PROJECT MANAGER Dave Chamberlin

PHONE NUMBER 714·752·5452

SITE CONTACT

ANALYSES

Sample No. / Identification	Date	Time	Lab Sample Number	SAMPLE TYPE LIQ.	AIR	SOLID	No. of Containers	601/602	NO_3 as N	Cd, Cu, Zn, Cr (total)	* Cr^{+6}, Cl *				Sample Condition/ REMARKS
CDM-SCC-MW11-005	10/24	1640		X			2	X							40ml VOA
↓	↓	↓		↓			1		X						250 ml poly
							1			X					500 ml poly
							1				X				500 ml poly

SAMPLERS: (Signature) K. Treiberg (for Bill Grove)

Relinquished by: (Signature) K. Treiberg

Received by: (Signature) | Date | Time

Received by: (Signature) | Date | Time

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Enseco Terms and Conditions, unless a contract or purchase order has been executed and is cited above.

Relinquished by: (Signature) | Date | Time

Received for Laboratory by: [signature]

Date RECEIVED	Time	Date ACCEPTED	Time
10-24-89	1835		

Method of Shipment: Personal Delivery

Special Instructions: * * Cr^{+6} has a 24 hour holding time! * *

SAMPLE DISPOSITION:
1. Storage time requested:_____days
(Samples will be stored for 30 days without additional charges; thereafter storage charges will be billed at the published rates.)
2. Sample to be returned to client: Y N
(Enseco will dispose of unreturned samples at no extra charge. Disposal will be by incineration wherever possible; otherwise, as appropriate, according to legal requirements.)

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CHAIN OF CUSTODY RECORD

Date 10-25-89 Page 1 of 3

Lab Number

CLIENT Camp Dresser & McKee

ADDRESS 18881 Von Karman Ste. 650

PROJECT NAME Southern California Chem.

CONTRACT / PURCHASE ORDER / QUOTE #

PROJECT MANAGER Dave Chamberlin

PHONE NUMBER 714-752-5452

SITE CONTACT Bill Grove

ANALYSES

Sample No. / Identification	Date	Time	Lab Sample Number	SAMPLE TYPE LIQ.	AIR	SOLID	No. of Containers	601/602	NO3 as N	Cd, Cu, Zn, Cr (total)	* Cr+6, Cl *				Sample Condition/ REMARKS
~~CDM-SCC-CB02~~															
CDM-SCC-TB03-005	10/25	–		X			2	X							
CDM-SCC-MW06B-005	10/25	1330		X			2	X							
↓	↓	↓		X			1		X						
				X			1			X					
				X			1				X				
CDM-SCC-MW07-005	10/25	1550		X			2	X							
↓	↓	↓		X			1		X						
				X			1			X					
				X			1				X				

SAMPLERS: (Signature) K. Treiberg

Relinquished by: (Signature) K. Treiberg

Relinquished by: (Signature) [signature] Date 10/25/89 Time 7:10

Received by: (Signature) [signature] Date Time

Received by: (Signature) [signature] Date 10/25/89 Time 6:20

Received for Laboratory by: [signature] Date 10-25-89 RECEIVED Time 710 Date ACCEPTED Time

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Enseco Terms and Conditions, unless a contract or purchase order has been executed and is cited above.

Method of Shipment: Enseco pick up

Special Instructions: * * Cr^{+6} has a 24 hr holding time * *

SAMPLE DISPOSITION:
1. Storage time requested:_____days
(Samples will be stored for 30 days without additional charges; thereafter storage charges will be billed at the published rates.)
2. Sample to be returned to client: Y N
(Enseco will dispose of unreturned samples at no extra charge. Disposal will be by incineration wherever possible; otherwise, as appropriate, according to legal requirements.)

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☐ 2325 Skyway Dr., Unit K, Santa Maria, CA 93455, (805) 922-2776
☐ 9537 Telstar Ave., Unit 118, El Monte, CA 91731, (818) 442-8400
☐ Mobile Labs, (800) ENSECO-8

CHAIN OF CUSTODY RECORD

Date 10·25·89 Page 2 of 3

Lab Number

CLIENT Camp Dresser & McKee

ADDRESS 18881 Von Karman Ste. 650

PROJECT NAME Southern California Chem.

CONTRACT / PURCHASE ORDER / QUOTE #

PROJECT MANAGER Dave Chamberlin

PHONE NUMBER 714.752.5452

SITE CONTACT Bill Grove

ANALYSES

Sample No. / Identification	Date	Time	Lab Sample Number	SAMPLE TYPE LIQ.	AIR	SOLID	No. of Containers	601/602	NO_3 as N	Cd, Cu, Zn, Cr (total)	* Cr^{+6}, Cl *				Sample Condition/ REMARKS
CDM-SCC-SP01-005	10/25	—		X			1			X					
CDM-SCC-SP01-005	10/25			X			1				X				
CDM-SCC-MW08-005	↓	0930		X			2	X							
↓	↓	↓		X			1		X						
				X			1			X					
				X			1				X				
CDM-SCC-MW09-005	10/25	1000		X			2	X							
↓	↓	↓					1		X						
							1			X					
							1				X				

SAMPLERS: (Signature) K Treiberg

Relinquished by: (Signature) K Treiberg

Relinquished by: (Signature) [signature]

Received by: (Signature) [signature] Date Time

Received by: (Signature) [signature] Date 10/25/89 Time 6:20

Date 10/25/89 Time 7:10

Received for Laboratory by: [signature]

Date	RECEIVED	Time	Date	ACCEPTED	Time
10-25-89		7:10			

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Enseco Terms and Conditions, unless a contract or purchase order has been executed and is cited above.

Method of Shipment: Enseco pick up

Special Instructions: * * Cr^{+6} has a 24 hr. holding time * *

SAMPLE DISPOSITION:
1. Storage time requested:_____days
(Samples will be stored for 30 days without additional charges; thereafter storage charges will be billed at the published rates.)
2. Sample to be returned to client: Y N
(Enseco will dispose of unreturned samples at no extra charge. Disposal will be by incineration wherever possible; otherwise, as appropriate, according to legal requirements.)

DISTRIBUTION: White with report, Yellow to Enseco, Pink to Courier, Gold to Sample Control

Enseco

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☐ Mobile Labs, (800) ENSECO-8

CHAIN OF CUSTODY RECORD

Date _____ Page 3 of 3

Lab Number _____

CLIENT: Camp Dresser & McKee

ADDRESS: 18881 Von Karman Ste. 650

PROJECT NAME: Southern California Chem.

CONTRACT / PURCHASE ORDER / QUOTE #

PROJECT MANAGER: Dave Chamberlin

PHONE NUMBER: 714-752-5452

SITE CONTACT: Bill Grove

ANALYSES

Sample No. / Identification	Date	Time	Lab Sample Number	SAMPLE TYPE LIQ.	AIR	SOLID	No. of Containers	601/602	NO_3 as N	Cd, Cu, Zn, Cr (total)	* Cr^{+6}, Cl *				Sample Condition/ REMARKS
CDM-SCC-DIW01-005	10/25	—		X			2	X							
↓	↓	—		X			1		X						
		—		X			1			X					
		—		X			1				X				

SAMPLERS: (Signature) K. Trebeg

Relinquished by: (Signature) K. Trebeg

Relinquished by: (Signature) [signature] Date 10/25/89 Time 7:10

Received by: (Signature) [signature] Date 10/25/89 Time 6:20

Received for Laboratory by: [signature] Date 10-25-89 RECEIVED Time 710 Date ACCEPTED Time

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Enseco Terms and Conditions, unless a contract or purchase order has been executed and is cited above.

Method of Shipment: Enseco pick up

Special Instructions: * * Cr^{+6} has a 24 hr. holding time * *

SAMPLE DISPOSITION:
1. Storage time requested: _____ days
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☐ Mobile Labs, (800) ENSECO-8

CHAIN OF CUSTODY RECORD

Date 10·26·89 Page 1 of 3

Lab Number 929929

CLIENT: CAMP DRESSER & McKEE
ADDRESS: 18881 Von Karman Ste. 650, Irvine Ca
PROJECT NAME: Southern California Chem.
CONTRACT / PURCHASE ORDER / QUOTE #:

PROJECT MANAGER: Dave Chamberlin
PHONE NUMBER: 714·752·5452
SITE CONTACT: Bill Grove

ANALYSES

Sample No. / Identification	Date 1989	Time	Lab Sample Number	SAMPLE TYPE LIQ.	AIR	SOLID	No. of Containers	601/602	NO_3 as N	Cd, Cu, Zn, Cr (total)	* Cr^{+6}, Cl *	602 (only)			Sample Condition/ REMARKS
CDM-SCC-MW04-005	10/26	1000		X			2	X							40 ml VOA
↓	↓	↓		X			1		X						250 ml poly
				X			1			X					500 ml poly
				X			1				X				500 ml poly
CDM-SCC-MW05-005	10/26	1450		X			2	X							40 ml VOA
↓	↓	↓		X			1		X						250 ml poly
				X			1			X					500 ml poly
				X			1				X				500 ml poly
CDM-SCC-SP01-005	10/25	—		X			2					X			40ml VOA
CDM-SCC-TB04-005	10/26	—		X			2	X							40ml VOA

SAMPLERS: (Signature) B Grove, K. Treiberg

Relinquished by: (Signature) K Treiberg

Relinquished by: (Signature) [signature] Date 10/26/89 Time 6:25

Received by: (Signature)

Received by: (Signature) [signature] Date 10/26/89 Time 5:30

Received for Laboratory by: [signature]

Date RECEIVED	Time	Date ACCEPTED	Time
10-26-89	6:25 pm		

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Enseco Terms and Conditions, unless a contract or purchase order has been executed and is cited above.

Method of Shipment: Delivery using Enseco

Special Instructions: * * Cr^{+6} has a 24 hour holding time * *

SAMPLE DISPOSITION:
1. Storage time requested: _____ days
(Samples will be stored for 30 days without additional charges; thereafter storage charges will be billed at the published rates.)
2. Sample to be returned to client: Y N
(Enseco will dispose of unreturned samples at no extra charge. Disposal will be by incineration wherever possible; otherwise, as appropriate, according to legal requirements.)

DISTRIBUTION: White with report, Yellow to Enseco, Pink to Courier, Gold to Sample Control

Enseco

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CHAIN OF CUSTODY RECORD

Date 10·26·89 Page 2 of 3

Lab Number 929929

CLIENT CAMP DRESSER & McKEE

ADDRESS 18881 Von Karman Ste. 650

PROJECT NAME Southern California Chem.

CONTRACT / PURCHASE ORDER / QUOTE #

PROJECT MANAGER Dave Chamberlin

PHONE NUMBER 714·752·5452

SITE CONTACT Bill Grove

ANALYSES

Sample No. / Identification	Date	Time	Lab Sample Number	SAMPLE TYPE LIQ.	AIR	SOLID	No. of Containers	601/602	NO3 as N	Cd, Cu, Zn, Cr (total)	* Cr+6, Ce *				Sample Condition/ REMARKS
CDM-SCC-MW31-005 DUP FOR MW04	10/26	1100		X			2	X							40ml VOA
↓	↓	↓		X			1		X						250 ml poly
				X			1			X					500 ml poly
				X			1				X				500 ml poly
CDM-SCC-MW10-005	10/26	0945		X			2	X							40ml VOA
↓	↓	↓		X			1		X						250 ml poly
				X			1			X					500 ml poly
				X			1				X				500 ml poly

SAMPLERS: (Signature) K. Treiberg B. Grove

Relinquished by: (Signature) K. Treiberg

Relinquished by: (Signature) [signature] Date 10/26/89 Time 6:25

Received by: (Signature) Date Time

Received by: (Signature) [signature] Date 10/26/89 Time 5:30

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Enseco Terms and Conditions, unless a contract or purchase order has been executed and is cited above.

Received for Laboratory by: [signature]

Date	RECEIVED	Time	Date	ACCEPTED	Time
10-26-89	6:25 pm				

Method of Shipment: Enseco Pickup

Special Instructions: ** Cr+6 has a 24 hour holding time **

SAMPLE DISPOSITION:
1. Storage time requested: _____ days
(Samples will be stored for 30 days without additional charges; thereafter storage charges will be billed at the published rates.)
2. Sample to be returned to client: Y N
(Enseco will dispose of unreturned samples at no extra charge. Disposal will be by incineration wherever possible; otherwise, as appropriate, according to legal requirements.)

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☐ Mobile Labs, (800) ENSECO-8

CHAIN OF CUSTODY RECORD

Date 10·26·89 Page 3 of 3

Lab Number 929929

CLIENT CAMP DRESSER & McKEE

ADDRESS 18881 Von Karman Ste. 650

PROJECT NAME Southern California Chem.

CONTRACT / PURCHASE ORDER / QUOTE #

PROJECT MANAGER Dave Chamberlin

PHONE NUMBER 714·752·5452

SITE CONTACT Bill Grove

ANALYSES

Sample No. / Identification	Date	Time	Lab Sample Number	SAMPLE TYPE LIQ.	AIR	SOLID	No. of Containers	601/602	NO_3 as N	Cd, Cu, Zn, Cr (total)	*Cr^{+6}, Cl *				Sample Condition/ REMARKS
CDM-SCC-EB02-005	10/26	1240		X			2	X							40ml VOA
↓	↓	↓		X			1		X						250 ml poly
				X			1			X					500 ml poly
				X			1				X				500 ml poly

SAMPLERS: (Signature) B. Grove K. Treiberg

Received by: (Signature) | Date | Time

Relinquished by: (Signature) K. Treiberg

Received by: (Signature) [signature] | Date 10/26/89 | Time 5:30

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Enseco Terms and Conditions, unless a contract or purchase order has been executed and is cited above.

Relinquished by: (Signature) [signature] | Date 10/26/89 | Time 6:20

Received for Laboratory by: [signature]

Date	RECEIVED	Time	Date	ACCEPTED	Time
10-26-89		6:20			

Method of Shipment:

Special Instructions:
** Cr^{+6} has a 24 hour holding time **

SAMPLE DISPOSITION:
1. Storage time requested:_____days
(Samples will be stored for 30 days without additional charges; thereafter storage charges will be billed at the published rates.)
2. Sample to be returned to client: Y N
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CHAIN OF CUSTODY RECORD

Client Name: CAMP Dresser & McKee **Phone No.** 714.752.5452

Fax No.

Proj. No.

Technical Contact: Bill Grove **Proj. Name** Southern Ca. Chem

WEST COAST ANALYTICAL SERVICE, Inc.
9840 Alburtis Avenue
Santa Fe Springs, CA 90670
Phone 213/948-2225 FAX 213/948-5850

JOB NO.

Sample No.	Sample Description/Remarks	Analyses Requested
1.	bottle labeled Pb Cr Cu Zn	
2.	" " Cr+6, CL	
3.	bottle labeled 601, 602 (2)	
4	plastic bottle NO3	

Total No. of Containers.....

Relinquished by: (Company & Signature)	Received for Lab by:	Date/Time

White copy: Job Envelope Yellow Copy: Return with Lab Results Pink Copy: Client at time of sample delivery

I would like to pick up the spikes wed, Late 430-500pm or Thurs around 1200 AM. Call the office and let Sharon Wallin know what time you will be able to make.