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Naval Facilities Engineering Command
Contracts Department
1220 Pacific Highway, Room 135
San Diego, CA 92132-5187

Contract No. N68711-92-D-4670

COMPREHENSIVE LONG-TERM ENVIRONMENTAL ACTION NAVY

CLEAN II

AIR-SPARGING PILOT TEST REPORT SITE 24 MCAS EL TORO, CALIFORNIA

CTO-0073/0197

November 1996

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ACRONYMS/ABBREVIATIONS

BCT	BRAC Cleanup Team
bgs	below ground surface
BNI	Bechtel National, Inc.
BRAC	Base Realignment and Closure
Cal-EPA	California Environmental Protection Agency
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
cfm	cubic feet per minute
CLEAN	Comprehensive Long-Term Environmental Action Navy
CPT	cone penetrometer test
CTO	Contract Task Order
DON	Department of the Navy
DQO	data quality objective
DTSC	Department of Toxic Substances Control
FFA	Federal Facilities Agreement
FS	Feasibility Study
µg/L	micrograms per liter
mg/L	milligrams per liter
MCAS	Marine Corps Air Station
MSL	mean sea level
PID	photoionization detector
psi	pounds per square inch
PVC	polyvinyl chloride
RI	Remedial Investigation
RWQCB	(California) Regional Water Quality Control Board
SARA	Superfund Amendments and Reauthorization Act (1986)
scfh	standard cubic feet per hour
SVE	soil vapor extraction
SWDIV	Southwest Division Naval Facilities Engineering Command
TCE	trichloroethene
U.S. EPA	United States Environmental Protection Agency
VOC	volatile organic compound

ACRONYMS/ABBREVIATIONS (continued)

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Section 1
INTRODUCTION

This report presents the results of the air-sparging test that was conducted as part of the Phase II Remedial Investigation (RI)/Feasibility Study (FS), at Site 24, the Volatile Organic Compound (VOC) Source Area, at the Marine Corps Air Station (MCAS) El Toro in Orange County, California. The pilot testing was performed by Bechtel National, Inc. (BNI), on behalf of the U.S. Department of the Navy (DON), Southwest Division Naval Facilities Engineering Command (SWDIV) in accordance with Contact Task Order (CTO)-0073. This CTO was issued under the Comprehensive Long-Term Environmental Action Navy (CLEAN) II Program, contract No. N68711-92-D-4670. This report is based on air-sparging pilot testing conducted during May, and June 1996.

1.1 PURPOSE OF REPORT

The air-sparging pilot test was designed to fulfill the VOC Source Area data quality objectives (DQOs) (BNI 1995a, 1996a). The DQOs for Site 24 identify a decision to determine whether pilot tests are necessary to evaluate remedial alternatives (BNI 1995a). Air sparging is a potentially applicable remedial technology for sites with VOC-contaminated groundwater. The DQOs state that inputs affecting the decision to perform pilot testing include the need to identify the technology implementability, effectiveness, and cost. Because these characteristics of air sparging are dependent on site-specific criteria, a pilot test was conducted. The purpose of this report is to present the methods, findings, and conclusions of the air-sparging pilot testing conducted at Site 24.

1.2 GUIDANCE AND AGREEMENTS

Guidance to implement the RI/FS is provided in the Installation Restoration Program Manual (DON 1992), which defines how the DON will satisfy guidelines, regulations, and criteria associated with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 and the Superfund Amendments and Reauthorization Act (SARA) of 1986 (DON 1994); the Marine Corps Environmental Compliance and Protection Manual (DON 1990); and the United States Environmental Protection Agency (U.S. EPA) Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA (U.S. EPA 1988).

This report was prepared in accordance with the October 1990 Federal Facilities Agreement (FFA) between the DON, U.S. EPA Region IX, California Department of Health Services (now referred to as the California Environmental Protection Agency [Cal-EPA]), represented by the Department of Toxic Substances Control (DTSC) and the California Regional Water Quality Control Board (RWQCB) Santa Ana Region. The FFA is a cooperative agreement between the DON, U.S. EPA, and Cal-EPA (DTSC and RWQCB Santa Ana Region) that:

- assures environmental impacts are investigated and appropriate response actions are taken to protect public health and the environment;

- establishes a procedural framework and schedule for developing, implementing, and monitoring appropriate response actions;
- facilitates cooperation, exchange of information, and participation of the parties; and
- assures adequate assessment, prompt notification, cooperation, and coordination between federal and state agencies.

The implementation of the FFA is included as one of the responsibilities of the Base Realignment and Closure (BRAC) Cleanup Team (BCT). The BCT consists of representatives from SWDIV, U.S. EPA, and Cal-EPA (DTSC and RWQCB Santa Ana Region). It was established to manage and coordinate environmental restoration and compliance programs related to the closure and disposal of MCAS El Toro by July 1999. In addition, the MCAS El Toro BCT has specified in its mission and vision statement that:

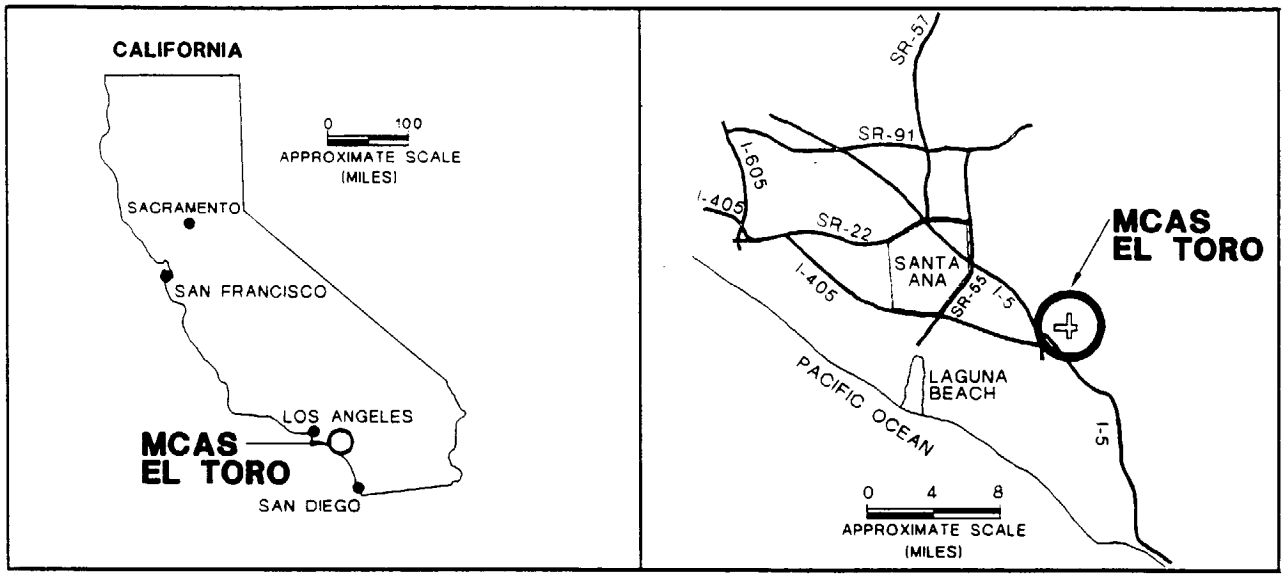
- fast-track remediation of sites is necessary to expedite reuse; and
- restoration and reuse is to be maximized by 1999.

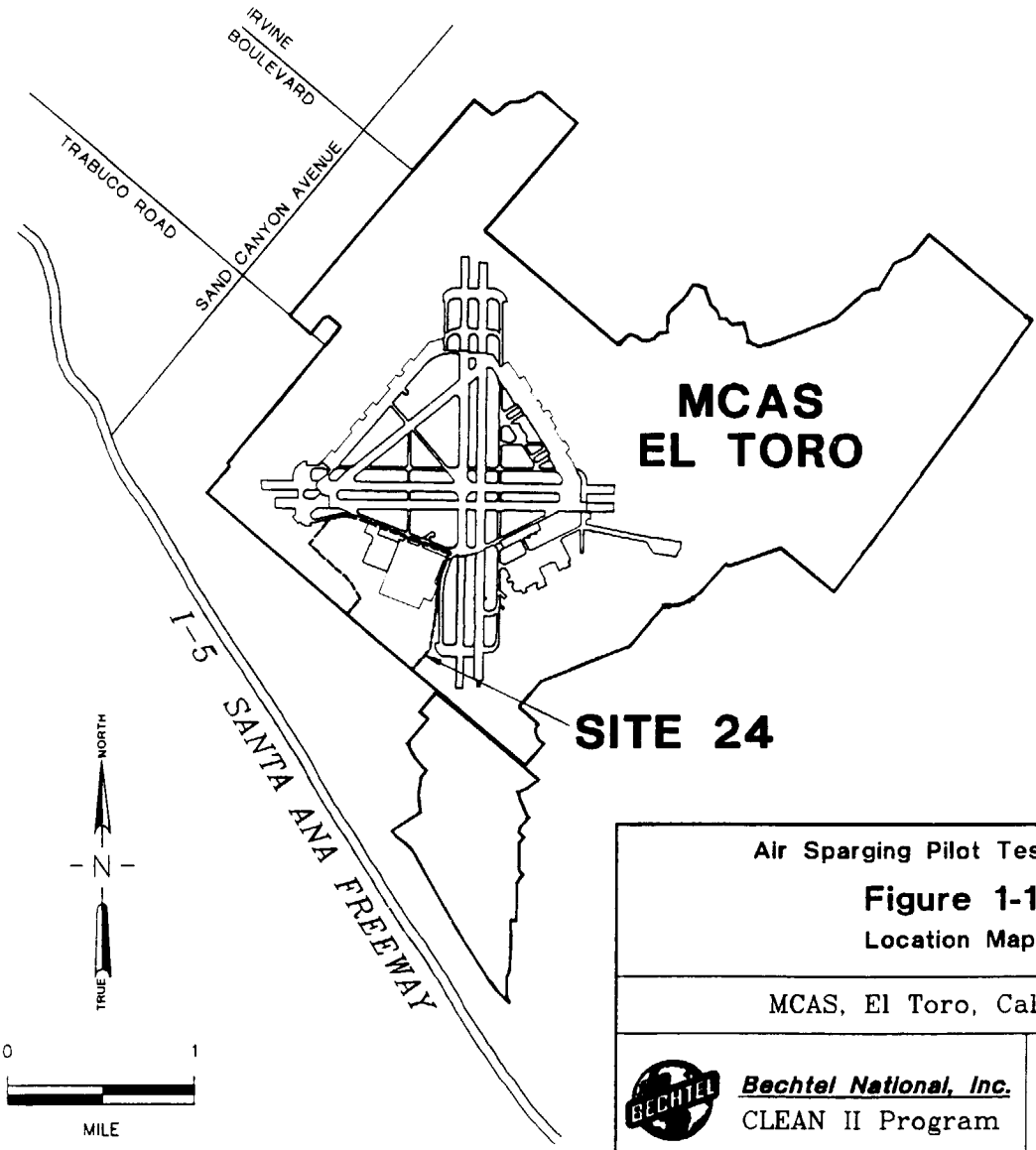
Additional guidance was obtained from the Phase II RI/FS Work Plan (BNI 1995a), Field Sampling Plan (BNI 1995b), Data Management Plan (BNI 1995c), Quality Assurance Project Plan (BNI 1995d), Investigation-Derived Waste Management Plan (BNI 1995e), and Site-Specific Health and Safety Plan (BNI 1995f).

1.3 SITE DESCRIPTION

This subsection briefly describes the site. For a more complete description, please see the Phase II Remedial Investigation Report (BNI 1996b). MCAS El Toro lies in a semiurban agricultural area in southern California, approximately 8 miles southeast of the city of Santa Ana and 12 miles northeast of the city of Laguna Beach (Figure 1-1). Land northwest of MCAS El Toro is used for agricultural purposes. The land to the south and northeast is used mainly for commercial, light-industrial, and residential purposes. Surrounding residential areas are the cities of Lake Forest, Irvine, and Laguna Hills.

Site 24 encompasses approximately 200 acres in the southwestern quadrant of MCAS El Toro (Figure 1-2). The site slopes to the west from an elevation of about 320 feet above mean sea level (MSL) at the intersection of the east-west and north-south runways to approximately 240 feet above MSL near the end of the east-west runway. The site contains buildings used for aircraft maintenance and flight-operations support, supply and storage facilities, and a limited number of administrative offices. The aircraft-maintenance facilities (Buildings 295, 296, and 297) dominate the eastern portion of the site. Regional VOC groundwater contamination, consisting primarily of trichloroethene (TCE), extends from Site 24 to approximately 3 miles west of the Station boundary.





Air Sparging Pilot Test Report

Figure 1-1

Location Map

MCAS, El Toro, California

Bechtel National, Inc.
CLEAN II Program

Date: 10/31/96
File No: 073R1785
Job No: 22214-073
Rev No: A

The Phase II RI demonstrated that contaminated soil beneath Site 24 is the source of the regional VOC groundwater contamination (BNI 1996b). The highest reported concentrations of TCE in soil gas and groundwater are beneath Buildings 296 and 297. The soil vapor extraction (SVE) pilot testing demonstrated that SVE is capable of removing significant TCE mass from the soil (BNI 1996c).

The groundwater hot spot (the area with TCE concentrations greater that 500 µg/L) extends from Building 296 to approximately 1,500 feet northwest of Building 297 (Figure 1-2). The air-sparging pilot test was conducted at the leading edge of the TCE groundwater hot spot, outside the area of elevated soil gas concentrations.

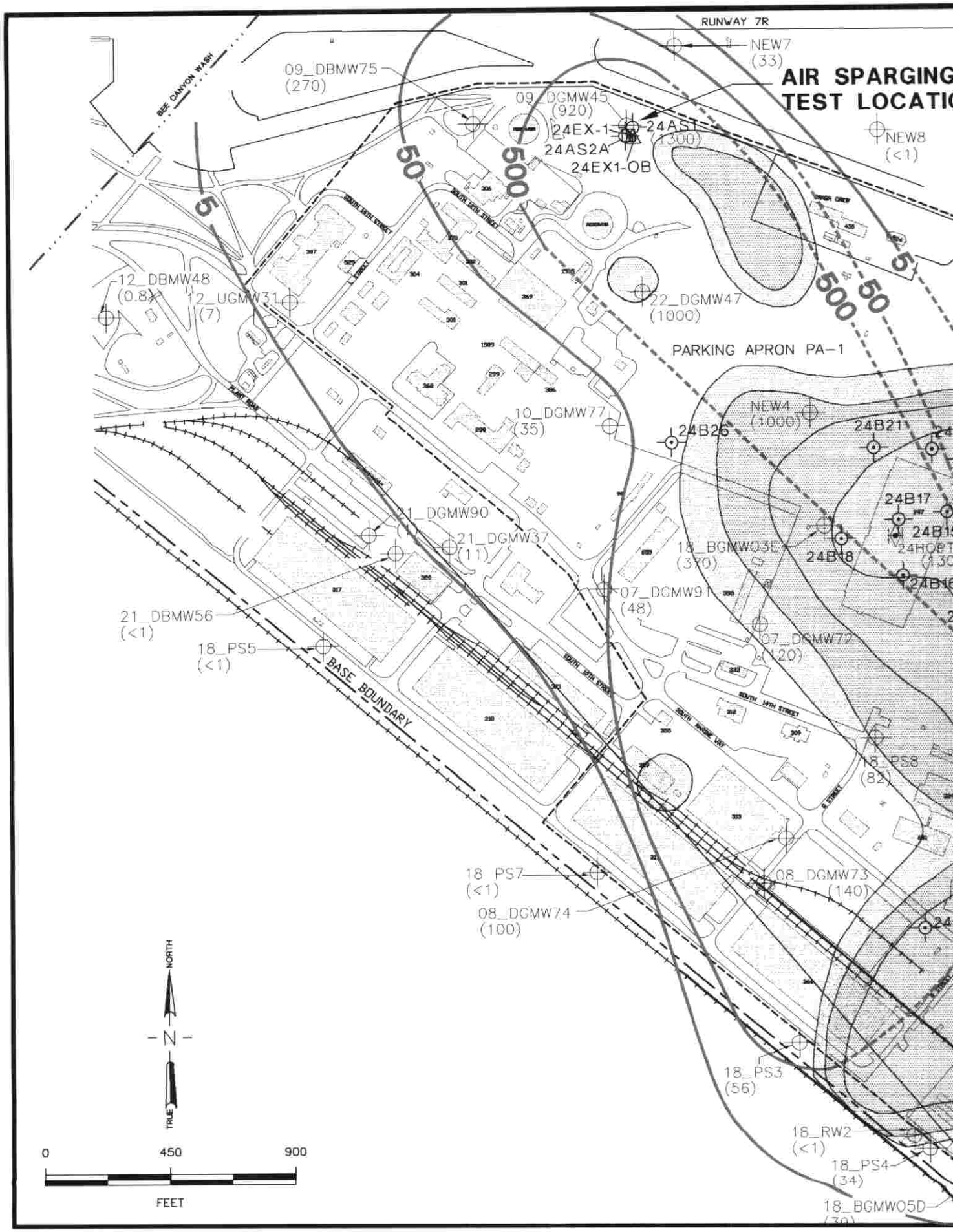
1.4 REMEDIAL TECHNOLOGY DESCRIPTION

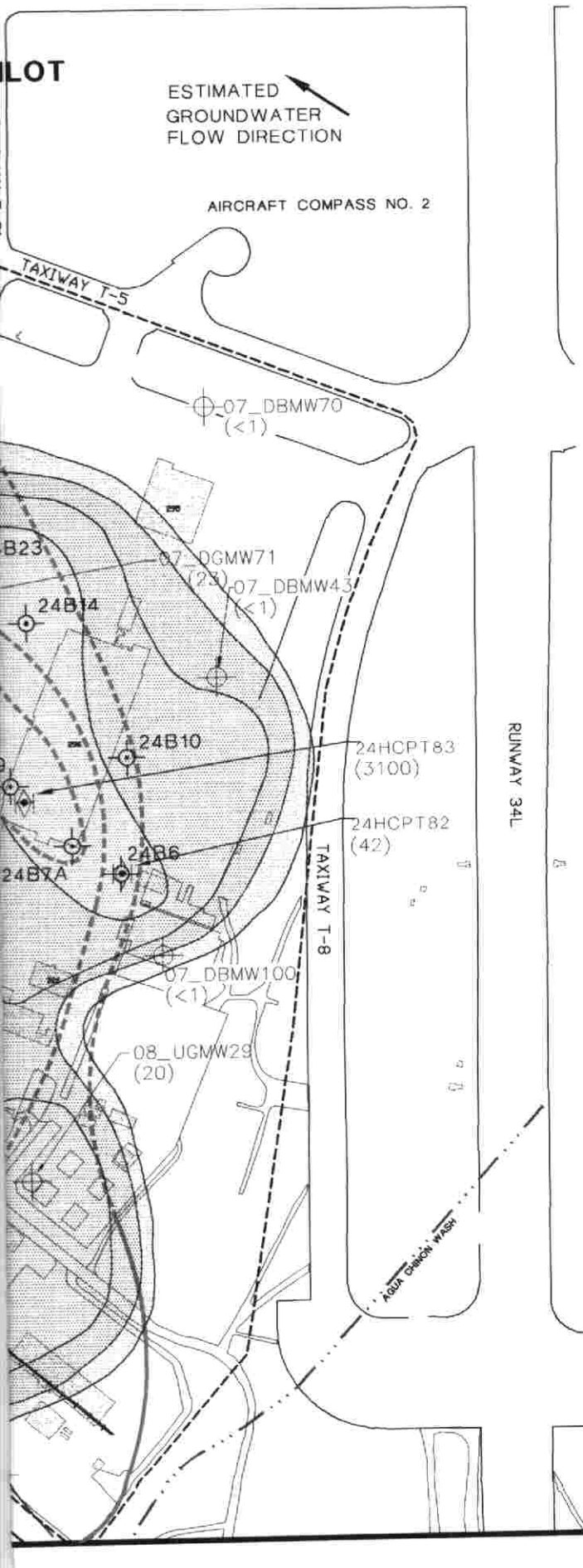
Air sparging is a potentially applicable remedial technology for sites with VOC-contaminated groundwater. It is a remedial technique that removes VOCs from groundwater by injecting clean air into the aquifer. In an aquifer contaminated with VOCs, an equilibrium is established between the dissolved and adsorbed phases. Air sparging works by introducing a vapor phase (clean air), thereby upsetting the equilibrium between phases. To reestablish the equilibrium, a mass transfer of VOCs occurs from the dissolved and adsorbed phases to the injected clean air. Once in the vapor phase, the sparging bubbles laden with VOC vapor rise through the aquifer due to buoyant forces and are collected by SVE in the vadose zone. There are numerous treatment options for the discharged soil gas, including carbon adsorption, and catalytic or thermal oxidation.

1.5 AIR-SPARGING PILOT TEST OBJECTIVES

The air-sparging pilot test objectives included the following (BNI 1996a):

- evaluate the implementability of using air sparging to remove VOCs from contaminated aquifer beneath Site 24;
- evaluate relative aquifer permeability, degree of heterogeneity, and sparging radius of influence;
- estimate the VOCs removal efficiency and overall effectiveness of air sparging at the test site;
- estimate the mass of VOCs removed from the contaminated aquifer versus time and overall effectiveness of air sparging at the test site;
- assess groundwater chemistry before and after air sparging;
- establish operating parameters to optimize air-sparging performance, if appropriate; and
- collect sufficient data to estimate the cost of full-scale operation, if appropriate.


AIR SPARGING
TEST LOCATIO
RUNWAY 7R
NEW7
(33)
NEW8
(<1)
BEE CANYON WASH
09_DBMW75
(270)
09_DGMW45
(920)
24EX-1
24AS1
(300)
24AS2A
24EX1-OB
50
500
5
12_DBMW48
(0.8)
12_UGMW31
(7)
22_DGMW47
(1000)
PARKING APRON PA-1
10_DGMW77
(35)
NEW4
(1000)
24B26
24B21
24B17
24B18
21_DGMW90
21_DGMW37
(11)
18_BGMW03E
(370)
07_DGMW91
(48)
21_DBMW56
(<1)
18_PS5
(<1)
07_DGMW72
(120)
BASE BOUNDARY
18_PS8
(82)
18_PS7
(<1)
08_DGMW73
(140)
08_DGMW74
(100)
NORTH
N
TRUE
18_PS3
(56)
18_RW2
(<1)
18_PS4
(34)
18_BGMW05D
0
450
900
FEET



LEGEND

- BUILDING OR PAD
- STREAMS OR WASH
- IMPROVED ROADS
- RAILROAD
- PHASE II UNIT BOUNDARY
- BASE BOUNDARY
- —500— ISOCONCENTRATION CONTOUR OF TCE IN GROUNDWATER (µg/L) (FROM SAMPLES COLLECTED JULY 1992 TO JANUARY 1993. RESULTS IN TABLE C-1 PHASE I T.M.)
- --500-- REDEFINED ISOCONCENTRATION CONTOUR OF TCE IN GROUNDWATER (µg/L) (FROM PHASE II RI SAMPLES COLLLECTED OCTOBER 1995 TO JANUARY 1996)

SOIL GAS CONCENTRATIONS NEAR WATER TABLE:

- 1.0 TO 5.0 µg/L TCE
- 5.0 TO 50.0 µg/L TCE
- 50.0 TO 500.0 µg/L TCE
- GREATER THAN 500.0 µg/L TCE

EXISTING:

- MONITORING WELL (WITH HIGHEST TCE CONCENTRATION IN µg/L)
- AIR SPARGING WELL
- HYDROPUNCH SAMPLE (WITH HIGHEST TCE CONCENTRATION IN µg/L)
- SOIL VAPOR EXTRACTION WELL
- EXTRACTION TEST WELL
- OBSERVATION WELL

Air Sparging Pilot Test Report

Figure 1-2

Site Plan

MCAS, El Toro, California

Bechtel National, Inc.
CLEAN II Program

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File No: 073H1734
Job No: 22214-073
Rev No: D

Section 2
FIELD METHODS AND PROCEDURES

This section describes the field methods and procedures that were used to conduct the air-sparging pilot test. Pilot test operation data are summarized in Appendix A.

2.1 AIR-SPARGING SYSTEM DESCRIPTION

The air-sparging pilot test system consisted of a trailer-mounted air compressor, pressure regulator, and filter assembly. The air compressor was connected to the air-sparging well using 1-inch-diameter, high-pressure air line. Pressure and airflow gauges were used to monitor the system performance. In order to collect the air-sparging off-gas, the system also included an SVE component. A process flow diagram is included as Figure 2-1.

The SVE system consisted of a trailer-mounted Sutorbilt Legend™ Model 4LP blower, 15-horsepower electric motor, moisture-knockout pot, and six 200-pound carbon-canister filters. The blower was equipped with a dilution air valve to draw clean air into the blower inlet and a recirculation system to recirculate the blower exhaust to the blower inlet. Pressure, temperature, and airflow gauges were used to monitor the system performance.

SVE wells were connected to the blower using 2-inch-diameter polyvinyl chloride (PVC) pipe and flexible tubing. Vacuum and airflow were monitored at the wellhead. Soil gas extracted from the vadose well passed through a moisture-knockout pot before entering the blower. A sample port to monitor the soil gas VOC concentration was installed upstream of the moisture-knockout pot. Soil gas exiting the blower was treated using activated-carbon filters. Sample ports were installed to monitor temperature, pressure, and VOC concentration.

The air-sparging compressor was connected by a vacuum switch to the SVE system. If collection of air-sparging off-gas was interrupted by failure of vacuum at the SVE well, the air compressor was automatically shut down.

2.2 AIR-SPARGING SYSTEM PERFORMANCE MONITORING

This subsection describes the methods used to monitor the air-sparging system performance.

2.2.1 Wellhead Pressure

Positive pressure was measured at the wellhead using a 2-inch-diameter pressure gauge with a zero- to 60-pounds-per-square-inch (psi) scale.

2.2.2 Volumetric Airflow

Airflow was measured at the wellhead using a King™ variable-area flowmeter with a zero- to 40-cubic-feet-per-minute (cfm) scale.

2.2.3 Bubble Flux

The sparging radius of influence was evaluated using the bubble-flux test method. This method measures the flow rate of air-sparging bubbles in a monitoring well. The sparging bubbles in the monitoring well were captured with an inverted funnel connected by tubing to four flowmeters capable of measuring airflow from 0.1 to 20 standard cubic feet per hour (scfh). To monitor bubble flux, the funnel assembly was lowered to the bottom of the monitoring well and raised in 1-foot increments until the first airflow was measured. After the bubble-flux reading stabilized, the measurements were recorded and the funnel assembly was raised to the next-higher depth interval. Because the air-sparging wells are screened at the same depth but at different distances from the monitoring well, the radius of influence were to have been estimated using three points—the first point being the depth of the air-sparging well screens (160 feet bgs), and the second and third points being the depth in well 09_DBMW45 where bubble flux was first detected during air sparging at wells 24AS1 and 24AS2A, respectively. However, no bubble flux was present in the monitoring well during the injection test at well 24AS2A. Consequently, the radius of influence for well 24AS1 was estimated with only two points.

2.3 SVE SYSTEM PERFORMANCE MONITORING

This subsection describes the methods used to monitor the SVE system performance.

2.3.1 Wellhead Pressure

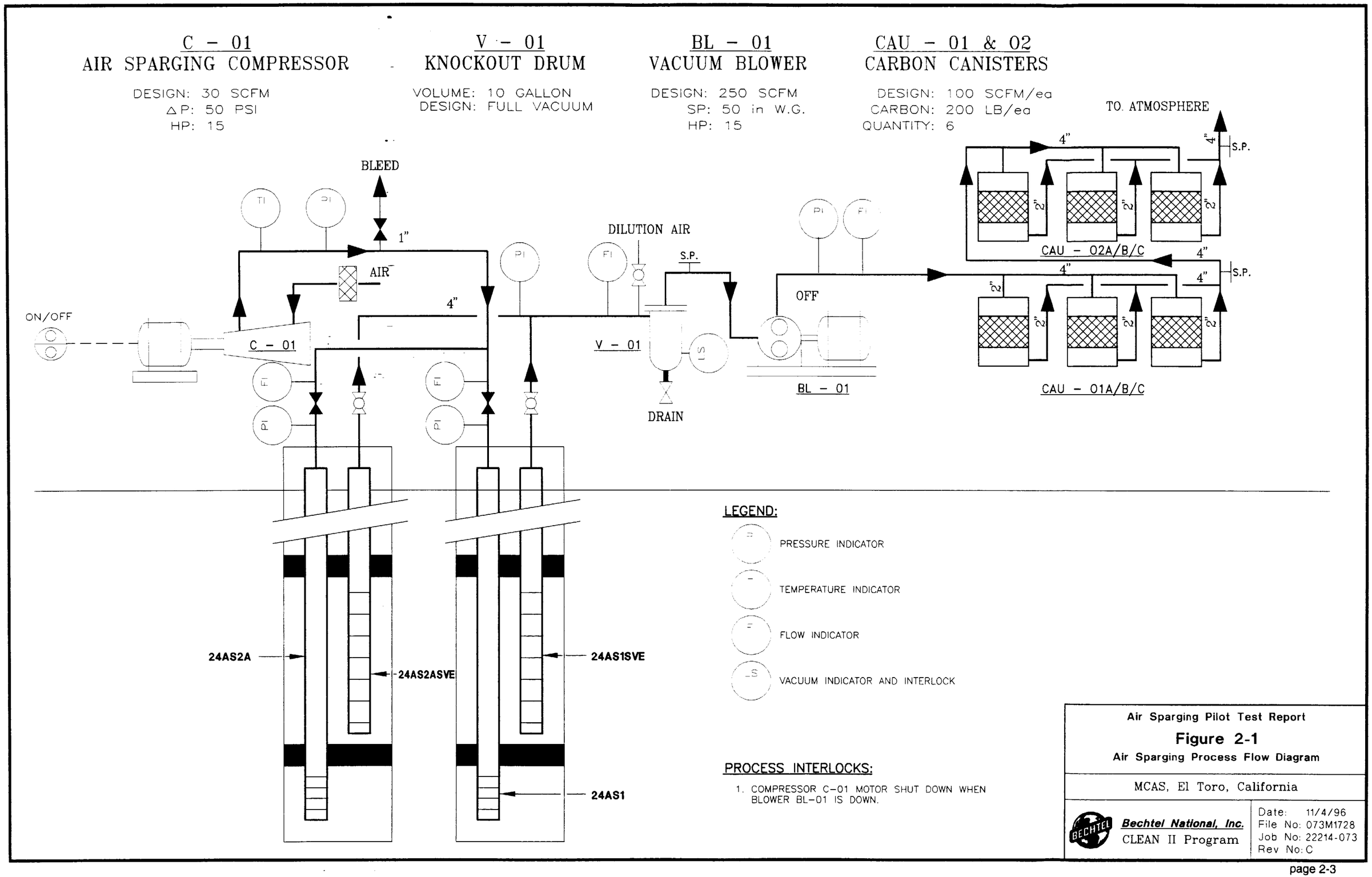
Negative pressure was measured at the wellhead using a 2-inch-diameter pressure gauge with a zero- to 120-inches-of-water scale. Measurement of pressure at the wellhead was compared to pressure at the blower to estimate head loss due to piping and the moisture-knockout pot.

2.3.2 Volumetric Airflow

Airflow was measured at the wellhead using a King variable-area flowmeter with a zero- to 245-cfm scale.

2.3.3 Soil Gas Sampling

Soil gas samples were collected from a sample port near the wellhead, upstream of the moisture-knockout pot and blower. To collect the soil gas sample, a one-liter Tedlar® bag was placed inside a vacuum chamber and connected to the sample valve using a new length of Teflon® tubing. Negative pressure was then applied to the vacuum chamber with a portable vacuum pump, and the sample valve was opened for approximately 45 seconds to fill the Tedlar bag.


C - 01
AIR SPARGING COMPRESSOR
DESIGN: 30 SCFM
ΔP: 50 PSI
HP: 15
V - 01
KNOCKOUT DRUM
VOLUME: 10 GALLON
DESIGN: FULL VACUUM
BL - 01
VACUUM BLOWER
DESIGN: 250 SCFM
SP: 50 in W.G.
HP: 15
CAU - 01 & 02
CARBON CANISTERS
DESIGN: 100 SCFM/ea
CARBON: 200 LB/ea
QUANTITY: 6
TO ATMOSPHERE
BLEED
1"
AIR
4"
ON/OFF
C - 01
DILUTION AIR
S.P.
V - 01
DRAIN
OFF
BL - 01
CAU - 02A/B/C
CAU - 01A/B/C
2"
24AS2A
24AS2ASVE
24AS1SVE
24AS1
LEGEND:
PRESSURE INDICATOR
TEMPERATURE INDICATOR
FLOW INDICATOR
VACUUM INDICATOR AND INTERLOCK
PROCESS INTERLOCKS:
1. COMPRESSOR C-01 MOTOR SHUT DOWN WHEN BLOWER BL-01 IS DOWN.
Air Sparging Pilot Test Report
Figure 2-1
Air Sparging Process Flow Diagram
MCAS, El Toro, California
Bechtel National, Inc.
CLEAN II Program
Date: 11/4/96
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2.3.4 Soil Gas Temperature

Soil gas temperature was monitored with a direct-reading temperature gauge both upstream and downstream from the blower. Volumetric airflow was adjusted to maintain the temperature exiting the blower. In general, the soil gas temperature was maintained below 200 degrees Fahrenheit.

2.3.5 Carbon-Canister Pressure

The 200-pound carbon canisters used during the pilot test are rated for a maximum pressure of 12 psi. Three carbon canisters were connected in parallel, and two of these canister sets were connected in series to form a six-canister treatment unit. Pressure-monitoring ports were installed at each canister and monitored with a 2-inch-diameter pressure gauge.

2.3.6 Effluent Soil Gas Sampling

Soil gas monitoring ports were installed at the exhaust of each carbon canister and at the exhaust stack. Soil gas samples were collected directly by connecting one-liter Tedlar bags to the sample ports with a new length of Teflon tubing. The vacuum chamber was not used because soil gas at the carbon canisters and exhaust stack was under positive pressure.

2.3.7 Remote-Vacuum Monitoring

Remote vacuum was measured at nearby wells screened in the vadose zone using Magnehelic™ gauges with scales from zero to 1 inch of water, and zero to 5 inches of water. Before the pilot test was initiated, the wells were fitted with slip caps that had a stopcock valve. The slip caps were placed over the vadose well openings and sealed with a silicone sealant. The stopcock valves were threaded onto the slipcaps and sealed with Teflon tape. With the stopcock valve closed, the vacuum in the vadose well remained stabilized. The remote-vacuum measurement was taken by connecting the vacuum gauge to the stopcock valve, opening the valve, and recording the measurement.

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Section 3
SITE GEOLOGY AND HYDROGEOLOGY

This section provides a description of soil and aquifer conditions that affect the airflow in the vadose zone and shallow groundwater unit. Induced airflow from SVE is necessary in the vadose zone to capture air-sparging off-gas. Airflow within the aquifer will control TCE removal and influence the ability of the SVE system to capture the sparging off-gas. In general, coarse-grained soil will facilitate off-gas capture. Similarly, a relatively coarse-grained aquifer with the absence of confining units promotes TEC-mass removal and facilitates off-gas capture.

3.1 VADOSE ZONE CONDITIONS

Soil encountered beneath Site 24 generally consists of a matrix of Holocene Age fine overbank deposits and coarse-grained stream channel deposits. These soils are alluvial fan deposits generated from the Santa Ana Mountains to the east.

The vadose zone is approximately 120 feet thick in the area of the pilot test. Soil conditions are characterized predominantly by sand and silty sand interbedded with silt and clay. The subsurface geology and air-sparging test setup are depicted in Figure 3-1. The figure demonstrates that the vadose zone in the pilot test area is generally composed of sand, silty sand, and silt. Such soil is relatively permeable to air and facilitates the operation of SVE systems by allowing greater airflow in the vadose zone.

A review of soil and soil gas analytical results indicates that the vadose zone in the pilot test area is relatively free of VOCs. The highest reported TCE concentration in soil gas prior to air sparging was 2 micrograms per liter (µg/L). VOCs were not reported in any of the soil samples analyzed from the pilot test area.

3.2 AQUIFER CONDITIONS

Prior to planning the air-sparging pilot test, four cone penetrometer tests (CPTs) were conducted in the groundwater hot spot area (24CPT55, 24CPT66, 24CPT74, and 24CPT77). The CPT work provided lithologic logs based on the ratio of piezocone sleeve friction to tip pressure (Robertson and Campanella 1990). The CPT logs are provided in Appendix B. A review of the CPT logs indicates that the stratigraphy beneath the pilot test area is characterized by interbedded sand, silt, and clay. A silty sand, sand, and gravely sand layer logged in 24CPT55 between approximately 148 and 159 feet below ground surface (bgs) appears to correlate with similar beds logged in 24CPT66 between 149 and 156.5 feet bgs. The CPT logs are generally consistent with the air-sparging well boring logs, and observation well 24EX1OB (Appendix B).

HydroPunch® groundwater samples were collected from the air-sparging pilot test area and analyzed for VOCs by U.S. EPA Method 8010/8020. Prior to the pilot test, groundwater samples were also collected from monitoring well 09_DBMW45 and from air-sparging wells 24AS1 and 24AS2A. The analytical results for TCE are presented in Table 3-1. A summary of the laboratory analytical results for groundwater in the pilot test area is included as Appendix C.

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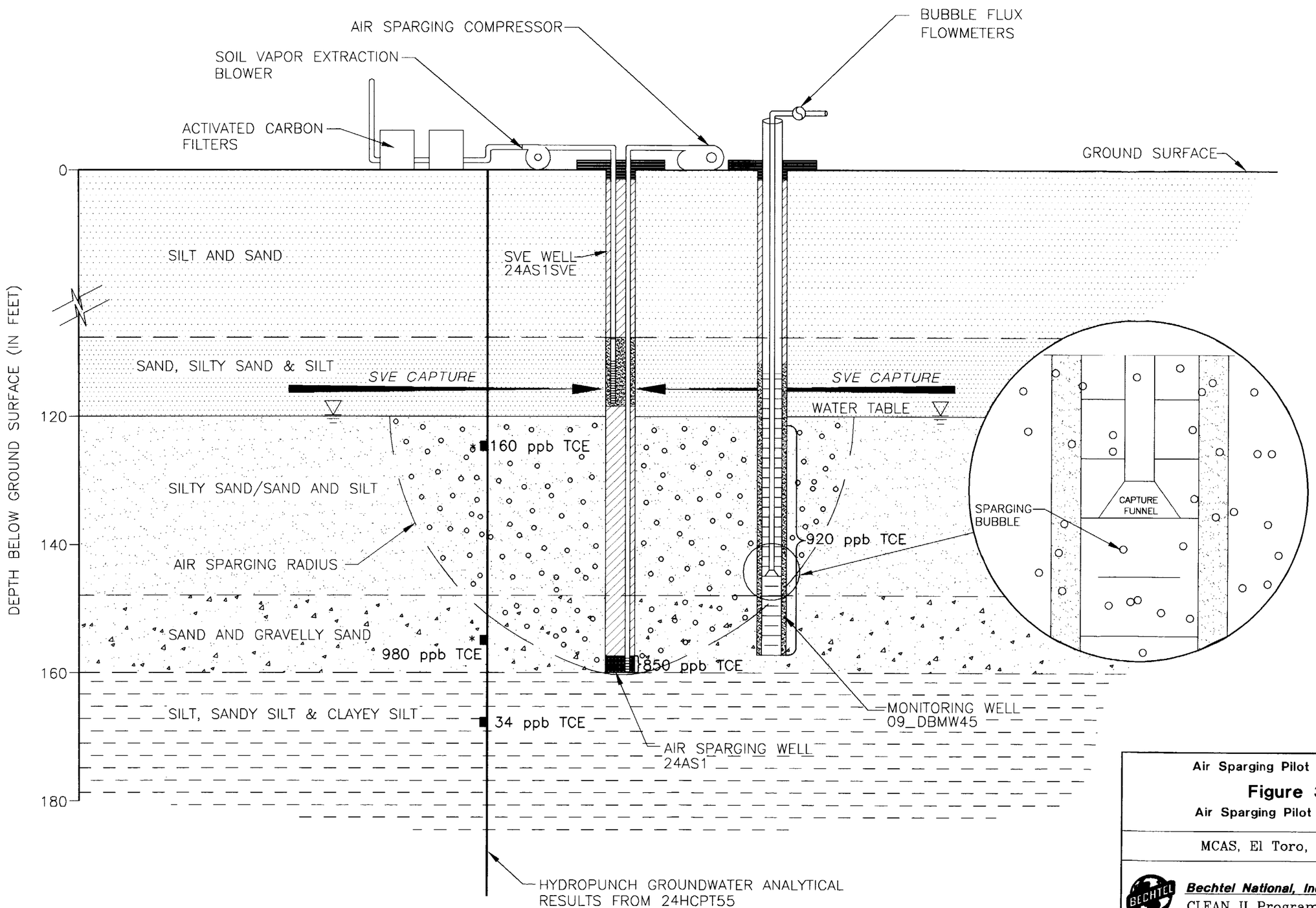

Air Sparging Pilot Test Report

Figure 3-1

Air Sparging Pilot Test Setup

MCAS, El Toro, California

Bechtel National, Inc.
CLEAN II Program

Date: 11/7/96
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Job No: 22214-073
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Table 3-1
Initial TCE[a] Concentrations in Groundwater

Location	Date	Depth (feet bgs[b])	Highest Reported TCE Concentration (µg/L)[c]
24CPT55	08/23/95	126	160
	08/23/95	155	980
	08/23/95	168	45
24CPT66	08/25/96	124	640
	08/25/96	142	220
	08/25/96	156	190
	08/25/96	175	220
24CPT74	09/26/95	123	42
	09/26/95	148	250
24CPT77	09/27/95	142	5
	09/27/95	161	560
	09/28/95	187	5.7
24AS1	11/28/95	155 – 160	980
	04/15/96	155 – 160	850
24AS2A	11/29/95	155 – 160	1,300
09_DBMW45	11/20/95	117-157	920

Notes:
[a] TCE – trichloroethene
[b] bgs – below ground surface
[c] µg/L – micrograms per liter

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Section 4
AIR-SPARGING PILOT TEST RESULTS

This section presents the results of the air-sparging pilot test. To evaluate the implementability of air sparging to remove VOCs from contaminated groundwater beneath Site 24, the radius of influence of both the SVE well and air-sparging well were estimated. Other factors considered were demonstrated ability for the SVE well to capture the air-sparging off-gas, aquifer heterogeneity, VOC mass removed from the groundwater, and potential for encrustation.

4.1 SVE RADIUS OF INFLUENCE

The radius of influence for 24AS1SVE was estimated by recording the remote vacuum at two nearby wells that are screened in the vadose zone (24AS2ASVE and 09_DBMW45) A semilog graph was prepared by plotting remote vacuum versus distance from the extraction well. A straight line was fitted through the data points. The distance at which the remote vacuum was projected to be equal to one percent of the applied vacuum was considered the effective SVE radius of influence. Figure 4-1 shows remote vacuum versus distance for an applied pressure of minus 76 inches water at vadose well 24AS1SVE and an extraction rate of 130 cfm. Based on these data, a radius of influence of approximately 100 feet has been estimated. The SVE vacuum step-test data are included in Appendix A.

4.2 CAPTURE OF AIR-SPARGING OFF-GAS

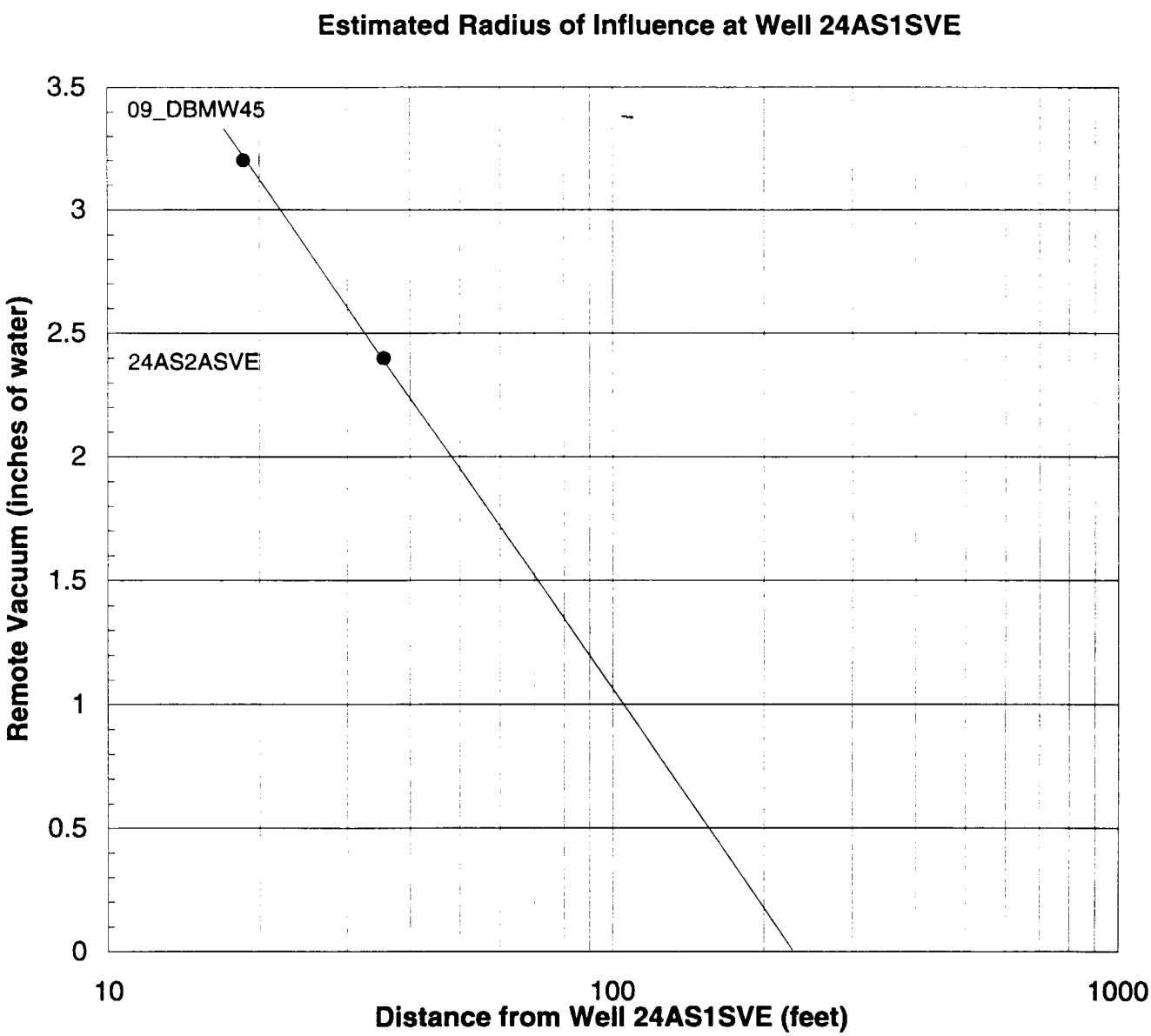
To evaluate capture of air-sparging off-gas, the contribution of TCE from sparging bubbles that was captured by the SVE system was compared to initial soil gas conditions before air sparging. The expected TCE concentration in the sparging bubbles can be calculated using Henry's law and assuming equilibrium conditions. This concentration, coupled with the air-injection rate, can be used to calculate the expected concentration increase in soil gas after sparging bubbles enter the vadose zone. The form of this calculation is one of a weighted average. An example calculation of the expected TCE concentration, assuming equilibrium conditions, is provided below.

$$C_{as} = \{(C_h \times F_{as}) + [C_b \times (F_{sve} - F_{as})]\} / F_{sve}$$

where:

C_{as} = expected TCE soil gas concentration after air sparging is initiated;
C_h = TCE-vapor concentration based on Henry's law, using average groundwater TCE concentration;
F_{as} = air-sparging flow rate;
C_b = baseline TCE concentration measured from SVE soil gas sample; and
F_{sve} = soil vapor-extraction flow rate.

The first term of the equation, $(C_h \times F_{as})$, uses the air-sparging flow rate and the equilibrium TCE-vapor concentration to calculate the mass-removal rate of TCE from the aquifer. The second term, $[C_b \times (F_{sve} - F_{as})]$, uses the difference between the SVE flow



Air Sparging Pilot Test Report

Figure 4-1

SVE Radius of Influence for Well 24AS1SVE

MCAS, El Toro, California

Bechtel National, Inc.
CLEAN II Program

Date: 10/31/96
File No: -
Job No: 22214-073
Rev No: A

rate and the contribution to this flow from the air-sparging bubbles that reach the vadose zone to calculate the mass-removal rate from the vadose zone. When these two terms are divided by the total flow rate, F_{sve}, the TCE concentration in soil gas after air sparging is initiated can be calculated. For example, given the average TCE groundwater concentration of 885 µg/L, and a dimensionless Henry's constant of 0.363, the equilibrium TCE concentration in the vapor phase is 321 µg/L.

Given the pilot test air-sparging flow rate of 15 cfm, the SVE flow rate of approximately 100 cfm, and a baseline TCE soil gas concentration of 2 µg/L, an increase in extracted soil gas concentration of 2 µg/L to 50 µg/L is expected under equilibrium conditions.

Baseline conditions were established by collecting and analyzing a soil gas sample from the SVE well before the air-sparging compressor was activated (Table 4-1). The result was compared to soil gas analytical results from a sample collected approximately one hour after the air-sparging compressor was energized. The laboratory results reported identical TCE concentrations for the baseline soil gas conditions and the sample collected during air sparging. This indicates that the air-sparging off-gas is not captured. That interpretation was reported to the BCT. However, during the preparation of this report, the original laboratory report was found to be incorrect. The soil gas sample collected during air sparging was never analyzed, but a result was reported by the laboratory that was identical to the baseline soil gas TCE concentration. A soil gas sample, collected later in the pilot test during air sparging, contained 24 µg/L TCE. This result indicates that air-sparging off-gas was recovered by the SVE well, but not to the degree that would be expected under equilibrium conditions. However, the rapid movement of sparge bubbles through the saturated zone is not likely to allow full achievement of equilibrium, and concentrations lower than equilibrium should be expected.

4.3 AIR-SPARGING RADIUS OF INFLUENCE

Bubble flux was not present in monitoring well 09_DBMW45 when well 24AS2A was sparged. Bubble-flux measurements were recorded in the monitoring well only during the sparging of well 24AS1. A review of these data (shown in Figure 4-2) indicated that the depth of the first bubble-flux measurement was approximately 147 feet bgs. The radius of influence can be estimated by extrapolating a line from the bottom of the air-sparging well screen to the water table, passing through the point at which the first bubble was detected. Given the water table position at approximately 120 feet bgs, the depth of the air-sparging well screen at 160 feet bgs, and the 18.6-foot separation between the air-sparging well and the monitoring well, the air-sparging radius of influence is estimated to be approximately 57 feet. This estimate (illustrated in Figure 4-3) assumes that the aquifer is homogeneous and isotropic.

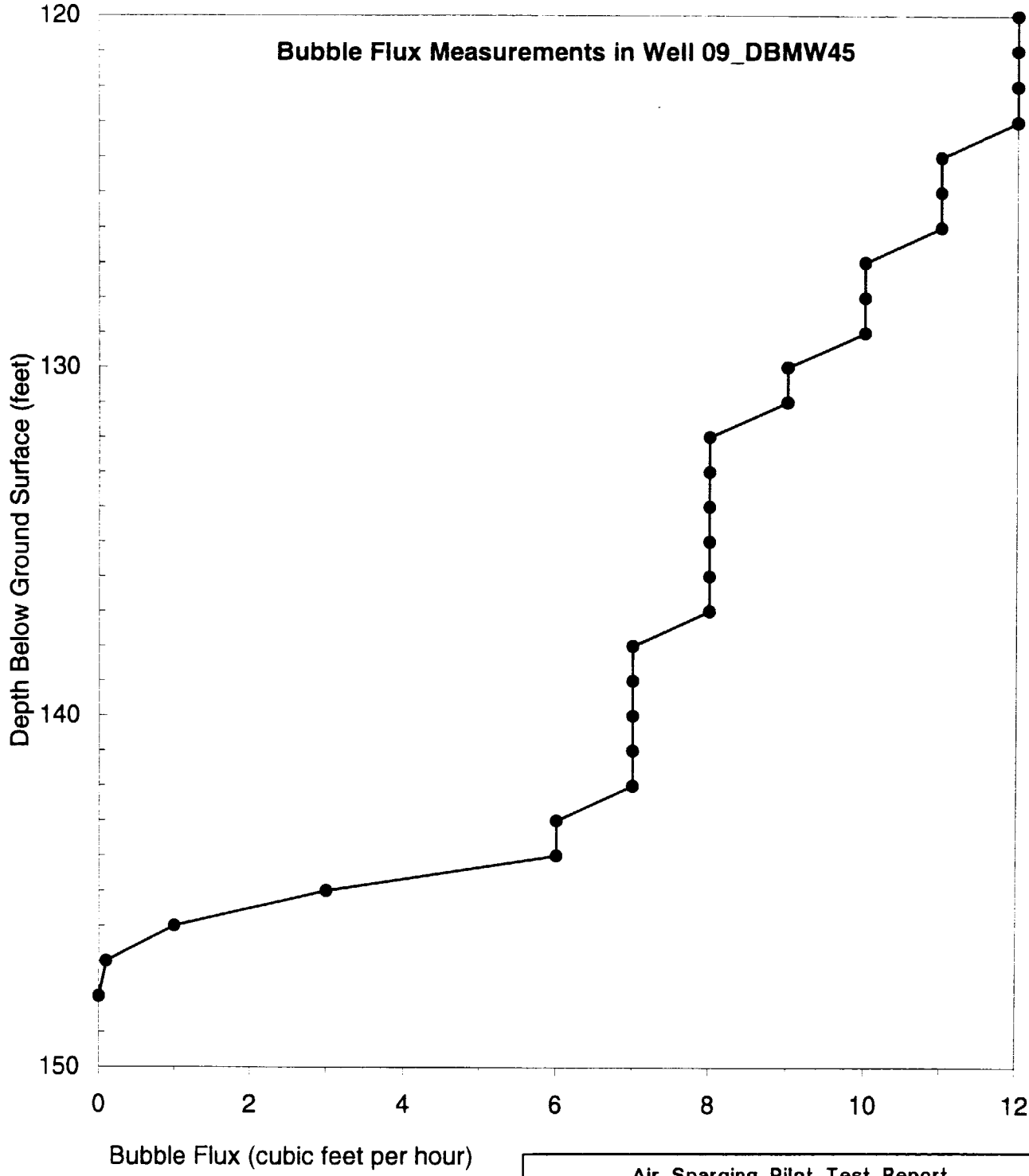
4.4 AQUIFER HETEROGENEITY RELATIVE TO AIRFLOW

The aquifer heterogeneity relative to airflow was evaluated by comparing bubble-flux measurements collected during sparging in wells 24AS1 and 24AS2A. Bubble-flux measurements in monitoring well 09_DBMW45 were as expected for a generally

Table 4-1
TCE[a] Concentrations in Groundwater Before and After Pilot Testing

Location	Date	Depth (feet bgs[c])	ANALYTE (µg/L)[b] TCE	PCE[d]	1,1-DCE[e]
09_DBMW45	11/20/95	117 – 157	920	7.2	20
	05/29/96	117 – 157	720	< 12	< 12
24AS1	11/28/95	155 – 160	980	< 42	< 42
	04/15/96	155 – 160	850	< 25	< 25
	05/29/96	155 – 160	780	< 12	< 12

Notes:
[a] TCE – trichloroethene
[b] µg/L – micrograms per liter
[c] bgs – below ground surface
[d] PCE – tetrachloroethene
[e] DCE – dichloroethene



Air Sparging Pilot Test Report

Figure 4-2

Bubble Flux Measurements in Well 09_DMBW45

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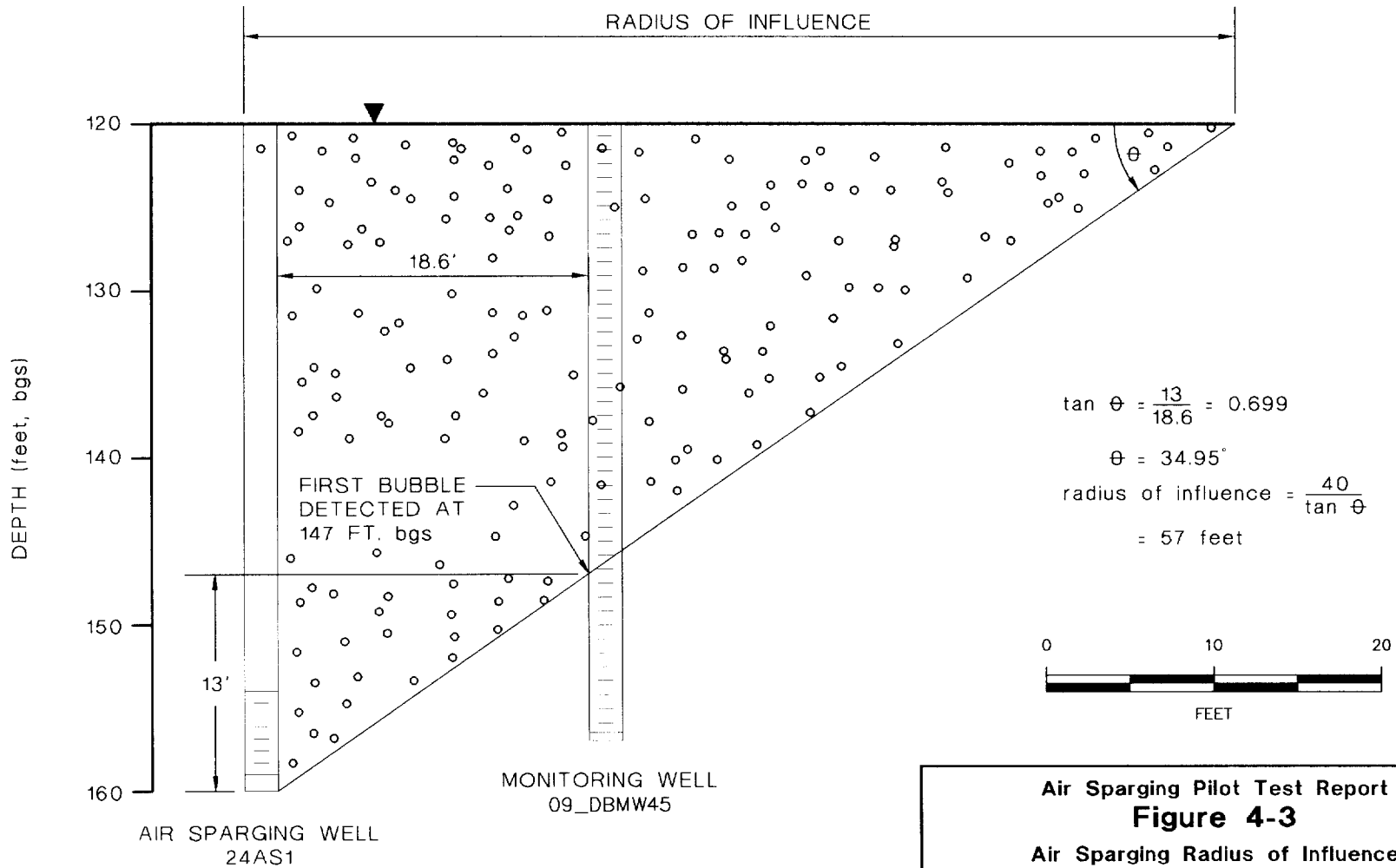
Job No: 22214-073
Rev No: A



$$\tan \theta = \frac{13}{18.6} = 0.699$$

$$\theta = 34.95^\circ$$

$$\text{radius of influence} = \frac{40}{\tan \theta}$$

$$= 57 \text{ feet}$$

Air Sparging Pilot Test Report

Figure 4-3

Air Sparging Radius of Influence Estimate - 24AS1

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Date: 11/7/96
File No: 073X1786
Job No: 22214-073
Rev No: C

homogenous aquifer during the sparging of well 24AS1. However, during the sparging of well 24AS2A, bubble-flux was not observed in wells 09_DBMW45 or 24NEW1. These data indicate that the aquifer in the test area is heterogeneous relative to airflow.

4.5 VOC REMOVAL DUE TO AIR SPARGING

Groundwater samples were collected before and after the air-sparging test to evaluate the effectiveness of air sparging in removing VOCs from groundwater. Table 4-1 summarizes the decrease in TCE concentrations after the air-sparging test.

To estimate the TCE mass removed during the air-sparging test, the following assumptions are made:

- the radius of influence is as it was estimated in Section 4.3;
- volume of influence can be estimated as a cone, $V = 1/3\pi r^2 h$, where r = 57 feet, the air-sparging radius of influence, and h = 40 feet, the distance between the water table and the bottom of the air-sparging well screen;
- TCE mass removal is uniform within the volume of influence;
- the decrease in TCE concentration can be estimated by the average decrease from samples collected from wells 09_DBMW45 and 24AS1 as follows:

  $[(920\ \mu g/L - 720\ \mu g/L) + (850\ \mu g/L - 780\ \mu g/L)]/2 = 135\ \mu g/L$; and
- the aquifer porosity is 0.22.

Using these assumptions, the initial estimated mass of TCE In groundwater within the volume of air-sparging influence (assuming an average initial concentration based on wells 09_DBMW45 and 24AS1) is 771 grams. The TCE mass removed is estimated to be approximately 120 grams, for a reduction in the groundwater TCE concentration of approximately 15 percent during the pilot test. This estimate is consistent with the estimated mass removed by the SVE system (140 grams), which assumes that the TCE concentration in the removed soil gas remained constant at 24 µg/L over the duration of the test. Backup calculations are included in Appendix C.

4.6 POTENTIAL FOR ENCRUSTATION

The potential for encrustation in air-sparging wells was investigated using both empirical and analytical methods. To check for massive mineral precipitation, a groundwater sample was collected from air-sparging well 24AS1. The sample was aerated for 72 hours and was then visually inspected for mineral precipitation; none was observed. To evaluate encrustation that might occur over a longer time period, groundwater chemistry was analyzed. The Ryznar index is an analytical method that predicts the encrusting (scaling) or corrosive nature of water. The Ryznar index is adapted from the Langelier index, and it incorporates total alkalinity, total dissolved solids, and pH. A water is corrosive if the index is higher than 7, and it is encrusting if the index is lower than 7 (Driscoll 1986). Encrusting groundwater may precipitate minerals on well screens

and in the pores of the aquifer, which would decrease the efficiency of air-sparging wells. The following are indicators of encrusting in groundwater.

- High pH. If the pH value is above 7.5 the water will tend to be encrusting.
- High Ryznar index. If the Ryznar index is greater than 7, the water will tend to be encrusting.
- Carbonate hardness. If the carbonate hardness exceeds 300 milligrams per liter (mg/L), encrustation of calcium carbonate is likely.
- Iron. If the iron concentration exceeds 500 µg/L, precipitation of iron is likely, although some precipitation may begin at concentrations as low as 250 µg/L.
- Manganese. If the manganese concentration exceeds 200 µg/L and the pH value is high, precipitation of manganese is likely if oxygen is present.

Table 4-2 summarizes selected inorganic parameters related to encrusting potential. A review of these data indicate that Ryznar indices are greater than 7, and therefore, the groundwater is classified as corrosive. The Ryznar indices for wells 24EX1 and 09_DBMW45 are consistent with Ryznar indices calculated for other wells at MCAS El Toro (BNI 1996d). Hardness as calcium carbonate exceeds 300 mg/L in well 24AS1, which indicates a potential for encrustation. Iron, manganese, and pH are generally within the limits of nonencrusting waters (pH exceeds 7.5 during one monitoring episode).

Grundfos Pump Corporation conducted an independent evaluation of corrosivity to evaluate pump failures at MCAS El Toro. The groundwater from two nearby wells (22DBMW47 and 09_DBMW75) were classified as having a high encrustation potential (Grundfos 1996).

Based on a review of these data, there is a potential for long-term encrustation due to carbonate in the groundwater. Iron and manganese concentrations do not appear to be high enough to cause encrustation. Dissolved oxygen concentrations are already near saturation, and did not change significantly during the air-sparging test.

Table 4-2
Inorganic Parameters Related to Encrustation Potential

Well Location	Sample Date	pH	Dissolved Oxygen (mg/L)[a]	Total Alkalinity as $CaCO_3$[b] (mg/L)	Total Dissolved Solids (mg/L)	Hardness as $CaCO_3$ (mg/L)	Calcium (mg/L)	Iron (µg/L)[c]	Manganese (µg/L)	Ryznar Index
24AS1	4/15-18/96	7.85	8.5	166	NA[d]	564	182	148	19.7	NA
	5/29/96	7.12	7.3	164	NA	638	180	63	2.2	NA
09_DBMW45	2/15/96	6.39	7.1	182	1,110	NA	206	230	15 U[e]	7.71
24EX1	5/29/96	6.76	8.6	168	1,820	NA	246	111	62	7.29

Notes:
- a mg/L – milligrams per liter
- b $CaCO_3$ – calcium carbonate
- c µg/L – micrograms per liter
- d NA – not analyzed
- e U – not detected

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Section 5
CONCLUSIONS AND RECOMMENDATIONS

This section presents the conclusions and recommendations based on the data collection and analysis conducted during the Phase II RI and air-sparging pilot test.

Based on a review of Site 24 boring logs, soil gas analytical results, and air-sparging system performance monitoring, the following conclusions can be made.

- The vadose zone in the area of the pilot test is generally coarse-grained and facilitates airflow to the SVE system.
- Vadose well 24AS1SVE produced a radius of influence of approximately 100 feet when operating at 130 cfm and a pressure of minus 76 inches of water.
- Based on bubble-flux measurements, the air-sparging radius of influence for a flow of 15 cfm is approximately 57 feet.
- The TCE concentrations in soil gas withdrawn from vadose well 24AS1SVE1 increased from 2 µg/L to 24 µg/L during air sparging, which indicates that capture of air-sparging off-gas was occurring.
- Based on a radius of influence of 57 feet and an average reduction of TCE concentration of 135 µg/L, approximately 120 grams of TCE were removed from the aquifer during the pilot test.
- TCE concentration was reduced approximately 15 percent during the pilot test.
- Sparging flow was induced in well 24AS2A, but bubble flux could not be measured in any monitoring well. A short circuit for airflow in the aquifer is suggested, but the airflow path cannot be determined with the test data.
- The implementation of air sparging at Site 24 will be problematic due to heterogeneities in the aquifer (as was the case for sparging well 24AS2A; however, it may be applicable at some portions of the site.

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Section 6
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APPENDIX A

AIR-SPARGING PILOT TEST DATA

AIR SPARGING PILOT TEST
STEP SVE VACUUM TEST
SITE 24 MCAS EL TORO
TEST WELL 24AS1SVE

Time	SVE TEST WELL	SVE Flow Rate (SCFM)	Well Vac. 24AS1SVE (inches of water)	Induced Vac. 24AS2ASVE (inches of water)	Induced Vac. 09_DBMW45 (inches of water)	Vac Flow 09_DBMW45 (SCFH)	Notes
Date	**6/6/96**						
1102	24AS1SVE	145	79	0	0	0	No sample taken
1104		145	79	1.6	2.4	3.8	
1150		35	20	0.84	1.4	0.8	Sampling demonstration
1330		130	76	2.4	3.2	4	
1345		100	58	1.7	3	3.6	
1400		100	58	2.3	3	3.6	
1415		100	58	2.3	2.8	3.6	
1430		75	42	1.8	2	2.5	
1445		75	42	1.8	2	2.5	
1500		75	42	1.8	1.8	2.6	
1515		50	32	1.4	1.8	1.5	
1535		50	32	1.4	1	1.5	
1600		50	32	1.4	1	1	
1605		25	18	0.96	0.2	0	
1620		25	18	0.74	0	0	
1635		25	18	0.63	0	0	
End	24AS1SVE	25	18	nr	nr	nr	

AIR SPARGING PILOT TEST
SPARGING AIR FLOW STEP TEST 5 SCFM
BUBBLE FLUX AND VACUUM MEASUREMENTS
SITE 24 MCAS EL TORO
TEST WELL 24AS1

TIME	Sparging Well No.	Wellhead pressure (psi)	Sparging Flow Rate (SCFM)	SVE Well No.	SVE at Wellhead (inches of water)	SVE Flow Rate (SCFM)	Remote Well No.	Bubble flux depth (feet,bgs)	Bubble flux (SCFH)	Notes
DATE	5/16/96									
1110	24AS 1	20	5	24AS1SVE	70	100	09_DBMW45	nr	nr	No sample taken
1115		20	5		70	100		nr	nr	
1118		20	5		70	100		nr	nr	
1120		20	5		70	100		nr	nr	
1124		20	5		70	100		124	1	
1127		20	5		70	100		124	0.2	
1130		20	5		70	100		124	0.3	
1135		20	5		70	100		124	0.4	
1136		20	5		70	100		125	0.4	
1140		20	5		70	100		125	0.6	
1142		20	5		70	100		126	0.7	
1145		20	5		70	100		127	0.7	
1147		20	5		70	100		127	0.8	
1150		20	5		70	100		128	0.5	
1153		20	5		70	100		129	0.4	
1155		20	5		70	100		130	0.5	
1158		20	5		70	100		131	0.4	
1200		20	5		70	100		131	0.4	
1204		20	5		70	100		132	0.5	
1207		20	5		70	100		133	0.6	
1209		20	5		70	100		134	0.5	
1212		20	5		70	100		135	0.5	
1214		20	5		70	100		nr	nr	
1218		20	5		70	100		nr	nr	
1220		20	5		70	100		nr	nr	
1222		20	5		70	100		135	0.4	
1225		20	5		70	100		135	0.4	
1227		20	5		70	100		136	0.4	
1230		20	5		70	100		137	0.3	
1232		20	5		70	100		138	0.3	
1235		20	5		70	100		139	0.3	
1237		20	5		70	100		140	0.2	
1240		20	5		70	100		140	0.3	
1241		20	5		70	100		141	0.3	
1245		20	5		70	100		141	0.2	
1247		20	5		70	100		142	0.2	
1250		20	5		70	100		143	0.2	
1252		20	5		70	100		144	0.1	
1255		20	5		70	100		145	0.1	
1258		20	5		70	100		146	0.1	
1300		20	5		70	100		146	0	
End	24AS 1	20	5	24AS1SVE	70	100	09_DBMW45	nr	nr	

AIR SPARGING PILOT TEST
SPARGING AIR FLOW STEP TEST 10 SCFM
BUBBLE FLUX AND VACUUM MEASUREMENTS
SITE 24 MCAS EL TORO
TEST WELL 24AS1

TIME	Sparging Well No.	Wellhead pressure (psi)	Sparging Flow Rate (SCFM)	SVE Well No.	SVE at Wellhead (inches of water)	SVE Flow Rate (SCFM)	Remote Well No.	Bubble flux depth (feet,bgs)	Bubble flux (SCFH)	Notes
Date	5/16/96									
Start	24AS 1	20	10	24AS1SVE	70	100	09_DBMW45	nr	nr	No sample taken
1340		20	10		70	100		119	0	
1350		20	10		70	100		119	1	
1355		20	10		70	100		120	1	
1357		20	10		70	100		121	1.5	
1400		20	10		70	100		122	1.5	
1403		20	10		70	100		123	2	
1405		20	10		70	100		124	2	
1408		20	10		70	100		125	2	
1410		20	10		70	100		126	2	
1412		20	10		70	100		127	2	
1414		20	10		70	100		128	2	
1416		20	10		70	100		129	2	
1418		20	10		70	100		130	2	
1420		20	10		70	100		131	2	
1425		20	10		70	100		132	2	
1428		20	10		70	100		133	2	
1430		20	10		70	100		134	2	
1435		20	10		70	100		135	2	
1138		20	10		70	100		136	2	
1440		20	10		70	100		137	2	
1443		20	10		70	100		138	2	
1445		20	10		70	100		139	1.5	
1448		20	10		70	100		140	1	
1450		20	10		70	100		141	1	
1455		20	10		70	100		142	1	No vacuum at
1500		20	10		70	100		143	0.8	24EX1 during test.
1505		20	10		70	100		144	0.75	
1510		20	10		70	100		145	0.75	
1515		20	10		70	100		146	0.5	
1518		20	10		70	100		147	0.5	
1520		20	10		70	100		147	0	
1522		20	10		70	100		146	0.25	
End	24AS 1	20	10	24AS1SVE	70	100	09_DBMW45	nr	nr	

AIR SPARGING PILOT TEST
BUBBLE FLUX MEASUREMENTS
SITE 24 MCAS EL TORO
TEST WELL 24AS2A

TIME	Sparging Well No.	Wellhead pressure (psi)	Sparging Flow Rate (SCFM)	Bubble Flux depth (feet,bgs)	Bubble Flux (SCFH) 24EX1	Bubble Flux (SCFH) 24EXOP1	Bubble Flux (SCFH) 24AS1	Bubble Flux (SCFH) 09_DBMW45	Notes
DATE	5/14/96								
1400	24AS 2A	20	10	162	0	0	0	0	No sample taken
1504		20	10	124	0	0	0	0	
1516		20	10	124	0	0	0	0	
1520	24AS 2A	19	21.5	Any depth	0	0	0	0	Searched water column,
1535		19	21.5	122	0	0	0	0	no response in any well.
1537		19	21.5	123	0	0	0	0	
1539		19	21.5	124	0	0	0	0	
1600		19	21.5	125	0	0	0	0	
1603		19	21.5	126	0	0	0	0	
1606		19	21.5	127	0	0	0	0	
1609		19	21.5	128	0	0	0	0	
1612		19	21.5	129	0	0	0	0	
1613		19	21.5	130	0	0	0	0	
1615		19	21.5	131	0	0	0	0	
1617		19	21.5	132	0	0	0	0	
1620		19	21.5	133	0	0	0	0	
1622		19	21.5	134	0	0	0	0	
1624		19	21.5	135	0	0	0	0	
1630		19	21.5	136	0	0	0	0	
1632		19	21.5	137	0	0	0	0	
1634		19	21.5	138	0	0	0	0	
1650		19	21.5	125	0	0	0	0	
1710		19	21.5	125	0	0	0	0	
End	24AS 2A	19	21.5	125	0	0	0	0	

APPENDIX B

CPT AND BORING LOGS

AIR SPARGING PILOT TEST
BUBBLE FLUX MEASUREMENTS
ESTABLISHING SOIL GAS BACKGROUND CONCENTRATIONS
SITE 24 MCAS EL TORO
TEST WELL 24AS1

TIME	Sparging Well	Wellhead pressure (psi)	Sparging Flow Rate (SCFM)	Remote Well No.	Bubble flux depth (feet,bgs)	Bubble flux (SCFH)	Notes	Sample Location	Sample ID	Analysis	O_2 (%) v/v	CO_2 (%) v/v	1,1,2-TCTFA ug/L	1,1-DCE ug/L	trans-1,2-DCE ug/L	1,1-DCA ug/L	cis-1,2-DCE ug/L	Chloroform ug/L	Carbon tectrachloride ug/L	TCE ug/L	PCE ug/L
DATE	5/14/96																				
0900	24AS 1	20	10	09_DBMW45	nr	nr	**Inital Well**	24AS 1	73W2347 01			4.5 %v/v									
1103	24AS 1	20	10	09_DBMW45	nr	nr	**sample**		73W2347 02			4.5 %v/v									
1108		20	10		161	0			73W2347 03		13 %v/v										
1113		20	10		160	0			73W2347 04		13 %v/v										
1118		20	10		159	0			73W234705	8021			ND<1	ND	ND	ND	ND	ND<1	ND	2	ND
1123		20	10		158	0			73W2347 06	8021			ND<1	ND	ND	ND	ND	ND<1	ND	2	ND
1128		20	10		157	0															
1133		20	10		156	0															
1140	24AS 1	20	23	09_DBMW45	120	12	Fix Vac meter														
1237		20	23		121	12															
1239		20	23		121	12															
1240		20	23		122	12															
1242		20	23		123	12															
1244		20	23		124	11															
1246		20	23		125	11															
1247		20	23		126	11															
1249		20	23		127	10															
1251		20	23		128	10															
1253		20	23		129	10															
1254		20	23		130	9															
1255		20	23		131	9															
1256		20	23		132	8															
1257		20	23		133	8															
1259		20	23		134	8															
1300		20	23		135	8															
1302		20	23		136	8															
1303		20	23		137	8															
1304		20	23		138	7															
1305		20	23		139	7															
1306		20	23		140	7															
1307		20	23		141	7															
1308		20	23		142	7															
1309		20	23		143	6															
1310		20	23		144	6															
1311		20	23		145	3															
1313		20	23		146	1															
1316		20	23		147	0.1															
1319		20	23		148	0															
1325		20	23	24EX1	124	0	No response														
1335		20	23	24AS2A	125	0	No response														
1440	24AS 1	20	23	24AS2A	125	0	**Final Well**	24AS 1	73W2348 01			4.8 %v/v									
1440		20	23		nr	nr	**sample**		73W2348 03		17%v/v										
1440		20	23		nr	nr	73W2348		73W2348 05	8021			NA	NA	NA	NA	NA	NA	NA	NA	NA
1440		20	23		nr	nr	no analysis		73W2348 06	8021											
1440		20	23		nr	nr	8021														
End	24AS 1	20	23	24AS 1	nr	nr	Lab. error	24AS 1													

AIR SPARGING PILOT TEST
LONG-TERM SPARGING FLOW RATE TEST
AIR FLOW AND VACUUM MEASUREMENTS
SITE 24 MCAS EL TORO
TEST WELL 24AS1

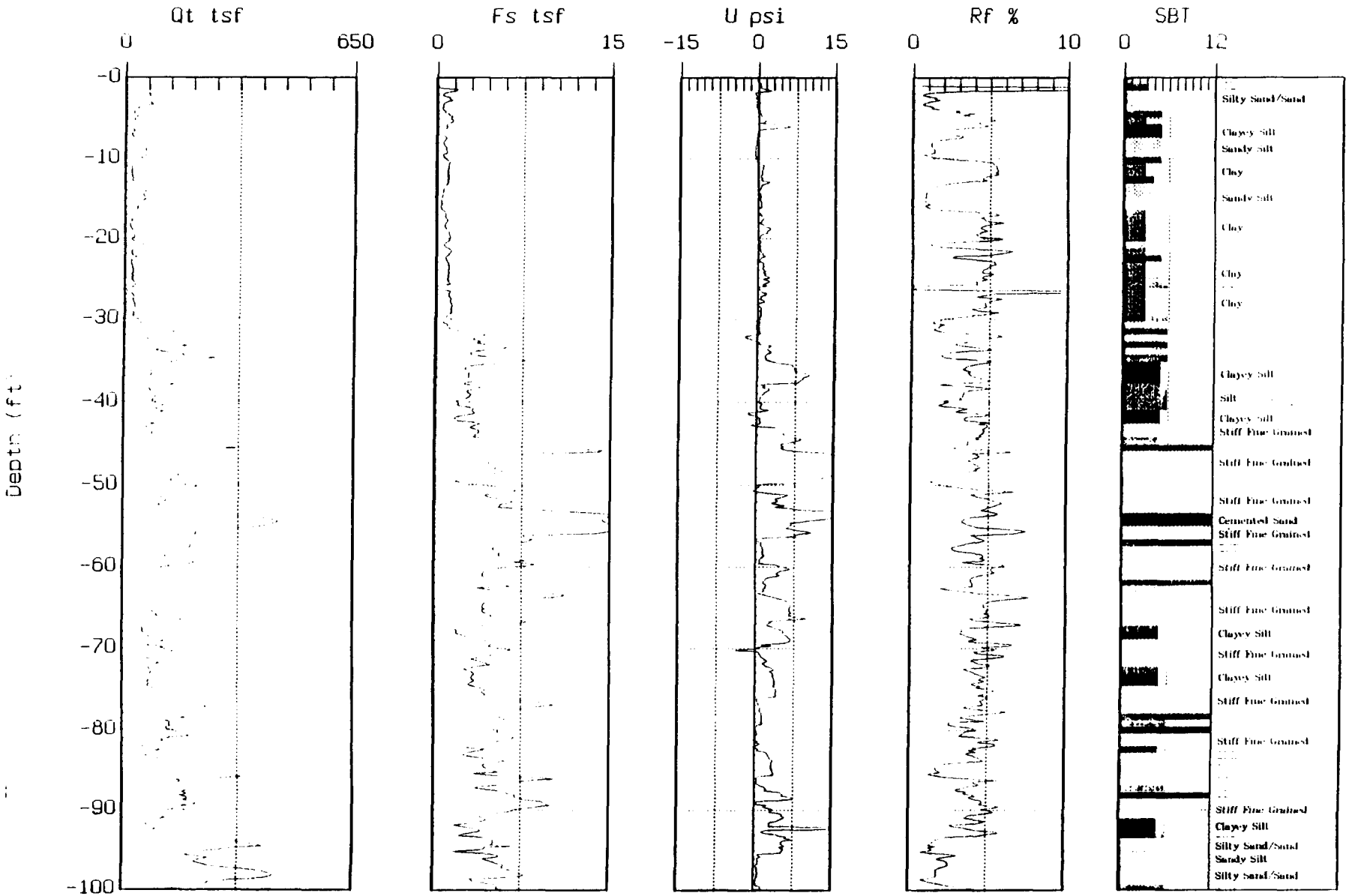
TIME	Sparging Well	Wellhead pressure (psi)	Sparging Flow Rate (SCFM)	SVE Well No.	Vac Wellhead (inches of water)	SVE Flow Rate (SCFM)	Notes	Sample Location	Sample ID	Analysis	O_2 (%) v/v	CO_2 (%) v/v	1,1,2-TCTFA ug/L	1,1-DCE ug/L	trans-1,2-DCE ug/L	1,1-DCA ug/L	cis-1,2-DCE ug/L	Chloroform ug/L	Carbon tectrachloride ug/L	TCE ug/L	PCE ug/L
Date	**5/17/96**																				
0900	24AS 1	22	21.5	24AS1SVE	70	75															
1000		22	21.5		70	75	Effluent sample	24AS1SVE	73W2349 01	8021			ND	ND	ND	ND	ND	ND	ND	ND	ND
1400		20	22.5		80	60															
End	24AS 1	20	22.5	24AS1SVE	80	60															
DATE	**5/20/96**																				
0800	24AS 1	21	21.5	24AS1SVE	70	65	No sample taken														
0900		21	22.5		80	70	Pos.														
1000		19	22.75		80	65	pressure														
1100		19	22.75		80	58	09_DBMW45														
1200		19	22.75		82	58															
1300		19	22.75		82	58	Reduced air sparge														
1310		19	15		82	55	flow rate														
1410		19	15		80	55															
1510		19	15		80	55															
1610		19	15		80	55															
End	24AS 1	19	15	24AS1SVE	80	55															
DATE	**5/21/96**																				
0900	24AS1	20	15	24AS1SVE	75	78	No sample taken														
1000		19	15		86	82	Pos.														
1200		19	15		80	58	pressure														
1300		19	15		80	58	09_DBMW45														
1400		19	15		78	65															
1500		19	15		78	65															
1600		19	15		78	65															
End	24AS1	19	15	24AS1SVE	78	65															
DATE	**5/22/96**																				
0730	24AS1	20	15	24AS1SVE	70	80	No sample taken														
0745		20	15		70	80	Pos.														
0800		20	15		76	85	pressure														
0900		19	15		80	67	09_DBMW45														
1000		19	15		80	65															
1100		19	15		80	65															
1200		19	15		80	65															
1530		19	15		80	65															
1600		19	15		80	65															
End	24AS1	19	15	24AS1SVE	80	65															
DATE	**5/23/96**																				
0800	24AS1	19	15	24AS1SVE	72	80	Pos.														
0900		19	15		78	70	pressure														
1000		19	15		80	68	09_DBMW45														
1100		19	15		80	68															
1200		19	15		80	68															
1300		19	15		35	10	**Well sample**	09_DBMW45	73W2350 01	8021			ND	ND<1	ND	ND	ND	ND	ND	74	ND<1
1305		19	15		80	68															
1400		19	15		80	72															
1500		19	15		80	70															
End	24AS1	19	15	24AS SVE	80	70															
DATE	**5/28/96**																				
0630	24AS1	nr	nr	24AS1SVE	nr	nr	Pos.														
0830		19	15		72	80	pressure														
0900		19	15		72	80	09DBMW45														
1000		19	15		68	80															
1100		19	15		68	80															
1200		19	15		68	78															
1300		19	15		66	100															
1400		19	15		66	100															
1400		19	15		66	100	Effluent sample	24AS1SVE	73W2351 01	8021			ND	ND<1	ND	ND	ND	ND<1	ND	ND<1	ND
1400		19	15		10	35	**Well sample**		73W2352 01	8021			ND	1	ND	ND	ND	2	ND	24	ND
1400		19	15		10	35	**Well sample**		73W2352 02		16.8 %v/v										
End	24AS1	nr	nr	24AS1SVE	nr	35	**Well sample**		73W2352 03			16.8 %v/v									

GREGG

BECHTEL

Site : 24
Location : 24CPT66

Geologist : [illegible]
Date : 08:24:95 Time: [illegible]



Max. Depth: 204.39 (ft)

Depth Inc.: 0.164 (ft)

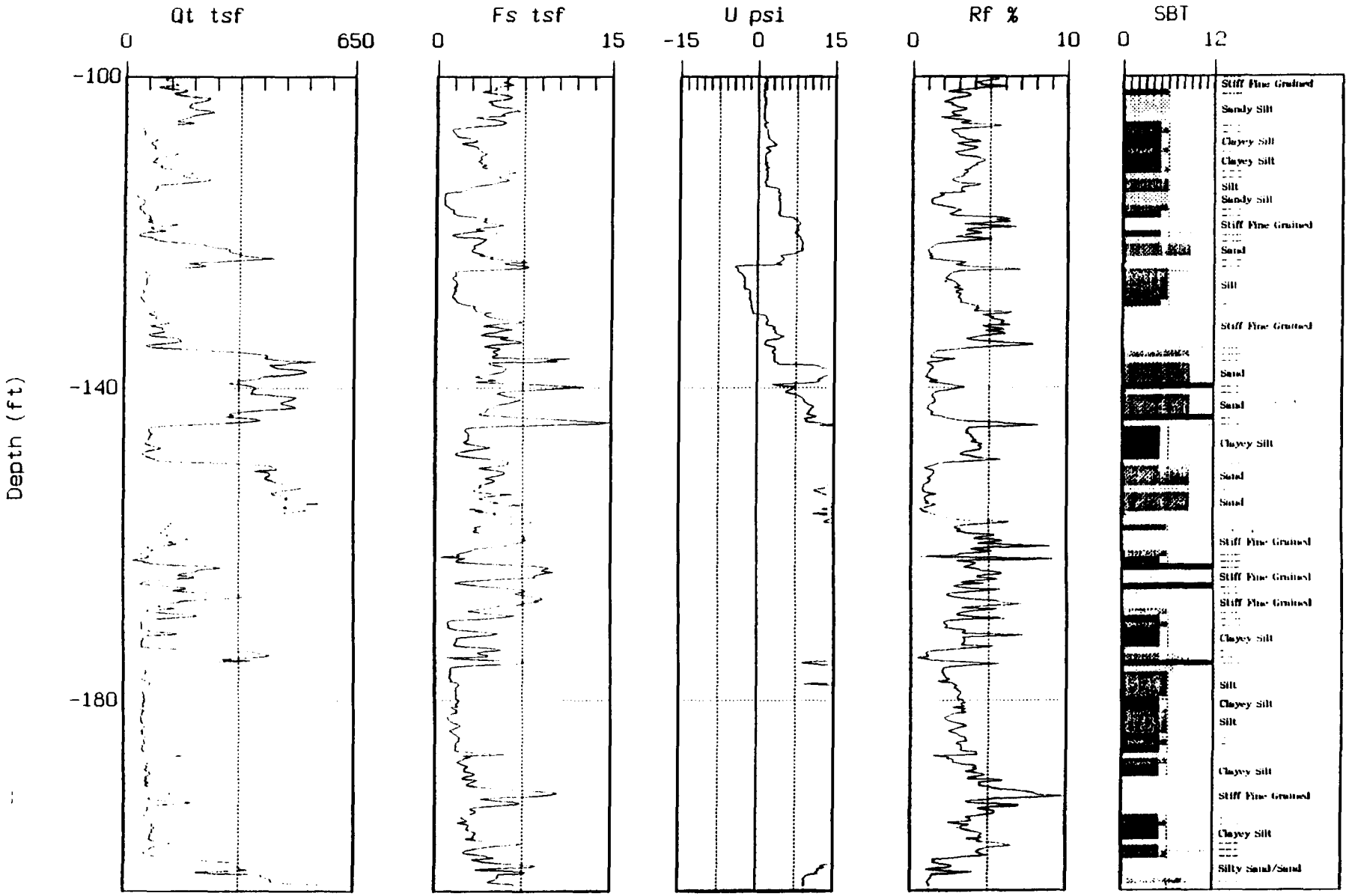
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

BECHTEL

Site : 24
Location : 24CPT66

Geologist : J. [illegible]
Date : 08:24:95 11:[illegible]



Max. Depth: 204.39 (ft)

Depth Inc: 0.164 (ft)

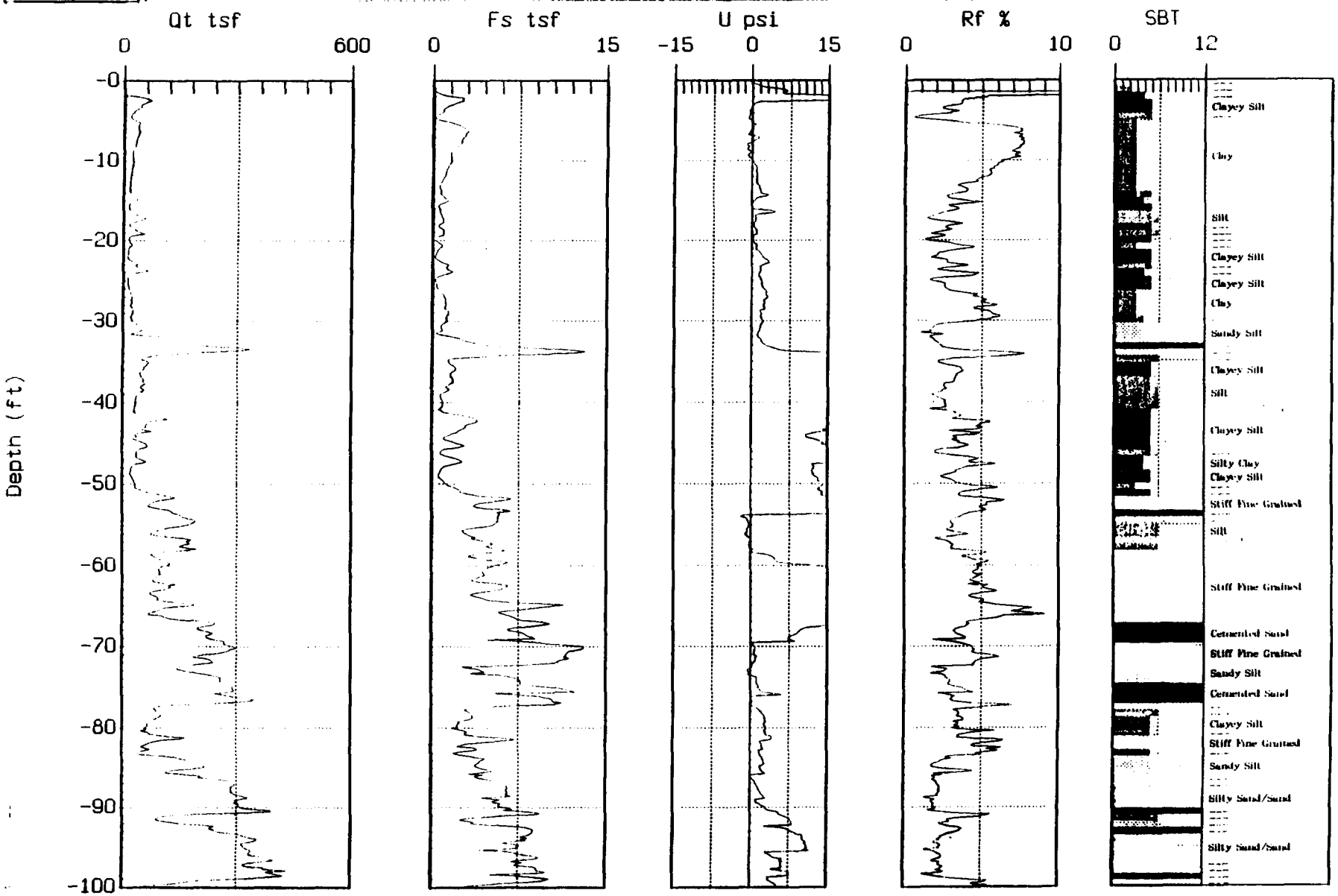
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

BECHTEL

Site : 24
Location : CPT-74

Geologist : Phil Bennett
Date : 09:22:95 08:51



Max. Depth: 150.26 (ft)

Depth Inc.: 0.164 (ft)

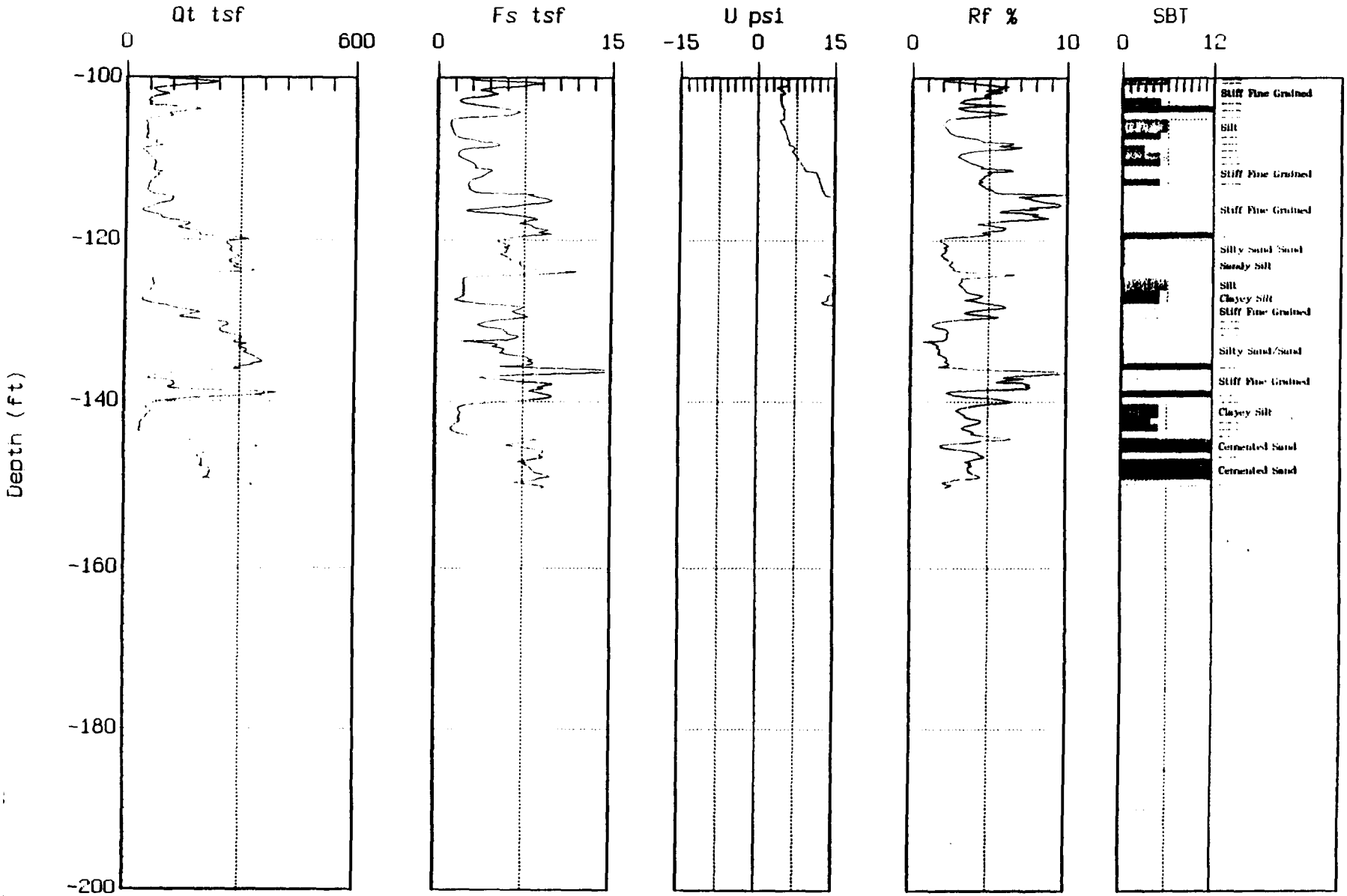
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

BECHTEL

Site : 24
Location : CPT-74

Geologist : PAT BROWN
Date : 09:22:95 08:51



Max. Depth: 150.26 (ft)

Depth Inc.: 0.164 (ft)

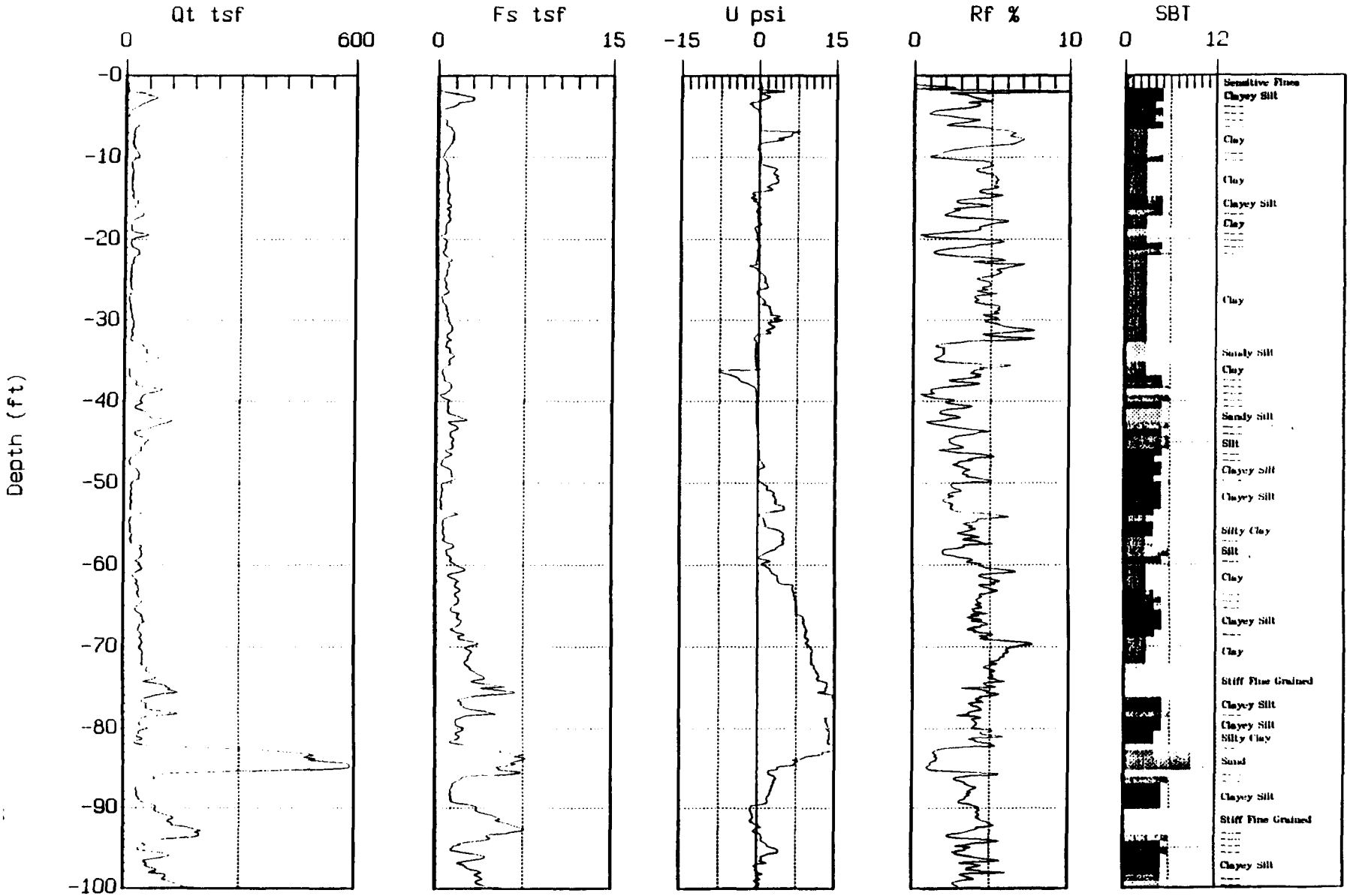
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

BECHTEL

Site : 24
Location : CPT-77

Geologist : PAT BROOKS
Date : 09:25:95 12:4[illegible]



Max. Depth: 202.75 (ft)

Depth Inc.: 0.164 (ft)

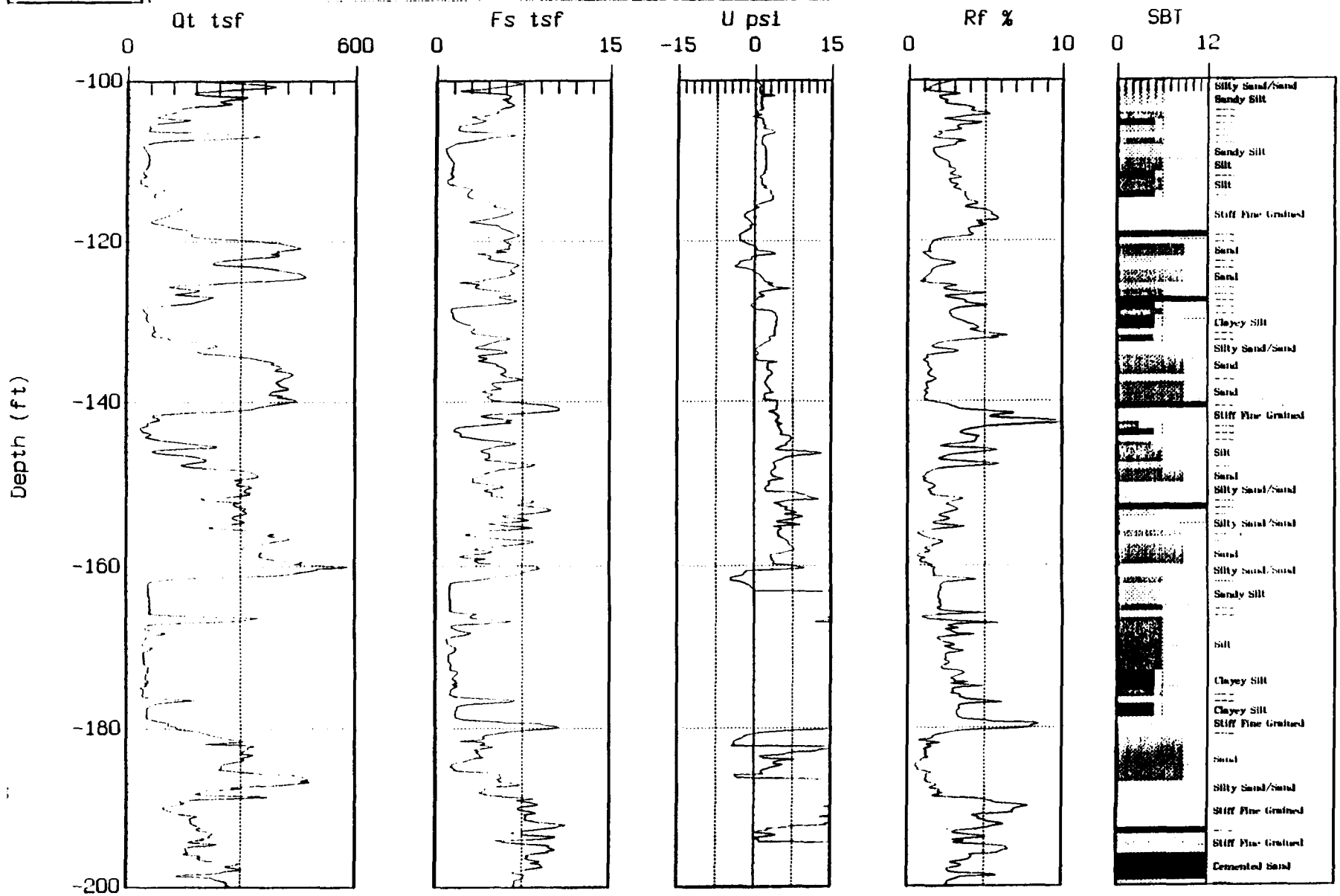
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

BECHTEL

Site : 24
Location : CPT-77

Geologist : PAT BROWN
Date : 09:25:95 12:42



Max. Depth: 202.75 (ft)

Depth Inc: 0.164 (ft)

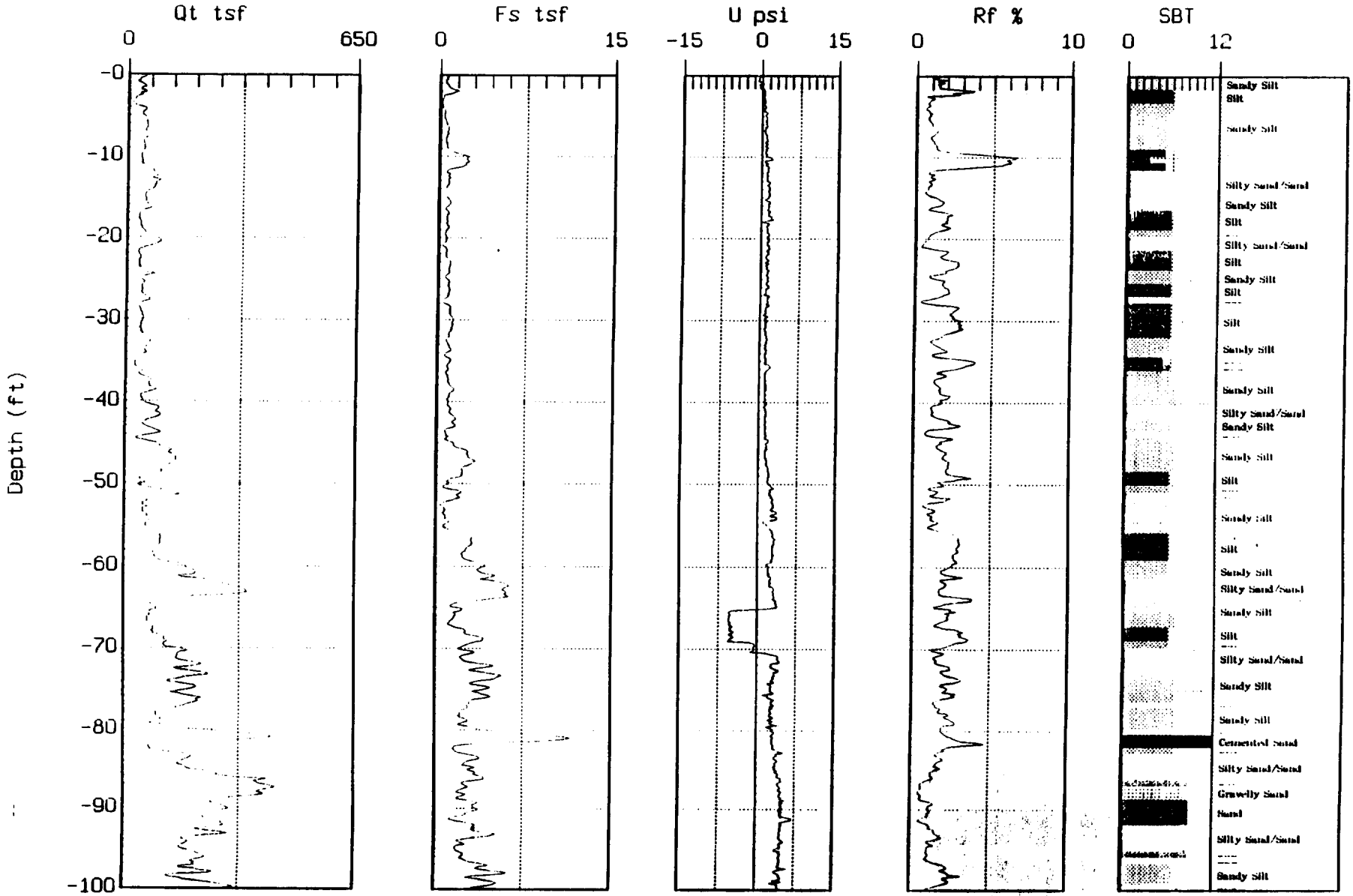
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

BECHTEL

Site : 24
Location : 24CPT-55

Geologist : J. THIBEAULT
Date : 08:22:95 08:01



Max. Depth: 195.21 (ft)

Depth Inc.: 0.164 (ft)

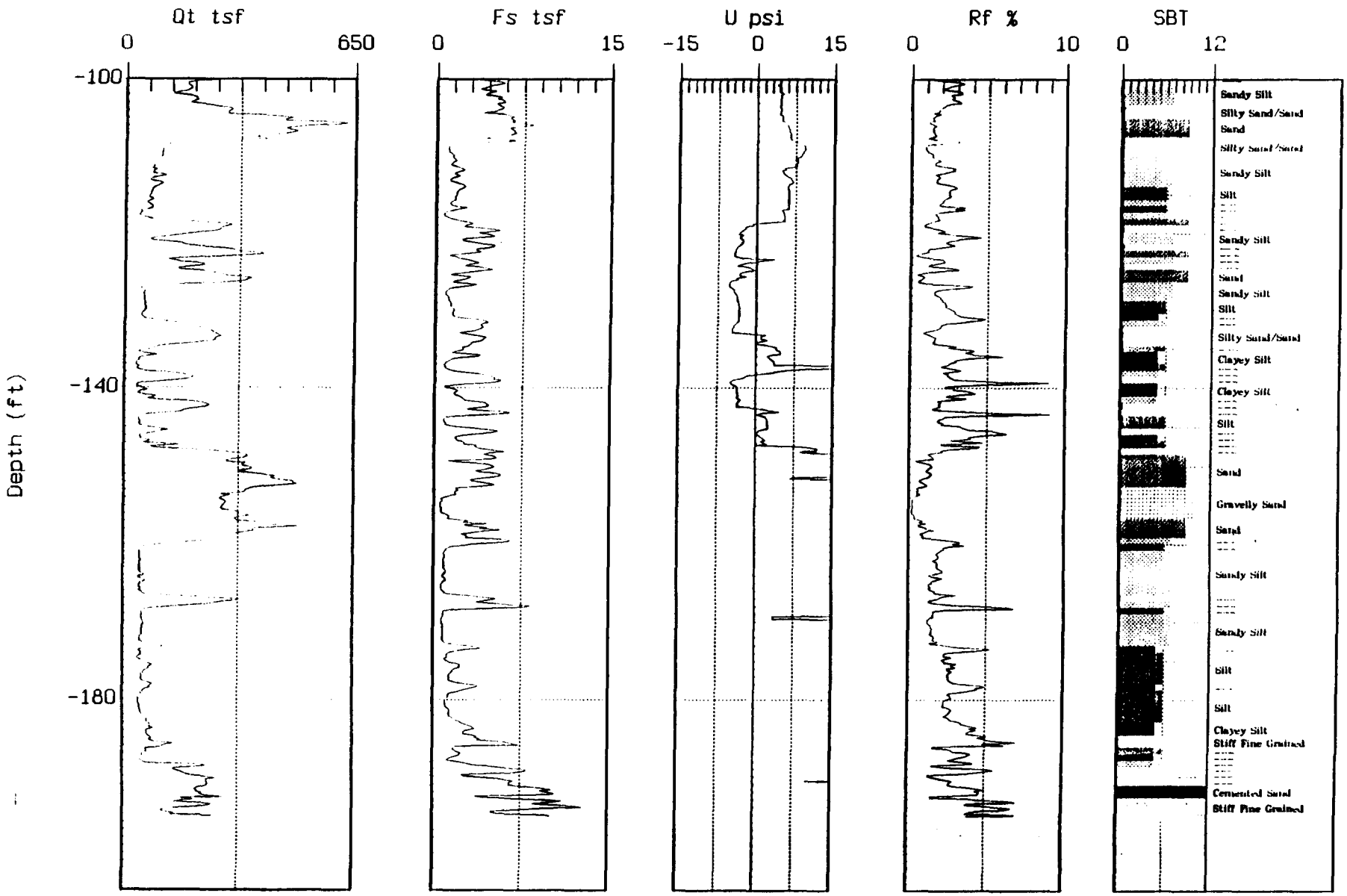
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

BECHTEL

Site : 24
Location : 24CPT-55

Geologist : J. [illegible]
Date : 08:22:95 08:01



Max. Depth: 195.21 (ft)

Depth Inc.: 0.164 (ft)

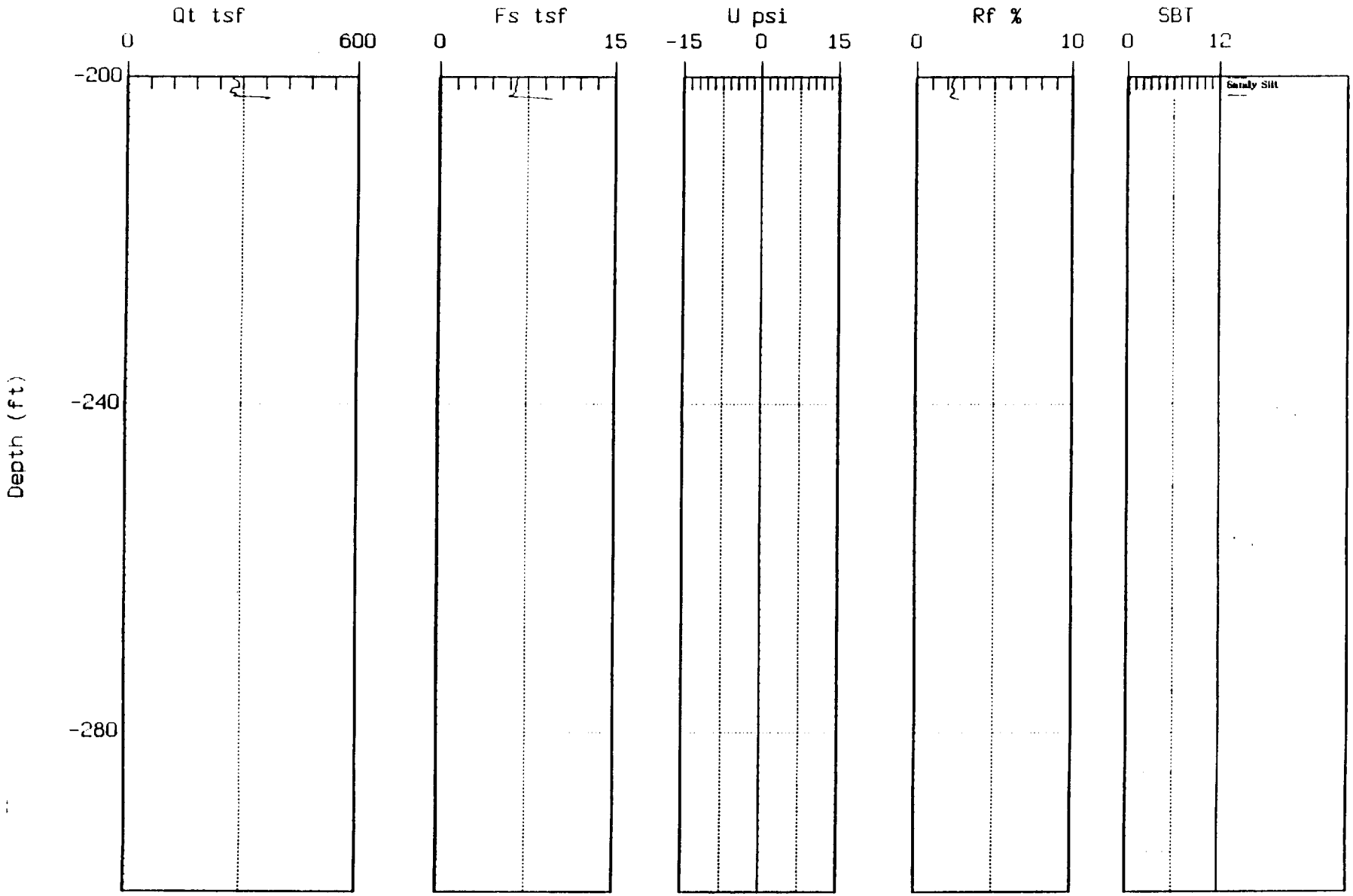
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

BECHTEL

Site : 24
Location : CPT-22

Geologist : Phil Bennett
Date : 09:25:95 12:41



Max. Depth: 202.75 (ft)

Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson and Campanella 1988)

BOREHOLE LOG

PROJECT and JOB NUMBER: *Clean II Program* 22214-073			HOLE NO. 24AS1
			SHEET NO. 1 OF
DRILLER: Water Development Corp.	SITE and LOCATION: Site 24, VOC Source Area, MCAS El Toro, CA		OVERBURDEN 163.0 / BEGUN 9-2
DRILL MAKE AND MODEL: CME 95 HSA	COORDINATES: N 2,190,285.0 E 6,108,826.9	LOGGED BY: J. Turbeville	ROCK (FT) 0.0 / COMP
HOLE SIZE DIAMETER: 8" overdrilled to 12"	GROUND EL. & DEPTH/EL. GROUND WATER: 281.5 ▽ 122.2/159.3 on 9-28-95	CHECKED BY: P. Brooks	TOTAL DEPTH 163.0 / UPDA 2-

Organic Vapor Reading (ppm) PID / FID	Radiologic Reading (cpm)	BEIDMS No.	Sample Location / Sampler Type	Core/Soil Recovery (%)	Core Length/ Sampler Advance	Blow Counts or Recovery (ft)	Elevation (Feet, MSL)	Depth in Feet	Graphics	Description and Classification	Remarks:
							281.5			0.0-12.5 ft: CLAY (CL)	NOTE: Head space readin measured with Mo 580B OVM, data r is the PID reading. Hole drilled with 8-inc diameter hollow-st auger. Soil samples collected with 2.5" OD Modifie California sampler wit 6-inch long stainle st tubes. Modified California sampler driven with automatic hammer (14 lbs/30 inch drop).
0		73W0277		100	1.5	9 9 11		5		4.5-6.0 ft: Silty Clay (CL) - Brown (7.5YR4/4), trace silt, very stiff, moist.	
0		73W0278		100	1.5	8 8 6		10		9.5-10.0 ft; less silt.	
							269.0			12.5-42.5 ft: CLAYEY SILT (ML/CL)	
0		73W0279		100	1.5	8 8 9		15		14.5-16.0 ft; Clayey Silt (ML/CL) - clay interbedded with silt, brown (7.5YR4/4), very stiff, moist.	
0		73W0280		100	1.5	6 6 6		20		19.5-21.0 ft; interbedded clay and silt, stiff, moist.	
0		73W0281		100	1.5	8 4 5		25		24.5-26.0 ft; interbedded clay and silt, stiff, moist.	Description and classification by visual examination of sample. Colors from 'Mun l Soil-Color Charts' 9.

See Figure C-1 for explanation of sampler symbols and material graphics.

SITE and LOCATION: Site 24, VOC Source Area, MCAS El Toro, CA

HOLE NO. 24AS1

BOREHOLE LOG

PROJECT and JOB NUMBER: *Clean II Program* 22214-073

HOLE NO. 24AS1

Organic Vapor PID Reading (ppm)	Radiologic Reading (cpm)	BEIDMS No.	Sample Location / Sampler Type	Core/Soil Recovery (%)	Core Length/ Sampler Advance	Blow Counts or Recovery (ft)	Elevation (Feet, MSL)	Depth in Feet	Graphics	Description and Classification	Remarks:
0		73W0282		100	1.5	10 10 5		30		29.5-31.0 ft; interbedded clay and silt, very stiff, moist.	
0		73W0283		100	1.5	n/a		35		34.5-36.0 ft; interbedded clay and silt.	
0		73W0284		50	1.5	13 10 8		40		39.5-41.0 ft; silt, stiff, moist.	
							239.0			42.5-47.5 ft: CLAY (CL)	
0		73W0285		100	1.5	10 13 15		45		44.5-46.0 ft; Clay (CL) - Brown (7.5YR4/4), soft, dry, interbedded with fine to medium sand, brown (7.5YR4/4), friable, very stiff, moist.	
							234.0			47.5-57.5 ft: SILT (ML)	
0		73W0286		100	1.5	9 10 12		50		49.5-51.0 ft; Silt (ML) - Brown (7.5YR4/4), very stiff, moist.	
0		73W0287		100	1.5	8 7 8		55		54.5-56.0 ft; Silt (ML) - Brown (7.5YR4/4), interbedded with thin clay, some fine sand, very stiff, moist.	
							224.0			57.5-77.5 ft: CLAY (CL)	
				100	1.5	10				59.5-61.0 ft; Clay (CL) - Brown (7.5YR4/4), trace silt.	

See Figure C-1 for explanation of sampler symbols and material graphics.

SITE and LOCATION: Site 24, VOC Source Area, MCAS El Toro, CA

HOLE NO. 24AS1

BOREHOLE LOG

PROJECT and JOB NUMBER: *Clean II Program* 22214-073

HOLE NO. 24AS1

Organic Vapor Reading (ppm) PID/FID	Radiologic Reading (cpm)	BEIDMS No.	Sample Location / Sampler Type	Core/Soil Recovery (%)	Core Length/ Sampler Advance	Blow Counts or Recovery (ft)	Elevation (Feet, MSL)	Depth in Feet	Graphics	Description and Classification	Remarks:
0		73W0288				16 18				hard, moist.	
0		73W0289		100	1.5	23 17 14		65		64.5-66.0 ft; Clay (CL) - Brown (7.5YR4/4), trace fine sand at base.	
0		73W0290		100	1.5	13 17 20		70		69.5-71.0 ft; Sandy clay (CL) - Brown (7.5YR4/4), some fine sand, hard, dry.	
0		73W0291		100	1.5	10 15 17		75		74.5-76.0 ft; increasing fine to coarse grained sand.	
							204.0			77.5-92.5 ft: SAND (SP)	
0		73W0292		100	1.5	8 14 17		80		79.5-81.0 ft; Sand (SP) - Olive brown (2.5Y4/2), fine, trace silt and clay, dense, friable, dry.	
0		73W0293		100	1.5	6 10 12		85		84.5-86.0 ft; increasing silt content.	
0		73W0294		100	1.5	10 11 20		90		89.5-91.0 ft; Sand (SP) - fine to medium, trace coarse sand and fine gravel.	

See Figure C-1 for explanation of sampler symbols and material graphics.

SITE and LOCATION: Site 24, VOC Source Area, MCAS El Toro, CA

HOLE NO. 24AS1

BOREHOLE LOG

PROJECT and JOB NUMBER: *Clean II Program* 22214-073

HOLE NO. 24AS1

Organic Vapor Reading (ppm) PID/FID	Radiologic Reading (cpm)	BEIDMS No.	Sample Location / Sampler Type	Core/Soil Recovery (%)	Core Length/ Sampler Advance	Blow Counts or Recovery (ft)	Elevation (Feet, MSL)	Depth in Feet	Graphics	Description and Classification	Remarks:
							189.0			92.5-102.5 ft: SANDY CLAY (CL)	
0		73W0295		100	1.5	12 12 20		95		94.5-96.0 ft: Sandy Clay (SC) - Olive brown (2.5Y4/2), fine sand, hard, moist.	
0		73W0296		50	0.5	50/5.5"		100			At 100 ft: very hard sandy clay.
							179.0			102.5-107.5 ft: SAND (SP)	
0		73W0297		100	1.5	19 23 30		105		104.5-106.0 ft: Sand (SP) - Olive brown (2.5Y4/2), fine to medium, some fine gravel, trace clay, very dense, friable, moist.	
							174.0			107.5-117.5 ft: CLAY (CL)	
0		73W0298		100	1.5	8 8 16		110		109.5-111.0 ft; Clay (CL) - Olive brown (2.5Y4/2), very stiff, moist.	
0		73W0299		100	1.5	19 23 27		115		114.5-116.0 ft; Clay (CL) - Olive brown (2.5Y4/2), hard, stiff.	
							164.0			117.5-122.5 ft: CLAYEY SILT (ML/CL)	
0		73W0300		100	1.5	7 9 15		120		119.5-121.0 ft; Clayey Silt (ML/CL) - Olive brown (2.5Y4/2), some clay and fine sand, very stiff, wet.	
							159.0			122.5-133.0 ft: SAND (SW)	

See Figure C-1 for explanation of sampler symbols and material graphics.

SITE and LOCATION: Site 24, VOC Source Area, MCAS El Toro, CA

HOLE NO. 24AS1

BOREHOLE LOG

PROJECT and JOB NUMBER: *Clean II Program* 22214-073

HOLE NO. 24AS1

SHEET NO. 5 OF 6

Organic Vapor Reading (ppm) PID/FID	Radiologic Reading (cpm)	BEIDMS No.	Sample Location / Sampler Type	Core/Soil Recovery (%)	Core Length/ Sampler Advance	Blow Counts or Recovery (ft)	Elevation (Feet, MSL)	Depth in Feet	Graphics	Description and Classification	Remarks:
1		73W0351		100	1.5	6 8 14		125		124.5-126.0 ft; Sand (SW) - Olive brown (2.5Y4/2), fine to coarse grained, trace silt, friable, medium dense, wet.	5 ft of sampler is w u 125 ft sample. Geotech. soil sample at 125.0-126.0 ft (73W03:
0.6		73W0352		100	1.5	1 2 4		130		129.5-131.0 ft; Sand with some silt, possible slough material.	Geotech. soil sample at 130.0-131.0 ft (73W03: Samples from 130- ; f are possibly slough. ar material.
							148.5			133.0-147.5 ft: CLAY (CL)	
3.5				100	1.5	3 3 6		135			
5.2				100	1.5	7 7 19		140			
0				100	1.5	2 5 9		145		144.5-146.0 ft; Clay (CL) - Olive brown (2.5Y4/2), some silt, stiff, wet.	Sample at 144.5-151.0 f appears native.
							134.0			147.5-152.5 ft: SANDY SILT (ML)	
3.7				100	1.5	9 11 13		150		149.5-151.0 ft; Sandy Silt (SM) - Olive brown (2.5Y4/2), some fine sand and clay, very stiff, wet.	Samples from 149.5-161 appears to be mostly slough.
							129.0			152.5-159.0 ft: SAND (SW)	
0				100	1.5	9 10 19		155		154.5-156.0 ft; Sand (SW) -olive brown (2.5Y4/2), fine, medium dense friable, wet.	

See Figure C-1 for explanation of sampler symbols and material graphics.

SITE and LOCATION: Site 24, VOC Source Area, MCAS El Toro, CA

HOLE NO. 24AS1

BOREHOLE LOG

PROJECT and JOB NUMBER: *Clean II Program* 22214-073

HOLE NO. 24AS1

SHEET NO. 6 OF 6

Organic Vapor Reading (ppm) PID/FID	Radiologic Reading (cpm)	BEIDMS No.	Sample Location / Sampler Type	Core/Soil Recovery (%)	Core Length/ Sampler Advance	Blow Counts or Recovery (ft)	Elevation (Feet, MSL)	Depth in Feet	Graphics	Description and Classification	Remarks:
							122.5			159.0-163.0 ft: SILT (ML)	Logged as Sandy Silt in 24CPT55.
				0	1.5	15 18 24		160			
							118.5			TOTAL DEPTH = 163.0 ft.	Note: Converted soil boring 24AS1 to air sparging well 24AS1 and a soil vapor extraction well. From 161-163 ft, borehole was backfilled with bentonite chips. From 1-161 ft, borehole was enlarged from 8" diameter to 12" diameter.

See Figure C-1 for explanation of sampler symbols and material graphics.

SITE and LOCATION: Site 24, VOC Source Area, MCAS El Toro, CA

HOLE NO. 24AS1

BOREHOLE LOG

PROJECT and JOB NUMBER: *Clean II Program* 22214-073			HOLE NO. 24AS2
			SHEET NO. 1 OF
DRILLER: Water Development Corp.	SITE and LOCATION: Site 24, VOC Source Area, MCAS El Toro, CA		OVERBURDEN: 160.0 / BEGUN: 10-[illegible]
DRILL MAKE AND MODEL: CME 95 HSA	COORDINATES: N 2,190,268.8 E 6,108,815.8	LOGGED BY: C. Kramer	ROCK (FT): 0.0 / COMPL[illegible]: 10-5-[illegible]
HOLE SIZE DIAMETER: 8" overdrilled to 12"	GROUND EL. & DEPTH/EL. GROUND WATER: 281.5 ▽ 126.0/155.5 on 10-05-95	CHECKED BY: P. Brooks/J. Turbeville	TOTAL DEPTH: 160.0 / UPDAT[illegible]: 2-3

Organic Vapor Reading (ppm) PID/FID	Radiologic Reading (cpm)	BEIDMS No.	Sample Location	Sampler Type	Core/Soil Recovery (%)	Core Length/ Sampler Advance	Blow Counts or Recovery (ft)	Elevation (Feet, MSL)	Depth in Feet	Graphics	Description and Classification	Remarks:
								281.5			**0.0-13.0 ft: SANDY CLAY (CL)**	**NOTE:** Head space reading measured with Mod 580B OVM, data re is the PID reading. Hole drilled with 8-inc diameter hollow-ste auger. Soil samples collectu with 2.5" OD Modifiec California sampler wit 3-inch long stainles tubes from depth of 116 ft. Modified California sampler driven with automatic hammer (lbs/30 inch drop).
0		73W0452			100	1.5	10 16 20		5		4.5-6.0 ft: Sandy Clay (CL) - Brown (7.5YR4/3), low plastic fines and well graded sand, trace fine gravel, hard, moist.	
0		73W0453			100	1.5	10 10 10		10		9.5-11.0 ft: Sandy Clay (CL) - Dark brown (7.5YR3/4), medium to high plastic fines, fine sand, stiff, slightly expansive, very stiff, moist.	
								268.5			**13.0-18.0 ft: SILTY SAND (SM)**	
0		73W0454			100	1.5	4 4 8		15		14.5-16.0 ft: Silty Sand (SM) - Brown (7.5YR4/3), fine to medium, with silt, weakly cemented, medium dense, moist.	
								263.5			**18.0-28.0 ft: CLAY (CH)**	
0		73W0455			50	1.5	7 7 7		20		19.5-21.0 ft: Fat Clay (CH) - Dark brown (7.5YR3/3) with streaks of (7.5YR7/7), medium to high plastic fines, some fine sand, trace dark organic material, stiff, moist.	Description and classification by visual examination of sample.
0		73W0456			100	1.5	6 4 8		25		24.5-26.0 ft: Fat Clay (CL) - Brown (7.5YR4/2), medium to high plastic clay, some fine sand, stiff, moist.	Colors from "Mun Soil-Color Charts" 9
								253.5				

See Figure C-1 for explanation of sampler symbols and material graphics.

SITE and LOCATION: Site 24, VOC Source Area, MCAS El Toro, CA

HOLE NO. 24AS2

BOREHOLE LOG

PROJECT and JOB NUMBER: *Clean II Program* 22214-073

HOLE NO. 24AS2

Organic Vapor FID Reading (ppm)	Radiologic Reading (cpm)	BEIDMS No.	Sample Location / Sampler Type	Core/Soil Recovery (%)	Core Length/ Sampler Advance	Blow Counts or Recovery (ft)	Elevation (Feet, MSL)	Depth in Feet	Graphics	Description and Classification	Remarks:
										28.0-33.0 ft: CLAYEY SAND (SC)	
0		73W0457		87	1.5	8 13 8		30		29.5-31.0 ft: Clayey Sand (SC) - Brown (7.5YR4/2), fine to medium, some clay, medium dense, moist.	
							248.5			33.0-48.0 ft: SILT (ML)	
0		73W0458		100	1.5	9 10 10		35		34.5-36.0 ft: Silt (ML) - Brown (7.5YR5/2), low plastic silt, trace fine sand, very stiff, moist.	
0		73W0459		100	1.5	6 6 8		40		39.5-41.0 ft: Silt (ML) - Brown (7.5YR5/2)	
0		73W0460		100	1.5	10 12 15		45		44.5-46.0 ft: Silt (ML) - Brown (7.5YR5/2), low plastic silt, some fine sand, very stiff, moist.	
							233.5			48.0-53.0 ft: SAND (SP)	
5.2		73W0461		100	1.5	4 10 10		50		49.5-51.0 ft: Sand (SP) - Pinkish gray (7.5YR6/2), fine, trace silt, medium dense, moist.	
							228.5			53.0-58.0 ft: SILTY CLAY (CL/ML)	
0		73W0462		100	1.5	4 9 13		55		54.5-56.0 ft: Silty Clay (CL/ML) - Brown (7.5YR5/2), medium to high plastic clay, very stiff, moist.	
							223.5			58.0-63.0 ft: CLAY (CL)	
				100	1.5	8				59.5-61.0 ft: Clay (CL) - Dark brown (7.5YR3/3), low	

See Figure C-1 for explanation of sampler symbols and material graphics.

SITE and LOCATION: Site 24, VOC Source Area, MCAS El Toro, CA

HOLE NO. 24AS2

BOREHOLE LOG

PROJECT and JOB NUMBER: *Clean II Program* 22214-073

HOLE NO. 24AS2

SHEET NO. 3 OF 6

Organic Vapor Reading (ppm) FID PID	Radiologic Reading (cpm)	BEIDMS No.	Sample Location / Sampler Type	Core/Soil Recovery (%)	Core Length/ Sampler Advance	Blow Counts or Recovery (ft)	Elevation (Feet, MSL)	Depth in Feet	Graphics	Description and Classification	Remarks:
0		73W0463				9 14				to medium plastic clay, some fine sand, very stiff, moist.	
							218.5			63.0-68.0 ft: SAND (SW)	
0		73W0464		87	1.5	13 15 28		65		64.5-66.0 ft: Sand (SW) - Dark brown (7.5YR3/2), trace gravel and cobble fragments up to 2" long, dense, moist.	
							213.5			68.0-73.0 ft: CLAY (CL)	
0		73W0465		100	1.5	12 14 21		70		69.5-71.0 ft: Clay (CL) - Brown (7.5YR4/3), low plastic clay, some coarse sand, hard, moist.	
							208.5			73.0-85.0 ft: SILT (ML)	
0		73W0466		100	1.5	11 21 23		75		74.5-76.0 ft: Silt (ML) - Strong Brown (7.5YR4/6), low plastic silt, some fine sand, hard, moist.	
2		73W0467		100	1.5	21 12 10		80		79.5-81.0 ft: Sandy Silt (ML) - Brown (7.5YR5/4), low plastic silt, with fine sand, trace gravel, very stiff, moist.	
							196.5	85		84.5-85.0 ft: Silt (ML)	
0		73W0468		100	1.5	9 15 21				85.0-88.0 ft: CLAY (CL)	
										85.0-86.0 ft: Clay (CL) - Brown (7.5YR5/3), medium plastic fines, some silt, hard, moist.	
							193.5			88.0-93.0 ft: SAND (SW)	
0		73W0469		87	1.5	12 17 23		90		89.5-91.0 ft: Sand (SW) - Brown (7.5YR5/3), fine to coarse, trace gravel, moist.	

See Figure C-1 for explanation of sampler symbols and material graphics.

SITE and LOCATION: Site 24, VOC Source Area, MCAS El Toro, CA

HOLE NO. 24AS2

BOREHOLE LOG

PROJECT and JOB NUMBER: *Clean II Program* — *22214-073*

HOLE NO. **24AS2**

Organic Vapor Reading (ppm)	Radiologic Reading (cpm)	BEIDMS No.	Sample Location / Sampler Type	Core/Soil Recovery (%)	Core Length/ Sampler Advance	Blow Counts or Recovery (ft)	Elevation (Feet, MSL)	Depth in Feet	Graphics	Description and Classification	Remarks:
							188.5.			**93.0-98.0 ft: CLAYEY SILT (ML/CL)**	
1.8		73W0470		100	1.5	10 13 23		95		94.5-96.0 ft: Clayey Silt (ML/CL) - Brown (7.5YR5/4), trace fine sand, hard, moist.	
							183.5.			**98.0-108.0 ft: CLAY (CL)**	
0		73W0471		67	1.5	10 15 19		100		99.5-101.0 ft: Clay (CL) - Brown (7.5YR4/2), low plastic clay, with fine sand, hard, moist.	
0		73W0472		73	1.5	15 16 17		105		104.5-106.0 ft: Clay (CL) - Dark brown (7.5YR3/2), low plastic clay, with fine to medium sand, hard, moist.	
							173.5.			**108.0-113.0 ft: SILTY SAND (SM)**	
0		73W0473		87	1.5	4 7 15		110		109.5-111.0 ft: Silty Sand (SM) - Dark brown (7.5YR3/3), fine to coarse sand, trace fine gravel, medium dense, moist.	
							168.5.			**113.0-120.0 ft: SANDY SILT (ML)**	
0		73W0474		100	1.5	8 9 17		115		114.5-116.0 ft: Sandy Silt (ML) - Dark brown (7.5YR4/3), with fine sand, very stiff, moist.	
		73W0476 02		80	5.0	4	161.5.	120		120.0-123.0 ft: CLAY (CL) - Dark brown (7.5YR3/3), medium to high plastic clay, some fine sand, moist.	End shift 10-03-95 Begin Shift 10-04-95 Soil samples collected with 3.5" ID continuous sampler. Samples collected in 12-inch lo: stainless steel tubes.
		73W0476 03					158.5.				
		73W0476 04								123.0-125.0 ft: SILTY CLAY (CL/ML) - Brown (7.5YR5/3), with low plastic silt, moist.	

See Figure C-1 for explanation of sampler symbols and material graphics.

SITE and LOCATION: Site 24, VOC Source Area, MCAS El Toro, CA

HOLE NO. **24AS2**

BOREHOLE LOG

PROJECT and JOB NUMBER: *Clean II Program* 22214-073

HOLE NO. 24AS2

SHEET NO. 5 OF 6

Organic Vapor Reading (ppm) PID FID	Radiologic Reading (cpm)	BEIDMS No.	Sample Location / Sampler Type	Core/Soil Recovery (%)	Core Length/ Sampler Advance	Blow Counts or Recovery (ft)	Elevation (Feet, MSL)	Depth in Feet	Graphics	Description and Classification	Remarks:
		73W0476 05					156.5	125			
		73W0477 01		86	5.0	4.3	155.5			125.0-126.0 ft: SILTY SAND (SM) - Dark brown (7.5YR3/3), fine to medium, moist.	Samples collected from 121-159 ft are for possib geotechnical analyse
		73W0477 02					154.5			126.0-127.0 ft: SANDY SILT (ML) - Brown (7.5YR5/4), with fine sand, wet.	
		73W0477 03								127.0-129.0 ft: SILTY SAND (SM) - Brown (7.5YR5/4), fine to coarse, with silt, wet.	
		73W0477 04					152.5				
		73W0477 05						130		129.0-133.0 ft: SANDY SILT (ML) - Brown (7.5YR5/3), wet.	
		NR		0	3.5	0	148.5				
		No Sample		11	1.5	8 23 27				133.0-138.0 ft: SAND (SP) - Brown (7.5YR5/2), some silt, trace gravel, very dense, wet.	
				60	5.0	3		135			
		73W0479 03					143.5				
		73W0479 04								138.0-141.0 ft: SANDY CLAY (CL) - Brown (7.5YR4/2), medium plastic clay, fine sand, wet.	
		73W0479 05						140			
		73W0480 01		90	5.0	4.5	140.5				
		73W0480 02								141.0-144.0 ft: SAND (SP) - Pale brown (10YR6/3), fine, some silt, wet.	
		73W0480 03									
		73W0480 04					137.5				
		73W0480 05								144.0-147.0 ft: SANDY SILT (ML) - Brownish yellow (10YR6/6), low plastic silt, fine sand.	
		73W0481 01		94	5.0	4.7		145			End shift 10-04-95 Begin shift 10-05-95
		73W0481 02					134.5				
		73W0481 03					133.5			147.0-148.0 ft: SAND (SM) - Yellowish brown (10YR5/4), fine to coarse sand, 20% silt.	
		73W0481 04								148.0-152.0 ft: CLAY/SANDY CLAY (CL) - Dark grayish brown (10YR4/2) to brown (10YR4/3), medium plastic clay, some sand, wet.	
		73W0481 05									
				10	3.5	0.5		150			
							129.5			152.0-158.0 ft: SAND (SP) - Brown (10YR4/3), fine to medium, some silt, wet.	
		No Sample		22	1.5	3 9 22					
				74	5.0	3.7		155			

See Figure C-1 for explanation of sampler symbols and material graphics.

SITE and LOCATION: Site 24, VOC Source Area, MCAS El Toro, CA

HOLE NO. 24AS2

BOREHOLE LOG

PROJECT and JOB NUMBER: *Clean II Program* 22214-073

HOLE NO. 24AS2

Organic Vapor Reading (ppm)	Radiologic Reading (cpm)	BEIDMS No.	Sample Location / Sampler Type	Core/Soil Recovery (%)	Core Length/ Sampler Advance	Blow Counts or Recovery (ft)	Elevation (Feet, MSL)	Depth in Feet	Graphics	Description and Classification	Remarks:
		73W0408 02									
		73W0408 03									
							123.5			158.0-160.0 ft: SAND (SW) - Brown (10YR4/3), fine to coarse, some silt, trace gravel, wet.	
		73W0408 04									
		73W0408 05					121.5	160			
										TOTAL DEPTH = 160.0 ft.	Note: While installing air sparging well at 24AS2, the screen section fell of the well string and was stuck in the hole. After unsuccessfully attempting to retrieve the screen section, it was decided to abandon borehole 24AS2. A replacement borehole was drilled approximately 10 ft south of 24AS2 and was labelled as 24AS2A. Borehole 24AS2 was backfilled with neat cement.

See Figure C-1 for explanation of sampler symbols and material graphics.

SITE and LOCATION: Site 24, VOC Source Area, MCAS El Toro, CA

HOLE NO. 24AS2

WELL CONSTRUCTION DETAILS

PROJECT and JOB NUMBER: *Clean II Program* *22214-073*			WELL NO.: 24AS
			SHEET NO. 1 C
PROJECT SITE: MCAS El Toro, CA			HOLE SIZE: 8" / 12"
DRILLER: Water Development Corp.	COORDINATES: N 2,190,285.0 E 6,108,826.9	LOGGED BY: C. Kramer	TD OF WELL: 160.0
TOP of RISER CASING/GROUND ELEV. (ft, MSL): 281.4 / 281.5	GROUND WATER DEPTH/ELEV. (Below TOC): ∇ 122.1 ft / 159.3 ft (MSL) on 9-28-95	CHECKED BY: P. Brooks	TD OF HOLE: 163.0

(Template: WELL1. ac

Well Construction Details

Borehole 24AS1 converted to one 2-inch diameter air sparging well and one 2-inch diameter soil vapor extraction well.

For complete geologic description, see borehole log of 24AS1.

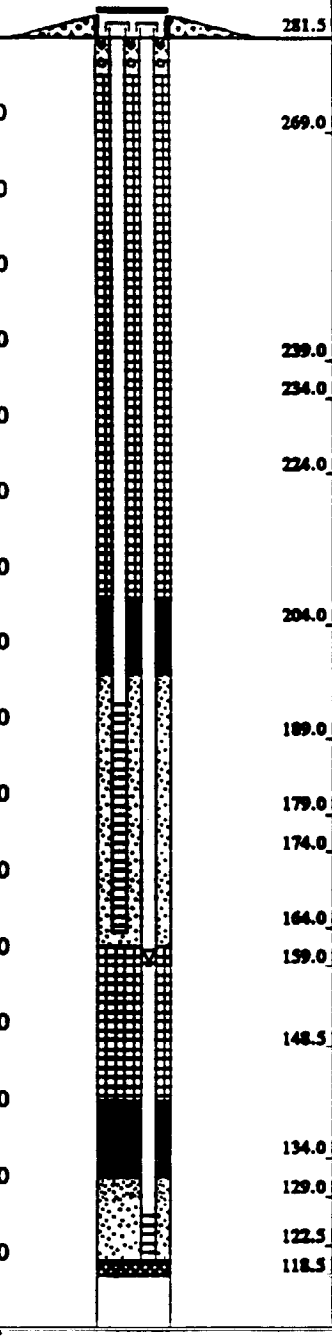
Top of riser casing elevation (ft, MSL)

24SVE AS1 = 281.38 ft.
24AS1 = 281.37 ft.

24SVE AS1 - Soil Vapor Extraction Well

24AS1 - Air Sparging Well

Well Graphics



Geologic Description and Classification

0.0-12.5 ft: CLAY (CL)
12.5-42.5 ft: CLAYEY SILT (ML/CL)
42.5-47.5 ft: CLAY (CL)
47.5-57.5 ft: SILT (ML)
57.5-77.5 ft: CLAY (CL)
77.5-92.5 ft: SAND (SP)
92.5-102.5 ft: SANDY CLAY (CL)
102.5-107.5 ft: SAND (SP)
107.5-117.5 ft: CLAY (CL)
117.5-122.5 ft: CLAYEY SILT (ML/CL)
122.5-133.0 ft: SAND (SW)
133.0-147.5 ft: CLAY (CL)
147.5-152.5 ft: SANDY SILT (ML)
152.5-159.0 ft: SAND (SW)
159.0-163.0 ft: SILT (ML)

TOTAL DEPTH = 163.0 ft.

See Figure C-1 for explanation of sampler symbols and material graphics.

SITE: Site 24, VOC Source Area

REFERENCE HOLE NO.: 24AS1

WELL CONSTRUCTION DETAILS	PROJECT and JOB NUMBER	WELL NO.
	Clean II Program 22214-073	24AS 1
		SHEET NO. 2 OF 2

SURFACE COMPLETION

SURFACE COMPLETION

Dia. & Type: 12" Emco Wheaton Flush mounted Christy Box

CONCRETE

From = 0.0 ft. To = 5.0 ft.
Type: 400 psi Concrete

SEALS

GROUT SEAL

From = 5.0 ft. To = 74.0 ft.
Type: Neat Cement

BENTONITE SEAL

From = 74.0 ft. To = 84.0 ft.
Type: Bentonite slurry

GROUT SEAL

From = 120.0 ft. To = 140.0 ft.
Type: Neat Cement

BENTONITE SEAL

From = 140.0 ft. To = 150.0 ft.
Type: Bentonite Slurry/Grout

24SVE AS1

RISER CASING

Dia. & Type: 2" diameter, Sch 40 PVC

FILTER PACK

From = 84.0 ft. To = 86.0 ft.
Type: #30 Sand

From = 86.0 ft. To = 120.0 ft.
Type: #2/16 Sand

SCREEN INFORMATION

From = 88.0 ft. To = 118.0 ft.
Dia. & Type: 2" diameter, Sch 40 PVC
Slot Size & Type: 0.020-inch machine slotted

SUMP

Dia. & Type: 2" diameter PVC end cap

TD OF WELL = 118.0 ft.

24AS 1

RISER CASING

Dia. & Type: 2" diameter, Sch 80 PVC

FILTER PACK

From = 150.0 ft. To = 153.0 ft.
Type: #30 Sand

From = 153.0 ft. To = 161.0 ft.
Type: #2/16 Sand

SCREEN INFORMATION

From = 155.0 ft. To = 160.0 ft.
Dia. & Type: 2" diameter, Stainless steel
Slot Size & Type: 0.010-inch slot

SUMP

Dia. & Type: 2" diameter, Stainless steel

TD OF WELL = 161.0 ft.

See Figure C-1 for explananon of sampler symbols and material graphics.	SITE and LOCATION	REFERENCE HOLE NO.
	Site 24, VOC Source Area, MCAS El Toro, CA	24AS1

Template: well.1.2, scale: 170

WELL CONSTRUCTION DETAILS

PROJECT and JOB NUMBER: *Clean II Program* *22214-073*			WELL NO.: 24AS 2A
			SHEET NO. 1 OF
PROJECT SITE: MCAS El Toro, CA			HOLE SIZE: 8" / 12" — BEGUN: 10
DRILLER: Water Development Corp.	COORDINATES: N 2,190,258.3 E 6,108,804.0	LOGGED BY: C. Kramer	OF WELL: 161.0 — COM: 10-1
TOP of RISER CASING/GROUND ELEV. (ft, MSL): 281.4 / 281.6	GROUND WATER DEPTH/ELEV. (Below TOC): ∇ 125.9 ft / 155.5 ft (MSL) on 10-05-95	CHECKED BY: P. Brooks	OF HOLE: 161.0 — UPD: 2

(Template: WELL1, scale:

Well Construction Details

Borehole 24AS2A converted to one 2-inch diameter air sparging well and one 2" diameter soil vapor extraction well.

For complete geologic description, see borehole log of 24AS2.

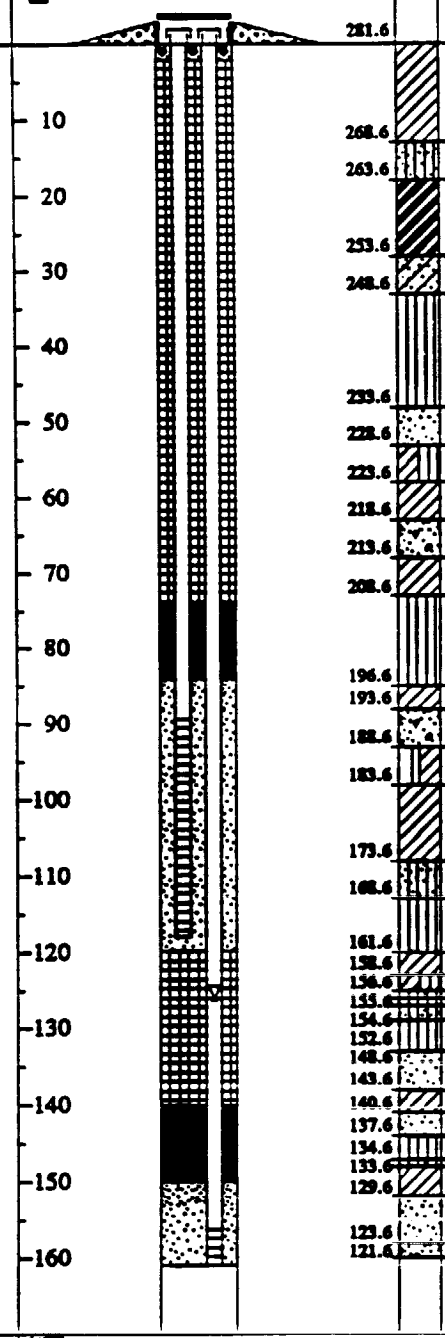
Top of riser casing elevation (ft, MSL)

24SVE AS2A = 281.37 ft.
24AS2A = 281.38 ft.

24SVE AS2A - Soil Vapor Extraction Well

24AS2A - Air Sparging Well

Well Graphics



Geologic Description and Classification

0.0-13.0 ft: SANDY CLAY (CL)
13.0-18.0 ft: SILTY SAND (SM)
18.0-28.0 ft: CLAY (CH)
28.0-33.0 ft: CLAYEY SAND (SC)
33.0-48.0 ft: SILT (ML)
48.0-53.0 ft: SAND (SP)
53.0-58.0 ft: SILTY CLAY (CL/ML)
58.0-63.0 ft: CLAY (CL)
63.0-68.0 ft: SAND (SW)
68.0-73.0 ft: CLAY (CL)
73.0-85.0 ft: SILT (ML)
85.0-88.0 ft: CLAY (CL)
88.0-93.0 ft: SAND (SW)
93.0-98.0 ft: CLAYEY SILT (ML/CL)
98.0-108.0 ft: CLAY (CL)
108.0-113.0 ft: SILTY SAND (SM)
113.0-120.0 ft: SANDY SILT (ML)
120.0-123.0 ft: CLAY (CL)
123.0-125.0 ft: SILTY CLAY (CL/ML)
125.0-126.0 ft: SILTY SAND (SM)
126.0-127.0 ft: SANDY SILT (ML)
127.0-129.0 ft: SILTY SAND (SM)
129.0-133.0 ft: SANDY SILT (ML)
133.0-138.0 ft: SAND (SP)
138.0-141.0 ft: SANDY CLAY (CL)
141.0-144.0 ft: SAND (SP)
144.0-147.0 ft: SANDY SILT (ML)
147.0-148.0 ft: SAND (SM)
148.0-152.0 ft: CLAY/SANDY CLAY (CL)
152.0-158.0 ft: SAND (SP)
158.0-160.0 ft: SAND (SW)

TOTAL DEPTH of borehole 24AS2 = 160.0

See Figure C-1 for explanation of sampler symbols and material graphics.

SITE: Site 24, VOC Source Area

REFERENCE HOLE ...D.: 24AS2

WELL CONSTRUCTION DETAILS	PROJECT and JOB NUMBER	WELL NO.
	Clean II Program *22214-073*	24AS 2A
		SHEET NO. 2 OF 2

SURFACE COMPLETION

SURFACE COMPLETION

Dia. & Type: 12" Emco Wheaton Flush mounted Christy Box

CONCRETE

From = 0.0 ft. To = 3.0 ft.
Type: 400 psi Concrete

SEALS

GROUT SEAL

From = 3.0 ft. To = 74.0 ft.
Type: Neat Cement

BENTONITE SEAL

From = 74.0 ft. To = 84.0 ft.
Type: Bentonite slurry

GROUT SEAL

From = 120.0 ft. To = 140.0 ft.
Type: Neat Cement

BENTONITE SEAL

From = 140.0 ft. To = 150.0 ft.
Type: Bentonite Slurry/Grout

24SVE AS2A

RISER CASING

Dia. & Type: 2" diameter, Sch 40 PVC

FILTER PACK

From = 84.0 ft. To = 86.0 ft.
Type: #30 Sand

From = 86.0 ft. To = 120.0 ft.
Type: #2/16 Sand

SCREEN INFORMATION

From = 88.0 ft. To = 118.0 ft.
Dia. & Type: 2" diameter, Sch 40 PVC
Slot Size & Type: 0.020-inch machine slotted

SUMP

Dia. & Type: 2.0" diameter PVC end cap

TD OF WELL = 118.0 ft.

24AS 2A

RISER CASING

Dia. & Type: 2" diameter, Sch 80 PVC

FILTER PACK

From = 150.0 ft. To = 153.0 ft.
Type: #30 Sand

From = 153.0 ft. To = 161.0 ft.
Type: #2/16 Sand

SCREEN INFORMATION

From = 155.0 ft. To = 160.0 ft.
Dia. & Type: 2" diameter, Stainless steel
Slot Size & Type: 0.010-inch slot

SUMP

Dia. & Type: 2" diameter, Stainless steel

TD OF WELL = 161.0 ft.

See Figure C-1 for explanation of sampler symbols and material graphics.	SITE and LOCATION	REFERENCE HOLE NO.
	Site 24, VOC Source Area, MCAS El Toro, CA	24AS2

Template: WELL2, scale: 170

WELL CONSTRUCTION DETAILS

PROJECT and JOB NUMBER: *CLEAN II* 22214-073		HOLE NO. 24EX1	SHEET NO. 1 OF 2
SITE and LOCATION: Site 24, VOC Source Area MCAS El Toro		HOLE SIZE 12"	BEGUN 4-1-96
DRILLING COMPANY: Water Development Corp.	COORDINATES: N 2,190,257.84 E 6,108,813.50	LOGGED BY: W. McConihe	TD OF WELL 224.9 / COMPLETED 4-2-96
ELEV.: TOP of RISER CASING / GROUND: 281.34 / 279.64	GROUND WATER DEPTH / ELEVATION: ▼ 121.30/158.34 4-30-96	CHECKED BY: P. Brooks	TD of HOLE 228.0 / UPDATE 11-11-96

Well Construction Details

SURFACE COMPLETION
Dia. & Type: 2 ft. square steel box

GROUT SEAL
Type: Cement w/ ~5% Bentonite

RISER CASING
Dia. & Type: 6" Schedule 40 PVC

BENTONITE SEAL
Top of Seal = 112.0 ft.
Type: Enviroplug medium chips

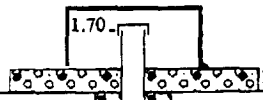
TRANSITION SAND
Top of Sand = 115.0 ft.
Type: #0/30 Silica

FILTER PACK
Top of Filter Pack = 117.0 ft.
Type: #2/16 Lonestar

SCREEN
Top of Screen = 122.5 ft.
Dia. & Type: 6" Stainless steel
Slot Size & Type: 0.02" wire-wrap
Bottom of Screen = 222.5 ft.

SUMP
Dia. & Type: 6" Stainless steel
Bottom of Sump = 224.9 ft.

Well Graphics



Depth in Feet: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100

Elevation in Feet: 268.6, 263.6, 260.1, 247.1, 243.1, 240.6, 238.6, 227.6, 221.6, 218.6, 214.6, 208.1, 201.6, 198.6, 190.1, 184.6, 177.6

Graphics

Geologic Description and Classification

0-11.0 ft: SILTY SAND (SM): Dark brown [7.5YR 3/2], moist, fine to medium, ~20% gravel up to 1.5 inch diameter, some rootlets down to 4.0 ft.
at 4.0 ft: color change to Grayish brown [10YR 5/2], fine with ~5% medium and ~5% coarse, trace clay.

11.0-16.0 ft: SILTY CLAY (CL): Brown [7.5YR 5/2], moist, fine to medium, trace coarse sand and gravel up to 3/8 inch diameter, trace caliche.

16.0-19.5 ft: SAND (SP): Brown [10YR 4/3], moist, fine with ~5% medium, trace mica.

19.5-32.5 ft: SILTY SAND (SM): Brown [10YR 4/3], moist, fine with ~5% medium, trace mica.

32.5-36.5 ft: SILTY CLAY (CL): Dark brown [7.5YR 3/2], moist, some medium to coarse sand.

36.5-39.0 ft: SILTY SAND (SM): Brown [10YR 5/3], dry, fine to medium, trace mica.

39.0-41.0 ft: SAND (SP). Brown [10YR 5/3], moist, fine with <5% medium.

41.0-52.0 ft: SILTY SAND (SM): Pale brown [10YR 6/3], moist, fine, some mica; some sand lenses.

52.0-58.0 ft: SILTY CLAY (CL): Dark brown [10YR 4/3], moist, low plasticity, micaceous.

58.0-61.0 ft: SILTY SAND with Clay (SM): Dark brown [7.5YR 3/4], moist, fine to medium.

61.0-65.0 ft: SILTY CLAY (CL): Dark brown [7.5YR 3/4], moist, some fine to medium sand.

65.0-71.5 ft: SANDY CLAY (CL): Dark brown [7.5YR 3/4], moist, fine to medium.

71.5-78.0 ft: CLAYEY SAND (SC): Dark brown [10YR 4/3], moist, fine to medium.

78.0-81.0 ft: SAND (SW): Yellowish brown [10YR 5/4], moist, fine to medium with some coarse.

81.0-89.5 ft: SILTY SAND (SM): Yellowish brown [10YR 5/4], moist, fine to medium with some coarse.

89.5-95.0 ft: SAND (SP): Yellowish brown [10YR 5/4], moist, fine to medium with trace coarse.

95.0-102.0 ft: SILTY SAND (SM): Yellowish brown [10YR 5/4], moist, fine with ~20% medium and trace coarse.

102.0-112.0 ft: SAND (SP): Yellowish brown [10YR 5/4], moist, fine to medium with 5-10% silt.

See key for graphic symbols.

SITE and LOCATION: Site 24, VOC Source Area MCAS El Toro — HOLE NO. 24EX1

Project ID: EL073; dpk-D:\gmt

CONSTRUCTION DETAILS (cont.)	PROJECT and JOB NUMBER: *CLEAN II* 22214-073	HOLE NO. 24EX1 SHEET NO. 2 OF 2

Construction Details	Graphics: Depth in Feet	Graphics: Elevation in Feet	Graphics	Geologic Description and Classification
	112.0	167.6	167.6	112.0-124.5 ft: SILTY CLAY (CL): Brown [10YR 5/3], moist, low plasticity, some sand.
	115.0	164.6		
	117.0	162.6		
	120			
	122.5	157.1	155.1	124.5-131.0 ft: CLAYEY SAND (SC): Yellowish brown [10YR 5/4], moist, fine to medium.
	130		148.6	at 129.0 ft: saturated, medium to coarse sand layer.
				131.0-155.0 ft: SAND (SW): Yellowish brown [10YR 5/4], saturated, fine to coarse
	140			
	150			at 150.0 ft: grades to fine to medium with ~5% coarse.
			124.6	
			121.1	155.0-158.0 ft: GRAVELLY SAND (SW): Light olive brown [2.5Y 5/3], saturated, fine to coarse, with subrounded to rounded gravel up to 1.25 inch diameter.
	160			158.0-167.0 ft: SAND (SP): Light olive brown [2.5Y 5/3], saturated, fine with ~5% medium, some silt.
			112.6	167.0-171.0 ft: CLAYEY SILT (ML): Olive brown [2.5Y 4/3], saturated, some fine sand.
	170		108.6	171.0-176.0 ft: SILTY SAND (SM): Olive brown [2.5Y 4/3], saturated, fine, with ~5% medium.
			103.6	
			101.6	176.0-178.0 ft: SAND (SW): Olive brown [2.5Y 4/3], saturated, fine to coarse, some silt.
	180		99.6	178.0-180.0 ft: CLAYEY SAND (SC): Olive brown [2.5Y 4/3], wet, fine.
				180.0-192.0 ft: SILTY SAND (SM): Olive brown [2.5Y 4/3], saturated, fine with ~5% medium. at 185.0 ft: less silt with depth, fine to medium. at 188.0 ft: more silt, fine. at 191.0 ft: 10-15% medium, <5% gravel, trace clay.
	190		87.6	192.0-199.0 ft: SAND (SW): Olive brown [2.5Y 4/3], saturated, fine to coarse, <5% fine gravel. below 196.0 ft: interbedded with clayey silt, silty clay, fine sand, and fine to medium sand layers.
			80.6	
	200			199.0-225.0 ft: SILTY SAND (SM): Olive brown [2.5Y 4/3], saturated, fine. at 205.0 ft: with ~5% medium, trace clay at 207.0 ft: fine to medium, less silt. at 210.0 ft: 5-10% medium, more silt. at 213.0 ft: fine to coarse, 5-10% gravel up to 3/4 inch diameter, less silt. at 217.0 ft: more silt, fine, ~5% medium. at 218.0 ft: fine to coarse, with 5-10% subrounded gravel up to 1.25 inch diameter. at 222.0 ft: interbedded with clayey layers.
	210			
	220			
	222.5	57.1		
	224.9	54.7	54.6	
	228.0	51.6	51.6	225.0-228.0 ft: GRAVELLY SAND (SW): Olive brown [2.5Y 4/3], saturated, fine to coarse, with subrounded gravel up to 1 inch diameter; 5% cobbles up to 3.5 inch diameter at 227.0 ft.

See key for graphic symbols.

SITE and LOCATION: Site 24, VOC Source Area MCAS El Toro

HOLE NO. 24EX1

Project ID: EL073; dpk D:\pim template: WELLS. 11/96

WELL CONSTRUCTION DETAILS

PROJECT and JOB NUMBER: *CLEAN II* 22214-073		HOLE NO. 24EX1OB	SHEET NO. 1 OF 4
SITE and LOCATION: Site 24, VOC Source Area MCAS El Toro		HOLE SIZE 8.25"	BEGUN 3-22-96
DRILLING COMPANY: Water Development Corp.	COORDINATES: N 2,190,245.30 E 6,108,828.85	LOGGED BY: S. Blanchard	TD OF WELL 221.2 / COMPLETED 3-27-96
ELEV.: TOP of RISER CASING / GROUND: 280.79 / 279.58	GROUND WATER DEPTH / ELEVATION: ∇ 118.80/160.78 4-30-96	CHECKED BY: P. Brooks	TD of HOLE 224.0 / UPDATE 11-11-96

Well Construction Details

SURFACE COMPLETION

Dia. & Type: 2 ft. square steel box

GROUT SEAL

Type: Cement w/ ~5% Bentonite

RISER CASING

Dia. & Type: 2" Schedule 80 PVC

BENTONITE SEAL

Top of Seal = 109.5 ft.

Type: Enviroplug medium chips

TRANSITION SAND

Top of Sand = 112.5 ft.

Type: #0/30 Silica

FILTER PACK

Top of Filter Pack = 114.5 ft.

Type: #2/16 Lonestar

SCREEN

Top of Screen = 120.8 ft.

Dia. & Type: 2" Schedule 80 PVC

Slot Size & Type: 0.02" wire-wrap

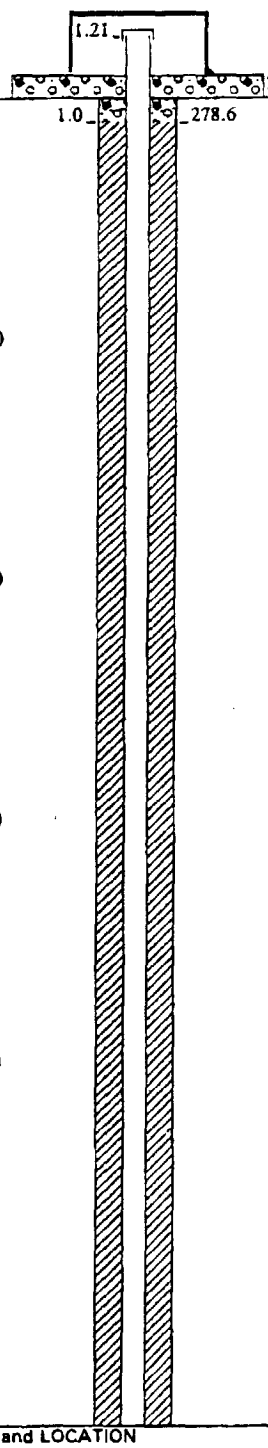
Bottom of Screen = 218.8 ft.

SUMP

Dia. & Type: 2" Schedule 80 PVC

Bottom of Sump = 221.2 ft.

Well Graphics



Geologic Description and Classification

0-8.8 ft: SILTY SAND (SM): Dark brown [10YR 3/3], loose, dry to moist, fine to medium, trace clay and gravel up to 1.75 inch diameter.

at 6.0 ft: medium dense
between 6.6 - 8.5 ft: with 5-15% rootlets < 1mm diameter, with white caliche in cracks.

270.8

8 8-11.7 ft: SAND (SP): Brown [10YR 4/3], medium dense, dry to moist, fine to medium, subangular, some silt.

267.9

11.7-13.2 ft. CLAYEY SILT (ML): Brown [10YR 4/3], stiff, dry to moist.

266.4

13.2-18.3 ft: SAND (SP): Brown [10YR 4/3], medium dense, dry to moist, fine to medium, subangular, some silt.
at 14.5 ft: trace silt.
at 16.5 ft: some silt.
at 17.2 ft: trace silt.
at 17.9 ft: 5-10% coarse.

261.3

260.4

18.3-19.2 ft: SANDY CLAYEY SILT (ML): Dark brown [7.5YR 4/3], soft, moist, fine.

19.2-24 0 ft: SAND (SP-SW): Yellowish brown [10YR 5/4], loose, moist, fine to medium, subangular, trace silt.
at 22.5 ft: 2-20% coarse.
at 23.5 ft: fine to coarse, <5% gravel up to 3/8 inch diameter.

255.6

24.0-27.3 ft: CLAYEY SILT (ML): Brown [10YR 4/3], soft, moist.

252.3

27.3-28.8 ft: SILTY SAND (SM): Brown [10YR 5/3], medium dense, moist, fine, subangular.

250.8

28.8-33.0 ft: CLAYEY SILT (ML): Dark yellowish brown [10YR 3/4], soft, moist, some fine sand.
at 30.0 ft: less silt, more clay.
at 31.0 ft: less clay, ~5-10% caliche filling in cracks, weak blocky structure.

246.6

33.0-38.8 ft: SILTY SAND (SM): Yellowish brown [10YR 5/4], medium dense, dry to moist, fine, less silt with depth.

at 37.0 ft: more silt, less sand, some clay.

240.9

38.8-52.7 ft: SAND (SP): Pale brown [10YR 6/3], loose, moist, fine, subangular, trace silt.

at 42.6 ft: medium dense, silty 10-20% silt, with indistinct Light olive brown [2.5Y 5/6] laminations.
between 44.0 - 46.0 ft: loose, little to no silt, 5-10% medium.

at 47.8 ft: silty, fine sand.

at 51.0 ft: weakly laminated.

226.9

225.8

52.7-53.8 ft: CLAYEY SILT (ML): Olive brown [2.5Y 4/3], soft, moist, laminated < 1mm thick.

See key for graphic symbols.

SITE and LOCATION: Site 24, VOC Source Area MCAS El Toro

HOLE NO. 24EX1OB

Project ID: EL073; dpk-D:\gint

CONSTRUCTION DETAILS (cont.)

PROJECT and JOB NUMBER: *CLEAN II* 22214-073

HOLE NO. 24EX1OB

SHEET NO. 2 OF 4

Construction Details	Graphics: Depth in Feet	Graphics: Elevation in Feet	Graphics	Geologic Description and Classification
		222.1		53.8-57.5 ft: SILTY SAND (SM): Dark brown [10YR 3/3], medium dense, moist, fine, trace clay. at 55.5 ft: dense, trace medium.
	60			57.5-63.7 ft: SANDY SILT (ML): Dark yellowish brown [10YR 3/4], medium stiff, moist, fine. between 59.0 - 61.5 ft. clayey silt. at 61.5 ft: color change to Strong brown [7.5YR 4/6].
		215.9		
		215.6		63.7-64.0 ft SAND (SW): Yellowish brown [10YR 5/4], moist, loose, moderately well graded, fine to medium, 5% coarse, subangular.
		213.9		64.0-65.7 ft: CLAYEY SAND (SC): Yellowish brown [10YR 5/4], very dense, moist, fine to medium, with ~25% gravel up to 1.5 inch diameter
		210.4		65.7-69.2 ft: SILTY SAND (SM): Yellowish brown [10YR 5/4], dense, moist, fine, ~5% medium, 5-10% coarse, <5% fine gravel, some clay.
	70			
		208.1		69.2-71.5 ft: SANDY SILT (ML): Light olive brown [2.5Y 5/3], soft, moist, fine to medium, trace coarse, gradational change to silty sand.
		205.1		71.5-74.5 ft: SILTY SAND (SM): Dark yellowish brown [10YR 4/6], dense, moist, fine to coarse, subrounded to subangular. at 73.0 ft: fine, less silt with depth.
				74.5-101.3 ft: SAND (SP-SW): Dark yellowish brown [10YR 4/6], medium dense, moist, fine, some silt. at 77.5 ft: fine to coarse, trace fine gravel.
	80			at 81.4 ft: fine.
				at 84.0 ft: color change to Light olive brown [2.5Y 5/], trace medium, some silt.
				at 87.5 ft: trace silt.
				at 88.6 ft: some silt.
	90			
	100			
		178.3		at 99.8 ft: color change to Light yellowish brown [2.5Y 6/3], loose, moist, fine to coarse, subangular, weakly laminated.
		177.1		101.3-102.5 ft: SILT (ML): Brown [10YR 4/3], very stiff, moist, some fine sand and clay.
		175.9		102.5-103.7 ft: SILTY SAND (SM): Brown [10YR 4/3], medium dense, moist, fine to medium, ~5% fine gravel.
				103.7-107.3 ft: SAND (SP-SW): Dark yellowish brown [10YR 4/4], loose, moist, fine to coarse, with gravel up to 2.75 inches, some silt.
		172.3		at 105.3 ft: color change to Light olive brown [2.5Y 5/4], fine, silt content decreasing with depth.
	109.5	170.1		107.3-109.5 ft: SILTY CLAY (CL): Olive brown [2.5Y 4/4], very stiff, moist, ~5-10% fine sand.
	110			109.5-112.5 ft: CLAYEY SILT (ML): Olive brown [2.5Y 4/3], stiff, moist, weakly laminated, crumbles along laminae and fractures.
	112.5	167.1		112.5-114.0 ft: SAND (SP): Light olive brown [2.5Y 5/6], loose, moist, fine, trace silt and clay.
	114.5	165.1		114.0-116.7 ft: SANDY CLAYEY SILT (ML): Olive brown [2.5Y 4/4], stiff, moist, fine to medium, less clay with depth.
		162.9		116.7-118.7 ft: CLAYEY SILTY SAND (SM): Olive brown

See key for graphic symbols.

SITE and LOCATION: Site 24, VOC Source Area MCAS El Toro

HOLE NO. 24EX1OB

Project ID: EL073; dpk-D:\gint template: WELLS, 11/96

CONSTRUCTION DETAILS (cont.)	PROJECT and JOB NUMBER: *CLEAN II* 22214-073	HOLE NO. 24EX1OB SHEET NO. 3 OF 4

Construction Details	Graphics: Depth in Feet	Graphics: Elevation in Feet	Graphics	Geologic Description and Classification
		160.9		[2.5Y 4/4], medium dense, moist, fine, trace medium.
	120	159.1		118.7-120.5 ft: CLAYEY SILT (ML): Olive brown [2.5Y 4/4], stiff, moist.
	120.8	158.8		120.5-123.5 ft: SILTY SAND (SM): Light olive brown [2.5Y 5/4], loose, saturated, fine, trace medium and coarse.
		156.1		at 122.7 ft: 4 inch thick bed with 20-25% gravel up to 1.25 inch diameter.
				123.5-128.6 ft SAND (SW): Light olive brown [2.5Y 5/4], loose, saturated, fine to coarse, subrounded to subangular.
				at 127.5 ft: trace fine gravel to 3/8 inch.
		151.0		128.6-130.5 ft: SILTY SAND (SM): Brown [10YR 5/3], medium dense, saturated, fine to coarse, subrounded to subangular.
	130	149.1		130.5-135.5 ft. SAND (SW): Light yellowish brown [2.5Y 6/3], loose, saturated, fine to coarse, subrounded to subangular.
				at 132.5 ft: 5-10% gravel up to 1 25 inch diameter.
				at 133.6 ft: minor silt, trace clay, weakly laminated.
		144.1		below 134.5 ft: little to no silt and clay.
				135.5-152.0 ft: SAND (SP): Light olive brown [2.5Y 5/4], medium dense, saturated, fine to medium, subrounded to subangular, less silt with depth.
				at 138.1 ft: 0.7 feet thick silt bed, weakly laminated.
	140			
				at 142.0 ft: some silt.
				at 143.5 ft: less silt, ~10% medium.
				at 146.0 ft: fine to medium with 5-15% coarse.
				at 147.5 ft: <5% subrounded gravel up to 1 inch diameter
	150			
		127.6		
		126.8		152.0-152.8 ft: CLAYEY SILT (ML): Light olive brown [2.5Y 5/4], medium stiff, wet.
		125.8		152.8-153.8 ft: SAND (SP): Light yellowish brown [2.5Y 6/3], loose, saturated, fine to medium, subrounded to subangular, <5% gravel up to 2 inch diameter.
		122.6		153.8-157.0 ft: SILTY SAND (SM): Light yellowish brown [2.5Y 6/4], medium dense, saturated, fine with 5-10% medium
				157.0-162.6 ft: SAND (SP): Light yellowish brown [2.5Y 6/3], loose, saturated, fine to coarse, subrounded to subangular, 5-15% gravel up to 1.5 inch diameter.
	160			at 158.5 ft: less gravel, trace silt.
				at 161.5 ft: fine to medium sand, trace coarse, some silt.
		117.0		162.6-168.8 ft: SILTY CLAY (CL): Light olive brown [2.5Y 5/3], very stiff, wet.
		110.8		
		109.6		168.8-170.0 ft: SILTY SAND (SM): Light olive brown [2.5Y 5/3], medium dense, saturated, fine, subangular.
	170			170.0-187.8 ft: CLAYEY SILT (ML): Olive brown [2.5Y 4/3], very stiff, wet.
				at 176.8 ft: 5 inch thick clayey silty sand bed, fine; sandy below 177.2 ft.
				below 179.0 ft: no sand.
	180			

See key for graphic symbols.

SITE and LOCATION: **Site 24, VOC Source Area MCAS El Toro**

HOLE NO. **24EX1OB**

Project ID: EL073; dpt-D:\gint template: WELLS; (1/96

CONSTRUCTION DETAILS (cont.)	PROJECT and JOB NUMBER *CLEAN II* 22214-073	HOLE NO. 24EX1OB SHEET NO. 4 OF 4

Construction Details	Graphics: Depth in Feet	Graphics: Elevation in Feet	Graphics	Geologic Description and Classification
		91.9		below 187.0 ft: sandy, fine to medium.
	190			187.8-194.7 ft: SILTY SAND (SM): Dark yellowish brown [10YR 3/4], medium dense, saturated, fine to coarse, subangular, 10-20% subrounded gravel up to 2.25 inch diameter.
				at 192.5 ft: color change to Olive Brown [2.5Y 4/3], fine to medium, trace clay and gravel up to 5/8 inch diameter.
		84.9		194.7-203.0 ft: CLAYEY SANDY SILT (ML): Dark yellowish brown [10YR 4/4], hard, wet, fine to medium, <5% coarse.
				at 197.5 ft: more clay, less sand.
				at 198.5 ft: no sand.
	200			
				at 201.0 ft: 5-10% fine to medium sand, less clay with depth.
		76.6		203.0-206.9 ft: SAND (SW): Light olive brown [2.5Y 5/3], loose, saturated, fine to medium, 5-10% coarse, subangular, some silt.
		72.8		
		71.6		206.9-208.0 ft: SANDY CLAYEY SILT (ML): Dark yellowish brown [10YR 4/4], hard, wet, fine to medium.
	210			208.0-211.0 ft: SILTY SAND (SM): Dark yellowish brown [10YR 4/4], medium dense, wet, fine, trace medium.
		68.6		
		67.6		211.0-212.0 ft: SILTY CLAY (CL): Dark yellowish brown [10YR 4/4], hard, wet.
				212.0-217.0 ft: SILTY SAND (SM): Light olive brown [2.5Y 5/3], dense, saturated, fine.
		62.6		
	218.8	60.8		217.0-219.0 ft: CLAYEY SANDY SILT (ML): Light olive brown [2.5Y 5/3], hard, wet, fine to medium, trace coarse.
		60.6		
	220			219.0-221.5 ft: SILTY CLAY (CL): Light olive brown [2.5Y 5/3], hard, wet.
	221.2	58.4		
		58.1		221.5-224.0 ft: SILTY SAND (SM): Light olive brown [2.5Y 5/4], dense, wet, fine.
	224.0	55.6		

See key for graphic symbols.

SITE and LOCATION: **Site 24, VOC Source Area MCAS El Toro**

HOLE NO. **24EX1OB**

Project ID: EL073, dpk-D:\grint template - WELLS, 11/96

BOREHOLE LOG

PROJECT and JOB NUMBER: *CLEAN II* 22214-073			HOLE NO. 24NEW1 SHEET NO. 1 OF 2
DRILLING COMPANY: Water Development Corp.	SITE and LOCATION: Site 24, VOC Source Area MCAS El Toro		OVERBURDEN: 260.0 / BEGUN: 10-4-95
DRILL MAKE AND MODEL: Air Rotary/ Casing Hammer	COORDINATES: N 2,190,294.15 E 6,108,799.31	LOGGED BY: J. Turbeville	ROCK (FT): 0.0 / COMPLETED: 10-16-95
HOLE DIAMETER and/or CORE HOLE DIAMETER: 9" to 12"	GROUND EL. & DEPTH/EL. GROUND WATER: 281.34 ▽ 125.0/156.3 on 10-05-95	CHECKED BY: P. Brooks	TOTAL DEPTH: 260.0 / UPDATE: 11-11-96

Organic Vapor Reading (ppm) PID/FID	Core/Soil Recovery (%)	Core Length/ Sampler Advance	Blow Counts or Recovery (ft)	Sampler Type/ BEIDMS No.	Elevation in Feet	Depth in Feet	Graphics	Sample/recovery	Description and Classification	Remarks:
					281.3				**0.0-38.0 ft: CLAY (CL)**	NOTE: Head space reading measured with Model 580B OVM, data recorded is the PID reading.
0						5			At 5.0 ft: Clay (CL) - red gray (5YR4/4), dry becoming moist, trace silty streaks.	
0						10				Advance and set 12-inch diameter casing to 163 ft. Drill from 163-260 ft with 9-inch diameter casing and bit.
0						15				
0						20				5-125 ft: Soil grab samples taken for lithology and headspace measurements only. No soil samples collected for chemical analyses from 0-129.5 ft due to volatization while drilling with air.
0						25				
0						30			At 30 ft: increasing silt	
0						35			At 35 ft: trace medium to coarse grained sand.	
					243.3				**38.0-63.0 ft: SILT (ML)**	
0						40			At 40 ft: Silt (ML) - light brown (7.5YR6/4), moist.	Description and classification by visual examination of sample.
0						45				
0						50				Colors from "Munsell Soil-Color Charts" (1988).
0						55			At 55 ft: trace coarse grained sand.	
0						60				
					218.3				**63.0-108.0 ft: SILTY SAND (SM) INTERBEDDED WITH CLAY (CL)**	
0						65			At 65 ft: sand interbedded with clay.	
0						70			At 70 ft: Clay (CL) - Brown (7.5YR4/4), moist, trace silt.	
0						75			At 75 ft: Silty Sand (SM) - Brown (7.5YR4/4), moist, soft, medium grained, trace fine gravel.	
0						80				
0						85				
0						90			At 90 ft: increasing clay.	
0						95			At 95 ft: interbedded clay and silty sand.	
0.4						100				PID = 7 ppm at cyclone
0.5						105			At 105 ft: increasing clay.	
					173.3				**108.0-113.0 ft: SAND (SP)**	
0.4					168.3	110			At 110 ft: Sand (SP) - brown (7.5YR4/4), dry, medium to coarse, trace fine gravel.	PID = 5 ppm at cyclone
2.2					163.3	115			**113.0-118.0 ft: CLAY (CL)** At 115 ft: Clay (CL)	
n/a					158.3	120			**118.0-123.0 ft: SAND (SP)** At 120 ft: Sand (SP) - brown (7.5YR4/4), moist, medium to coarse.	PID = 9 ppm at cyclone
0.3						125			**123.0-135.0 ft: CLAY (CL)** At 125 ft: Clay (CL) - Brown (7.5YR4/4), wet, hard, with trace fine to coarse gravel and fine to medium	PID = 3 ppm at cyclone

Project ID: EL073; dpk-D:\gint template: NAVYS, 11/95

BOREHOLE LOG

PROJECT and JOB NUMBER: *CLEAN II* 22214-073

HOLE NO. 24NEW1

SHEET NO. 2 OF 2

PID/FID Organic Vapor Reading (ppm)	Core/Soil Recovery (%)	Core Length/ Sampler Advance	Blow Counts or Recovery (ft)	Sampler Type/ BEIDMS No.	Elevation in Feet	Depth in Feet	Graphics	Sample/recovery	Description and Classification	Remarks:
0.4		1.5	9 18 27	MC 73W0355	146.3.	135			sand.	End shift 10-4-95 Begin shift 10-5-95
									135.0-145.0 ft: SILT (ML)	PID = 3 ppm at cyclone
0.4		1.5	n/a	MC 73W0356	136.3.	140			At 140 ft: Silt (ML) - Brown (7.5YR4/4), wet, trace clay and fine sand.	130-250 ft: Samples taken for headspace measurement, gas chromatography field screen and geotechnical analysis.
						145			**145.0-159.0 ft: SAND (SP)**	
0	100	1.5	5 18 26	MC 73W0357		150			At 150 ft: Sand (SP) - brown (7.5 YR4/4), wet, dense, fine to medium grained with trace fine gravel.	Soil samples collected with 2.5" OD split-spoon sampler with 6-inch stainless-steel tubes.
					122.3.	155				
0	100	1.5	6 10 19	MC 73W0358		160			**159.0-175.0 ft: CLAY (CL)** At 160 ft: Clay (CL) - brown (7.5YR4/4), very stiff, wet, trace silt.	Sampler driven with automatic hammer (140 lbs/30 inch drop). 1 ppm vinyl chloride at cyclone using Draeger tube. 0 ppm at breathing zone.
						165				
0.5	100	1.5	4 9 13	MC		170				
					106.3.	175			**175.0-181.0 ft: SILT (ML)**	Sample at 170 ft is slough, except in shoe.
0	100	1.5	5 6 12	MC 73W0359	100.3.	180			At 180 ft: Silt (ML) - brown (7.5YR4/4).	Trace oil sheen noted in rolloff bin at cyclone thought to be from drill rig hydraulic.
						185			**181.0-189.0 ft: GRAVEL (GW)** - wet, some fine to coarse sand.	
					92.3.					
0	100	1.5	n/a	MC 73W0360		190			**189.0-195.0 ft: CLAY (CL)**	Sand and gravel appears to be slough from unit at approximately 180-190 ft.
					86.3.	195			Clay (CL) - brown (7.5YR4/4), with fine to medium grained sand and some fine gravel.	
									195.0-204.0 ft: SILT (ML)	Gravel noted coming out of flow line into rolloff bin at 185 ft.
0	100	1.5	12 19 35	MC 73W0361		200			At 200 ft: Silt (ML) - brown (7.5YR4/4), wet, soft, some clay, trace fine to medium grained sand.	Water sample taken with stainless steel bailer. Sample No. 73W1034-01
					77.3. 75.3.	205			**204.0-206.0 ft: GRAVEL (GP)**	Gravel noted in cyclone at 204-206 ft.
									206.0-210.5 ft: SAND (SP)	
0	100	1.5	n/a	MC 73W0365	70.8.	210			At 210 ft: Sand (SP) - brown (7.5YR4/4), wet, with silt and fine to coarse gravel.	
						215			**210.5-228.0 ft: CLAY (CL)**	
0	100	1.5	12 20 25	MC 73W0366		220			210.5-211.0 ft: Clay (CL) - brown (7.5YR4/4), wet, hard. At 220 ft: Clay (CL) - brown (7.5YR4/4), hard, wet, sample appears to be native.	
						225				
					53.3. 51.3.				**228.0-230.0 ft: GRAVEL (GW)**	
0	100	1.5	12 18 23	MC 73W0367		230			**230.0-237.0 ft: SAND (SP)** At 230 ft: Sand (SP) - brown (7.5YR4/4), wet, dense, medium grained, trace fine gravel, friable.	Driller measured 6 ft of sand heave at 230 ft depth.
					44.3.	235				
0		1.5	n/a	MC	41.3.	240			**237.0-240.0 ft: GRAVEL (GW)** - fine to coarse with cobbles.	Gravel noted in cyclone at 237-240 ft.
					37.3. 35.3.				**240.0-244.0 ft: SAND (SP)**	
						245			At 241.0 ft: Sand (SP) - brown (7.5YR4/4), wet, trace fine to medium grained, friable.	
n/a		1.5	3 3 3	MC 73W0369		250			**244.0-246.0 ft: GRAVEL (GW)** Coarse sand and fine to coarse gravel noted in cyclone, depth is approximate.	Water sample taken with stainless steel bailer Sample No. 73W1035-01
						255			**246.0-260.0 ft: SAND (SW)** At 250 ft: Sample appears to be slough.	
					21.3.	260			TOTAL DEPTH = 260.0 ft.	Note: Converted soil boring 24NEW1 to monitoring well 24NEW 1.

SITE and LOCATION: Site 24, VOC Source Area MCAS El Toro

HOLE NO. 24NEW1

Project ID: EL073; dpk-D:\gint template: NAVYS, 11/95

APPENDIX C

GROUNDWATER AND SOIL GAS ANALYTICAL RESULTS

ANALYTICAL RESULTS --- CTO: 0073

Facility: MCASET

Data retrieved from BEIDMS on 31-Oct-96 at 9:03 AM

Station ID	Sample Information Matrix	Type	Top Depth	Container ID	Method Code	Analyte Name	Results	Qualifiers Lab	Val	Result Type	Date Information Collect	Prepare	Analyze
Pay Item : VOLATILE ORGANIC HALOGENS/AROMATICS													
09DBMW45	GW	REG		73W106015	EPA 8010/8020	1,1,1,2-TETRACHLOROETHANE	5 UG/L	U		TRG	11/20/95	11/21/95	11/21/95
09DBMW45	GW	REG		73W106015	EPA 8010/8020	1,1,1-TRICHLOROETHANE	10 UG/L	U		TRG	11/20/95	11/21/95	11/21/95
09DBMW45	GW	REG		73W106015	EPA 8010/8020	1,1,2,2-TETRACHLOROETHANE	5 UG/L	U		TRG	11/20/95	11/21/95	11/21/95
09DBMW45	GW	REG		73W106015	EPA 8010/8020	1,1,2-TRICHLORO-1,2,2-TRIFLUO	20 UG/L	U		TRG	11/20/95	11/21/95	11/21/95
09DBMW45	GW	REG		73W106015	EPA 8010/8020	1,1,2-TRICHLOROETHANE	5 UG/L	U		TRG	11/20/95	11/21/95	11/21/95
09DBMW45	GW	REG		73W106015	EPA 8010/8020	1,1-DICHLOROETHANE	5 UG/L	U		TRG	11/20/95	11/21/95	11/21/95
09DBMW45	GW	REG		73W106015	EPA 8010/8020	1,1-DICHLOROETHENE	20 UG/L			TRG	11/20/95	11/21/95	11/21/95
09DBMW45	GW	REG		73W106015	EPA 8010/8020	1,2-DICHLOROBENZENE	10 UG/L	U		TRG	11/20/95	11/21/95	11/21/95
09DBMW45	GW	REG		73W106015	EPA 8010/8020	1,2-DICHLOROETHANE	5 UG/L	U		TRG	11/20/95	11/21/95	11/21/95
09DBMW45	GW	REG		73W106015	EPA 8010/8020	1,2-DICHLOROPROPANE	5 UG/L	U		TRG	11/20/95	11/21/95	11/21/95
09DBMW45	GW	REG		73W106015	EPA 8010/8020	1,3-DICHLOROBENZENE	10 UG/L	U		TRG	11/20/95	11/21/95	11/21/95
09DBMW45	GW	REG		73W106015	EPA 8010/8020	1,4-DICHLOROBENZENE	10 UG/L	U		TRG	11/20/95	11/21/95	11/21/95
09DBMW45	GW	REG		73W106015	EPA 8010/8020	2-CHLOROETHYLVINYL ETHER	50 UG/L	U		TRG	11/20/95	11/21/95	11/21/95
09DBMW45	GW	REG		73W106015	EPA 8010/8020	BENZENE	5 UG/L	U		TRG	11/20/95	11/21/95	11/21/95
09DBMW45	GW	REG		73W106015	EPA 8010/8020	BENZYL CHLORIDE	10 UG/L	U		TRG	11/20/95	11/21/95	11/21/95
09DBMW45	GW	REG		73W106015	EPA 8010/8020	BROMODICHLOROMETHANE	5 UG/L	U		TRG	11/20/95	11/21/95	11/21/95
09DBMW45	GW	REG		73W106015	EPA 8010/8020	BROMOFORM	5 UG/L	U		TRG	11/20/95	11/21/95	11/21/95
09DBMW45	GW	REG		73W106015	EPA 8010/8020	BROMOMETHANE	10 UG/L	U		TRG	11/20/95	11/21/95	11/21/95
09DBMW45	GW	REG		73W106015	EPA 8010/8020	CARBON TETRACHLORIDE	5 UG/L	U		TRG	11/20/95	11/21/95	11/21/95
09DBMW45	GW	REG		73W106015	EPA 8010/8020	CHLOROBENZENE	5 UG/L	U		TRG	11/20/95	11/21/95	11/21/95
09DBMW45	GW	REG		73W106015	EPA 8010/8020	CHLORODIBROMOMETHANE	5 UG/L	U		TRG	11/20/95	11/21/95	11/21/95
09DBMW45	GW	REG		73W106015	EPA 8010/8020	CHLOROETHANE	10 UG/L	U		TRG	11/20/95	11/21/95	11/21/95
09DBMW45	GW	REG		73W106015	EPA 8010/8020	CHLOROFORM	5 UG/L	U		TRG	11/20/95	11/21/95	11/21/95
09DBMW45	GW	REG		73W106015	EPA 8010/8020	CHLOROMETHANE	10 UG/L	U		TRG	11/20/95	11/21/95	11/21/95
09DBMW45	GW	REG		73W106015	EPA 8010/8020	CIS-1,2-DICHLOROETHENE	5 UG/L	U		TRG	11/20/95	11/21/95	11/21/95
09DBMW45	GW	REG		73W106015	EPA 8010/8020	CIS-1,3-DICHLOROPROPENE	5 UG/L	U		TRG	11/20/95	11/21/95	11/21/95
09DBMW45	GW	REG		73W106015	EPA 8010/8020	DIBROMOMETHANE	5 UG/L	U		TRG	11/20/95	11/21/95	11/21/95

ANALYTICAL RESULTS --- CTO: 0073

Facility: MCASET

Data retrieved from BEIDMS on 31-Oct-96 at 9:03 AM

Station ID	Sample Information Matrix	Type	Top Depth	Container ID	Method Code	Analyte Name	Results	Qualifiers Lab	Val	Result Type	Date Information Collect	Prepare	Analyze
09DBMW45	GW	REG		73W106015	EPA 8010/8020	DICHLORODIFLUOROMETHANE	20 UG/L	U		TRG	11/20/95	11/21/95	11/21/95
09DBMW45	GW	REG		73W106015	EPA 8010/8020	ETHYLBENZENE	5 UG/L	U		TRG	11/20/95	11/21/95	11/21/95
09DBMW45	GW	REG		73W106015	EPA 8010/8020	METHYLENE CHLORIDE	20 UG/L	U		TRG	11/20/95	11/21/95	11/21/95
09DBMW45	GW	REG		73W106015	EPA 8010/8020	TETRACHLOROETHENE	7.2 UG/L			TRG	11/20/95	11/21/95	11/21/95
09DBMW45	GW	REG		73W106015	EPA 8010/8020	TOLUENE	5 UG/L	U		TRG	11/20/95	11/21/95	11/21/95
09DBMW45	GW	REG		73W106015	EPA 8010/8020	TOTAL XYLENES	10 UG/L	U		TRG	11/20/95	11/21/95	11/21/95
09DBMW45	GW	REG		73W106015	EPA 8010/8020	TRANS-1,2-DICHLOROETHENE	5 UG/L	U		TRG	11/20/95	11/21/95	11/21/95
09DBMW45	GW	REG		73W106015	EPA 8010/8020	TRANS-1,3-DICHLOROPROPENE	5 UG/L	U		TRG	11/20/95	11/21/95	11/21/95
09DBMW45	GW	REG		73W106015	EPA 8010/8020	TRICHLOROETHENE	920 UG/L			TRG	11/20/95	11/21/95	11/21/95
09DBMW45	GW	REG		73W106015	EPA 8010/8020	TRICHLOROFLUOROMETHANE	10 UG/L	U		TRG	11/20/95	11/21/95	11/21/95
09DBMW45	GW	REG		73W106015	EPA 8010/8020	VINYL CHLORIDE	5 UG/L	U		TRG	11/20/95	11/21/95	11/21/95
24AS1	GW	REG		73W106810	EPA 8010/8020	1,1,1,2-TETRACHLOROETHANE	5 UG/L	U		TRG	11/28/95	11/29/95	11/29/95
24AS1	GW	REG		73W106810	EPA 8010/8020	1,1,1-TRICHLOROETHANE	10 UG/L	U		TRG	11/28/95	11/29/95	11/29/95
24AS1	GW	REG		73W106810	EPA 8010/8020	1,1,2,2-TETRACHLOROETHANE	5 UG/L	U		TRG	11/28/95	11/29/95	11/29/95
24AS1	GW	REG		73W106810	EPA 8010/8020	1,1,2-TRICHLORO-1,2,2-TRIFLUO	20 UG/L	U		TRG	11/28/95	11/29/95	11/29/95
24AS1	GW	REG		73W106810	EPA 8010/8020	1,1,2-TRICHLOROETHANE	5 UG/L	U		TRG	11/28/95	11/29/95	11/29/95
24AS1	GW	REG		73W106810	EPA 8010/8020	1,1-DICHLOROETHANE	5 UG/L	U		TRG	11/28/95	11/29/95	11/29/95
24AS1	GW	REG		73W106810	EPA 8010/8020	1,1-DICHLOROETHENE	10 UG/L	U		TRG	11/28/95	11/29/95	11/29/95
24AS1	GW	REG		73W106810	EPA 8010/8020	1,2-DICHLOROBENZENE	10 UG/L	U		TRG	11/28/95	11/29/95	11/29/95
24AS1	GW	REG		73W106810	EPA 8010/8020	1,2-DICHLOROETHANE	5 UG/L	U		TRG	11/28/95	11/29/95	11/29/95
24AS1	GW	REG		73W106810	EPA 8010/8020	1,2-DICHLOROPROPANE	5 UG/L	U		TRG	11/28/95	11/29/95	11/29/95
24AS1	GW	REG		73W106810	EPA 8010/8020	1,3-DICHLOROBENZENE	10 UG/L	U		TRG	11/28/95	11/29/95	11/29/95
24AS1	GW	REG		73W106810	EPA 8010/8020	1,4-DICHLOROBENZENE	10 UG/L	U		TRG	11/28/95	11/29/95	11/29/95
24AS1	GW	REG		73W106810	EPA 8010/8020	2-CHLOROETHYLVINYL ETHER	50 UG/L	U		TRG	11/28/95	11/29/95	11/29/95
24AS1	GW	REG		73W106810	EPA 8010/8020	BENZENE	5 UG/L	U		TRG	11/28/95	11/29/95	11/29/95
24AS1	GW	REG		73W106810	EPA 8010/8020	BENZYL CHLORIDE	10 UG/L	U		TRG	11/28/95	11/29/95	11/29/95
24AS1	GW	REG		73W106810	EPA 8010/8020	BROMODICHLOROMETHANE	5 UG/L	U		TRG	11/28/95	11/29/95	11/29/95
24AS1	GW	REG		73W106810	EPA 8010/8020	BROMOFORM	5 UG/L	U		TRG	11/28/95	11/29/95	11/29/95
24AS1	GW	REG		73W106810	EPA 8010/8020	BROMOMETHANE	10 UG/L	U		TRG	11/28/95	11/29/95	11/29/95

ANALYTICAL RESULTS --- CTO: 0073

Facility: MCASET

Data retrieved from BEIDMS on 31-Oct-96 at 9:03 AM

Station ID	Sample Information Matrix	Type	Top Depth	Container ID	Method Code	Analyte Name	Results	Qualifiers Lab	Val	Result Type	Date Information Collect	Prepare	Analyze
24AS1	GW	REG		73W106810	EPA 8010/8020	CARBON TETRACHLORIDE	5 UG/L	U		TRG	11/28/95	11/29/95	11/29/95
24AS1	GW	REG		73W106810	EPA 8010/8020	CHLOROBENZENE	5 UG/L	U		TRG	11/28/95	11/29/95	11/29/95
24AS1	GW	REG		73W106810	EPA 8010/8020	CHLORODIBROMOMETHANE	5 UG/L	U		TRG	11/28/95	11/29/95	11/29/95
24AS1	GW	REG		73W106810	EPA 8010/8020	CHLOROETHANE	10 UG/L	U		TRG	11/28/95	11/29/95	11/29/95
24AS1	GW	REG		73W106810	EPA 8010/8020	CHLOROFORM	5 UG/L	U		TRG	11/28/95	11/29/95	11/29/95
24AS1	GW	REG		73W106810	EPA 8010/8020	CHLOROMETHANE	10 UG/L	U		TRG	11/28/95	11/29/95	11/29/95
24AS1	GW	REG		73W106810	EPA 8010/8020	CIS-1,2-DICHLOROETHENE	5 UG/L	U		TRG	11/28/95	11/29/95	11/29/95
24AS1	GW	REG		73W106810	EPA 8010/8020	CIS-1,3-DICHLOROPROPENE	5 UG/L	U		TRG	11/28/95	11/29/95	11/29/95
24AS1	GW	REG		73W106810	EPA 8010/8020	DIBROMOMETHANE	5 UG/L	U		TRG	11/28/95	11/29/95	11/29/95
24AS1	GW	REG		73W106810	EPA 8010/8020	DICHLORODIFLUOROMETHANE	20 UG/L	U		TRG	11/28/95	11/29/95	11/29/95
24AS1	GW	REG		73W106810	EPA 8010/8020	ETHYLBENZENE	5 UG/L	U		TRG	11/28/95	11/29/95	11/29/95
24AS1	GW	REG		73W106810	EPA 8010/8020	METHYLENE CHLORIDE	20 UG/L	U		TRG	11/28/95	11/29/95	11/29/95
24AS1	GW	REG		73W106810	EPA 8010/8020	TETRACHLOROETHENE	5 UG/L	U		TRG	11/28/95	11/29/95	11/29/95
24AS1	GW	REG		73W106810	EPA 8010/8020	TOLUENE	5 UG/L	U		TRG	11/28/95	11/29/95	11/29/95
24AS1	GW	REG		73W106810	EPA 8010/8020	TOTAL XYLENES	10 UG/L	U		TRG	11/28/95	11/29/95	11/29/95
24AS1	GW	REG		73W106810	EPA 8010/8020	TRANS-1,2-DICHLOROETHENE	5 UG/L	U		TRG	11/28/95	11/29/95	11/29/95
24AS1	GW	REG		73W106810	EPA 8010/8020	TRANS-1,3-DICHLOROPROPENE	5 UG/L	U		TRG	11/28/95	11/29/95	11/29/95
24AS1	GW	REG		73W106810	EPA 8010/8020	TRICHLOROETHENE	730 UG/L			TRG	11/28/95	11/29/95	11/29/95
24AS1	GW	REG		73W106810	EPA 8010/8020	TRICHLOROFLUOROMETHANE	10 UG/L	U		TRG	11/28/95	11/29/95	11/29/95
24AS1	GW	REG		73W106810	EPA 8010/8020	VINYL CHLORIDE	5 UG/L	U		TRG	11/28/95	11/29/95	11/29/95
24AS2A	GW	REG		73W107424	EPA 8010/8020	1,1,1,2-TETRACHLOROETHANE	5 UG/L	U		TRG	11/29/95	11/30/95	11/30/95
24AS2A	GW	REG		73W107424	EPA 8010/8020	1,1,1-TRICHLOROETHANE	10 UG/L	U		TRG	11/29/95	11/30/95	11/30/95
24AS2A	GW	REG		73W107424	EPA 8010/8020	1,1,2,2-TETRACHLOROETHANE	5 UG/L	U		TRG	11/29/95	11/30/95	11/30/95
24AS2A	GW	REG		73W107424	EPA 8010/8020	1,1,2-TRICHLORO-1,2,2-TRIFLUO	20 UG/L	U		TRG	11/29/95	11/30/95	11/30/95
24AS2A	GW	REG		73W107424	EPA 8010/8020	1,1,2-TRICHLOROETHANE	5 UG/L	U		TRG	11/29/95	11/30/95	11/30/95
24AS2A	GW	REG		73W107424	EPA 8010/8020	1,1-DICHLOROETHANE	5 UG/L	U		TRG	11/29/95	11/30/95	11/30/95
24AS2A	GW	REG		73W107424	EPA 8010/8020	1,1-DICHLOROETHENE	19 UG/L			TRG	11/29/95	11/30/95	11/30/95
24AS2A	GW	REG		73W107424	EPA 8010/8020	1,2-DICHLOROBENZENE	10 UG/L	U		TRG	11/29/95	11/30/95	11/30/95
24AS2A	GW	REG		73W107424	EPA 8010/8020	1,2-DICHLOROETHANE	5 UG/L	U		TRG	11/29/95	11/30/95	11/30/95

ANALYTICAL RESULTS --- CTO: 0073

Facility: MCASET

Data retrieved from BEIDMS on 31-Oct-96 at 9:03 AM

	Sample Information							Qualifiers			Date Information		
Station ID	Matrix	Type	Top Depth	Container ID	Method Code	Analyte Name	Results	Lab	Val	Result Type	Collect	Prepare	Analyze
24AS2A	GW	REG		73W107424	EPA 8010/8020	1,2-DICHLOROPROPANE	5 UG/L	U		TRG	11/29/95	11/30/95	11/30/95
24AS2A	GW	REG		73W107424	EPA 8010/8020	1,3-DICHLOROBENZENE	10 UG/L	U		TRG	11/29/95	11/30/95	11/30/95
24AS2A	GW	REG		73W107424	EPA 8010/8020	1,4-DICHLOROBENZENE	10 UG/L	U		TRG	11/29/95	11/30/95	11/30/95
24AS2A	GW	REG		73W107424	EPA 8010/8020	2-CHLOROETHYLVINYL ETHER	50 UG/L	U		TRG	11/29/95	11/30/95	11/30/95
24AS2A	GW	REG		73W107424	EPA 8010/8020	BENZENE	5 UG/L	U		TRG	11/29/95	11/30/95	11/30/95
24AS2A	GW	REG		73W107424	EPA 8010/8020	BENZYL CHLORIDE	10 UG/L	U		TRG	11/29/95	11/30/95	11/30/95
24AS2A	GW	REG		73W107424	EPA 8010/8020	BROMODICHLOROMETHANE	5 UG/L	U		TRG	11/29/95	11/30/95	11/30/95
24AS2A	GW	REG		73W107424	EPA 8010/8020	BROMOFORM	5 UG/L	U		TRG	11/29/95	11/30/95	11/30/95
24AS2A	GW	REG		73W107424	EPA 8010/8020	BROMOMETHANE	10 UG/L	U		TRG	11/29/95	11/30/95	11/30/95
24AS2A	GW	REG		73W107424	EPA 8010/8020	CARBON TETRACHLORIDE	5 UG/L	U		TRG	11/29/95	11/30/95	11/30/95
24AS2A	GW	REG		73W107424	EPA 8010/8020	CHLOROBENZENE	5 UG/L	U		TRG	11/29/95	11/30/95	11/30/95
24AS2A	GW	REG		73W107424	EPA 8010/8020	CHLORODIBROMOMETHANE	5 UG/L	U		TRG	11/29/95	11/30/95	11/30/95
24AS2A	GW	REG		73W107424	EPA 8010/8020	CHLOROETHANE	10 UG/L	U		TRG	11/29/95	11/30/95	11/30/95
24AS2A	GW	REG		73W107424	EPA 8010/8020	CHLOROFORM	5 UG/L	U		TRG	11/29/95	11/30/95	11/30/95
24AS2A	GW	REG		73W107424	EPA 8010/8020	CHLOROMETHANE	10 UG/L	U		TRG	11/29/95	11/30/95	11/30/95
24AS2A	GW	REG		73W107424	EPA 8010/8020	CIS-1,2-DICHLOROETHENE	5 UG/L	U		TRG	11/29/95	11/30/95	11/30/95
24AS2A	GW	REG		73W107424	EPA 8010/8020	CIS-1,3-DICHLOROPROPENE	5 UG/L	U		TRG	11/29/95	11/30/95	11/30/95
24AS2A	GW	REG		73W107424	EPA 8010/8020	DIBROMOMETHANE	5 UG/L	U		TRG	11/29/95	11/30/95	11/30/95
24AS2A	GW	REG		73W107424	EPA 8010/8020	DICHLORODIFLUOROMETHANE	20 UG/L	U		TRG	11/29/95	11/30/95	11/30/95
24AS2A	GW	REG		73W107424	EPA 8010/8020	ETHYLBENZENE	5 UG/L	U		TRG	11/29/95	11/30/95	11/30/95
24AS2A	GW	REG		73W107424	EPA 8010/8020	METHYLENE CHLORIDE	20 UG/L	U		TRG	11/29/95	11/30/95	11/30/95
24AS2A	GW	REG		73W107424	EPA 8010/8020	TETRACHLOROETHENE	5 UG/L	U		TRG	11/29/95	11/30/95	11/30/95
24AS2A	GW	REG		73W107424	EPA 8010/8020	TOLUENE	5 UG/L	U		TRG	11/29/95	11/30/95	11/30/95
24AS2A	GW	REG		73W107424	EPA 8010/8020	TOTAL XYLENES	10 UG/L	U		TRG	11/29/95	11/30/95	11/30/95
24AS2A	GW	REG		73W107424	EPA 8010/8020	TRANS-1,2-DICHLOROETHENE	5 UG/L	U		TRG	11/29/95	11/30/95	11/30/95
24AS2A	GW	REG		73W107424	EPA 8010/8020	TRANS-1,3-DICHLOROPROPENE	5 UG/L	U		TRG	11/29/95	11/30/95	11/30/95
24AS2A	GW	REG		73W107424	EPA 8010/8020	TRICHLOROETHENE	750 UG/L			TRG	11/29/95	11/30/95	11/30/95
24AS2A	GW	REG		73W107424	EPA 8010/8020	TRICHLOROFLUOROMETHANE	10 UG/L	U		TRG	11/29/95	11/30/95	11/30/95
24AS2A	GW	REG		73W107424	EPA 8010/8020	VINYL CHLORIDE	5 UG/L	U		TRG	11/29/95	11/30/95	11/30/95

ANALYTICAL RESULTS --- CTO: 0073

Facility: MCASET

Data retrieved from BEIDMS on 31-Oct-96 at 9:03 AM

Station ID	Sample Information Matrix	Type	Top Depth	Container ID	Method Code	Analyte Name	Results	Qualifiers Lab	Val	Result Type	Date Information Collect	Prepare	Analyze
Pay Item : TAL METALS													
09DBMW45	GW	REG		73W106001	EPA CLP	ALUMINUM	37.6 UG/L	B	U	TRG	11/20/95	12/14/95	12/22/95
09DBMW45	GW	REG		73W106001	EPA CLP	ANTIMONY	2.2 UG/L	U	U	TRG	11/20/95	12/14/95	12/22/95
09DBMW45	GW	REG		73W106001	EPA CLP	ARSENIC	2.1 UG/L	U	U	TRG	11/20/95	12/14/95	12/22/95
09DBMW45	GW	REG		73W106001	EPA CLP	BARIUM	24.8 UG/L	B		TRG	11/20/95	12/14/95	12/22/95
09DBMW45	GW	REG		73W106001	EPA CLP	BERYLLIUM	0.27 UG/L	U	U	TRG	11/20/95	12/14/95	12/22/95
09DBMW45	GW	REG		73W106001	EPA CLP	CADMIUM	0.3 UG/L	U	U	TRG	11/20/95	12/14/95	12/22/95
09DBMW45	GW	REG		73W106001	EPA CLP	CALCIUM	179000 UG/L			TRG	11/20/95	12/14/95	12/22/95
09DBMW45	GW	REG		73W106001	EPA CLP	CHROMIUM	6.2 UG/L	B		TRG	11/20/95	12/14/95	12/22/95
09DBMW45	GW	REG		73W106001	EPA CLP	COBALT	1.6 UG/L	B		TRG	11/20/95	12/14/95	12/22/95
09DBMW45	GW	REG		73W106001	EPA CLP	COPPER	1.4 UG/L	B		TRG	11/20/95	12/14/95	12/22/95
09DBMW45	GW	REG		73W106001	EPA CLP	IRON	179 UG/L	*	J	TRG	11/20/95	12/14/95	12/22/95
09DBMW45	GW	REG		73W106001	EPA CLP	LEAD	3.3 UG/L	*		TRG	11/20/95	12/14/95	12/22/95
09DBMW45	GW	REG		73W106001	EPA CLP	MAGNESIUM	47400 UG/L			TRG	11/20/95	12/14/95	12/22/95
09DBMW45	GW	REG		73W106001	EPA CLP	MANGANESE	6.6 UG/L	B		TRG	11/20/95	12/14/95	12/22/95
09DBMW45	GW	REG		73W106001	EPA CLP	MERCURY	0.02 UG/L	U	U	TRG	11/20/95	12/8/95	12/11/95
09DBMW45	GW	REG		73W106001	EPA CLP	NICKEL	26.8 UG/L	B		TRG	11/20/95	12/14/95	12/22/95
09DBMW45	GW	REG		73W106001	EPA CLP	POTASSIUM	2580 UG/L	B		TRG	11/20/95	12/14/95	12/22/95
09DBMW45	GW	REG		73W106001	EPA CLP	SELENIUM	22.4 UG/L			TRG	11/20/95	12/14/95	12/22/95
09DBMW45	GW	REG		73W106001	EPA CLP	SILVER	0.8 UG/L	U	U	TRG	11/20/95	12/14/95	12/22/95
09DBMW45	GW	REG		73W106001	EPA CLP	SODIUM	78200 UG/L	E	J	TRG	11/20/95	12/14/95	12/22/95
09DBMW45	GW	REG		73W106001	EPA CLP	THALLIUM	3 UG/L	U	U	TRG	11/20/95	12/14/95	12/22/95
09DBMW45	GW	REG		73W106001	EPA CLP	VANADIUM	14.9 UG/L	B		TRG	11/20/95	12/14/95	12/22/95
09DBMW45	GW	REG		73W106001	EPA CLP	ZINC	7.4 UG/L	B	U	TRG	11/20/95	12/14/95	12/22/95
09DBMW45	GW	REG		73W106027	EPA CLP	ALUMINUM	50.7 RPD	B		DUP	11/20/95	12/14/95	12/22/95
09DBMW45	GW	REG		73W106027	EPA CLP	ANTIMONY	0 RPD	U		DUP	11/20/95	12/14/95	12/22/95
09DBMW45	GW	REG		73W106027	EPA CLP	ARSENIC	0 RPD	U		DUP	11/20/95	12/14/95	12/22/95
09DBMW45	GW	REG		73W106027	EPA CLP	BARIUM	4.3 RPD	B		DUP	11/20/95	12/14/95	12/22/95

ANALYTICAL RESULTS --- CTO: 0073

Facility: MCASET

Data retrieved from BEIDMS on 31-Oct-96 at 9:03 AM

Station ID	Sample Information Matrix	Type	Top Depth	Container ID	Method Code	Analyte Name	Results	Qualifiers Lab	Val	Result Type	Date Information Collect	Prepare	Analyze
09DBMW45	GW	REG		73W106027	EPA CLP	BERYLLIUM	0 RPD	U		DUP	11/20/95	12/14/95	12/22/95
09DBMW45	GW	REG		73W106027	EPA CLP	CADMIUM	0 RPD	U		DUP	11/20/95	12/14/95	12/22/95
09DBMW45	GW	REG		73W106027	EPA CLP	CALCIUM	2.8 RPD			DUP	11/20/95	12/14/95	12/22/95
09DBMW45	GW	REG		73W106027	EPA CLP	CHROMIUM	0.4 RPD	B		DUP	11/20/95	12/14/95	12/22/95
09DBMW45	GW	REG		73W106027	EPA CLP	COBALT	2.7 RPD	B		DUP	11/20/95	12/14/95	12/22/95
09DBMW45	GW	REG		73W106027	EPA CLP	COPPER	42.3 RPD	B		DUP	11/20/95	12/14/95	12/22/95
09DBMW45	GW	REG		73W106027	EPA CLP	IRON	87.3 RPD	B*		DUP	11/20/95	12/14/95	12/22/95
09DBMW45	GW	REG		73W106027	EPA CLP	LEAD	200 RPD	U*		DUP	11/20/95	12/14/95	12/22/95
09DBMW45	GW	REG		73W106027	EPA CLP	MAGNESIUM	2.4 RPD			DUP	11/20/95	12/14/95	12/22/95
09DBMW45	GW	REG		73W106027	EPA CLP	MANGANESE	1.5 RPD	B		DUP	11/20/95	12/14/95	12/22/95
09DBMW45	GW	REG		73W106027	EPA CLP	MERCURY	0 RPD	U		DUP	11/20/95	12/8/95	12/11/95
09DBMW45	GW	REG		73W106027	EPA CLP	NICKEL	26.2 RPD	B		DUP	11/20/95	12/14/95	12/22/95
09DBMW45	GW	REG		73W106027	EPA CLP	POTASSIUM	2.3 RPD	B		DUP	11/20/95	12/14/95	12/22/95
09DBMW45	GW	REG		73W106027	EPA CLP	SELENIUM	4 RPD			DUP	11/20/95	12/14/95	12/22/95
09DBMW45	GW	REG		73W106027	EPA CLP	SILVER	200 RPD	B		DUP	11/20/95	12/14/95	12/22/95
09DBMW45	GW	REG		73W106027	EPA CLP	SODIUM	4.2 RPD			DUP	11/20/95	12/14/95	12/22/95
09DBMW45	GW	REG		73W106027	EPA CLP	THALLIUM	0 RPD	U		DUP	11/20/95	12/14/95	12/22/95
09DBMW45	GW	REG		73W106027	EPA CLP	VANADIUM	7.2 RPD	B		DUP	11/20/95	12/14/95	12/22/95
09DBMW45	GW	REG		73W106027	EPA CLP	ZINC	53.5 RPD	B		DUP	11/20/95	12/14/95	12/22/95
24AS1	GW	REG		73W106803	EPA CLP	ALUMINUM	24.1 UG/L	B	U	TRG	11/28/95	12/14/95	12/22/95
24AS1	GW	REG		73W106803	EPA CLP	ANTIMONY	2.2 UG/L	U	U	TRG	11/28/95	12/14/95	12/22/95
24AS1	GW	REG		73W106803	EPA CLP	ARSENIC	2.1 UG/L	U	U	TRG	11/28/95	12/14/95	12/22/95
24AS1	GW	REG		73W106803	EPA CLP	BARIUM	25 UG/L	B		TRG	11/28/95	12/14/95	12/22/95
24AS1	GW	REG		73W106803	EPA CLP	BERYLLIUM	0.27 UG/L	U	U	TRG	11/28/95	12/14/95	12/22/95
24AS1	GW	REG		73W106803	EPA CLP	CADMIUM	0.3 UG/L	B		TRG	11/28/95	12/14/95	12/22/95
24AS1	GW	REG		73W106803	EPA CLP	CALCIUM	183000 UG/L			TRG	11/28/95	12/14/95	12/22/95
24AS1	GW	REG		73W106803	EPA CLP	CHROMIUM	5.6 UG/L	B		TRG	11/28/95	12/14/95	12/22/95
24AS1	GW	REG		73W106803	EPA CLP	COBALT	2.4 UG/L	B		TRG	11/28/95	12/14/95	12/22/95
24AS1	GW	REG		73W106803	EPA CLP	COPPER	8.3 UG/L	B		TRG	11/28/95	12/14/95	12/22/95

ANALYTICAL RESULTS --- CTO: 0073

Facility: MCASET

Data retrieved from BEIDMS on 31-Oct-96 at 9:03 AM

Station ID	Sample Information Matrix	Type	Top Depth	Container ID	Method Code	Analyte Name	Results	Qualifiers Lab	Val	Result Type	Date Information Collect	Prepare	Analyze
24AS1	GW	REG		73W106803	EPA CLP	IRON	36.9 UG/L	B*	J	TRG	11/28/95	12/14/95	12/22/95
24AS1	GW	REG		73W106803	EPA CLP	LEAD	1.5 UG/L	U*	U	TRG	11/28/95	12/14/95	12/22/95
24AS1	GW	REG		73W106803	EPA CLP	MAGNESIUM	48700 UG/L			TRG	11/28/95	12/14/95	12/22/95
24AS1	GW	REG		73W106803	EPA CLP	MANGANESE	12.4 UG/L	B		TRG	11/28/95	12/14/95	12/22/95
24AS1	GW	REG		73W106803	EPA CLP	MERCURY	0.02 UG/L	U	U	TRG	11/28/95	12/8/95	12/11/95
24AS1	GW	REG		73W106803	EPA CLP	NICKEL	21.3 UG/L	B		TRG	11/28/95	12/14/95	12/22/95
24AS1	GW	REG		73W106803	EPA CLP	POTASSIUM	2750 UG/L	B		TRG	11/28/95	12/14/95	12/22/95
24AS1	GW	REG		73W106803	EPA CLP	SELENIUM	21.5 UG/L			TRG	11/28/95	12/14/95	12/22/95
24AS1	GW	REG		73W106803	EPA CLP	SILVER	1.2 UG/L	B		TRG	11/28/95	12/14/95	12/22/95
24AS1	GW	REG		73W106803	EPA CLP	SODIUM	80300 UG/L	E	J	TRG	11/28/95	12/14/95	12/22/95
24AS1	GW	REG		73W106803	EPA CLP	THALLIUM	3 UG/L	U	U	TRG	11/28/95	12/14/95	12/22/95
24AS1	GW	REG		73W106803	EPA CLP	VANADIUM	15.9 UG/L	B		TRG	11/28/95	12/14/95	12/22/95
24AS1	GW	REG		73W106803	EPA CLP	ZINC	17.4 UG/L	B	U	TRG	11/28/95	12/14/95	12/22/95
24AS1	GW	REG		73W111104	ILM02.1	ALUMINUM	34.5 UG/L	U	U	TRG	4/15/96	4/26/96	5/7/96
24AS1	GW	REG		73W111104	ILM02.1	ANTIMONY	3 UG/L	B	U	TRG	4/15/96	4/26/96	5/7/96
24AS1	GW	REG		73W111104	ILM02.1	ARSENIC	4 UG/L	U	U	TRG	4/15/96	4/26/96	5/7/96
24AS1	GW	REG		73W111104	ILM02.1	BARIUM	27.5 UG/L	B		TRG	4/15/96	4/26/96	5/7/96
24AS1	GW	REG		73W111104	ILM02.1	BERYLLIUM	0.14 UG/L	B	U	TRG	4/15/96	4/26/96	5/7/96
24AS1	GW	REG		73W111104	ILM02.1	CADMIUM	0.66 UG/L	B		TRG	4/15/96	4/26/96	5/7/96
24AS1	GW	REG		73W111104	ILM02.1	CALCIUM	182000 UG/L			TRG	4/15/96	4/26/96	5/7/96
24AS1	GW	REG		73W111104	ILM02.1	CHROMIUM	16.7 UG/L			TRG	4/15/96	4/26/96	5/7/96
24AS1	GW	REG		73W111104	ILM02.1	COBALT	2.4 UG/L	B	U	TRG	4/15/96	4/26/96	5/7/96
24AS1	GW	REG		73W111104	ILM02.1	COPPER	1.7 UG/L	B	U	TRG	4/15/96	4/26/96	5/7/96
24AS1	GW	REG		73W111104	ILM02.1	IRON	148 UG/L			TRG	4/15/96	4/26/96	5/7/96
24AS1	GW	REG		73W111104	ILM02.1	LEAD	1.9 UG/L	U	U	TRG	4/15/96	4/26/96	5/7/96
24AS1	GW	REG		73W111104	ILM02.1	MAGNESIUM	48200 UG/L			TRG	4/15/96	4/26/96	5/7/96
24AS1	GW	REG		73W111104	ILM02.1	MANGANESE	19.7 UG/L			TRG	4/15/96	4/26/96	5/7/96
24AS1	GW	REG		73W111104	ILM02.1	MERCURY	0.2 UG/L	U	U	TRG	4/15/96	4/30/96	5/1/96
24AS1	GW	REG		73W111104	ILM02.1	NICKEL	85 UG/L	E	J	TRG	4/15/96	4/26/96	5/7/96

ANALYTICAL RESULTS --- CTO: 0073

Facility: MCASET

Data retrieved from BEIDMS on 31-Oct-96 at 9:03 AM

Station ID	Sample Information Matrix	Type	Top Depth	Container ID	Method Code	Analyte Name	Results	Qualifiers Lab	Val	Result Type	Date Information Collect	Prepare	Analyze
24AS1	GW	REG		73W111104	ILM02.1	POTASSIUM	2540 UG/L	BE	J	TRG	4/15/96	4/26/96	5/7/96
24AS1	GW	REG		73W111104	ILM02.1	SELENIUM	25.7 UG/L			TRG	4/15/96	4/26/96	5/7/96
24AS1	GW	REG		73W111104	ILM02.1	SILVER	2.1 UG/L	B		TRG	4/15/96	4/26/96	5/7/96
24AS1	GW	REG		73W111104	ILM02.1	SODIUM	80700 UG/L	E	J	TRG	4/15/96	4/26/96	5/7/96
24AS1	GW	REG		73W111104	ILM02.1	THALLIUM	4.7 UG/L	U	U	TRG	4/15/96	4/26/96	5/7/96
24AS1	GW	REG		73W111104	ILM02.1	VANADIUM	15.4 UG/L	B		TRG	4/15/96	4/26/96	5/7/96
24AS1	GW	REG		73W111104	ILM02.1	ZINC	2.6 UG/L	BE	UJ	TRG	4/15/96	4/26/96	5/7/96
24AS1	GW	REG		73W111301	ILM02.1	ALUMINUM	34.5 UG/L	U	U	TRG	4/18/96	4/26/96	5/7/96
24AS1	GW	REG		73W111301	ILM02.1	ANTIMONY	1 UG/L	U	U	TRG	4/18/96	4/26/96	5/7/96
24AS1	GW	REG		73W111301	ILM02.1	ARSENIC	4 UG/L	U	U	TRG	4/18/96	4/26/96	5/7/96
24AS1	GW	REG		73W111301	ILM02.1	BARIUM	24.7 UG/L	B		TRG	4/18/96	4/26/96	5/7/96
24AS1	GW	REG		73W111301	ILM02.1	BERYLLIUM	0.12 UG/L	B	U	TRG	4/18/96	4/26/96	5/7/96
24AS1	GW	REG		73W111301	ILM02.1	CADMIUM	0.3 UG/L	U	U	TRG	4/18/96	4/26/96	5/7/96
24AS1	GW	REG		73W111301	ILM02.1	CALCIUM	150000 UG/L			TRG	4/18/96	4/26/96	5/7/96
24AS1	GW	REG		73W111301	ILM02.1	CHROMIUM	4.1 UG/L	B		TRG	4/18/96	4/26/96	5/7/96
24AS1	GW	REG		73W111301	ILM02.1	COBALT	4.4 UG/L	B	U	TRG	4/18/96	4/26/96	5/7/96
24AS1	GW	REG		73W111301	ILM02.1	COPPER	1 UG/L	U	U	TRG	4/18/96	4/26/96	5/7/96
24AS1	GW	REG		73W111301	ILM02.1	IRON	23.3 UG/L	B		TRG	4/18/96	4/26/96	5/7/96
24AS1	GW	REG		73W111301	ILM02.1	LEAD	1.9 UG/L	U	U	TRG	4/18/96	4/26/96	5/7/96
24AS1	GW	REG		73W111301	ILM02.1	MAGNESIUM	48300 UG/L			TRG	4/18/96	4/26/96	5/7/96
24AS1	GW	REG		73W111301	ILM02.1	MANGANESE	3.2 UG/L	B		TRG	4/18/96	4/26/96	5/7/96
24AS1	GW	REG		73W111301	ILM02.1	MERCURY	0.2 UG/L	U	U	TRG	4/18/96	4/30/96	5/1/96
24AS1	GW	REG		73W111301	ILM02.1	NICKEL	89.6 UG/L	E	J	TRG	4/18/96	4/26/96	5/7/96
24AS1	GW	REG		73W111301	ILM02.1	POTASSIUM	2610 UG/L	BE	J	TRG	4/18/96	4/26/96	5/7/96
24AS1	GW	REG		73W111301	ILM02.1	SELENIUM	25.5 UG/L			TRG	4/18/96	4/26/96	5/7/96
24AS1	GW	REG		73W111301	ILM02.1	SILVER	1.3 UG/L	U	U	TRG	4/18/96	4/26/96	5/7/96
24AS1	GW	REG		73W111301	ILM02.1	SODIUM	81000 UG/L	E	J	TRG	4/18/96	4/26/96	5/7/96
24AS1	GW	REG		73W111301	ILM02.1	THALLIUM	4.7 UG/L	U	U	TRG	4/18/96	4/26/96	5/7/96
24AS1	GW	REG		73W111301	ILM02.1	VANADIUM	12.7 UG/L	B		TRG	4/18/96	4/26/96	5/7/96

ANALYTICAL RESULTS --- CTO: 0073

Facility: MCASET

Data retrieved from BEIDMS on 31-Oct-96 at 9:03 AM

	Sample Information							Qualifiers			Date Information		
Station ID	Matrix	Type	Top Depth	Container ID	Method Code	Analyte Name	Results	Lab	Val	Result Type	Collect	Prepare	Analyze
24AS1	GW	REG		73W111301	ILM02.1	ZINC	2.9 UG/L	BE	UJ	TRG	4/18/96	4/26/96	5/7/96
24AS1	GW	REG		73W112506	ILM02.1	ALUMINUM	40.5 UG/L	B		TRG	5/29/96	6/4/96	6/10/96
24AS1	GW	REG		73W112506	ILM02.1	ANTIMONY	1 UG/L	U	U	TRG	5/29/96	6/4/96	6/10/96
24AS1	GW	REG		73W112506	ILM02.1	ARSENIC	4.2 UG/L	B		TRG	5/29/96	6/4/96	6/10/96
24AS1	GW	REG		73W112506	ILM02.1	BARIUM	22.9 UG/L	B		TRG	5/29/96	6/4/96	6/10/96
24AS1	GW	REG		73W112506	ILM02.1	BERYLLIUM	0.29 UG/L	B	U	TRG	5/29/96	6/4/96	6/10/96
24AS1	GW	REG		73W112506	ILM02.1	CADMIUM	0.3 UG/L	U	U	TRG	5/29/96	6/4/96	6/10/96
24AS1	GW	REG		73W112506	ILM02.1	CALCIUM	180000 UG/L			TRG	5/29/96	6/4/96	6/10/96
24AS1	GW	REG		73W112506	ILM02.1	CHROMIUM	9.9 UG/L	B		TRG	5/29/96	6/4/96	6/10/96
24AS1	GW	REG		73W112506	ILM02.1	COBALT	1.1 UG/L	B	U	TRG	5/29/96	6/4/96	6/10/96
24AS1	GW	REG		73W112506	ILM02.1	COPPER	1.3 UG/L	B	U	TRG	5/29/96	6/4/96	6/10/96
24AS1	GW	REG		73W112506	ILM02.1	IRON	63 UG/L	B		TRG	5/29/96	6/4/96	6/10/96
24AS1	GW	REG		73W112506	ILM02.1	LEAD	1.9 UG/L	U	U	TRG	5/29/96	6/4/96	6/10/96
24AS1	GW	REG		73W112506	ILM02.1	MAGNESIUM	48500 UG/L			TRG	5/29/96	6/4/96	6/10/96
24AS1	GW	REG		73W112506	ILM02.1	MANGANESE	2.2 UG/L	B		TRG	5/29/96	6/4/96	6/10/96
24AS1	GW	REG		73W112506	ILM02.1	MERCURY	0.2 UG/L	U	U	TRG	5/29/96	6/3/96	6/5/96
24AS1	GW	REG		73W112506	ILM02.1	MOLYBDENUM	25.9 UG/L			TRG	5/29/96	6/4/96	6/10/96
24AS1	GW	REG		73W112506	ILM02.1	NICKEL	23.4 UG/L	B		TRG	5/29/96	6/4/96	6/10/96
24AS1	GW	REG		73W112506	ILM02.1	POTASSIUM	2610 UG/L	BE	J	TRG	5/29/96	6/4/96	6/10/96
24AS1	GW	REG		73W112506	ILM02.1	SELENIUM	26.5 UG/L			TRG	5/29/96	6/4/96	6/10/96
24AS1	GW	REG		73W112506	ILM02.1	SILVER	1.3 UG/L	U	U	TRG	5/29/96	6/4/96	6/10/96
24AS1	GW	REG		73W112506	ILM02.1	SODIUM	81600 UG/L			TRG	5/29/96	6/4/96	6/10/96
24AS1	GW	REG		73W112506	ILM02.1	THALLIUM	4.7 UG/L	U	U	TRG	5/29/96	6/4/96	6/10/96
24AS1	GW	REG		73W112506	ILM02.1	VANADIUM	15.9 UG/L	B		TRG	5/29/96	6/4/96	6/10/96
24AS1	GW	REG		73W112506	ILM02.1	ZINC	4.6 UG/L	B	U	TRG	5/29/96	6/4/96	6/10/96
24AS2A	GW	DUP		73W107601	EPA CLP	ALUMINUM	28.2 UG/L	B	U	TRG	11/29/95	12/14/95	12/22/95
24AS2A	GW	DUP		73W107601	EPA CLP	ANTIMONY	2.2 UG/L	U	U	TRG	11/29/95	12/14/95	12/22/95
24AS2A	GW	DUP		73W107601	EPA CLP	ARSENIC	2.1 UG/L	U	U	TRG	11/29/95	12/14/95	12/22/95
24AS2A	GW	DUP		73W107601	EPA CLP	BARIUM	21.3 UG/L	B		TRG	11/29/95	12/14/95	12/22/95

ANALYTICAL RESULTS --- CTO: 0073

Facility: MCASET

Data retrieved from BEIDMS on 31-Oct-96 at 9:03 AM

Station ID	Sample Information Matrix	Type	Top Depth	Container ID	Method Code	Analyte Name	Results	Qualifiers Lab	Val	Result Type	Date Information Collect	Prepare	Analyze
24AS2A	GW	DUP		73W107601	EPA CLP	BERYLLIUM	0.27 UG/L	U	U	TRG	11/29/95	12/14/95	12/22/95
24AS2A	GW	DUP		73W107601	EPA CLP	CADMIUM	0.3 UG/L	U	U	TRG	11/29/95	12/14/95	12/22/95
24AS2A	GW	DUP		73W107601	EPA CLP	CALCIUM	182000 UG/L			TRG	11/29/95	12/14/95	12/22/95
24AS2A	GW	DUP		73W107601	EPA CLP	CHROMIUM	5.4 UG/L	B		TRG	11/29/95	12/14/95	12/22/95
24AS2A	GW	DUP		73W107601	EPA CLP	COBALT	1 UG/L	U	U	TRG	11/29/95	12/14/95	12/22/95
24AS2A	GW	DUP		73W107601	EPA CLP	COPPER	10.2 UG/L	B		TRG	11/29/95	12/14/95	12/22/95
24AS2A	GW	DUP		73W107601	EPA CLP	IRON	32.2 UG/L	B*	J	TRG	11/29/95	12/14/95	12/22/95
24AS2A	GW	DUP		73W107601	EPA CLP	LEAD	1.5 UG/L	U*	U	TRG	11/29/95	12/14/95	12/22/95
24AS2A	GW	DUP		73W107601	EPA CLP	MAGNESIUM	49200 UG/L			TRG	11/29/95	12/14/95	12/22/95
24AS2A	GW	DUP		73W107601	EPA CLP	MANGANESE	30.4 UG/L			TRG	11/29/95	12/14/95	12/22/95
24AS2A	GW	DUP		73W107601	EPA CLP	MERCURY	0.02 UG/L	U	U	TRG	11/29/95	12/8/95	12/11/95
24AS2A	GW	DUP		73W107601	EPA CLP	NICKEL	11 UG/L	B		TRG	11/29/95	12/14/95	12/22/95
24AS2A	GW	DUP		73W107601	EPA CLP	POTASSIUM	3600 UG/L	B		TRG	11/29/95	12/14/95	12/22/95
24AS2A	GW	DUP		73W107601	EPA CLP	SELENIUM	20.5 UG/L			TRG	11/29/95	12/14/95	12/22/95
24AS2A	GW	DUP		73W107601	EPA CLP	SILVER	0.8 UG/L	U	U	TRG	11/29/95	12/14/95	12/22/95
24AS2A	GW	DUP		73W107601	EPA CLP	SODIUM	86200 UG/L	E	J	TRG	11/29/95	12/14/95	12/22/95
24AS2A	GW	DUP		73W107601	EPA CLP	THALLIUM	3 UG/L	U	U	TRG	11/29/95	12/14/95	12/22/95
24AS2A	GW	DUP		73W107601	EPA CLP	VANADIUM	14.2 UG/L	B		TRG	11/29/95	12/14/95	12/22/95
24AS2A	GW	DUP		73W107601	EPA CLP	ZINC	9.7 UG/L	B	U	TRG	11/29/95	12/14/95	12/22/95
24AS2A	GW	REG		73W107203	EPA CLP	ALUMINUM	16.9 UG/L	B	U	TRG	11/28/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107203	EPA CLP	ANTIMONY	2.2 UG/L	U	U	TRG	11/28/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107203	EPA CLP	ARSENIC	2.1 UG/L	U	U	TRG	11/28/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107203	EPA CLP	BARIUM	19.5 UG/L	B		TRG	11/28/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107203	EPA CLP	BERYLLIUM	0.27 UG/L	U	U	TRG	11/28/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107203	EPA CLP	CADMIUM	0.3 UG/L	U	U	TRG	11/28/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107203	EPA CLP	CALCIUM	167000 UG/L			TRG	11/28/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107203	EPA CLP	CHROMIUM	4.5 UG/L	B		TRG	11/28/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107203	EPA CLP	COBALT	1.3 UG/L	B	U	TRG	11/28/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107203	EPA CLP	COPPER	3.8 UG/L	B		TRG	11/28/95	12/21/95	12/23/95

ANALYTICAL RESULTS --- CTO: 0073

Facility: MCASET

Data retrieved from BEIDMS on 31-Oct-96 at 9:03 AM

Station ID	Sample Information Matrix	Type	Top Depth	Container ID	Method Code	Analyte Name	Results	Qualifiers Lab	Val	Result Type	Date Information Collect	Prepare	Analyze
24AS2A	GW	REG		73W107203	EPA CLP	IRON	18.5 UG/L	U	U	TRG	11/28/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107203	EPA CLP	LEAD	1.5 UG/L	U	U	TRG	11/28/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107203	EPA CLP	MAGNESIUM	45500 UG/L			TRG	11/28/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107203	EPA CLP	MANGANESE	28.2 UG/L			TRG	11/28/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107203	EPA CLP	MERCURY	0.02 UG/L	UN	UJ	TRG	11/28/95	12/20/95	12/21/95
24AS2A	GW	REG		73W107203	EPA CLP	NICKEL	10.2 UG/L	B		TRG	11/28/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107203	EPA CLP	POTASSIUM	3290 UG/L	B		TRG	11/28/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107203	EPA CLP	SELENIUM	16.7 UG/L			TRG	11/28/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107203	EPA CLP	SILVER	0.8 UG/L	U	U	TRG	11/28/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107203	EPA CLP	SODIUM	77900 UG/L	E	J	TRG	11/28/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107203	EPA CLP	THALLIUM	3 UG/L	U	U	TRG	11/28/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107203	EPA CLP	VANADIUM	13.5 UG/L	B		TRG	11/28/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107203	EPA CLP	ZINC	7.1 UG/L	B	U	TRG	11/28/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107204	EPA CLP	ALUMINUM	200 RPD	U		DUP	11/28/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107204	EPA CLP	ANTIMONY	0 RPD	U		DUP	11/28/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107204	EPA CLP	ARSENIC	200 RPD	B		DUP	11/28/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107204	EPA CLP	BARIUM	2.5 RPD	B		DUP	11/28/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107204	EPA CLP	BERYLLIUM	0 RPD	U		DUP	11/28/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107204	EPA CLP	CADMIUM	0 RPD	U		DUP	11/28/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107204	EPA CLP	CALCIUM	3.1 RPD			DUP	11/28/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107204	EPA CLP	CHROMIUM	1.6 RPD	B		DUP	11/28/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107204	EPA CLP	COBALT	8.8 RPD	B		DUP	11/28/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107204	EPA CLP	COPPER	19.7 RPD	B		DUP	11/28/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107204	EPA CLP	IRON	0 RPD	U		DUP	11/28/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107204	EPA CLP	LEAD	0 RPD	U		DUP	11/28/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107204	EPA CLP	MAGNESIUM	2.4 RPD			DUP	11/28/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107204	EPA CLP	MANGANESE	3.2 RPD			DUP	11/28/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107204	EPA CLP	MERCURY	0 RPD	U		DUP	11/28/95	12/20/95	12/21/95
24AS2A	GW	REG		73W107204	EPA CLP	NICKEL	6 RPD	B		DUP	11/28/95	12/21/95	12/23/95

ANALYTICAL RESULTS --- CTO: 0073

Facility: MCASET

Data retrieved from BEIDMS on 31-Oct-96 at 9:03 AM

Station ID	Sample Information Matrix	Type	Top Depth	Container ID	Method Code	Analyte Name	Results	Qualifiers Lab	Val	Result Type	Date Information Collect	Prepare	Analyze
24AS2A	GW	REG		73W107204	EPA CLP	POTASSIUM	2.5 RPD	B		DUP	11/28/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107204	EPA CLP	SELENIUM	4.1 RPD			DUP	11/28/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107204	EPA CLP	SILVER	0 RPD	U		DUP	11/28/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107204	EPA CLP	SODIUM	1.8 RPD			DUP	11/28/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107204	EPA CLP	THALLIUM	0 RPD	U		DUP	11/28/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107204	EPA CLP	VANADIUM	2 RPD	B		DUP	11/28/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107204	EPA CLP	ZINC	75.3 RPD	B		DUP	11/28/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107401	EPA CLP	ALUMINUM	15.3 UG/L	B	U	TRG	11/29/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107401	EPA CLP	ANTIMONY	2.5 UG/L	B		TRG	11/29/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107401	EPA CLP	ARSENIC	4.6 UG/L	B	U	TRG	11/29/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107401	EPA CLP	BARIUM	20.3 UG/L	B		TRG	11/29/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107401	EPA CLP	BERYLLIUM	0.27 UG/L	U	U	TRG	11/29/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107401	EPA CLP	CADMIUM	0.38 UG/L	B		TRG	11/29/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107401	EPA CLP	CALCIUM	174000 UG/L			TRG	11/29/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107401	EPA CLP	CHROMIUM	5.2 UG/L	B		TRG	11/29/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107401	EPA CLP	COBALT	1.1 UG/L	B	U	TRG	11/29/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107401	EPA CLP	COPPER	8.9 UG/L	B		TRG	11/29/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107401	EPA CLP	IRON	22 UG/L	B	U	TRG	11/29/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107401	EPA CLP	LEAD	1.5 UG/L	U	U	TRG	11/29/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107401	EPA CLP	MAGNESIUM	46900 UG/L			TRG	11/29/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107401	EPA CLP	MANGANESE	29.9 UG/L			TRG	11/29/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107401	EPA CLP	MERCURY	0.02 UG/L	UN	UJ	TRG	11/29/95	12/20/95	12/21/95
24AS2A	GW	REG		73W107401	EPA CLP	NICKEL	10.7 UG/L	B		TRG	11/29/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107401	EPA CLP	POTASSIUM	3270 UG/L	B		TRG	11/29/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107401	EPA CLP	SELENIUM	17.6 UG/L			TRG	11/29/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107401	EPA CLP	SILVER	0.8 UG/L	U	U	TRG	11/29/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107401	EPA CLP	SODIUM	79800 UG/L	E	J	TRG	11/29/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107401	EPA CLP	THALLIUM	3 UG/L	U	U	TRG	11/29/95	12/21/95	12/23/95
24AS2A	GW	REG		73W107401	EPA CLP	VANADIUM	14.1 UG/L	B		TRG	11/29/95	12/21/95	12/23/95

ANALYTICAL RESULTS --- CTO: 0073

Facility: MCASET

Data retrieved from BEIDMS on 31-Oct-96 at 9:03 AM

Station ID	Sample Information Matrix	Type	Top Depth	Container ID	Method Code	Analyte Name	Results	Qualifiers Lab	Val	Result Type	Date Information Collect	Prepare	Analyze
24AS2A	GW	REG		73W107401	EPA CLP	ZINC	6.8 UG/L	B	U	TRG	11/29/95	12/21/95	12/23/95
Pay Item : VOLATILE ORGANIC COMPOUNDS													
09DBMW45	GW	REG		73W112402	EPA 8010/8020	1,1,1-TRICHLOROETHANE	12 UG/L	U	U	TRG	5/29/96		6/7/96
09DBMW45	GW	REG		73W112402	EPA 8010/8020	1,1,2,2-TETRACHLOROETHANE	12 UG/L	U	U	TRG	5/29/96		6/7/96
09DBMW45	GW	REG		73W112402	EPA 8010/8020	1,1,2-TRICHLORO-1,2,2-TRIFLUO	12 UG/L	U	U	TRG	5/29/96		6/7/96
09DBMW45	GW	REG		73W112402	EPA 8010/8020	1,1,2-TRICHLOROETHANE	12 UG/L	U	U	TRG	5/29/96		6/7/96
09DBMW45	GW	REG		73W112402	EPA 8010/8020	1,1-DICHLOROETHANE	12 UG/L	U	U	TRG	5/29/96		6/7/96
09DBMW45	GW	REG		73W112402	EPA 8010/8020	1,1-DICHLOROETHENE	12 UG/L	U	U	TRG	5/29/96		6/7/96
09DBMW45	GW	REG		73W112402	EPA 8010/8020	1,2-DICHLOROBENZENE	12 UG/L	U	U	TRG	5/29/96		6/7/96
09DBMW45	GW	REG		73W112402	EPA 8010/8020	1,2-DICHLOROETHANE	12 UG/L	U	U	TRG	5/29/96		6/7/96
09DBMW45	GW	REG		73W112402	EPA 8010/8020	1,2-DICHLOROPROPANE	12 UG/L	U	U	TRG	5/29/96		6/7/96
09DBMW45	GW	REG		73W112402	EPA 8010/8020	1,3-DICHLOROBENZENE	12 UG/L	U	U	TRG	5/29/96		6/7/96
09DBMW45	GW	REG		73W112402	EPA 8010/8020	1,4-DICHLOROBENZENE	12 UG/L	U	U	TRG	5/29/96		6/7/96
09DBMW45	GW	REG		73W112402	EPA 8010/8020	BENZENE	12 UG/L	U	U	TRG	5/29/96		6/7/96
09DBMW45	GW	REG		73W112402	EPA 8010/8020	BROMODICHLOROMETHANE	12 UG/L	U	U	TRG	5/29/96		6/7/96
09DBMW45	GW	REG		73W112402	EPA 8010/8020	BROMOFORM	12 UG/L	U	U	TRG	5/29/96		6/7/96
09DBMW45	GW	REG		73W112402	EPA 8010/8020	BROMOMETHANE	12 UG/L	U	U	TRG	5/29/96		6/7/96
09DBMW45	GW	REG		73W112402	EPA 8010/8020	CARBON TETRACHLORIDE	12 UG/L	U	U	TRG	5/29/96		6/7/96
09DBMW45	GW	REG		73W112402	EPA 8010/8020	CHLOROBENZENE	12 UG/L	U	U	TRG	5/29/96		6/7/96
09DBMW45	GW	REG		73W112402	EPA 8010/8020	CHLORODIBROMOMETHANE	12 UG/L	U	U	TRG	5/29/96		6/7/96
09DBMW45	GW	REG		73W112402	EPA 8010/8020	CHLOROETHANE	12 UG/L	U	UJ	TRG	5/29/96		6/7/96
09DBMW45	GW	REG		73W112402	EPA 8010/8020	CHLOROFORM	12 UG/L	U	U	TRG	5/29/96		6/7/96
09DBMW45	GW	REG		73W112402	EPA 8010/8020	CHLOROMETHANE	12 UG/L	U	UJ	TRG	5/29/96		6/7/96
09DBMW45	GW	REG		73W112402	EPA 8010/8020	CIS-1,2-DICHLOROETHENE	12 UG/L	U	U	TRG	5/29/96		6/7/96
09DBMW45	GW	REG		73W112402	EPA 8010/8020	CIS-1,3-DICHLOROPROPENE	12 UG/L	U	U	TRG	5/29/96		6/7/96
09DBMW45	GW	REG		73W112402	EPA 8010/8020	DICHLORODIFLUOROMETHANE	12 UG/L	U	UJ	TRG	5/29/96		6/7/96
09DBMW45	GW	REG		73W112402	EPA 8010/8020	ETHYLBENZENE	12 UG/L	U	U	TRG	5/29/96		6/7/96
09DBMW45	GW	REG		73W112402	EPA 8010/8020	M,P-XYLENE	25 UG/L	U	U	TRG	5/29/96		6/7/96

ANALYTICAL RESULTS --- CTO: 0073

Facility: MCASET

Data retrieved from BEIDMS on 31-Oct-96 at 9:03 AM

	Sample Information							Qualifiers			Date Information		
Station ID	Matrix	Type	Top Depth	Container ID	Method Code	Analyte Name	Results	Lab	Val	Result Type	Collect	Prepare	Analyze
09DBMW45	GW	REG		73W112402	EPA 8010/8020	METHYLENE CHLORIDE	12 UG/L	U	U	TRG	5/29/96		6/7/96
09DBMW45	GW	REG		73W112402	EPA 8010/8020	O-XYLENE	12 UG/L	U	U	TRG	5/29/96		6/7/96
09DBMW45	GW	REG		73W112402	EPA 8010/8020	STYRENE	12 UG/L	U	U	TRG	5/29/96		6/7/96
09DBMW45	GW	REG		73W112402	EPA 8010/8020	TETRACHLOROETHENE	12 UG/L	U	U	TRG	5/29/96		6/7/96
09DBMW45	GW	REG		73W112402	EPA 8010/8020	TOLUENE	12 UG/L	U	U	TRG	5/29/96		6/7/96
09DBMW45	GW	REG		73W112402	EPA 8010/8020	TRANS-1,2-DICHLOROETHENE	12 UG/L	U	U	TRG	5/29/96		6/7/96
09DBMW45	GW	REG		73W112402	EPA 8010/8020	TRANS-1,3-DICHLOROPROPENE	12 UG/L	U	U	TRG	5/29/96		6/7/96
09DBMW45	GW	REG		73W112402	EPA 8010/8020	TRICHLOROETHENE	720 UG/L	P		TRG	5/29/96		6/7/96
09DBMW45	GW	REG		73W112402	EPA 8010/8020	TRICHLOROFLUOROMETHANE	12 UG/L	U	U	TRG	5/29/96		6/7/96
09DBMW45	GW	REG		73W112402	EPA 8010/8020	VINYL CHLORIDE	12 UG/L	U	U	TRG	5/29/96		6/7/96
24AS1	GW	REG		73W111103	EPA 8010/8020	1,1,1-TRICHLOROETHANE	25 UG/L	U	U	TRG	4/15/96		4/25/96
24AS1	GW	REG		73W111103	EPA 8010/8020	1,1,2,2-TETRACHLOROETHANE	25 UG/L	U	U	TRG	4/15/96		4/25/96
24AS1	GW	REG		73W111103	EPA 8010/8020	1,1,2-TRICHLORO-1,2,2-TRIFLUO	25 UG/L	U	U	TRG	4/15/96		4/25/96
24AS1	GW	REG		73W111103	EPA 8010/8020	1,1,2-TRICHLOROETHANE	25 UG/L	U	U	TRG	4/15/96		4/25/96
24AS1	GW	REG		73W111103	EPA 8010/8020	1,1-DICHLOROETHANE	25 UG/L	U	U	TRG	4/15/96		4/25/96
24AS1	GW	REG		73W111103	EPA 8010/8020	1,1-DICHLOROETHENE	25 UG/L	U	U	TRG	4/15/96		4/25/96
24AS1	GW	REG		73W111103	EPA 8010/8020	1,2-DICHLOROBENZENE	25 UG/L	U	U	TRG	4/15/96		4/25/96
24AS1	GW	REG		73W111103	EPA 8010/8020	1,2-DICHLOROETHANE	25 UG/L	U	U	TRG	4/15/96		4/25/96
24AS1	GW	REG		73W111103	EPA 8010/8020	1,2-DICHLOROPROPANE	25 UG/L	U	U	TRG	4/15/96		4/25/96
24AS1	GW	REG		73W111103	EPA 8010/8020	1,3-DICHLOROBENZENE	25 UG/L	U	U	TRG	4/15/96		4/25/96
24AS1	GW	REG		73W111103	EPA 8010/8020	1,4-DICHLOROBENZENE	25 UG/L	U	U	TRG	4/15/96		4/25/96
24AS1	GW	REG		73W111103	EPA 8010/8020	BENZENE	25 UG/L	U	U	TRG	4/15/96		4/25/96
24AS1	GW	REG		73W111103	EPA 8010/8020	BROMODICHLOROMETHANE	25 UG/L	U	U	TRG	4/15/96		4/25/96
24AS1	GW	REG		73W111103	EPA 8010/8020	BROMOFORM	25 UG/L	U	U	TRG	4/15/96		4/25/96
24AS1	GW	REG		73W111103	EPA 8010/8020	BROMOMETHANE	25 UG/L	U	U	TRG	4/15/96		4/25/96
24AS1	GW	REG		73W111103	EPA 8010/8020	CARBON TETRACHLORIDE	25 UG/L	U	U	TRG	4/15/96		4/25/96
24AS1	GW	REG		73W111103	EPA 8010/8020	CHLOROBENZENE	25 UG/L	U	U	TRG	4/15/96		4/25/96
24AS1	GW	REG		73W111103	EPA 8010/8020	CHLORODIBROMOMETHANE	25 UG/L	U	U	TRG	4/15/96		4/25/96
24AS1	GW	REG		73W111103	EPA 8010/8020	CHLOROETHANE	25 UG/L	U	U	TRG	4/15/96		4/25/96

ANALYTICAL RESULTS --- CTO: 0073

Facility: MCASET

Data retrieved from BEIDMS on 31-Oct-96 at 9:03 AM

	Sample Information							Qualifiers			Date Information		
Station ID	Matrix	Type	Top Depth	Container ID	Method Code	Analyte Name	Results	Lab	Val	Result Type	Collect	Prepare	Analyze
24AS1	GW	REG		73W111103	EPA 8010/8020	CHLOROFORM	25 UG/L	U	U	TRG	4/15/96		4/25/96
24AS1	GW	REG		73W111103	EPA 8010/8020	CHLOROMETHANE	25 UG/L	U	U	TRG	4/15/96		4/25/96
24AS1	GW	REG		73W111103	EPA 8010/8020	CIS-1,2-DICHLOROETHENE	25 UG/L	U	U	TRG	4/15/96		4/25/96
24AS1	GW	REG		73W111103	EPA 8010/8020	CIS-1,3-DICHLOROPROPENE	25 UG/L	U	U	TRG	4/15/96		4/25/96
24AS1	GW	REG		73W111103	EPA 8010/8020	DICHLORODIFLUOROMETHANE	25 UG/L	U	U	TRG	4/15/96		4/25/96
24AS1	GW	REG		73W111103	EPA 8010/8020	ETHYLBENZENE	25 UG/L	U	U	TRG	4/15/96		4/25/96
24AS1	GW	REG		73W111103	EPA 8010/8020	M,P-XYLENE	50 UG/L	U	U	TRG	4/15/96		4/25/96
24AS1	GW	REG		73W111103	EPA 8010/8020	METHYLENE CHLORIDE	25 UG/L	U	U	TRG	4/15/96		4/25/96
24AS1	GW	REG		73W111103	EPA 8010/8020	O-XYLENE	25 UG/L	U	U	TRG	4/15/96		4/25/96
24AS1	GW	REG		73W111103	EPA 8010/8020	STYRENE	25 UG/L	U	U	TRG	4/15/96		4/25/96
24AS1	GW	REG		73W111103	EPA 8010/8020	TETRACHLOROETHENE	25 UG/L	U	U	TRG	4/15/96		4/25/96
24AS1	GW	REG		73W111103	EPA 8010/8020	TOLUENE	25 UG/L	U	U	TRG	4/15/96		4/25/96
24AS1	GW	REG		73W111103	EPA 8010/8020	TRANS-1,2-DICHLOROETHENE	25 UG/L	U	U	TRG	4/15/96		4/25/96
24AS1	GW	REG		73W111103	EPA 8010/8020	TRANS-1,3-DICHLOROPROPENE	25 UG/L	U	U	TRG	4/15/96		4/25/96
24AS1	GW	REG		73W111103	EPA 8010/8020	TRICHLOROETHENE	850 UG/L	P		TRG	4/15/96		4/25/96
24AS1	GW	REG		73W111103	EPA 8010/8020	TRICHLOROFLUOROMETHANE	25 UG/L	U	U	TRG	4/15/96		4/25/96
24AS1	GW	REG		73W111103	EPA 8010/8020	VINYL CHLORIDE	25 UG/L	U	U	TRG	4/15/96		4/25/96
24AS1	GW	REG		73W112502	EPA 8010/8020	1,1,1-TRICHLOROETHANE	12 UG/L	U	U	TRG	5/29/96		6/7/96
24AS1	GW	REG		73W112502	EPA 8010/8020	1,1,2,2-TETRACHLOROETHANE	12 UG/L	U	U	TRG	5/29/96		6/7/96
24AS1	GW	REG		73W112502	EPA 8010/8020	1,1,2-TRICHLORO-1,2,2-TRIFLUO	12 UG/L	U	U	TRG	5/29/96		6/7/96
24AS1	GW	REG		73W112502	EPA 8010/8020	1,1,2-TRICHLOROETHANE	12 UG/L	U	U	TRG	5/29/96		6/7/96
24AS1	GW	REG		73W112502	EPA 8010/8020	1,1-DICHLOROETHANE	12 UG/L	U	U	TRG	5/29/96		6/7/96
24AS1	GW	REG		73W112502	EPA 8010/8020	1,1-DICHLOROETHENE	12 UG/L	U	U	TRG	5/29/96		6/7/96
24AS1	GW	REG		73W112502	EPA 8010/8020	1,2-DICHLOROBENZENE	12 UG/L	U	U	TRG	5/29/96		6/7/96
24AS1	GW	REG		73W112502	EPA 8010/8020	1,2-DICHLOROETHANE	12 UG/L	U	U	TRG	5/29/96		6/7/96
24AS1	GW	REG		73W112502	EPA 8010/8020	1,2-DICHLOROPROPANE	12 UG/L	U	U	TRG	5/29/96		6/7/96
24AS1	GW	REG		73W112502	EPA 8010/8020	1,3-DICHLOROBENZENE	12 UG/L	U	U	TRG	5/29/96		6/7/96
24AS1	GW	REG		73W112502	EPA 8010/8020	1,4-DICHLOROBENZENE	12 UG/L	U	U	TRG	5/29/96		6/7/96
24AS1	GW	REG		73W112502	EPA 8010/8020	BENZENE	12 UG/L	U	U	TRG	5/29/96		6/7/96

ANALYTICAL RESULTS --- CTO: 0073

Facility: MCASET

Data retrieved from BEIDMS on 31-Oct-96 at 9:03 AM

Station ID	Sample Information Matrix	Type	Top Depth	Container ID	Method Code	Analyte Name	Results	Qualifiers Lab	Val	Result Type	Date Information Collect	Prepare	Analyze
24AS1	GW	REG		73W112502	EPA 8010/8020	BROMODICHLOROMETHANE	12 UG/L	U	U	TRG	5/29/96		6/7/96
24AS1	GW	REG		73W112502	EPA 8010/8020	BROMOFORM	12 UG/L	U	U	TRG	5/29/96		6/7/96
24AS1	GW	REG		73W112502	EPA 8010/8020	BROMOMETHANE	12 UG/L	U	U	TRG	5/29/96		6/7/96
24AS1	GW	REG		73W112502	EPA 8010/8020	CARBON TETRACHLORIDE	12 UG/L	U	U	TRG	5/29/96		6/7/96
24AS1	GW	REG		73W112502	EPA 8010/8020	CHLOROBENZENE	12 UG/L	U	U	TRG	5/29/96		6/7/96
24AS1	GW	REG		73W112502	EPA 8010/8020	CHLORODIBROMOMETHANE	12 UG/L	U	U	TRG	5/29/96		6/7/96
24AS1	GW	REG		73W112502	EPA 8010/8020	CHLOROETHANE	12 UG/L	U	UJ	TRG	5/29/96		6/7/96
24AS1	GW	REG		73W112502	EPA 8010/8020	CHLOROFORM	12 UG/L	U	U	TRG	5/29/96		6/7/96
24AS1	GW	REG		73W112502	EPA 8010/8020	CHLOROMETHANE	12 UG/L	U	UJ	TRG	5/29/96		6/7/96
24AS1	GW	REG		73W112502	EPA 8010/8020	CIS-1,2-DICHLOROETHENE	12 UG/L	U	U	TRG	5/29/96		6/7/96
24AS1	GW	REG		73W112502	EPA 8010/8020	CIS-1,3-DICHLOROPROPENE	12 UG/L	U	U	TRG	5/29/96		6/7/96
24AS1	GW	REG		73W112502	EPA 8010/8020	DICHLORODIFLUOROMETHANE	12 UG/L	U	UJ	TRG	5/29/96		6/7/96
24AS1	GW	REG		73W112502	EPA 8010/8020	ETHYLBENZENE	12 UG/L	U	U	TRG	5/29/96		6/7/96
24AS1	GW	REG		73W112502	EPA 8010/8020	M,P-XYLENE	25 UG/L	U	U	TRG	5/29/96		6/7/96
24AS1	GW	REG		73W112502	EPA 8010/8020	METHYLENE CHLORIDE	12 UG/L	U	U	TRG	5/29/96		6/7/96
24AS1	GW	REG		73W112502	EPA 8010/8020	O-XYLENE	12 UG/L	U	U	TRG	5/29/96		6/7/96
24AS1	GW	REG		73W112502	EPA 8010/8020	STYRENE	12 UG/L	U	U	TRG	5/29/96		6/7/96
24AS1	GW	REG		73W112502	EPA 8010/8020	TETRACHLOROETHENE	12 UG/L	U	U	TRG	5/29/96		6/7/96
24AS1	GW	REG		73W112502	EPA 8010/8020	TOLUENE	12 UG/L	U	U	TRG	5/29/96		6/7/96
24AS1	GW	REG		73W112502	EPA 8010/8020	TRANS-1,2-DICHLOROETHENE	12 UG/L	U	U	TRG	5/29/96		6/7/96
24AS1	GW	REG		73W112502	EPA 8010/8020	TRANS-1,3-DICHLOROPROPENE	12 UG/L	U	U	TRG	5/29/96		6/7/96
24AS1	GW	REG		73W112502	EPA 8010/8020	TRICHLOROETHENE	780 UG/L	P		TRG	5/29/96		6/7/96
24AS1	GW	REG		73W112502	EPA 8010/8020	TRICHLOROFLUOROMETHANE	12 UG/L	U	U	TRG	5/29/96		6/7/96
24AS1	GW	REG		73W112502	EPA 8010/8020	VINYL CHLORIDE	12 UG/L	U	U	TRG	5/29/96		6/7/96
Pay Item : BIOCHEMICAL OXYGEN DEMAND 5-DAY													
09DBMW45	GW	REG		73W106024	EPA 405.1	BOD5	2 MG/L	U	U	TRG	[illegible]95	11/22/95	11/27/95
09DBMW45	GW	REG		73W106026	EPA 405.1	BOD5	2 MG/L	U		DUP	11/20/95	11/22/95	11/27/95
24AS1	GW	REG		73W106804	EPA 405.1	BOD5	2 MG/L	U	U	TRG	11/28/95	11/29/95	12/4/95

ANALYTICAL RESULTS --- CTO: 0073

Facility: MCASET

Data retrieved from BEIDMS on 31-Oct-96 at 9:03 AM

Station ID	Sample Information Matrix	Type	Top Depth	Container ID	Method Code	Analyte Name	Results	Qualifiers Lab	Val	Result Type	Date Information Collect	Prepare	Analyze
24AS2A	GW	DUP		73W107609	EPA 405.1	BOD5	2 MG/L	U	U	TRG	11/29/95	12/1/95	12/6/95
24AS2A	GW	REG		73W107405	EPA 405.1	BOD5	2 MG/L	U	U	TRG	11/29/95	12/1/95	12/6/95
24AS2A	GW	REG		73W107407	EPA 405.1	BOD5	2 MG/L	U		DUP	11/29/95	12/1/95	12/6/95
Pay Item : LOW CONCENTRATION VOCS													
09DBMW45	GW	REG		73W106017	EPA CLP/OLC	1,1,1-TRICHLOROETHANE	8 UG/L	U	U	TRG	11/20/95		11/29/95
09DBMW45	GW	REG		73W106017	EPA CLP/OLC	1,1,2,2-TETRACHLOROETHANE	8 UG/L	U	U	TRG	11/20/95		11/29/95
09DBMW45	GW	REG		73W106017	EPA CLP/OLC	1,1,2-TRICHLOROETHANE	8 UG/L	U	U	TRG	11/20/95		11/29/95
09DBMW45	GW	REG		73W106017	EPA CLP/OLC	1,1-DICHLOROETHANE	8 UG/L	U	U	TRG	11/20/95		11/29/95
09DBMW45	GW	REG		73W106017	EPA CLP/OLC	1,1-DICHLOROETHENE	8 UG/L	U	U	TRG	11/20/95		11/29/95
09DBMW45	GW	REG		73W106017	EPA CLP/OLC	1,2-DIBROMOETHANE	8 UG/L	U	U	TRG	11/20/95		11/29/95
09DBMW45	GW	REG		73W106017	EPA CLP/OLC	1,2-DICHLOROBENZENE	8 UG/L	U	U	TRG	11/20/95		11/29/95
09DBMW45	GW	REG		73W106017	EPA CLP/OLC	1,2-DICHLOROETHANE	8 UG/L	U	U	TRG	11/20/95		11/29/95
09DBMW45	GW	REG		73W106017	EPA CLP/OLC	1,2-DICHLOROPROPANE	8 UG/L	U	U	TRG	11/20/95		11/29/95
09DBMW45	GW	REG		73W106017	EPA CLP/OLC	1,3-DICHLOROBENZENE	8 UG/L	U	U	TRG	11/20/95		11/29/95
09DBMW45	GW	REG		73W106017	EPA CLP/OLC	1,4-DICHLOROBENZENE	8 UG/L	U	U	TRG	11/20/95		11/29/95
09DBMW45	GW	REG		73W106017	EPA CLP/OLC	2-BUTANONE	40 UG/L	U	U	TRG	11/20/95		11/29/95
09DBMW45	GW	REG		73W106017	EPA CLP/OLC	2-HEXANONE	40 UG/L	U	U	TRG	11/20/95		11/29/95
09DBMW45	GW	REG		73W106017	EPA CLP/OLC	4-METHYL-2-PENTANONE	40 UG/L	U	U	TRG	11/20/95		11/29/95
09DBMW45	GW	REG		73W106017	EPA CLP/OLC	ACETONE	40 UG/L	U	U	TRG	11/20/95		11/29/95
09DBMW45	GW	REG		73W106017	EPA CLP/OLC	BENZENE	8 UG/L	U	U	TRG	11/20/95		11/29/95
09DBMW45	GW	REG		73W106017	EPA CLP/OLC	BROMOCHLOROMETHANE	8 UG/L	U	U	TRG	11/20/95		11/29/95
09DBMW45	GW	REG		73W106017	EPA CLP/OLC	BROMODICHLOROMETHANE	8 UG/L	U	U	TRG	11/20/95		11/29/95
09DBMW45	GW	REG		73W106017	EPA CLP/OLC	BROMOFORM	8 UG/L	U	U	TRG	11/20/95		11/29/95
09DBMW45	GW	REG		73W106017	EPA CLP/OLC	BROMOMETHANE	8 UG/L	U	U	TRG	11/20/95		11/29/95
09DBMW45	GW	REG		73W106017	EPA CLP/OLC	CARBON DISULFIDE	8 UG/L	U	U	TRG	11/20/95		11/29/95
09DBMW45	GW	REG		73W106017	EPA CLP/OLC	CARBON TETRACHLORIDE	3 UG/L	J	J	TRG	11/20/95		11/29/95
09DBMW45	GW	REG		73W106017	EPA CLP/OLC	CHLOROBENZENE	8 UG/L	U	U	TRG	11/20/95		11/29/95
09DBMW45	GW	REG		73W106017	EPA CLP/OLC	CHLORODIBROMOMETHANE	8 UG/L	U	U	TRG	11/20/95		11/29/95

ANALYTICAL RESULTS --- CTO: 0073

Facility: MCASET

Data retrieved from BEIDMS on 31-Oct-96 at 9:03 AM

Station ID	Sample Information Matrix	Type	Top Depth	Container ID	Method Code	Analyte Name	Results	Qualifiers Lab	Val	Result Type	Date Information Collect	Prepare	Analyze
09DBMW45	GW	REG		73W106017	EPA CLP/OLC	CHLOROETHANE	8 UG/L	U	U	TRG	11/20/95		11/29/95
09DBMW45	GW	REG		73W106017	EPA CLP/OLC	CHLOROFORM	10 UG/L			TRG	11/20/95		11/29/95
09DBMW45	GW	REG		73W106017	EPA CLP/OLC	CHLOROMETHANE	8 UG/L	U	U	TRG	11/20/95		11/29/95
09DBMW45	GW	REG		73W106017	EPA CLP/OLC	CIS-1,2-DICHLOROETHENE	8 UG/L	U	U	TRG	11/20/95		11/29/95
09DBMW45	GW	REG		73W106017	EPA CLP/OLC	CIS-1,3-DICHLOROPROPENE	8 UG/L	U	UJ	TRG	11/20/95		11/29/95
09DBMW45	GW	REG		73W106017	EPA CLP/OLC	DIBROMOCHLOROPROPANE	8 UG/L	U	U	TRG	11/20/95		11/29/95
09DBMW45	GW	REG		73W106017	EPA CLP/OLC	ETHYLBENZENE	8 UG/L	U	U	TRG	11/20/95		11/29/95
09DBMW45	GW	REG		73W106017	EPA CLP/OLC	METHYLENE CHLORIDE	16 UG/L	U	U	TRG	11/20/95		11/29/95
09DBMW45	GW	REG		73W106017	EPA CLP/OLC	STYRENE	8 UG/L	U	U	TRG	11/20/95		11/29/95
09DBMW45	GW	REG		73W106017	EPA CLP/OLC	TETRACHLOROETHENE	3 UG/L	J	J	TRG	11/20/95		11/29/95
09DBMW45	GW	REG		73W106017	EPA CLP/OLC	TOLUENE	8 UG/L	U	U	TRG	11/20/95		11/29/95
09DBMW45	GW	REG		73W106017	EPA CLP/OLC	TOTAL XYLENES	8 UG/L	U	U	TRG	11/20/95		11/29/95
09DBMW45	GW	REG		73W106017	EPA CLP/OLC	TRANS-1,2-DICHLOROETHENE	8 UG/L	U	U	TRG	11/20/95		11/29/95
09DBMW45	GW	REG		73W106017	EPA CLP/OLC	TRANS-1,3-DICHLOROPROPENE	8 UG/L	U	U	TRG	11/20/95		11/29/95
09DBMW45	GW	REG		73W106017	EPA CLP/OLC	TRICHLOROETHENE	250 UG/L	E		TRG	11/20/95		11/29/95
09DBMW45	GW	REG		73W106017	EPA CLP/OLC	VINYL CHLORIDE	8 UG/L	U	R	TRG	11/20/95		11/29/95
09DBMW45	GW	REG		73W106018	EPA CLP/OLC	1,1,1-TRICHLOROETHANE	42 UG/L	UD	U	DL	11/20/95		12/1/95
09DBMW45	GW	REG		73W106018	EPA CLP/OLC	1,1,2,2-TETRACHLOROETHANE	42 UG/L	UD	U	DL	11/20/95		12/1/95
09DBMW45	GW	REG		73W106018	EPA CLP/OLC	1,1,2-TRICHLOROETHANE	42 UG/L	UD	U	DL	11/20/95		12/1/95
09DBMW45	GW	REG		73W106018	EPA CLP/OLC	1,1-DICHLOROETHANE	42 UG/L	UD	U	DL	11/20/95		12/1/95
09DBMW45	GW	REG		73W106018	EPA CLP/OLC	1,1-DICHLOROETHENE	42 UG/L	UD	U	DL	11/20/95		12/1/95
09DBMW45	GW	REG		73W106018	EPA CLP/OLC	1,2-DIBROMOETHANE	42 UG/L	UD	U	DL	11/20/95		12/1/95
09DBMW45	GW	REG		73W106018	EPA CLP/OLC	1,2-DICHLOROBENZENE	42 UG/L	UD	U	DL	11/20/95		12/1/95
09DBMW45	GW	REG		73W106018	EPA CLP/OLC	1,2-DICHLOROETHANE	42 UG/L	UD	U	DL	11/20/95		12/1/95
09DBMW45	GW	REG		73W106018	EPA CLP/OLC	1,2-DICHLOROPROPANE	42 UG/L	UD	U	DL	11/20/95		12/1/95
09DBMW45	GW	REG		73W106018	EPA CLP/OLC	1,3-DICHLOROBENZENE	42 UG/L	UD	U	DL	11/20/95		12/1/95
09DBMW45	GW	REG		73W106018	EPA CLP/OLC	1,4-DICHLOROBENZENE	42 UG/L	UD	U	DL	11/20/95		12/1/95
09DBMW45	GW	REG		73W106018	EPA CLP/OLC	2-BUTANONE	210 UG/L	UD	U	DL	11/20/95		12/1/95
09DBMW45	GW	REG		73W106018	EPA CLP/OLC	2-HEXANONE	210 UG/L	UD	U	DL	11/20/95		12/1/95

ANALYTICAL RESULTS --- CTO: 0073

Facility: MCASET

Data retrieved from BEIDMS on 31-Oct-96 at 9:03 AM

Station ID	Sample Information Matrix	Type	Top Depth	Container ID	Method Code	Analyte Name	Results	Qualifiers Lab	Val	Result Type	Date Information Collect	Prepare	Analyze
09DBMW45	GW	REG		73W106018	EPA CLP/OLC	4-METHYL-2-PENTANONE	210 UG/L	UD	U	DL	11/20/95		12/1/95
09DBMW45	GW	REG		73W106018	EPA CLP/OLC	ACETONE	210 UG/L	UD	U	DL	11/20/95		12/1/95
09DBMW45	GW	REG		73W106018	EPA CLP/OLC	BENZENE	42 UG/L	UD	U	DL	11/20/95		12/1/95
09DBMW45	GW	REG		73W106018	EPA CLP/OLC	BROMOCHLOROMETHANE	42 UG/L	UD	U	DL	11/20/95		12/1/95
09DBMW45	GW	REG		73W106018	EPA CLP/OLC	BROMODICHLOROMETHANE	42 UG/L	UD	U	DL	11/20/95		12/1/95
09DBMW45	GW	REG		73W106018	EPA CLP/OLC	BROMOFORM	42 UG/L	UD	U	DL	11/20/95		12/1/95
09DBMW45	GW	REG		73W106018	EPA CLP/OLC	BROMOMETHANE	42 UG/L	UD	U	DL	11/20/95		12/1/95
09DBMW45	GW	REG		73W106018	EPA CLP/OLC	CARBON DISULFIDE	42 UG/L	UD	U	DL	11/20/95		12/1/95
09DBMW45	GW	REG		73W106018	EPA CLP/OLC	CARBON TETRACHLORIDE	42 UG/L	UD	U	DL	11/20/95		12/1/95
09DBMW45	GW	REG		73W106018	EPA CLP/OLC	CHLOROBENZENE	42 UG/L	UD	U	DL	11/20/95		12/1/95
09DBMW45	GW	REG		73W106018	EPA CLP/OLC	CHLORODIBROMOMETHANE	42 UG/L	UD	U	DL	11/20/95		12/1/95
09DBMW45	GW	REG		73W106018	EPA CLP/OLC	CHLOROETHANE	42 UG/L	UD	U	DL	11/20/95		12/1/95
09DBMW45	GW	REG		73W106018	EPA CLP/OLC	CHLOROFORM	42 UG/L	UD	U	DL	11/20/95		12/1/95
09DBMW45	GW	REG		73W106018	EPA CLP/OLC	CHLOROMETHANE	42 UG/L	UD	U	DL	11/20/95		12/1/95
09DBMW45	GW	REG		73W106018	EPA CLP/OLC	CIS-1,2-DICHLOROETHENE	42 UG/L	UD	U	DL	11/20/95		12/1/95
09DBMW45	GW	REG		73W106018	EPA CLP/OLC	CIS-1,3-DICHLOROPROPENE	42 UG/L	UD	UJ	DL	11/20/95		12/1/95
09DBMW45	GW	REG		73W106018	EPA CLP/OLC	DIBROMOCHLOROPROPANE	42 UG/L	UD	U	DL	11/20/95		12/1/95
09DBMW45	GW	REG		73W106018	EPA CLP/OLC	ETHYLBENZENE	42 UG/L	UD	U	DL	11/20/95		12/1/95
09DBMW45	GW	REG		73W106018	EPA CLP/OLC	METHYLENE CHLORIDE	83 UG/L	UD	U	DL	11/20/95		12/1/95
09DBMW45	GW	REG		73W106018	EPA CLP/OLC	STYRENE	42 UG/L	UD	U	DL	11/20/95		12/1/95
09DBMW45	GW	REG		73W106018	EPA CLP/OLC	TETRACHLOROETHENE	42 UG/L	UD	U	DL	11/20/95		12/1/95
09DBMW45	GW	REG		73W106018	EPA CLP/OLC	TOLUENE	42 UG/L	UD	U	DL	11/20/95		12/1/95
09DBMW45	GW	REG		73W106018	EPA CLP/OLC	TOTAL XYLENES	42 UG/L	UD	U	DL	11/20/95		12/1/95
09DBMW45	GW	REG		73W106018	EPA CLP/OLC	TRANS-1,2-DICHLOROETHENE	42 UG/L	UD	U	DL	11/20/95		12/1/95
09DBMW45	GW	REG		73W106018	EPA CLP/OLC	TRANS-1,3-DICHLOROPROPENE	42 UG/L	UD	U	DL	11/20/95		12/1/95
09DBMW45	GW	REG		73W106018	EPA CLP/OLC	TRICHLOROETHENE	900 UG/L	D		DL	11/20/95		12/1/95
09DBMW45	GW	REG		73W106018	EPA CLP/OLC	VINYL CHLORIDE	42 UG/L	UD	R	DL	11/20/95		12/1/95
24AS1	GW	REG		73W106813	EPA CLP/OLC	1,1,1-TRICHLOROETHANE	42 UG/L	U	U	TRG	11/28/95		12/7/95
24AS1	GW	REG		73W106813	EPA CLP/OLC	1,1,2,2-TETRACHLOROETHANE	42 UG/L	U	U	TRG	11/28/95		12/7/95

ANALYTICAL RESULTS --- CTO: 0073

Facility: MCASET

Data retrieved from BEIDMS on 31-Oct-96 at 9:03 AM

Station ID	Sample Information Matrix	Type	Top Depth	Container ID	Method Code	Analyte Name	Results	Qualifiers Lab	Val	Result Type	Date Information Collect	Prepare	Analyze
24AS1	GW	REG		73W106813	EPA CLP/OLC	1,1,2-TRICHLOROETHANE	42 UG/L	U	U	TRG	11/28/95		12/7/95
24AS1	GW	REG		73W106813	EPA CLP/OLC	1,1-DICHLOROETHANE	42 UG/L	U	U	TRG	11/28/95		12/7/95
24AS1	GW	REG		73W106813	EPA CLP/OLC	1,1-DICHLOROETHENE	42 UG/L	U	U	TRG	11/28/95		12/7/95
24AS1	GW	REG		73W106813	EPA CLP/OLC	1,2-DIBROMOETHANE	42 UG/L	U	U	TRG	11/28/95		12/7/95
24AS1	GW	REG		73W106813	EPA CLP/OLC	1,2-DICHLOROBENZENE	42 UG/L	U	U	TRG	11/28/95		12/7/95
24AS1	GW	REG		73W106813	EPA CLP/OLC	1,2-DICHLOROETHANE	42 UG/L	U	U	TRG	11/28/95		12/7/95
24AS1	GW	REG		73W106813	EPA CLP/OLC	1,2-DICHLOROPROPANE	42 UG/L	U	U	TRG	11/28/95		12/7/95
24AS1	GW	REG		73W106813	EPA CLP/OLC	1,3-DICHLOROBENZENE	42 UG/L	U	U	TRG	11/28/95		12/7/95
24AS1	GW	REG		73W106813	EPA CLP/OLC	1,4-DICHLOROBENZENE	42 UG/L	U	U	TRG	11/28/95		12/7/95
24AS1	GW	REG		73W106813	EPA CLP/OLC	2-BUTANONE	210 UG/L	U	U	TRG	11/28/95		12/7/95
24AS1	GW	REG		73W106813	EPA CLP/OLC	2-HEXANONE	210 UG/L	U	U	TRG	11/28/95		12/7/95
24AS1	GW	REG		73W106813	EPA CLP/OLC	4-METHYL-2-PENTANONE	210 UG/L	U	U	TRG	11/28/95		12/7/95
24AS1	GW	REG		73W106813	EPA CLP/OLC	ACETONE	210 UG/L	U	UJ	TRG	11/28/95		12/7/95
24AS1	GW	REG		73W106813	EPA CLP/OLC	BENZENE	42 UG/L	U	U	TRG	11/28/95		12/7/95
24AS1	GW	REG		73W106813	EPA CLP/OLC	BROMOCHLOROMETHANE	42 UG/L	U	U	TRG	11/28/95		12/7/95
24AS1	GW	REG		73W106813	EPA CLP/OLC	BROMODICHLOROMETHANE	42 UG/L	U	U	TRG	11/28/95		12/7/95
24AS1	GW	REG		73W106813	EPA CLP/OLC	BROMOFORM	42 UG/L	U	U	TRG	11/28/95		12/7/95
24AS1	GW	REG		73W106813	EPA CLP/OLC	BROMOMETHANE	42 UG/L	U	U	TRG	11/28/95		12/7/95
24AS1	GW	REG		73W106813	EPA CLP/OLC	CARBON DISULFIDE	42 UG/L	U	U	TRG	11/28/95		12/7/95
24AS1	GW	REG		73W106813	EPA CLP/OLC	CARBON TETRACHLORIDE	42 UG/L	U	U	TRG	11/28/95		12/7/95
24AS1	GW	REG		73W106813	EPA CLP/OLC	CHLOROBENZENE	42 UG/L	U	U	TRG	11/28/95		12/7/95
24AS1	GW	REG		73W106813	EPA CLP/OLC	CHLORODIBROMOMETHANE	42 UG/L	U	U	TRG	11/28/95		12/7/95
24AS1	GW	REG		73W106813	EPA CLP/OLC	CHLOROETHANE	42 UG/L	U	U	TRG	11/28/95		12/7/95
24AS1	GW	REG		73W106813	EPA CLP/OLC	CHLOROFORM	42 UG/L	U	U	TRG	11/28/95		12/7/95
24AS1	GW	REG		73W106813	EPA CLP/OLC	CHLOROMETHANE	42 UG/L	U	U	TRG	11/28/95		12/7/95
24AS1	GW	REG		73W106813	EPA CLP/OLC	CIS-1,2-DICHLOROETHENE	42 UG/L	U	U	TRG	11/28/95		12/7/95
24AS1	GW	REG		73W106813	EPA CLP/OLC	CIS-1,3-DICHLOROPROPENE	42 UG/L	U	UJ	TRG	11/28/95		12/7/95
24AS1	GW	REG		73W106813	EPA CLP/OLC	DIBROMOCHLOROPROPANE	42 UG/L	U	U	TRG	11/28/95		12/7/95
24AS1	GW	REG		73W106813	EPA CLP/OLC	ETHYLBENZENE	42 UG/L	U	U	TRG	11/28/95		12/7/95

ANALYTICAL RESULTS --- CTO: 0073

Facility: MCASET

Data retrieved from BEIDMS on 31-Oct-96 at 9:03 AM

Station ID	Sample Information Matrix	Type	Top Depth	Container ID	Method Code	Analyte Name	Results	Qualifiers Lab	Val	Result Type	Date Information Collect	Prepare	Analyze
24AS1	GW	REG		73W106813	EPA CLP/OLC	METHYLENE CHLORIDE	83 UG/L	U	U	TRG	11/28/95		12/7/95
24AS1	GW	REG		73W106813	EPA CLP/OLC	STYRENE	42 UG/L	U	U	TRG	11/28/95		12/7/95
24AS1	GW	REG		73W106813	EPA CLP/OLC	TETRACHLOROETHENE	42 UG/L	U	U	TRG	11/28/95		12/7/95
24AS1	GW	REG		73W106813	EPA CLP/OLC	TOLUENE	42 UG/L	U	U	TRG	11/28/95		12/7/95
24AS1	GW	REG		73W106813	EPA CLP/OLC	TOTAL XYLENES	42 UG/L	U	U	TRG	11/28/95		12/7/95
24AS1	GW	REG		73W106813	EPA CLP/OLC	TRANS-1,2-DICHLOROETHENE	42 UG/L	U	U	TRG	11/28/95		12/7/95
24AS1	GW	REG		73W106813	EPA CLP/OLC	TRANS-1,3-DICHLOROPROPENE	42 UG/L	U	U	TRG	11/28/95		12/7/95
24AS1	GW	REG		73W106813	EPA CLP/OLC	TRICHLOROETHENE	980 UG/L			TRG	11/28/95		12/7/95
24AS1	GW	REG		73W106813	EPA CLP/OLC	VINYL CHLORIDE	42 UG/L	U	R	TRG	11/28/95		12/7/95
24AS2A	GW	DUP		73W107608	EPA CLP/OLC	1,1,1-TRICHLOROETHANE	83 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	DUP		73W107608	EPA CLP/OLC	1,1,2,2-TETRACHLOROETHANE	83 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	DUP		73W107608	EPA CLP/OLC	1,1,2-TRICHLOROETHANE	83 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	DUP		73W107608	EPA CLP/OLC	1,1-DICHLOROETHANE	83 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	DUP		73W107608	EPA CLP/OLC	1,1-DICHLOROETHENE	83 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	DUP		73W107608	EPA CLP/OLC	1,2-DIBROMOETHANE	83 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	DUP		73W107608	EPA CLP/OLC	1,2-DICHLOROBENZENE	83 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	DUP		73W107608	EPA CLP/OLC	1,2-DICHLOROETHANE	83 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	DUP		73W107608	EPA CLP/OLC	1,2-DICHLOROPROPANE	83 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	DUP		73W107608	EPA CLP/OLC	1,3-DICHLOROBENZENE	83 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	DUP		73W107608	EPA CLP/OLC	1,4-DICHLOROBENZENE	83 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	DUP		73W107608	EPA CLP/OLC	2-BUTANONE	420 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	DUP		73W107608	EPA CLP/OLC	2-HEXANONE	420 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	DUP		73W107608	EPA CLP/OLC	4-METHYL-2-PENTANONE	420 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	DUP		73W107608	EPA CLP/OLC	ACETONE	420 UG/L	U	UJ	TRG	11/29/95		12/7/95
24AS2A	GW	DUP		73W107608	EPA CLP/OLC	BENZENE	83 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	DUP		73W107608	EPA CLP/OLC	BROMOCHLOROMETHANE	83 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	DUP		73W107608	EPA CLP/OLC	BROMODICHLOROMETHANE	83 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	DUP		73W107608	EPA CLP/OLC	BROMOFORM	83 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	DUP		73W107608	EPA CLP/OLC	BROMOMETHANE	83 UG/L	U	U	TRG	11/29/95		12/7/95

ANALYTICAL RESULTS --- CTO: 0073

Facility: MCASET

Data retrieved from BEIDMS on 31-Oct-96 at 9:03 AM

Station ID	Sample Information Matrix	Type	Top Depth	Container ID	Method Code	Analyte Name	Results	Qualifiers Lab	Val	Result Type	Date Information Collect	Prepare	Analyze
24AS2A	GW	DUP		73W107608	EPA CLP/OLC	CARBON DISULFIDE	83 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	DUP		73W107608	EPA CLP/OLC	CARBON TETRACHLORIDE	83 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	DUP		73W107608	EPA CLP/OLC	CHLOROBENZENE	83 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	DUP		73W107608	EPA CLP/OLC	CHLORODIBROMOMETHANE	83 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	DUP		73W107608	EPA CLP/OLC	CHLOROETHANE	83 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	DUP		73W107608	EPA CLP/OLC	CHLOROFORM	83 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	DUP		73W107608	EPA CLP/OLC	CHLOROMETHANE	83 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	DUP		73W107608	EPA CLP/OLC	CIS-1,2-DICHLOROETHENE	83 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	DUP		73W107608	EPA CLP/OLC	CIS-1,3-DICHLOROPROPENE	83 UG/L	U	UJ	TRG	11/29/95		12/7/95
24AS2A	GW	DUP		73W107608	EPA CLP/OLC	DIBROMOCHLOROPROPANE	83 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	DUP		73W107608	EPA CLP/OLC	ETHYLBENZENE	83 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	DUP		73W107608	EPA CLP/OLC	METHYLENE CHLORIDE	170 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	DUP		73W107608	EPA CLP/OLC	STYRENE	83 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	DUP		73W107608	EPA CLP/OLC	TETRACHLOROETHENE	83 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	DUP		73W107608	EPA CLP/OLC	TOLUENE	83 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	DUP		73W107608	EPA CLP/OLC	TOTAL XYLENES	83 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	DUP		73W107608	EPA CLP/OLC	TRANS-1,2-DICHLOROETHENE	83 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	DUP		73W107608	EPA CLP/OLC	TRANS-1,3-DICHLOROPROPENE	83 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	DUP		73W107608	EPA CLP/OLC	TRICHLOROETHENE	1300 UG/L			TRG	11/29/95		12/7/95
24AS2A	GW	DUP		73W107608	EPA CLP/OLC	VINYL CHLORIDE	83 UG/L	U	R	TRG	11/29/95		12/7/95
24AS2A	GW	REG		73W107419	EPA CLP/OLC	1,1,1-TRICHLOROETHANE	71 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	REG		73W107419	EPA CLP/OLC	1,1,2,2-TETRACHLOROETHANE	71 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	REG		73W107419	EPA CLP/OLC	1,1,2-TRICHLOROETHANE	71 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	REG		73W107419	EPA CLP/OLC	1,1-DICHLOROETHANE	71 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	REG		73W107419	EPA CLP/OLC	1,1-DICHLOROETHENE	71 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	REG		73W107419	EPA CLP/OLC	1,2-DIBROMOETHANE	71 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	REG		73W107419	EPA CLP/OLC	1,2-DICHLOROBENZENE	71 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	REG		73W107419	EPA CLP/OLC	1,2-DICHLOROETHANE	71 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	REG		73W107419	EPA CLP/OLC	1,2-DICHLOROPROPANE	71 UG/L	U	U	TRG	11/29/95		12/7/95

ANALYTICAL RESULTS --- CTO: 0073

Facility: MCASET

Data retrieved from BEIDMS on 31-Oct-96 at 9:03 AM

Station ID	Sample Information Matrix	Type	Top Depth	Container ID	Method Code	Analyte Name	Results	Qualifiers Lab	Val	Result Type	Date Information Collect	Prepare	Analyze
24AS2A	GW	REG		73W107419	EPA CLP/OLC	1,3-DICHLOROBENZENE	71 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	REG		73W107419	EPA CLP/OLC	1,4-DICHLOROBENZENE	71 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	REG		73W107419	EPA CLP/OLC	2-BUTANONE	360 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	REG		73W107419	EPA CLP/OLC	2-HEXANONE	360 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	REG		73W107419	EPA CLP/OLC	4-METHYL-2-PENTANONE	360 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	REG		73W107419	EPA CLP/OLC	ACETONE	360 UG/L	U	UJ	TRG	11/29/95		12/7/95
24AS2A	GW	REG		73W107419	EPA CLP/OLC	BENZENE	71 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	REG		73W107419	EPA CLP/OLC	BROMOCHLOROMETHANE	71 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	REG		73W107419	EPA CLP/OLC	BROMODICHLOROMETHANE	71 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	REG		73W107419	EPA CLP/OLC	BROMOFORM	71 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	REG		73W107419	EPA CLP/OLC	BROMOMETHANE	71 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	REG		73W107419	EPA CLP/OLC	CARBON DISULFIDE	71 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	REG		73W107419	EPA CLP/OLC	CARBON TETRACHLORIDE	71 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	REG		73W107419	EPA CLP/OLC	CHLOROBENZENE	71 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	REG		73W107419	EPA CLP/OLC	CHLORODIBROMOMETHANE	71 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	REG		73W107419	EPA CLP/OLC	CHLOROETHANE	71 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	REG		73W107419	EPA CLP/OLC	CHLOROFORM	71 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	REG		73W107419	EPA CLP/OLC	CHLOROMETHANE	71 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	REG		73W107419	EPA CLP/OLC	CIS-1,2-DICHLOROETHENE	71 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	REG		73W107419	EPA CLP/OLC	CIS-1,3-DICHLOROPROPENE	71 UG/L	U	UJ	TRG	11/29/95		12/7/95
24AS2A	GW	REG		73W107419	EPA CLP/OLC	DIBROMOCHLOROPROPANE	71 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	REG		73W107419	EPA CLP/OLC	ETHYLBENZENE	71 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	REG		73W107419	EPA CLP/OLC	METHYLENE CHLORIDE	140 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	REG		73W107419	EPA CLP/OLC	STYRENE	71 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	REG		73W107419	EPA CLP/OLC	TETRACHLOROETHENE	71 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	REG		73W107419	EPA CLP/OLC	TOLUENE	71 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	REG		73W107419	EPA CLP/OLC	TOTAL XYLENES	71 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	REG		73W107419	EPA CLP/OLC	TRANS-1,2-DICHLOROETHENE	71 UG/L	U	U	TRG	11/29/95		12/7/95
24AS2A	GW	REG		73W107419	EPA CLP/OLC	TRANS-1,3-DICHLOROPROPENE	71 UG/L	U	U	TRG	11/29/95		12/7/95

ANALYTICAL RESULTS --- CTO: 0073

Facility: MCASET

Data retrieved from BEIDMS on 31-Oct-96 at 9:03 AM

Station ID	Sample Information Matrix	Type	Top Depth	Container ID	Method Code	Analyte Name	Results	Qualifiers Lab	Val	Result Type	Date Information Collect	Prepare	Analyze
24AS2A	GW	REG		73W107419	EPA CLP/OLC	TRICHLOROETHENE	1200 UG/L			TRG	11/29/95		12/7/95
24AS2A	GW	REG		73W107419	EPA CLP/OLC	VINYL CHLORIDE	71 UG/L	U	R	TRG	11/29/95		12/7/95
Pay Item : IONS BY ION CHROMATOGRAPHY													
09DBMW45	GW	REG		73W106002	EPA 300.0	CHLORIDE	231 MG/L			TRG	11/20/95		11/21/95
09DBMW45	GW	REG		73W106002	EPA 300.0	FLUORIDE	0.1 MG/L	U	UJ	TRG	11/20/95		11/21/95
09DBMW45	GW	REG		73W106002	EPA 300.0	PHOSPHATE	0.1 MG/L	U	U	TRG	11/20/95		11/21/95
09DBMW45	GW	REG		73W106002	EPA 300.0	SULFATE	220 MG/L			TRG	11/20/95		11/21/95
24AS1	GW	REG		73W106801	EPA 300.0	CHLORIDE	218 MG/L			TRG	11/28/95		11/29/95
24AS1	GW	REG		73W106801	EPA 300.0	FLUORIDE	0.1 MG/L	U	UJ	TRG	11/28/95		11/29/95
24AS1	GW	REG		73W106801	EPA 300.0	PHOSPHATE	0.1 MG/L	U	U	TRG	11/28/95		11/29/95
24AS1	GW	REG		73W106801	EPA 300.0	SULFATE	194 MG/L			TRG	11/28/95		11/29/95
24AS1	GW	REG		73W111105	EPA 300.0	CHLORIDE	268 MG/L			TRG	4/15/96		4/24/96
24AS1	GW	REG		73W111105	EPA 300.0	FLUORIDE	0.1 MG/L	U	U	TRG	4/15/96		4/18/96
24AS1	GW	REG		73W111105	EPA 300.0	PHOSPHATE	0.1 MG/L	U	UJ	TRG	4/15/96		4/18/96
24AS1	GW	REG		73W111105	EPA 300.0	SULFATE	259 MG/L			TRG	4/15/96		4/24/96
24AS1	GW	REG		73W111302	EPA 300.0	CHLORIDE	250 MG/L			TRG	4/18/96		4/24/96
24AS1	GW	REG		73W111302	EPA 300.0	FLUORIDE	0.1 MG/L	U	U	TRG	4/18/96		4/19/96
24AS1	GW	REG		73W111302	EPA 300.0	PHOSPHATE	0.1 MG/L	U	U	TRG	4/18/96		4/19/96
24AS1	GW	REG		73W111302	EPA 300.0	SULFATE	241 MG/L			TRG	4/18/96		4/24/96
24AS1	GW	REG		73W112507	EPA 300.0	CHLORIDE	238 MG/L			TRG	5/29/96		5/31/96
24AS1	GW	REG		73W112507	EPA 300.0	FLUORIDE	0.1 MG/L	U	U	TRG	5/29/96		5/31/96
24AS1	GW	REG		73W112507	EPA 300.0	PHOSPHATE	0.1 MG/L	U	U	TRG	5/29/96		5/31/96
24AS1	GW	REG		73W112507	EPA 300.0	SULFATE	230 MG/L			TRG	5/29/96		5/31/96
24AS2A	GW	DUP		73W107602	EPA 300.0	CHLORIDE	226 MG/L			TRG	11/29/95		12/1/95
24AS2A	GW	DUP		73W107602	EPA 300.0	FLUORIDE	0.1 MG/L	U	UJ	TRG	11/29/95		12/1/95
24AS2A	GW	DUP		73W107602	EPA 300.0	PHOSPHATE	0.1 MG/L	U	U	TRG	11/29/95		12/1/95
24AS2A	GW	DUP		73W107602	EPA 300.0	SULFATE	204 MG/L			TRG	11/29/95		12/1/95
24AS2A	GW	REG		73W107201	EPA 300.0	CHLORIDE	227 MG/L			TRG	11/28/95		12/1/95

ANALYTICAL RESULTS --- CTO: 0073

Facility: MCASET

Data retrieved from BEIDMS on 31-Oct-96 at 9:03 AM

Station ID	Sample Information Matrix	Type	Top Depth	Container ID	Method Code	Analyte Name	Results	Qualifiers Lab	Val	Result Type	Date Information Collect	Prepare	Analyze
24AS2A	GW	REG		73W107201	EPA 300.0	FLUORIDE	0.1 MG/L	U	U	TRG	11/28/95		12/1/95
24AS2A	GW	REG		73W107201	EPA 300.0	PHOSPHATE	0.1 MG/L	U	U	TRG	11/28/95		12/1/95
24AS2A	GW	REG		73W107201	EPA 300.0	SULFATE	205 MG/L			TRG	11/28/95		12/1/95
24AS2A	GW	REG		73W107202	EPA 300.0	CHLORIDE	229 MG/L			DUP	11/28/95		12/1/95
24AS2A	GW	REG		73W107202	EPA 300.0	FLUORIDE	0.1 MG/L	U		DUP	11/28/95		12/1/95
24AS2A	GW	REG		73W107202	EPA 300.0	PHOSPHATE	0.1 MG/L	U		DUP	11/28/95		12/1/95
24AS2A	GW	REG		73W107202	EPA 300.0	SULFATE	208 MG/L			DUP	11/28/95		12/1/95
24AS2A	GW	REG		73W107402	EPA 300.0	CHLORIDE	229 MG/L			TRG	11/29/95		12/1/95
24AS2A	GW	REG		73W107402	EPA 300.0	FLUORIDE	0.1 MG/L	U	U	TRG	11/29/95		12/1/95
24AS2A	GW	REG		73W107402	EPA 300.0	PHOSPHATE	0.1 MG/L	U	U	TRG	11/29/95		12/1/95
24AS2A	GW	REG		73W107402	EPA 300.0	SULFATE	207 MG/L			TRG	11/29/95		12/1/95
Pay Item : CHEMICAL OXYGEN DEMAND													
09DBMW45	GW	REG		73W106022	EPA 410.1	CHEMICAL OXYGEN DEMAND	10 MG/L			TRG	11/20/95	12/28/95	12/28/95
09DBMW45	GW	REG		73W106023	EPA 410.1	CHEMICAL OXYGEN DEMAND	12 MG/L			DUP	11/20/95	12/28/95	12/28/95
24AS1	GW	REG		73W106807	EPA 410.1	CHEMICAL OXYGEN DEMAND	23 MG/L			TRG	11/28/95	12/5/95	12/5/95
24AS2A	GW	DUP		73W107610	EPA 410.1	CHEMICAL OXYGEN DEMAND	15 MG/L			TRG	11/29/95	12/5/95	12/5/95
24AS2A	GW	REG		73W107408	EPA 410.1	CHEMICAL OXYGEN DEMAND	23 MG/L		J	TRG	11/29/95	12/18/95	12/18/95
24AS2A	GW	REG		73W107409	EPA 410.1	CHEMICAL OXYGEN DEMAND	19 MG/L			DUP	11/29/95	12/18/95	12/18/95
Pay Item : HARDNESS													
24AS1	GW	REG		73W111106	EPA 130.2	TOTAL HARDNESS (CACO3)	636 MG/L			TRG	4/15/96		4/24/96
24AS1	GW	REG		73W111303	EPA 130.2	TOTAL HARDNESS (CACO3)	564 MG/L			TRG	4/18/96		4/24/96
24AS1	GW	REG		73W112506	EPA 130.2	TOTAL HARDNESS (CACO3)	638 MG/L			TRG	5/29/96		5/31/96
Pay Item : TOTAL PETROLEUM HYDROCARBONS-GASOLINE													
09DBMW45	GW	REG		73W106010	EPA 8015-M	GASOLINE	0.49 MG/L	Z	J	TRG	11/20/95		11/22/95
24AS1	GW	REG		73W106816	EPA 8015-M	GASOLINE	0.46 MG/L	Z	J	TRG	11/28/95		12/1/95
24AS2A	GW	DUP		73W107605	EPA 8015-M	GASOLINE	0.46 MG/L	Z	J	TRG	11/29/95		12/6/95
24AS2A	GW	REG		73W107416	EPA 8015-M	GASOLINE	0.46 MG/L	Z	J	TRG	11/29/95		12/1/95

ANALYTICAL RESULTS --- CTO: 0073

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Station ID	Sample Information Matrix	Type	Top Depth	Container ID	Method Code	Analyte Name	Results	Qualifiers Lab	Val	Result Type	Date Information Collect	Prepare	Analyze
Pay Item : TOTAL PETROLEUM HYDROCARBONS-DIESEL													
09DBMW45	GW	REG		73W106004	EPA 8015-M	TPH-DIESEL	0.1 MG/L	U	U	TRG	11/20/95	11/27/95	12/6/95
Pay Item : ALKALINITY PLUS CARBONATE/BICARBONATE													
24AS1	GW	REG		73W111107	EPA 310.1	BICARBONATE	166 MG/L			TRG	4/15/96		4/26/96
24AS1	GW	REG		73W111107	EPA 310.1	CARBONATE	2 MG/L	U	U	TRG	4/15/96		4/26/96
24AS1	GW	REG		73W111107	EPA 310.1	HYDROXIDE ALKALINITY (AS CAC	2 MG/L	U	U	TRG	4/15/96		4/26/96
24AS1	GW	REG		73W111107	EPA 310.1	TOTAL ALKALINITY	166 MG/L			TRG	4/15/96		4/26/96
24AS1	GW	REG		73W111304	EPA 310.1	BICARBONATE	90 MG/L			TRG	4/18/96		4/29/96
24AS1	GW	REG		73W111304	EPA 310.1	CARBONATE	2 MG/L	U	U	TRG	4/18/96		4/29/96
24AS1	GW	REG		73W111304	EPA 310.1	HYDROXIDE ALKALINITY (AS CAC	2 MG/L	U	U	TRG	4/18/96		4/29/96
24AS1	GW	REG		73W111304	EPA 310.1	TOTAL ALKALINITY	90 MG/L			TRG	4/18/96		4/29/96
24AS1	GW	REG		73W112507	EPA 310.1	ALKALINITY (AS CACO3)	164 MG/L			TRG	5/29/96		5/31/96
24AS1	GW	REG		73W112507	EPA 310.1	BICARBONATE	164 MG/L			TRG	5/29/96		5/31/96
24AS1	GW	REG		73W112507	EPA 310.1	CARBONATE	2 MG/L	U	U	TRG	5/29/96		5/31/96
24AS1	GW	REG		73W112507	EPA 310.1	HYDROXIDE ALKALINITY (AS CAC	2 MG/L	U	U	TRG	5/29/96		5/31/96

ENVIRONMENTAL SUPPORT TECHNOLOGIES, INC.

TRANSMITTAL

TO Bechtel National, Inc.
401 West A Street
Suite 1000
San Diego, California
92101-7905

FROM Marcia LeFrancois
ENVIRONMENTAL SUPPORT TECHNOLOGIES, INC.
23011 Moulton Parkway, Suite E-6
Laguna Hills, California 92653
Telephone 714/457-9664 Fax 714/457-0664

ATTN Pat Brooks
RE

DATE October 9, 1996
PROJECT NO. EST 1296

WE ARE SENDING YOU

- [x] ENCLOSED
- [ ] UNDER SEPARATE COVER VIA
- [ ] WORK PLAN
- [ ] PRELIMINARY DATA
- [ ] REPORT
- [ ] FINAL DATA
- [ ] COPY OF LETTER
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- [ ] COST ESTIMATE
- [ ] OTHER

QUANTITY	DESCRIPTION
1	Revised Table 1
	Soil Gas Sample Analyses Report
	Site 24
	EL Toro Marine Corps Air Station

IF MATERIAL RECEIVED IS NOT AS LISTED, PLEASE NOTIFY US AT ONCE

REMARKS This table reflects the changes discussed during our phone conversation on 10-9-96. We are sorry for any inconvenience this may have caused.

Marcia

COPY TO

FORM1012.1092

Table 1

SUMMARY TABLE FOR LABORATORY ANALYSES RESULTS
TEDLAR BAG SOIL GAS SAMPLES

SITE 24 VOC SOURCE AREA, MCAS - EL TORO, CALIFORNIA

5/17/96

SAMPLE ID NUMBER	SAMPLE LOCATION	DATE OF SAMPLING	TCE (ug/L)	PCE (ug/L)	O2 %(v/v)	CO2 %(v/v)
73W2347	24AS1	5/14/96	2	ND<1	13	4.5
73W2348	24AS1	5/14/96	NA	NA	17	4.8
73W2349	VES SYSTEM	5/17/96	ND<1	ND<1	NA	NA

ft. = feet below grade
ug/L = micrograms per liter
%(v/v) = percent volume per volume
ND = Not Detected above the reported limit
NA = Not Analyzed

TCE = Trichloroethene
PCE = Tetrachloroethene
O2 = Oxygen
CO2 = Carbon Dioxide

Note: Concentrations shown are the highest detected within calibration limits for each sample

May 21, 1996

EST1296

Mr. Patrick Brooks
Bechtel National, Inc.
401 West A Street, Suite 1000
San Diego, California 92101-7905

Subject: Soil Gas Sample Analyses Report
Site 24
El Toro Marine Corps Air Station, El Toro, California

Dear Mr. Brooks:

Environmental Support Technologies, Inc. (EST) is pleased to provide this Soil Gas Sample Analyses Report for Tedlar™ bag samples collected from two (2) sampling locations at Site 24 VOC Source Area at the El Toro Marine Corps Air Station in El Toro, California. Bechtel National, Inc. performed the soil gas sample collection and delivered the samples under chain-of-custody to EST for analyses. Soil gas samples were analyzed for volatile organic compounds (VOCs), oxygen (O_2) and carbon dioxide (CO_2).

A summary of field analyses results for the soil gas samples is provided in Table 1. Laboratory analyses reports, quality assurance/ quality control data, and three-point calibration data for VOCs are included in Appendix A. Laboratory analyses reports for O_2 and CO_2 are included in Appendix B. Chain-of-custody forms are provided in Appendix C.

Should you have any questions or comments please contact me at (714) 457-9664.

Sincerely,

Environmental Support Technologies, Inc.

Kirk A. Thomson

Kirk A. Thomson, R.G., R.E.A.
Project Manager/Principal Hydrogeologist

cc: EST Project File (296TED.RPT)

LIMITATIONS AND WARRANTIES

This Soil Gas Sample Analyses Report has been prepared for the exclusive use of Bechtel National, Inc. and assigned interested parties. The report has been prepared in accordance with generally accepted environmental assessment practices. No other warranty, expressed or implied, is made.

The information provided in this report is based on measurements performed in specific areas during a specific limited period of time. In the event that any changes occur in waste management practices, site conditions, or uses of the property, the results contained in this Soil Gas Sample Analyses Report should be reviewed and modified or verified in writing by Environmental Support Technologies, Inc. (EST).

Soil gas sample analyses are conducted using laboratory-grade gas chromatography equipment. Chemical compound identification is performed using quantitative methods. Chemical compound identities should be verified using gas chromatography/mass spectrometric analyses methods. Soil gas survey data should be used in conjunction with other site specific data.

Kirk A. Thomson

Kirk A. Thomson, R.G., R.E.A.
Project Manager/Principal Hydrogeologist

TABLES

Table 1

SUMMARY TABLE FOR LABORATORY ANALYSES RESULTS
TEDLAR BAG SOIL GAS SAMPLES

SITE 24 VOC SOURCE AREA, MCAS – EL TORO, CALIFORNIA

5/17/96

SAMPLE ID NUMBER	SAMPLE LOCATION	DATE OF SAMPLING	TCE (ug/L)	PCE (ug/L)	O2 %(v/v)	CO2 %(v/v)
73W2347	24AS1	5/14/96	2	ND<1	13	4.5
73W2348	24AS1	5/14/96	2	ND<1	17	4.8
73W2349	VES SYSTEM	5/17/96	ND<1	ND<1	NA	NA

ft. = feet below grade
ug/L = micrograms per liter
%(v/v) = percent volume per volume
ND = Not Detected above the reported limit
NA = Not Analyzed

TCE = Trichloroethene
PCE = Tetrachloroethene
O2 = Oxygen
CO2 = Carbon Dioxide

Note: Concentrations shown are the highest detected within calibration limits for each sample

APPENDICES

Appendix A

LABORATORY ANALYSES REPORTS FOR HALOGENATED AND AROMATIC HYDROCARBONS

(INCLUDING CALIBRATION REPORTS, QUALITY CONTROL REPORTS, EXPLANATION OF METHOD DETECTION LIMITS)

TABLE A-1
HALOGENATED AND AROMATIC HYDROCARBONS
FIELD ANALYSES RESULTS FOR SOIL GAS SAMPLES
BECHTEL, SITE 24 VOC SOURCE AREA, EL TORO , CALIFORNIA
25-TARGET COMPOUND LIST

PID/ELCD #2 - 5/15/96
FILE: 296EESGRP.WK3

SAMPLE ID			73W2347-05	73W2347-05	73W2347-06	NA	NA	NA	NA	NA
DATE			5/15/96	5/15/96	5/15/96	NA	NA	NA	NA	NA
TIME			12:13	12:29	12:48	NA	NA	NA	NA	NA
INJECTION VOLUME (ul)			500	500	500	NA	NA	NA	NA	NA
PURGE VOLUME (ml)			NA	NA	NA	NA	NA	NA	NA	NA
VACUUM (in. Hg)			NA	NA	NA	NA	NA	NA	NA	NA
DILUTION FACTOR			1.0	1.0	1.0	NA	NA	NA	NA	NA
COMMENTS	RT	ARF	Tedlar bag sample	Tedlar bag Sample dup	Tedlar bag sample					
Dichlorodifluoromethane	2:90	8.77E+07	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Vinyl chloride	3:26	4.37E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Chloroethane	3:55	3.10E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Trichlorofluoromethane	3:75	6.79E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2-Trichloro-trifluoroethane	4:36	1.37E+09	8.81E+04 ND<1	1.72E+05 ND<1	1.95E+05 ND<1	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1-Dichloroethene	4:36	2.49E+07	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Methylene chloride	4:93	1.07E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
trans-1,2-Dichloroethene	5:24	1.04E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1-Dichloroethane	5:72	9.38E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
cis-1,2-Dichloroethene	6:39	1.13E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Chloroform	6:75	1.31E+09	3.29E+05 ND<1	6.10E+05 ND<1	6.44E+05 ND<1	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,1-Trichloroethane	7:01	1.18E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Carbon tetrachloride	7:22	1.48E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Benzene	7:46	9.07E+07	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,2-Dichloroethane	7:47	1.32E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Trichloroethene	8:28	1.19E+09	5.32E+05 ND<1	9.24E+05 2	9.69E+05 2	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Toluene	10:04	8.74E+07	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2-Trichloroethane	10:62	9.68E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Tetrachloroethene	10:91	1.43E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,1,2-Tetrachloroethane	12:36	1.12E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Ethylbenzene	12:40	6.04E+07	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
meta and para-Xylene	12:59	1.69E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
ortho-Xylene	13:26	6.32E+07	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2,2-Tetrachloroethane	14:34	8.86E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND

ND = not detected; analyte is below the reportable limit of quantitation for this sample
RT = retention time
ul = microliter
in. Hg = inches of Mercury

Concentrations reported in micrograms per liter (ug/L)
ARF = average response factor
ml = milliliter
* = compound detected out of calibration range

5/15/96

ANALYST : Ragi Abraham

REVIEWED BY : David M. Pride

TABLE A-1
HALOGENATED AND AROMATIC HYDROCARBONS
FIELD ANALYSES RESULTS FOR SOIL GAS SAMPLES
BECHTEL, SITE 24 VOC SOURCE AREA, EL TORO , CALIFORNIA
25-TARGET COMPOUND LIST

PID/ELCD #2 - 5/17/96
FILE: 295FF SGRP.WK3

SAMPLE ID			73W2349-01	NA	NA	NA	NA	NA	NA	NA
DATE			5/17/96	NA	NA	NA	NA	NA	NA	NA
TIME			16:41	NA	NA	NA	NA	NA	NA	NA
INJECTION VOLUME (ul)			500	NA	NA	NA	NA	NA	NA	NA
PURGE VOLUME (ml)			NA	NA	NA	NA	NA	NA	NA	NA
VACUUM (in. Hg)			NA	NA	NA	NA	NA	NA	NA	NA
DILUTION FACTOR			1.0	NA	NA	NA	NA	NA	NA	NA
COMMENTS	RT	ARF	Tedlar bag sample							
Dichlorodifluoromethane	NA	NA	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Vinyl chloride	3:33	1.11E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Chloroethane	3:63	1.51E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Trichlorofluoromethane	3:82	3.22E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2-Trichloro-trifluoroethane	4:49	9.49E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1-Dichloroethene	4:48	2.48E+07	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Methylene chloride	5:05	6.79E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
trans-1,2-Dichloroethene	5:33	7.81E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1-Dichloroethane	5:81	8.02E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
cis-1,2-Dichloroethene	6:46	8.34E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Chloroform	6:81	1.11E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,1-Trichloroethane	7:05	9.77E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Carbon tetrachloride	7:25	1.28E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00* ND	0.00E+00 ND	0.00E+00 ND
Benzene	7:49	1.17E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,2-Dichloroethane	7:53	9.23E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Trichloroethene	8:27	9.68E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Toluene	9:99	1.15E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2-Trichloroethane	10:57	1.00E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Tetrachloroethene	10:78	1.13E+09	2.74E+04 ND<1	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,1,2-Tetrachloroethane	12:15	1.07E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Ethylbenzene	12:15	9.64E+07	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
meta and para-Xylene	12:31	2.42E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
ortho-Xylene	12:91	9.39E+07	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2,2-Tetrachloroethane	13:92	1.09E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND

ND = not detected; analyte is below the reportable limit of quantitation for this sample
RT = retention time
ul = microliter
in. Hg = inches of Mercury

Concentrations reported in micrograms per liter (ug/L)
ARF = average response factor
ml = milliliter
* = compound detected out of calibration range

5/17/96

ANALYST : Ragi Abraham

REVIEWED BY : David M. Pride

TABLE A-2
QUALITY ASSURANCE/QUALITY CONTROL REPORT
DAILY MID-POINT, BLANK ANALYSIS, AND LAST GC TEST RUN
MAY 15, 1996

PID/ELCD #2

FILE: 296EEQCMP.WK

		DAILY MID-POINT			BLANK	LAST GC TEST RUN		
STANDARD CONC. (ug/L)		5000	AVERAGE		AMBIENT AIR	5000	AVERAGE	
INJECTION VOLUME(uL)		1.00	RESPONSE	PERCENT	500	1.00	RESPONSE	PERCENT
COMPOUND/WEIGHT(ug)	RT	0.00500	FACTOR	DIFFERENCE		0.00500	FACTOR	DIFFERENCE
Dichlorodifluoromethane	2:90	0			0.00E+00	0		
RF		0.00E+00	8.77E+07	NA	ND	0.00E+00	8.77E+07	NA
Vinyl chloride	3:26	0			0.00E+00	0		
RF		0.00E+00	4.37E+08	NA	ND	0.00E+00	4.37E+08	NA
Chloroethane	3:55	0			0.00E+00	0		
RF		0.00E+00	3.10E+08	NA	ND	0.00E+00	3.10E+08	NA
Trichlorofluoromethane	3:75	0			0.00E+00	0		
RF		0.00E+00	6.79E+08	NA	ND	0.00E+00	6.79E+08	NA
1,1,2-Trichloro-trifluoroethane	4:36	0			0.00E+00	0		
RF		0.00E+00	1.37E+09	NA	ND	0.00E+00	1.37E+09	NA
1,1-Dichloroethene (PID)	4:36	108079			0.00E+00	102695		
RF		2.16E+07	2.49E+07	-13	ND	2.05E+07	2.49E+07	-18
Methylene chloride	4:93	0			0.00E+00	0		
RF		0.00E+00	1.07E+09	NA	ND	0.00E+00	1.07E+09	NA
trans-1,2-Dichloroethene	5:24	4763782			0.00E+00	4893418		
RF		9.53E+08	1.04E+09	-8	ND	9.79E+08	1.04E+09	-6
1,1-Dichloroethane	5:72	4721118			0.00E+00	4819849		
RF		9.44E+08	9.38E+08	1	ND	9.64E+08	9.38E+08	3
Cis-1,2-Dichloroethene	6:39	4951959			0.00E+00	5149133		
RF		9.90E+08	1.13E+09	-12	ND	1.03E+09	1.13E+09	-9
Chloroform	6:75	0			0.00E+00	0		
RF		0.00E+00	1.31E+09	NA	ND	0.00E+00	1.31E+09	NA
1,1,1-Trichloroethane	7:01	5644293			0.00E+00	5407414		
RF		1.13E+09	1.18E+09	-4	ND	1.08E+09	1.18E+09	-8
Carbon tetrachloride	7:22	0			0.00E+00	0		
RF		0.00E+00	1.48E+09	NA	ND	0.00E+00	1.48E+09	NA
Benzene (PID)	7:46	430869			0.00E+00	408279		
RF		8.62E+07	9.07E+07	-5	ND	8.17E+07	9.07E+07	-10
1,2-Dichloroethane	7:47	6138019			0.00E+00	5698514		
RF		1.23E+09	1.32E+09	-7	ND	1.14E+09	1.32E+09	-14
Trichloroethene	8:28	5477214			0.00E+00	5361886		
RF		1.10E+09	1.19E+09	-8	ND	1.07E+09	1.19E+09	-10
Toluene (PID)	10:04	415473			0.00E+00	447386		
RF		8.31E+07	8.74E+07	-5	ND	8.95E+07	8.74E+07	2
1,1,2-Trichloroethane	10:62	4865155			0.00E+00	5180209		
RF		9.73E+08	9.68E+08	1	ND	1.04E+09	9.68E+08	7
Tetrachloroethene	10:91	6370725			0.00E+00	6116405		
RF		1.27E+09	1.43E+09	-11	ND	1.22E+09	1.43E+09	-14
1,1,1,2-Tetrachloroethane	12:36	0			0.00E+00	0		
RF		0.00E+00	1.12E+09	NA	ND	0.00E+00	1.12E+09	NA
Ethylbenzene (PID)	12:40	0			0.00E+00	0		
RF		0.00E+00	6.04E+07	NA	ND	0.00E+00	6.04E+07	NA
m,p-Xylene (PID)	12:59	807812			0.00E+00	869311		
RF		1.62E+08	1.69E+08	-4	ND	1.74E+08	1.69E+08	3
o-Xylene (PID)	13:26	325389			0.00E+00	320880		
RF		6.51E+07	6.32E+07	3	ND	6.42E+07	6.32E+07	2
1,1,2,2-Tetrachloroethane	14:34	0			0.00E+00	0		
RF		0.00E+00	8.86E+08	NA	ND	0.00E+00	8.86E+08	NA

RT = Retention Time
RF = Response Factor
NA = Not Applicable

ug/L = microgram per Liter
uL = microliter
ug = microgram

5/15/96

ANALYST: Ragi Abraham

REVIEWED BY: David M. Pride

TABLE A-3
RESPONSE FACTORS FOR THREE POINT CALIBRATION
SUBJECT SITE, CALIFORNIA
APRIL 24, 1996

PID\ELCD #2

FILE: 424963PT.WK3

STANDARD CONC. (ug/L) INJECTION VOLUME(uL) COMPOUND/WEIGHT(ug)	RT	5000 0.50 0.0025	5000 1.00 0.0050	5000 2.00 0.0100	AVERAGE RESPONSE FACTOR	STANDARD DEVIATION	RELATIVE % STANDARD DEVIATION
Dichlorodifluoromethane	2:90	194482	420918	1012432			
CF		7.78E+07	8.42E+07	1.01E+08	8.77E+07	1.21E+07	14
Vinyl chloride	3:26	958056	2347988	4591034			
CF		3.83E+08	4.70E+08	4.59E+08	4.37E+08	4.71E+07	11
Chloroethane	3:55	803430	1519289	3037713			
CF		3.21E+08	3.04E+08	3.04E+08	3.10E+08	1.01E+07	3
Trichlorofluoromethane	3:75	1670633	3327440	7030350			
CF		6.68E+08	6.65E+08	7.03E+08	6.79E+08	2.09E+07	3
1,1,2-Trichloro-trifluoroethane	4:36	3068454	7195634	14318027			
CF		1.23E+09	1.44E+09	1.43E+09	1.37E+09	1.20E+08	9
1,1-Dichloroethene (PID)	4:36	55032	110627	305725			
CF		2.20E+07	2.21E+07	3.06E+07	2.49E+07	4.91E+06	20
Methylene chloride	4:93	2517211	5506436	11128812			
CF		1.01E+09	1.10E+09	1.11E+09	1.07E+09	5.81E+07	5
trans-1,2-Dichloroethene	5:24	2272591	5332875	11409777			
CF		9.09E+08	1.07E+09	1.14E+09	1.04E+09	1.18E+08	11
1,1-Dichloroethane	5:72	2108242	4917295	9875290			
CF		8.43E+08	9.83E+08	9.88E+08	9.38E+08	8.21E+07	9
cis-1,2-Dichloroethene	6:39	2630404	5837384	11568102			
CF		1.05E+09	1.17E+09	1.16E+09	1.13E+09	6.37E+07	6
Chloroform	6:75	3071756	6811353	13319420			
CF		1.23E+09	1.36E+09	1.33E+09	1.31E+09	7.00E+07	5
1,1,1-Trichloroethane	7:01	2879068	6038728	11710360			
CF		1.15E+09	1.21E+09	1.17E+09	1.18E+09	2.85E+07	2
Carbon tetrachloride	7:22	3429459	7707342	15377948			
CF		1.37E+09	1.54E+09	1.54E+09	1.48E+09	9.69E+07	7
Benzene (PID)	7:46	202287	463128	987006			
CF		8.09E+07	9.26E+07	9.87E+07	9.07E+07	9.04E+06	10
1,2-Dichloroethane	7:47	3018098	6997910	13646475			
CF		1.21E+09	1.40E+09	1.36E+09	1.32E+09	1.02E+08	8
Trichloroethene	8:28	2720582	6295165	12216627			
CF		1.09E+09	1.26E+09	1.22E+09	1.19E+09	8.98E+07	8
Toluene (PID)	10:04	189615	473986	915154			
CF		7.58E+07	9.48E+07	9.15E+07	8.74E+07	1.01E+07	12
1,1,2-Trichloroethane	10:62	2201954	5032679	10166793			
CF		8.81E+08	1.01E+09	1.02E+09	9.68E+08	7.57E+07	8
Tetrachloroethene	10:91	3472760	7181440	14630275			
CF		1.39E+09	1.44E+09	1.46E+09	1.43E+09	3.74E+07	3
1,1,1,2-Tetrachloroethane	12:36	2520257	5831261	11888172			
CF		1.01E+09	1.17E+09	1.19E+09	1.12E+09	9.85E+07	9
Ethylbenzene (PID)	12:40	128137	303366	692977			
CF		5.13E+07	6.07E+07	6.93E+07	6.04E+07	9.02E+06	15
m,p-Xylene (PID)	12:59	375763	841106	1871726			
CF		1.50E+08	1.68E+08	1.87E+08	1.69E+08	1.84E+07	11
o-Xylene (PID)	13:26	149216	304855	688187			
CF		5.97E+07	6.10E+07	6.88E+07	6.32E+07	4.94E+06	8
1,1,2,2-Tetrachloroethane	14:34	1929867	4749621	9372528			
CF		7.72E+08	9.50E+08	9.37E+08	8.86E+08	9.93E+07	11

RT = Retention Time
CF = Calibration Factor

ug/L = Micrograms per Liter
uL = Microliter
ug = Microgram

4/24/96

Analyst: David M. Pride

Reviewed by: Ragi Abraham

TABLE A-3
RESPONSE FACTORS FOR THREE POINT CALIBRATION
SUBJECT SITE, CALIFORNIA
MAY 17, 1996

PID\ELCD #1

FILE: 05173PT.WK3

STANDARD CONC. (ug/L) INJECTION VOLUME(uL) COMPOUND/WEIGHT(ug)	RT	5000 0.50 0.0025	5000 1.00 0.0050	5000 2.00 0.0100	AVERAGE RESPONSE FACTOR	STANDARD DEVIATION	RELATIVE % STANDARD DEVIATION
Dichlorodifluoromethane		0	0	0			
CF		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA
Vinyl chloride	3:33	256404	586125	1130657			
CF		1.03E+08	1.17E+08	1.13E+08	1.11E+08	7.56E+06	7
Chloroethane	3:63	412108	636143	1612556			
CF		1.65E+08	1.27E+08	1.61E+08	1.51E+08	2.08E+07	14
Trichlorofluoromethane	3:82	793246	1550504	3398119			
CF		3.17E+08	3.10E+08	3.40E+08	3.22E+08	1.55E+07	5
1,1,2-Trichloro-trifluoroethane	4:49	2287808	5173778	8980461			
CF		9.15E+08	1.03E+09	8.98E+08	9.49E+08	7.45E+07	8
1,1-Dichloroethene (PID)	4:48	53855	124811	279621			
CF		2.15E+07	2.50E+07	2.80E+07	2.48E+07	3.21E+06	13
Methylene chloride	5:05	2097194	4468930	9049900			
CF		8.39E+08	8.94E+08	9.05E+08	8.79E+08	3.54E+07	4
trans-1,2-Dichloroethene	5:33	1840737	4099970	7880340			
CF		7.36E+08	8.20E+08	7.88E+08	7.81E+08	4.22E+07	5
1,1-Dichloroethane	5:81	1956844	4227240	7765306			
CF		7.83E+08	8.45E+08	7.77E+08	8.02E+08	3.81E+07	5
cis-1,2-Dichloroethene	6:46	1936264	4327067	8620424			
CF		7.75E+08	8.65E+08	8.62E+08	8.34E+08	5.15E+07	6
Chloroform	6:81	2603506	5766639	11431927			
CF		1.04E+09	1.15E+09	1.14E+09	1.11E+09	6.19E+07	6
1,1,1-Trichloroethane	7:05	2328726	5137926	9727401			
CF		9.31E+08	1.03E+09	9.73E+08	9.77E+08	4.82E+07	5
Carbon tetrachloride	7:25	3024806	6797578	12632941			
CF		1.21E+09	1.36E+09	1.26E+09	1.28E+09	7.58E+07	6
Benzene (PID)	7:49	263512	626137	1214341			
CF		1.05E+08	1.25E+08	1.21E+08	1.17E+08	1.05E+07	9
1,2-Dichloroethane	7:53	2180827	4965459	9037814			
CF		8.72E+08	9.93E+08	9.04E+08	9.23E+08	6.26E+07	7
Trichloroethene	8:27	2312473	5141517	9508850			
CF		9.25E+08	1.03E+09	9.51E+08	9.68E+08	5.38E+07	6
Toluene (PID)	9:99	261059	611446	1185066			
CF		1.04E+08	1.22E+08	1.19E+08	1.15E+08	9.41E+06	8
1,1,2-Trichloroethane	10:57	2372658	5284463	9928588			
CF		9.49E+08	1.06E+09	9.93E+08	1.00E+09	5.42E+07	5
Tetrachloroethene	10:78	2506432	6224648	11490055			
CF		1.00E+09	1.24E+09	1.15E+09	1.13E+09	1.22E+08	11
1,1,1,2-Tetrachloroethane	12:15	2544517	5689617	10633323			
CF		1.02E+09	1.14E+09	1.06E+09	1.07E+09	6.06E+07	6
Ethylbenzene (PID)	12:15	215075	535609	959471			
CF		8.60E+07	1.07E+08	9.59E+07	9.64E+07	1.06E+07	11
m,p-Xylene (PID)	12:31	554441	1345130	2347128			
CF		2.22E+08	2.69E+08	2.35E+08	2.42E+08	2.44E+07	10
o-Xylene (PID)	12:91	212217	526835	915618			
CF		8.49E+07	1.05E+08	9.16E+07	9.39E+07	1.04E+07	11
1,1,2,2-Tetrachloroethane	13:92	2455456	5832767	11290611			
CF		9.82E+08	1.17E+09	1.13E+09	1.09E+09	9.74E+07	9

RT = Retention Time
CF = Calibration Factor

ug/L = Micrograms per Liter
uL = Microliter
ug = Microgram

5/17/96

Analyst: Ragi Abraham

Reviewed by: David M. Pride

TABLE A-4
QUALITY ASSURANCE/QUALITY CONTROL REPORT
LAB CONTROL SAMPLE, BLANK ANALYSIS, AND LAST GC TEST RUN
APRIL 24, 1996

PID/ELCD #2

FILE: 424QCLC.WK

		LAB CONTROL SAMPLE			BLANK	LAST GC TEST RUN		
STANDARD CONC. (ug/L)		5000	AVERAGE		AMBIENT AIR	5000	AVERAGE	
INJECTION VOLUME(uL)		1.00	RESPONSE	PERCENT	500	1.00	RESPONSE	PERCENT
COMPOUND/WEIGHT(ug)	RT	0.00500	FACTOR	DIFFERENCE		0.00500	FACTOR	DIFFERENCE
Dichlorodifluoromethane	2:90	502880			0.00E+00	0		
RF		1.01E+08	8.77E+07	15	ND	0.00E+00	8.77E+07	NA
Vinyl chloride	3:26	2681826			0.00E+00	0		
RF		5.36E+08	4.37E+08	23	ND	0.00E+00	4.37E+08	NA
Chloroethane	3:55	1507950			0.00E+00	0		
RF		3.02E+08	3.10E+08	-3	ND	0.00E+00	3.10E+08	NA
Trichlorofluoromethane	3:75	3673783			0.00E+00	0		
RF		7.35E+08	6.79E+08	8	ND	0.00E+00	6.79E+08	NA
1,1,2-Trichloro-trifluoroethane	4:36	7582873			0.00E+00	0		
RF		1.52E+09	1.37E+09	11	ND	0.00E+00	1.37E+09	NA
1,1-Dichloroethene (PID)	4:36	105830			0.00E+00	0		
RF		2.12E+07	2.49E+07	-15	ND	0.00E+00	2.49E+07	NA
Methylene chloride	4:93	5762127			0.00E+00	0		
RF		1.15E+09	1.07E+09	8	ND	0.00E+00	1.07E+09	NA
trans-1,2-Dichloroethene	5:24	5517709			0.00E+00	0		
RF		1.10E+09	1.04E+09	6	ND	0.00E+00	1.04E+09	NA
1,1-Dichloroethane	5:72	5125724			0.00E+00	0		
RF		1.03E+09	9.38E+08	9	ND	0.00E+00	9.38E+08	NA
Cis-1,2-Dichloroethene	6:39	6113127			0.00E+00	0		
RF		1.22E+09	1.13E+09	8	ND	0.00E+00	1.13E+09	NA
Chloroform	6:75	7133083			0.00E+00	0		
RF		1.43E+09	1.31E+09	9	ND	0.00E+00	1.31E+09	NA
1,1,1-Trichloroethane	7:01	6414289			0.00E+00	0		
RF		1.28E+09	1.18E+09	9	ND	0.00E+00	1.18E+09	NA
Carbon tetrachloride	7:22	8044397			0.00E+00	0		
RF		1.61E+09	1.48E+09	9	ND	0.00E+00	1.48E+09	NA
Benzene (PID)	7:46	439057			0.00E+00	0		
RF		8.78E+07	9.07E+07	-3	ND	0.00E+00	9.07E+07	NA
1,2-Dichloroethane	7:47	7005227			0.00E+00	0		
RF		1.40E+09	1.32E+09	6	ND	0.00E+00	1.32E+09	NA
Trichloroethene	8:28	6508275			0.00E+00	0		
RF		1.30E+09	1.19E+09	9	ND	0.00E+00	1.19E+09	NA
Toluene (PID)	10:04	404203			0.00E+00	0		
RF		8.08E+07	8.74E+07	-8	ND	0.00E+00	8.74E+07	NA
1,1,2-Trichloroethane	10:62	5143977			0.00E+00	0		
RF		1.03E+09	9.68E+08	6	ND	0.00E+00	9.68E+08	NA
Tetrachloroethene	10:91	7195941			0.00E+00	0		
RF		1.44E+09	1.43E+09	1	ND	0.00E+00	1.43E+09	NA
1,1,1,2-Tetrachloroethane	12:36	5779558			0.00E+00	0		
RF		1.16E+09	1.12E+09	3	ND	0.00E+00	1.12E+09	NA
Ethylbenzene (PID)	12:40	290953			0.00E+00	0		
RF		5.82E+07	6.04E+07	-4	ND	0.00E+00	6.04E+07	NA
m,p-Xylene (PID)	12:59	814875			0.00E+00	0		
RF		1.63E+08	1.69E+08	-4	ND	0.00E+00	1.69E+08	NA
o-Xylene (PID)	13:26	298940			0.00E+00	0		
RF		5.98E+07	6.32E+07	-5	ND	0.00E+00	6.32E+07	NA
1,1,2,2-Tetrachloroethane	14:34	4975911			0.00E+00	0		
RF		9.95E+08	8.86E+08	12	ND	0.00E+00	8.86E+08	NA

RT = Retention Time
RF = Response Factor
NA = Not Applicable

ug/L = microgram per Liter
uL = microliter
ug = microgram

04/24/96

ANALYST: David M. Pride

REVIEWED BY: Ragi Abraham

TABLE A-4
QUALITY ASSURANCE/QUALITY CONTROL REPORT
LAB CONTROL SAMPLE, BLANK ANALYSIS, AND LAST GC TEST RUN
MAY 17, 1996

PID/ELCD #1

FILE: 0517QCLC.WK

		LAB CONTROL SAMPLE			BLANK	LAST GC TEST RUN		
STANDARD CONC. (ug/L)		5000	AVERAGE		AMBIENT AIR	5000	AVERAGE	
INJECTION VOLUME(uL)		1.00	RESPONSE	PERCENT	500	1.00	RESPONSE	PERCENT
COMPOUND/WEIGHT(ug)	RT	0.00500	FACTOR	DIFFERENCE		0.00500	FACTOR	DIFFERENCE
Dichlorodifluoromethane	3:09	0			0.00E+00	0		
RF		0.00E+00	NA	NA	ND	0.00E+00	NA	NA
Vinyl chloride	3:46	558018			0.00E+00	0		
RF		1.12E+08	1.11E+08	1	ND	0.00E+00	1.11E+08	NA
Chloroethane	3:77	715439			0.00E+00	0		
RF		1.43E+08	1.51E+08	-5	ND	0.00E+00	1.51E+08	NA
Trichlorofluoromethane	4:00	1565339			0.00E+00	0		
RF		3.13E+08	3.22E+08	-3	ND	0.00E+00	3.22E+08	NA
1,1,2-Trichloro-trifluoroethane	4:66	5128761			0.00E+00	0		
RF		1.03E+09	9.49E+08	8	ND	0.00E+00	9.49E+08	NA
1,1-Dichloroethene (PID)	4:66	106020			0.00E+00	105887		
RF		2.12E+07	2.48E+07	-15	ND	2.12E+07	2.48E+07	-15
Methylene chloride	5:22	4649744			0.00E+00	0		
RF		9.30E+08	8.79E+08	6	ND	0.00E+00	8.79E+08	NA
trans-1,2-Dichloroethene	5:51	4264302			0.00E+00	3771832		
RF		8.53E+08	7.81E+08	9	ND	7.54E+08	7.81E+08	-3
1,1-Dichloroethane	5:98	4477047			0.00E+00	3897427		
RF		8.95E+08	8.02E+08	12	ND	7.79E+08	8.02E+08	-3
Cis-1,2-Dichloroethene	6:63	4350479			0.00E+00	3904670		
RF		8.70E+08	8.34E+08	4	ND	7.81E+08	8.34E+08	-6
Chloroform	6:98	5920393			0.00E+00	0		
RF		1.18E+09	1.11E+09	7	ND	0.00E+00	1.11E+09	NA
1,1,1-Trichloroethane	7:23	5237151			0.00E+00	4641555		
RF		1.05E+09	9.77E+08	7	ND	9.28E+08	9.77E+08	-5
Carbon tetrachloride	7:43	6836573			0.00E+00	0		
RF		1.37E+09	1.28E+09	7	ND	0.00E+00	1.28E+09	NA
Benzene (PID)	7:68	610425			0.00E+00	541860		
RF		1.22E+08	1.17E+08	4	ND	1.08E+08	1.17E+08	-7
1,2-Dichloroethane	7:70	4941873			0.00E+00	4549629		
RF		9.88E+08	9.23E+08	7	ND	9.10E+08	9.23E+08	-1
Trichloroethene	8:46	5319880			0.00E+00	4664846		
RF		1.06E+09	9.68E+08	10	ND	9.33E+08	9.68E+08	-4
Toluene (PID)	10:17	609184			0.00E+00	534213		
RF		1.22E+08	1.15E+08	6	ND	1.07E+08	1.15E+08	-7
1,1,2-Trichloroethane	10:74	5561159			0.00E+00	5046767		
RF		1.11E+09	1.00E+09	11	ND	1.01E+09	1.00E+09	1
Tetrachloroethene	10:95	5850854			0.00E+00	5475941		
RF		1.17E+09	1.13E+09	4	ND	1.10E+09	1.13E+09	-3
1,1,1,2-Tetrachloroethane	12:31	5710169			0.00E+00	0		
RF		1.14E+09	1.07E+09	7	ND	0.00E+00	1.07E+09	NA
Ethylbenzene (PID)	12:32	520617			0.00E+00	0		
RF		1.04E+08	9.64E+07	8	ND	0.00E+00	9.64E+07	NA
m,p-Xylene (PID)	12:48	1273177			0.00E+00	1174198		
RF		2.55E+08	2.42E+08	5	ND	2.35E+08	2.42E+08	-3
o-Xylene (PID)	13:09	454742			0.00E+00	446262		
RF		9.09E+07	9.39E+07	-3	ND	8.93E+07	9.39E+07	-5
1,1,2,2-Tetrachloroethane	14:08	6113359			0.00E+00	0		
RF		1.22E+09	1.09E+09	12	ND	0.00E+00	1.09E+09	NA

RT = Retention Time
RF = Response Factor
NA = Not Applicable

ug/L = microgram per Liter
uL = microliter
ug = microgram

5/17/96

ANALYST: Ragi Abraham

REVIEWED BY: David M. Pride

Table A–5
Environmental Support Technologies, Inc.
Detection Limits for Soil Gas Surveys

Detection Limits or Reportable Limits of Quantitation for Halogenated and Aromatic Hydrocarbons are 1 ug/L when the injection volume is 500 uL. For lesser injection volumes detection limits are listed below.

Injection Volume (uL)	Detection Limit (ug/L)
500	1.0
250	2.0
200	2.5
100	5.0
80	6.3
60	8.3
50	10.0
40	12.5
20	25.0
10	50.0
5	100.0
1	500.0

Appendix B

LABORATORY ANALYSES REPORTS FOR OXYGEN AND CARBON DIOXIDE

Environmental Support Technologies, Inc.		Date Sampled:	5/14/96
23011 Moulton Parkway, Suite E-6		Date Received:	5/15/96
Laguna Hills, CA 92653		Date Prepared:	5/17/96
		Date Analyzed:	5/17/96
Sierra Project No.:	9605-122	Analyst:	BK
Client Project ID:	Site 24 VOC Source Area		
Sample Matrix:	Air	Report Date:	5/21/96

ORGANIC ANALYSIS

Sierra ID No.	Client ID No.	QUANTITY VALUES			
		Carbon Dioxide (v/v)	Oxygen (v/v)		
8367	73W2347-01,02	4.5	-		
8368	73W2347-03,04	-	13		
8369	73W2348-01,02	4.8	-		
8370	73W2348-03,04	-	17		
Method No.		700.6	700.6		
Method Detection Limit		<0.5	<0.5		

ND means Not Detected

Appendix C

CHAIN-OF-CUSTODY FORMS

7825

CLEAN II

CHAIN-OF-CUSTODY RECORD

Site Name: Site 24 VOC Source Area
CTO Number: 073

Sampler's Name(s): Patrick Brooks
Sampler's Signature(s): Patrick Brooks

Site Contact/Supervisor: CARL LIND

Analytical Laboratory Name: EST
Analytical Laboratory Address: 23011 Moulton Pkwy Suite E6 Laguna Hills, CA
Field QC Package Number:
Field Logbook/Page Number: AT-73W-001 Page 20
Date: 5/14/96

Pay Items/Analyses Required: CO_2 700.6; O_2 700.6; 700.5 VOCs

QC Level: C | (D) | E

TAT (in days): (2) | 7 | 14 | 30

Sample ID Number (7 digit)	Date/Time Collected	Station Description	Sample Matrix	Archive	Type of Container	Preservation: None	None	None	Remarks (e.g., MS, MSD)
						Container Nos. (2 digit)			
5-14-96 PB 7W 73W2347	0900 5-14-96	24AS1	Air		1 liter tedlar bag	01 02	03 04	05 06	
73W2348	1400 5-14-96	24AS1	AIR		1 liter tedlar bag	01 02	03 04	05 06	

Relinquished By	Received By	Date	Time	Reason for Transfer
Patrick Brooks	Don Edwards	5-14-96	1525	Transport to lab
Don Edwards	Marcia A. Francis	5-14-96	1615	

Comments/Instructions: Pat Brooks = Project manager 619-687-8851

Method of Shipment: HAND

Airbill No.:

Total No. of Coolers Shipped: 1

Forms.cocrecor.doc

CLEAN II

1825

CHAIN-OF-CUSTODY RECORD

Site Name: Site 24 VOC Source Area	Sampler's Name(s): Patrick Brooks	Site Contact/Supervisor: CARL LIND
CTO Number: 073	Sampler's Signature(s): Patrick Brooks	

Analytical Laboratory Name: EST

Analytical Laboratory Address: 23011 Moulton Pkwy Suite E6 Laguna Hills, CA

Field QC Package Number:

Field Logbook/Page Number: AT-73W001 Page 20

Date: 5/14/96

Par/Items/Analyses Required: CO_2 700.6; O_2 700.6; ~~700.5 HCS~~ KAT

QC Level: C | (D) | E

TAT (in days): (2) | 7 | 14 | 30

Preservation: NONE; NONE; ~~NONE~~ KAT

Sample ID Number (7 digit)	Date/Time Collected	Station Description	Sample Matrix	Archive	Type of Container	Container Nos. (2 digit)				Remarks (e.g., MS, MSD)
5-14-96 PB 73W2347	0900 5-14-96	24AS1	Air		1 liter tedlar bag	01 02	03 04	~~05~~ ~~06~~ KAT		
73W2348	1400 5-14-96	24AS1	AIR		1 liter tedlar bag	01 02	03 04	~~05~~ ~~06~~		

Relinquished By	Received By	Date	Time	Reason for Transfer
Patrick Brooks	[illegible]	5-14-96	1525	transport to lab
[illegible]	Marcia [illegible]	5-14-96	1615	
[illegible]	Tracy Collins	5-15-96	1:40	

Comments/Instructions: Pat Brooks = Project manager 619-687-8851

Method of Shipment: HAND

Airbill No.:

Total No. of Coolers Shipped: 1

CLEAN II

CHAIN-OF-CUSTODY RECORD

7822

Site Name: Site 24 VOC Source Area
CTO Number: 073

Sampler's Name(s): Dan Eldredge
Sampler's Signature(s): Dan Eldredge

Site Contact/Supervisor: Carl Lind

Analytical Laboratory Name: EST
Analytical Laboratory Address: 23011 Moulton Pkwy Suite E6 Laguna Hills CA
Field QC Package Number:
Field Logbook/Page Number: AT-73W001 Page 32
Date: 5-17-96

Pay Items/Analyses Required: 8021-VOC, 700.3 VOC

QC Level: C | D | E

TAT (in days): 2 | 7 | 14 | 30

Preservation: None

Sample ID Number (7 digit)	Date/Time Collected	Station Description	Sample Matrix	Archive	Type of Container	Container Nos. (2 digit)	Remarks (e.g., MS, MSD)
73W7349	1000 5-17-96	VES (System)	Air		1 liter Tedlar	01	

Relinquished By	Received By	Date	Time	Reason for Transfer
Dan Eldredge	Marcia A Espinoza	5-17-96	1255	Lab

Comments/Instructions: Pat Brooks - Project mgr 619 687-8851

Method of Shipment: Hand Carry

Airbill No.: —

Total No. of Coolers Shipped: 1

ms/cocr

July 24, 1996

EST1296

Mr. Patrick Brooks
Bechtel National, Inc.
401 West A Street, Suite 1000
San Diego, California 92101-7905

Subject: Soil Gas Sample Analyses Report
Site 24
El Toro Marine Corps Air Station, Orange County, California

Dear Mr. Brooks:

Environmental Support Technologies, Inc. (EST) is pleased to provide the analyses results of Tedlar™ bag soil gas samples collected from a vapor extraction system operating at the El Toro Marine Corps Air Station in Orange County, California. Bechtel National, Inc. performed the soil gas sample collection and delivered the samples, under chain-of-custody, to EST for analyses. Soil gas samples were analyzed for volatile organic compounds (VOCs), oxygen (O_2) and carbon dioxide (CO_2).

Laboratory analyses reports for O_2 and CO_2 are included in Appendix A. Laboratory analyses reports, quality assurance/quality control data, and three-point calibration data for VOCs are included in Appendix B. Chain-of-custody forms are provided in Appendix C.

Should you have any questions or comments please contact me at (714) 457-9664.

Sincerely,

Environmental Support Technologies, Inc.

Kirk A. Thomson

Kirk A. Thomson, R.G., R.E.A., C.HG
Project Manager/Principal Hydrogeologist

cc: EST Project File (296TED2.RPT)

LIMITATIONS AND WARRANTIES

This analyses results report has been prepared for the exclusive use of Bechtel National, Inc. and assigned interested parties. The report has been prepared in accordance with generally accepted environmental assessment practices. No other warranty, expressed or implied, is made.

The information provided in this report is based on measurements performed in specific areas during a specific limited period of time. In the event that any changes occur in waste management practices, site conditions, or uses of the property, the results contained in this report should be reviewed and modified or verified in writing by Environmental Support Technologies, Inc. (EST).

Soil gas sample analyses are conducted using laboratory-grade gas chromatography equipment. Chemical compound identification is performed using quantitative methods. Chemical compound identities should be verified using gas chromatography/mass spectrometric analyses methods. Soil gas survey data should be used in conjunction with other site specific data.

Kirk A. Thomson

Kirk A. Thomson, R.G., R.E.A., C.HG.
Project Manager/Principal Hydrogeologist

APPENDICES

Appendix A

LABORATORY ANALYSES REPORTS FOR OXYGEN AND CARBON DIOXIDE

IERRA
BORATORIES

Date: 6/10/96

Environmental Support Technologies, Inc.		Client Project Number:	Site 24 VOC Source Ana
23011 Moulton Parkway, Suite E-6		Date Sampled:	5/28/96
Laguna Hills, CA 92653		Date Samples Received:	5/28/96
Attention:	Mr. Kirk Thomson	Sierra Project No.:	9605-211

Attached are the results of the chemo-physical analysis of the sample(s) from the project identified above.

The samples were received by Sierra Laboratories, Inc. with a chain of custody record attached or completed at the submittal of the samples.

The analysis were performed according to the prescribed method as outlined by EPA, Standard Methods, and A.S.T.M.

The remaining portions of the samples will be disposed of within 30 days from the date of this report. If you require additional retaining time, please advise us.

Richard K. Forsyth
Laboratory Director

This report is applicable only to the sample received by the laboratory. The liability of the laboratory is limited to the amount paid for this report. This report is for the exclusive use of the clientto whom it is addressed and upon the condition that the client assumes all liability for the further distribution of the report or its contents

26052 MERIT CIRCLE, SUITE 105, LAGUNA HILLS, CALIFORNIA 92653
TELEPHONE: (714) 348-9389 FAX: (714) 348-9115

STERLING

Analytical Laboratory

June 5, 1996

Sierra Laboratories
26052 Merit Circle
Suite #105
Laguna Hills, CA 92653

Attn: Bill Hudson

File No.: 0693031.00

CADHS No: 1166

Lab Folder No.: 4735

LABORATORY REPORT

Samples Received: Water: _____ Soil: _____ Gas: 2

Collected On: May 28, 1996 Received On: May 29, 1996

Sampled From:

Analysis Requested: 2 samples to be analyzed.

Analysis Results: See attached sheets.

Reviewed by: _____

Approved by: _____

2860 Walnut Avenue
Long Beach, CA 90806-1834

(800) 366-9324 • (310) 595-9324
(310) 595-6709 FAX

Major Gas Analysis

Lab I.D.		Method Blank	4735-1	4735-2	4735-2 DUP		
Client Sample I.D.		N/A	73W-2352-02	73W-2352-03	73W-2352-03		
Date Sampled		N/A	5/28/96	5/28/96	5/28/96		
Date Extracted		N/A	N/A	N/A	N/A		
Date Anaylzed		6/3/96	5/30/96	5/30/96	5/30/96		
Matrix		Gas	Gas	Gas	Gas		
Units		% v / v	% v / v	% v / v	% v / v		
Dilution Factor		1	1	1	1		
alyte	R.L.	Results	Results	Results	Results	RPD %	
bo Dioxide (CO2)	0.1	< 0.1	N/A	**16.8**	**16.8**	**0%**	
ge (O2)	0.1	< 0.1	**16.8**	N/A	N/A	**0%**	

. - Reporting Limit
. - Not Applicable

SIERRA
LABORATORIES

Date: 6/10/96

Environmental Support Technologies, Inc.		Client Project Number:	Site 24 VOC Source Ana
23011 Moulton Parkway, Suite E-6		Date Sampled:	5/30/96
Laguna Hills, CA 92653		Date Samples Received:	5/30/96
Attention:	Mr. Kirk Thomson	Sierra Project No.:	9605-235

Attached are the results of the chemo-physical analysis of the sample(s) from the project identified above.

The samples were received by Sierra Laboratories, Inc. with a chain of custody record attached or completed at the submittal of the samples.

The analysis were performed according to the prescribed method as outlined by EPA, Standard Methods, and A.S.T.M.

The remaining portions of the samples will be disposed of within 30 days from the date of this report. If you require additional retaining time, please advise us.

Richard K. Forsyth
Laboratory Director

This report is applicable only to the sample received by the laboratory. The liability of the laboratory is limited to the amount paid for this report. This report is for the exclusive use of the clientto whom it is addressed and upon the condition that the client assumes all liability for the further distribution of the report or its contents.

26052 MERIT CIRCLE, SUITE 105, LAGUNA HILLS, CALIFORNIA 92653
TELEPHONE: (714) 348-9389 FAX: (714) 348-9115

STERLING

Analytical Laboratory

June 6, 1996

Sierra Laboratories
26052 Merit Circle
Suite #105
Laguna Hills, CA 92653

Attn: Bill Hudson

File No.: 0693031.00 CADHS No: 1166

Lab Folder No.: 4744

LABORATORY REPORT

Sample Received: Water: _____ Soil: _____ Gas: 1

Collected On: May 30, 1996 Received On: May 31, 1996

Analysis Requested: 1 sample to be analyzed.

Analysis Results: See attached sheet.

Reviewed by: _____ Approved by: _____

2860 Walnut Avenue
Long Beach, CA 90806-1834

(800) 366-9324 • (310) 595-9324
(310) 595-6709 FAX

Major Gas Analysis

Lab I.D.		Method Blank	4744-1	4744-1 DUP			
Client Sample I.D.		N/A	73W2353-02	73W2353-02			
Date Sampled		N/A	5/30/96	5/30/96			
Date Extracted		N/A	N/A	N/A			
Date Anaylzed		6/3/96	6/3/96	6/3/96			
Matrix		Gas	Gas	Gas			
Units		% v / v	% v / v	% v / v			
Dilution Factor		1	1	1			
Analyte	R.L.	Results	Results	Results	RPD %		
Carbon Dioxide (C02)	0.1	< 0.1	12.1	12.1	0%		
Oxygen (O2)	0.1	< 0.1	17.8	17.8	0%		

R.L. - Reporting Limit
N/A - Not Applicable

SIERRA
LABORATORIES

Date: 7/15/96

Environmental Support Technologies, Inc.		Client Project Number:	MCAS El Toro, California
23011 Moulton Parkway, Suite E-6		Date Sampled:	7/8/96
Laguna Hills, CA 92653		Date Samples Received:	7/10/96
Attention:	Mr. Kirk Thomson	Sierra Project No.:	9607-058

Attached are the results of the chemo-physical analysis of the sample(s) from the project identified above.

The samples were received by Sierra Laboratories, Inc. with a chain of custody record attached or completed at the submittal of the samples.

The analysis were performed according to the prescribed method as outlined by EPA, Standard Methods, and A.S.T.M.

The remaining portions of the samples will be disposed of within 30 days from the date of this report. If you require additional retaining time, please advise us.

Richard K. Forsyth
Laboratory Director

This report is applicable only to the sample received by the laboratory The liability of the laboratory is limited to the amount paid for this report. This report is for the exclusive use of the clientto whom it is addressed and upon the condition that the client assumes all liability for the further distribution of the report or its contents

26052 MERIT CIRCLE, SUITE 105, LAGUNA HILLS, CALIFORNIA 92653
TELEPHONE: (714) 348-9389 FAX: (714) 348-9115

STERLING

Analytical Laboratory

July 12, 1996

Sierra Laboratories
26052 Merit Circle
Suite #105
Laguna Hills, CA 92653

Attn: Rick Forsyth

File No.: 0693031.00

CADHS No: 1166

Lab Folder No.: 4900

LABORATORY REPORT

Sample Received: Water: _____ Soil: _____ Gas: 1

Collected On: July 8, 1996 Received On: July 9, 1996

Analysis Requested: 1 sample to be analyzed.

Analysis Results: See attached sheet.

Reviewed by: _____

Approved by: _____

2860 Walnut Avenue
Long Beach, CA 90806-1834

(800) 366-9324 • (310) 595-9324
(310) 595-6709 FAX

STERLING

Analytical Laboratory

Major Gases Report

Laboratory I.D.	Method Blank	4900-1	4900-1 DUP			
Client Sample I.D.	N/A	9607-058-11578	9607-058-11578			
Date Sampled	N/A	7/8/96	7/8/96			
Date Analyzed	7/9/96	7/9/96	7/9/96			
Matrix	Gas	Gas	Gas			
Units	%, V/V	%, V/V	%, V/V			
Dilution Factor	1	1	1			
Analyte R.L.	**Results**	**Results**	**Results**			
Carbon Dioxide	<1.0	**13.46**	**13.44**			
Oxygen	<1.0	**18.05**	**18.07**			

RL = Reporting Limit N/A = Not Applicable

Comments:

Appendix B

LABORATORY ANALYSES REPORTS FOR HALOGENATED AND AROMATIC HYDROCARBONS

(INCLUDING CALIBRATION REPORTS, QUALITY CONTROL REPORTS, EXPLANATION OF METHOD DETECTION LIMITS)

TABLE B-1
HALOGENATED AND AROMATIC HYDROCARBONS
FIELD ANALYSES RESULTS FOR SOIL GAS SAMPLES
BECHTEL, SITE 24 VOC SOURCE AREA, EL TORO, CALIFORNIA
25-TARGET COMPOUND LIST

PID/ELCD #1 - 5/23/96
FILE: 296GGSGR.WK3

SAMPLE ID			73W2350	73W2350	NA	NA	NA	NA	NA	NA
DATE			5/23/96	5/23/96	NA	NA	NA	NA	NA	NA
TIME			18:36	18:51	NA	NA	NA	NA	NA	NA
INJECTION VOLUME (ul)			500	100	NA	NA	NA	NA	NA	NA
PURGE VOLUME (ml)			NA	NA	NA	NA	NA	NA	NA	NA
VACUUM (In. Hg)			NA	NA	NA	NA	NA	NA	NA	NA
DILUTION FACTOR			1.0	5.0	NA	NA	NA	NA	NA	NA
COMMENTS	RT	ARF								
Dichlorodifluoromethane	2:97	1.25E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Vinyl chloride	3:33	4.24E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Chloroethane	3:62	3.04E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Trichlorofluoromethane	3:81	5.43E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2-Trichloro-trifluoroethane	4:47	1.16E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1-Dichloroethene	4:45	3.05E+07	5.46E+03 ND<1	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Methylene chloride	5:02	9.25E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
trans-1,2-Dichloroethene	5:31	9.18E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1-Dichloroethane	5:78	8.84E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
cis-1,2-Dichloroethene	6:42	1.04E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Chloroform	6:77	1.18E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,1-Trichloroethane	7:01	1.03E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Carbon tetrachloride	7:21	1.27E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Benzene	7:43	9.96E+07	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,2-Dichloroethane	7:48	1.03E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Trichloroethene	8:23	1.09E+09	2.34E+07 43 *	8.03E+06 74	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Toluene	9:93	9.76E+07	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2-Trichlorethane	10:51	9.77E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Tetrachloroethene	10:72	1.22E+09	2.47E+05 ND<1	2.85E+04 ND<5	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,1,2-Tetrachloroethane	12:09	1.06E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Ethylbenzene	12:09	8.77E+07	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
meta and para-Xylene	12:25	2.20E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
ortho-Xylene	12:86	8.56E+07	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2,2-Tetrachloroethane	13:87	9.48E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND

ND = not detected; analyte is below the reportable limit of quantitation for this sample
RT = retention time
ul = microliter
In. Hg = inches of mercury

Concentrations reported in micrograms per liter (ug/L)
ARF = average response factor
ml = milliliter
* = exceeds calibration range

5/23/96

ANALYST : David M. Pride

REVIEWED BY : Ragi Abraham (RA)

TABLE B-1
HALOGENATED AND AROMATIC HYDROCARBONS
FIELD ANALYSES RESULTS FOR SOIL GAS SAMPLES
BECHTEL, SITE 24 VOC SOURCE AREA, EL TORO, CALIFORNIA
25-TARGET COMPOUND LIST

PID/ELCD #1 - 5/28/96
FILE: 296HHSGR.WK3

SAMPLE ID			73W2351	73W2352	NA	NA	NA	NA	NA	NA
DATE			5/28/96	5/28/96	NA	NA	NA	NA	NA	NA
TIME			21:16	21:38	NA	NA	NA	NA	NA	NA
INJECTION VOLUME (ul)			500	500	NA	NA	NA	NA	NA	NA
PURGE VOLUME (ml)			NA	NA	NA	NA	NA	NA	NA	NA
VACUUM (in. Hg)			NA	NA	NA	NA	NA	NA	NA	NA
DILUTION FACTOR			1.0	1.0	NA	NA	NA	NA	NA	NA
COMMENTS	RT	ARF								
Dichlorodifluoromethane	2:97	1.25E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Vinyl chloride	3:33	4.24E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Chloroethane	3:62	3.04E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Trichlorofluoromethane	3:81	5.43E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2-Trichloro-trifluoroethane	4:47	1.16E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1-Dichloroethene	4:45	3.05E+07	6.10E+03 ND<1	1.80E+04 1	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Methylene chloride	5:02	9.25E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
trans-1,2-Dichloroethene	5:31	9.18E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1-Dichloroethane	5:78	8.84E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
cis-1,2-Dichloroethene	6:42	1.04E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Chloroform	6:77	1.18E+09	0.00E+00 ND<1	1.06E+08 2	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,1-Trichloroethane	7:01	1.03E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Carbon tetrachloride	7:21	1.27E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Benzene	7:43	9.98E+07	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,2-Dichloroethane	7:48	1.03E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Trichloroethene	8:23	1.09E+09	0.00E+00 ND<1	1.29E+07 24	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Toluene	9:93	9.76E+07	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2-Trichlorethane	10:51	9.77E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Tetrachloroethene	10:72	1.22E+09	0.00E+00 ND	5.84E+04 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,1,2-Tetrachloroethane	12:09	1.06E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Ethylbenzene	12:09	8.77E+07	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
meta and para-Xylene	12:25	2.20E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
ortho-Xylene	12:86	8.56E+07	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2,2-Tetrachloroethane	13:87	9.48E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND

ND = not detected; analyte is below the reportable limit of quantitation for this sample
RT = retention time
ul = microliter
in. Hg = inches of mercury

Concentrations reported in micrograms per liter (ug/L)
ARF = average response factor
ml = milliliter
* = exceeds calibration range

5/28/96

ANALYST : David M. Pride

REVIEWED BY : Marcia LeFrancois

ML

TABLE B-1
HALOGENATED AND AROMATIC HYDROCARBONS
FIELD ANALYSES RESULTS FOR SOIL GAS SAMPLES
BECHTEL, SITE 24 VOC SOURCE AREA, EL TORO, CALIFORNIA
25-TARGET COMPOUND LIST

PID/ELCD #1 - 5/31/96
FILE: 296IISGRP.WK3

SAMPLE ID			73W2353-01	73W2353-01	73W2353-01	73W2354-01	NA	NA	NA	NA
DATE			5/31/96	5/31/96	5/31/96	5/31/96	NA	NA	NA	NA
TIME			13:40	13:57	14:11	14:25	NA	NA	NA	NA
INJECTION VOLUME (ul)			500	25	10	500	NA	NA	NA	NA
PURGE VOLUME (ml)			NA	NA	NA	NA	NA	NA	NA	NA
VACUUM (in. Hg)			NA	NA	NA	NA	NA	NA	NA	NA
DILUTION FACTOR			1.0	20.0	50.0	1.0	NA	NA	NA	NA
COMMENTS	RT	ARF								
Dichlorodifluoromethane	2:96	2.87E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Vinyl chloride	3:32	6.34E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Chloroethane	3:61	5.62E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Trichlorofluoromethane	3:79	6.67E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2-Trichloro-trifluoroethane	4:45	1.49E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1-Dichloroethene	4:42	3.76E+07	9.03E+06 481 *	3.15E+05 335	9.84E+04 262	6.79E+03 ND<1	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Methylene chloride	5:01	1.19E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
trans-1,2-Dichloroethene	5:29	1.03E+09	1.04E+06 2	0.00E+00 ND<20	0.00E+00 ND<50	0.00E+00 ND<1	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1-Dichloroethane	5:76	1.08E+09	3.42E+06 6	6.17E+04 ND<20	0.00E+00 ND<50	0.00E+00 ND<1	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
cis-1,2-Dichloroethene	6:40	1.03E+09	1.12E+06 2	2.41E+04 ND<20	0.00E+00 ND<50	0.00E+00 ND<1	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Chloroform	6:75	1.34E+09	7.30E+05 1	0.00E+00 ND<20	0.00E+00 ND<50	0.00E+00 ND<1	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,1-Trichloroethane	6:99	1.20E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Carbon tetrachloride	7:19	1.57E+09	2.90E+06 4	9.17E+04 ND<20	2.78E+04 ND<50	0.00E+00 ND<1	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Benzene	7:41	1.37E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,2-Dichloroethane	7:47	1.10E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Trichloroethene	8:21	1.21E+09	1.28E+08 211 *	2.36E+07 777 *	1.50E+07 1240	2.82E+04 ND<1	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Toluene	9:90	1.52E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2-Trichlorethane	10:50	1.19E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Tetrachloroethene	10:72	1.32E+09	8.55E+06 13	1.54E+05 ND<20	6.80E+04 ND<50	0.00E+00 ND<1	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,1,2-Tetrachloroethane	12:08	1.24E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Ethylbenzene	12:06	1.15E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
meta and para-Xylene	12:22	3.28E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
ortho-Xylene	12:84	1.18E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2,2-Tetrachloroethane	13:86	1.23E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND

ND = not detected; analyte is below the reportable limit of quantitation for this sample
RT = retention time
ul = microliter
In. Hg = inches of mercury

Concentrations reported in micrograms per liter (ug/L)
ARF = average response factor
ml = milliliter
* = exceeds calibration range

5/31/96

ANALYST : Ragi Abraham

REVIEWED BY : Marcia LeFrancois

TABLE B-1
HALOGENATED AND AROMATIC HYDROCARBONS
FIELD ANALYSES RESULTS FOR SOIL GAS SAMPLES
BECHTEL, MCAS EL TORO, CALIFORNIA
25-TARGET COMPOUND LIST

PID/ELCD #1 - 6/12/96
FILE: 296UVSGRP.WK3

SAMPLE ID			73W235501	73W235501	73W235501	73W2356	73W2356	NA	NA	NA
DATE			6/12/96	6/12/96	6/12/96	6/12/96	6/12/96	NA	NA	NA
TIME			16:40	16:56	17:11	17:28	17:44	NA	NA	NA
INJECTION VOLUME (ul)			500	25	10	500	10	NA	NA	NA
PURGE VOLUME (ml)			NA	NA	NA	NA	NA	NA	NA	NA
VACUUM (in. Hg)			NA	NA	NA	NA	NA	NA	NA	NA
DILUTION FACTOR			1.0	20.0	50.0	1.0	50.0	NA	NA	NA
COMMENTS	RT	ARF	Tedlar Bag Sample	Tedlar Bag Sample	Tedlar Bag Sample	Tedlar Bag Sample	Tedlar Bag Sample			
Dichlorodifluoromethane	2:87	9.69E+07	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Vinyl chloride	3:20	4.52E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Chloroethane	3:48	1.95E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Trichlorofluoromethane	3:67	5.18E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2-Trichloro-trifluoroethane	4:28	6.74E+08	6.20E+07 184 *	7.64E+06 453	2.59E+06 384	4.48E+07 133 *	3.48E+06 516	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1-Dichloroethene	4:26	3.78E+07	4.75E+06 251 *	2.77E+05 293	9.23E+04 244	7.54E+06 399 *	1.09E+05 288	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Methylene chloride	4:91	1.10E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
trans-1,2-Dichloroethene	5:19	9.98E+08	4.74E+05 ND<1	0.00E+00 ND<20	0.00E+00 ND<50	9.15E+05 2	0.00E+00 ND<50	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1-Dichloroethane	5:68	1.03E+09	3.14E+06 6	8.44E+04 ND<20	1.88E+04 ND<50	2.79E+06 ND<50	2.45E+04 ND<50	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
cis-1,2-Dichloroethene	6:34	9.71E+08	8.01E+05 2	1.40E+04 ND<20	0.00E+00 ND<50	7.99E+05 2	0.00E+00 ND<50	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Bromochloromethane (Surrogate)	6:57	5.36E+08	3.69E+06 138%	2.67E+06 100%	2.39E+06 89%	4.13E+06 154%	2.90E+06 108%	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Chloroform	6:70	1.30E+09	1.18E+06 2	0.00E+00 ND<20	0.00E+00 ND<50	1.06E+06 2	0.00E+00 ND<50	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,1-Trichloroethane	6:93	1.23E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Carbon tetrachloride	7:12	1.59E+09	3.04E+06 4	1.02E+05 ND<20	2.41E+04 ND<50	2.51E+06 3	3.34E+04 ND<50	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Benzene	7:36	1.20E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,2-Dichloroethane	7:41	1.06E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Trichloroethene	8:16	1.15E+09	1.22E+08 211 *	2.09E+07 725 *	1.33E+07 1150	1.21E+08 210 *	1.51E+07 1310	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Toluene	9:84	1.17E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2-Trichlorethane	10:43	1.06E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Tetrachloroethene	10:65	9.95E+08	8.49E+06 17	1.01E+05 ND<20	2.92E+04 ND<50	7.05E+06 14	3.42E+04 ND<50	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Chlorobenzene (Surrogate)	11:87	8.93E+07	5.91E+05 132%	4.24E+05 95%	4.13E+05 93%	6.09E+05 136%	4.22E+05 94%	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,1,2-Tetrachloroethane	12:00	1.12E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Ethylbenzene	12:00	1.33E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
meta and para-Xylene	12:16	3.04E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
ortho-Xylene	12:77	1.08E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2,2-Tetrachloroethane	13:77	9.81E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND

ND = not detected; analyte is below the reportable limit of quantitation for this sample
RT = retention time
ul = microliter
in. Hg = inches of mercury

Concentrations reported in micrograms per liter (ug/L)
ARF = average response factor
ml = milliliter
* = exceeds calibration range

6/12/96

ANALYST: Ragi Abraham

REVIEWED BY: Marcia LeFrancois

ML

TABLE B-1
HALOGENATED AND AROMATIC HYDROCARBONS
FIELD ANALYSES RESULTS FOR SOIL GAS SAMPLES
BECHTEL, MCAS EL TORO, CALIFORNIA
25-TARGET COMPOUND LIST

PID/ELCD #1 - 6/14/96
FILE: 298KKSGRP.WK3

SAMPLE ID			73W235701	73W235701	73W235701	73W235701	73W235801	73W235801	73W235901	73W236001
DATE			6/14/96	6/14/96	6/14/96	6/14/96	6/14/96	6/14/96	6/14/96	6/14/96
TIME			6:30	7:44	7:58	8:12	16:14	16:31	16:47	17:02
INJECTION VOLUME (ul)			500	50	25	10	50	10	10	10
PURGE VOLUME (ml)			NA	NA	NA	NA	NA	NA	NA	NA
VACUUM (in. Hg)			NA	NA	NA	NA	NA	NA	NA	NA
DILUTION FACTOR			1.0	10.0	20.0	50.0	10.0	50.0	50.0	50.0
COMMENTS	RT	ARF	Tedlar Bag Sample	Tedlar Bag Sample	Tedlar Bag Sample	Tedlar Bag Sample	Tedlar Bag Sample	Tedlar Bag Sample	Tedlar Bag Sample	Tedlar Bag Sample
Dichlorodifluoromethane	2:87	9.69E+07	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Vinyl chloride	3:20	4.52E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Chloroethane	3:48	1.95E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Trichlorofluoromethane	3:67	5.18E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2-Trichloro-trifluoroethane	4:28	6.74E+08	4.85E+07 144 *	1.14E+07 338 *	6.31E+06 374	2.11E+06 313	1.25E+07 371 *	1.87E+06 277	6.73E+06 997	1.77E+06 262
1,1-Dichloroethene	4:28	3.78E+07	2.02E+06 107 *	5.39E+05 285 *	2.28E+05 241	9.79E+04 259	5.79E+05 306 *	6.71E+04 178	2.25E+05 595	6.54E+04 173
Methylene chloride	4:91	1.10E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
trans-1,2-Dichloroethene	5:19	9.98E+08	4.81E+05 ND<1	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1-Dichloroethane	5:68	1.03E+09	1.30E+06 3	1.19E+05 ND<10	4.11E+04 ND<20	0.00E+00 ND<50	1.20E+05 ND<10	0.00E+00 ND<50	7.35E+04 ND<50	0.00E+00 ND<50
cis-1,2-Dichloroethene	6:34	9.71E+08	4.57E+05 ND<1	3.07E+04 ND<10	0.00E+00 ND	0.00E+00 ND	3.44E+04 ND<10	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Bromochloromethane (Surrogate)	6:57	5.36E+08	2.16E+08 81%	2.72E+08 102%	2.24E+08 83%	2.13E+08 79%	1.98E+08 74%	2.37E+08 88%	2.83E+08 105%	2.67E+08 100%
Chloroform	6:70	1.30E+09	5.75E+05 ND<1	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,1-Trichloroethane	6:93	1.23E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Carbon tetrachloride	7:12	1.59E+09	1.53E+06 2	1.99E+05 ND<10	9.83E+04 ND<20	1.97E+04 ND<50	1.41E+05 ND<10	0.00E+00 ND<50	0.00E+00 ND<50	0.00E+00 ND<50
Benzene	7:36	1.20E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,2-Dichloroethane	7:41	1.06E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Trichloroethene	8:18	1.15E+09	7.92E+07 137 *	2.65E+07 460 *	1.69E+07 588 *	1.25E+07 1090	2.85E+07 494 *	1.09E+07 951	0.00E+00 ND<50	1.02E+07 884
Toluene	9:84	1.17E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2-Trichlorethane	10:43	1.06E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Tetrachloroethene	10:85	9.95E+08	2.38E+06 5	1.19E+05 ND<10	2.48E+04 ND<20	0.00E+00 ND<50	2.17E+05 ND<10	0.00E+00 ND<50	0.00E+00 ND<50	0.00E+00 ND<50
Chlorobenzene (Surrogate)	11:87	8.93E+07	4.10E+05 92%	4.47E+05 100%	3.97E+05 89%	4.99E+05 112%	3.33E+05 75%	4.13E+05 92%	4.70E+05 105%	3.92E+05 88%
1,1,1,2-Tetrachloroethane	12:00	1.12E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Ethylbenzene	12:00	1.33E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
meta and para-Xylene	12:16	3.04E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
ortho-Xylene	12:77	1.08E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2,2-Tetrachloroethane	13:77	9.81E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND

ND = not detected; analyte is below the reportable limit of quantitation for this sample
RT = retention time
ul = microliter
in. Hg = inches of mercury

Concentrations reported in micrograms per liter (ug/L)
ARF = average response factor
ml = milliliter
* = exceeds calibration range

6/14/96

ANALYST : Ragi Abraham

REVIEWED BY : Marcia LeFrancois

ML

TABLE B-1
HALOGENATED AND AROMATIC HYDROCARBONS
FIELD ANALYSES RESULTS FOR SOIL GAS SAMPLES
BECHTEL, MCAS EL TORO, CALIFORNIA
25-TARGET COMPOUND LIST

PID/ELCD #2 – 6/19/96
FILE: 296LLSGR.WK3

SAMPLE ID			73W236101	73W236101	73W236101	73W236101	73W236101	73W236101	NA	NA
DATE			6/18/96	6/19/96	6/19/96	6/19/96	6/19/96	6/19/96	NA	NA
TIME			12:32	12:49	13:34	14:00	14:43	14:57	NA	NA
INJECTION VOLUME (ul)			500	10	25	20	20	5	NA	NA
PURGE VOLUME (ml)			NA	NA	NA	NA	NA	NA	NA	NA
VACUUM (in. Hg)			NA	NA	NA	NA	NA	NA	NA	NA
DILUTION FACTOR			1.0	50.0	20.0	25.0	25.0	100.0	NA	NA
COMMENTS	RT	ARF	Tedlar Bag Sample	Tedlar Bag Syringe Leak	Tedlar Bag Sample	Tedlar Bag Sample	Tedlar Bag Sample	Tedlar Bag Sample		
Dichlorodifluoromethane	2:77	4.34E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Vinyl chloride	3:05	1.70E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Chloroethane	3:37	8.47E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Trichlorofluoromethane	3:56	1.59E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2-Trichloro-trifluoroethane	4:17	3.69E+09	1.60E+08 87 *	0.00E+00 ND<50	3.86E+07 419	2.52E+07 342	3.10E+07 420	2.27E+06 123	0.00E+00 ND	0.00E+00 ND
1,1-Dichloroethene	4:15	6.53E+07	1.83E+07 499 *	0.00E+00 ND<50	9.45E+05 579 *	5.04E+05 386	5.71E+05 437	7.28E+04 223	0.00E+00 ND	0.00E+00 ND
Methylene chloride	4:71	2.81E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
trans-1,2-Dichloroethene	5:01	2.90E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1-Dichloroethane	5:46	2.85E+09	8.73E+06 6	0.00E+00 ND<50	0.00E+00 ND<20	0.00E+00 ND<25	0.00E+00 ND<25	0.00E+00 ND<100	0.00E+00 ND	0.00E+00 ND
cis-1,2-Dichloroethene	6:08	2.78E+09	2.85E+06 2	0.00E+00 ND<50	0.00E+00 ND<20	0.00E+00 ND<25	0.00E+00 ND<25	0.00E+00 ND<100	0.00E+00 ND	0.00E+00 ND
Bromochloromethane (Surrogate)	6:23	1.49E+09	1.21E+07 163%	9.02E+06 121%	8.32E+06 111%	9.52E+06 128%	9.45E+06 127%	9.13E+06 122%	0.00E+00 ND	0.00E+00 ND
Chloroform	6:41	5.39E+09	1.03E+06 ND<1	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,1-Trichloroethane	6:68	4.97E+09	2.58E+05 ND<1	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Carbon tetrachloride	6:88	6.45E+09	1.16E+07 4	0.00E+00 ND<50	0.00E+00 ND<20	0.00E+00 ND<25	0.00E+00 ND<25	0.00E+00 ND<100	0.00E+00 ND	0.00E+00 ND
Benzene	7:09	2.59E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,2-Dichloroethane	7:10	4.72E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Trichloroethene	7:87	3.88E+09	2.29E+08 118 *	3.51E+06 91	8.97E+07 925 *	7.13E+07 919 *	7.63E+07 983 *	2.50E+07 1290	0.00E+00 ND	0.00E+00 ND
Toluene	9:57	2.74E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2-Trichlorethane	10:14	3.50E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Tetrachloroethene	10:41	4.64E+09	1.06E+07 5	0.00E+00 ND<50	7.22E+05 ND<20	0.00E+00 ND<25	0.00E+00 ND<25	0.00E+00 ND<100	0.00E+00 ND	0.00E+00 ND
Chlorobenzene (Surrogate)	11:69	2.77E+08	1.35E+06 97%	1.29E+06 93%	1.13E+06 82%	1.31E+06 95%	1.16E+06 84%	1.11E+06 80%	0.00E+00 ND	0.00E+00 ND
1,1,1,2-Tetrachloroethane	11:84	4.59E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Ethylbenzene	11:88	2.39E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
meta and para-Xylene	12:05	5.57E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
ortho-Xylene	12:71	2.27E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2,2-Tetrachloroethane	13:79	3.73E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND

ND = not detected; analyte is below the reportable limit of quantitation for this sample
RT = retention time
ul = microliter
in. Hg = inches of mercury

Concentrations reported in micrograms per liter (ug/L)
ARF = average response factor
ml = milliliter
* = exceeds calibration range

6/19/96

ANALYST: Ragi Abraham

REVIEWED BY: Marcia LeFrancois

TABLE B–1
HALOGENATED AND AROMATIC HYDROCARBONS
FIELD ANALYSES RESULTS FOR SOIL GAS SAMPLES
BECHTEL, MCAS EL TORO, CALIFORNIA
25–TARGET COMPOUND LIST

PID/ELCD #2 – 6/20/96
FILE: 296MMSGRP.WK3

SAMPLE ID			73W236201	73W236201	73W236401	73W236401	NA	NA	NA	NA
DATE			6/20/96	6/20/96	6/20/96	6/20/96	NA	NA	NA	NA
TIME			16:14	16:32	16:48	17:04	NA	NA	NA	NA
INJECTION VOLUME (ul)			10	50	10	25	NA	NA	NA	NA
PURGE VOLUME (ml)			NA	NA	NA	NA	NA	NA	NA	NA
VACUUM (in. Hg)			NA	NA	NA	NA	NA	NA	NA	NA
DILUTION FACTOR			50.0	10.0	50.0	20.0	NA	NA	NA	NA
COMMENTS	RT	ARF	Tedlar Bag Sample	Tedlar Bag Sample	Tedlar Bag Sample	Tedlar Bag Sample				
Dichlorodifluoromethane	2:77	4.34E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Vinyl chloride	3:05	1.70E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Chloroethane	3:37	8.47E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Trichlorofluoromethane	3:56	1.59E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2–Trichloro–trifluoroethane	4:17	3.69E+09	1.22E+06 33	3.94E+07 214	2.47E+06 67	9.04E+06 98	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1–Dichloroethene	4:15	6.53E+07	1.39E+05 214	1.32E+06 403 *	1.46E+05 223	3.05E+05 187	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Methylene chloride	4:71	2.61E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
trans–1,2–Dichloroethene	5:01	2.90E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1–Dichloroethane	5:46	2.85E+09	0.00E+00 ND	3.57E+05 ND<10	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
cis–1,2–Dichloroethene	6:08	2.76E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Bromochloromethane (Surrogate)	6:23	1.49E+09	8.38E+06 86%	9.73E+06 131%	8.81E+06 118%	8.33E+06 112%	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Chloroform	6:41	5.39E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,1–Trichloroethane	6:68	4.97E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Carbon tetrachloride	6:86	6.45E+09	0.00E+00 ND	9.29E+05 ND<10	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Benzene	7:09	2.59E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,2–Dichloroethane	7:10	4.72E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Trichloroethene	7:87	3.86E+09	3.31E+07 853	1.22E+06 629 *	4.65E+07 1199	7.00E+07 721 *	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Toluene	9:57	2.74E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2–Trichlorethane	10:14	3.50E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Tetrachloroethene	10:41	4.64E+09	0.00E+00 ND	9.10E+05 ND<10	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Chlorobenzene (Surrogate)	11:69	2.77E+08	1.07E+06 77%	1.10E+06 79%	1.35E+06 97%	1.06E+06 77%	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,1,2–Tetrachloroethane	11:84	4.59E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Ethylbenzene	11:86	2.39E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
meta and para–Xylene	12:05	5.57E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
ortho–Xylene	12:71	2.27E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2,2–Tetrachloroethane	13:79	3.73E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND

ND = not detected; analyte is below the reportable limit of quantitation for this sample
RT = retention time
ul = microliter
in. Hg = inches of mercury

Concentrations reported in micrograms per liter (ug/L)
ARF = average response factor
ml = milliliter
* = exceeds calibration range

6/20/96

ANALYST : Ragi Abraham

REVIEWED BY : David Pride

TABLE B-1
HALOGENATED AND AROMATIC HYDROCARBONS
FIELD ANALYSES RESULTS FOR SOIL GAS SAMPLES
BECHTEL, MCAS EL TORO, CALIFORNIA
25-TARGET COMPOUND LIST

PID/ELCD #2 - 6/21/96
FILE: 296NNSGRP.WK3

SAMPLE ID			73W2365	NA	NA	NA	NA	NA	NA	NA
DATE			6/21/96	NA	NA	NA	NA	NA	NA	NA
TIME			17:33	NA	NA	NA	NA	NA	NA	NA
INJECTION VOLUME (ul)			10	NA	NA	NA	NA	NA	NA	NA
PURGE VOLUME (ml)			NA	NA	NA	NA	NA	NA	NA	NA
VACUUM (in. Hg)			NA	NA	NA	NA	NA	NA	NA	NA
DILUTION FACTOR			50.0	NA	NA	NA	NA	NA	NA	NA
COMMENTS	RT	ARF	Tedlar Bag Sample							
Dichlorodifluoromethane	2:77	4.34E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Vinyl chloride	3:05	1.70E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Chloroethane	3:37	8.47E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Trichlorofluoromethane	3:56	1.59E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2-Trichloro-trifluoroethane	4:17	3.69E+09	2.31E+06 63	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1-Dichloroethene	4:15	6.53E+07	1.04E+05 159	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Methylene chloride	4:71	2.61E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
trans-1,2-Dichloroethene	5:01	2.90E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1-Dichloroethane	5:46	2.85E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
cis-1,2-Dichloroethene	6:08	2.76E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Bromochloromethane (Surrogate)	6:23	1.49E+09	8.79E+06 118%	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Chloroform	6:41	5.39E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,1-Trichloroethane	6:68	4.97E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Carbon tetrachloride	6:88	6.45E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Benzene	7:09	2.59E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,2-Dichloroethane	7:10	4.72E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Trichloroethene	7:87	3.88E+09	3.66E+07 945	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Toluene	9:57	2.74E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2-Trichlorethane	10:14	3.50E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Tetrachloroethene	10:41	4.64E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Chlorobenzene (Surrogate)	11:69	2.77E+08	1.10E+08 80%	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,1,2-Tetrachloroethane	11:84	4.59E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Ethylbenzene	11:86	2.39E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
meta and para-Xylene	12:05	5.57E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
ortho-Xylene	12:71	2.27E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2,2-Tetrachloroethane	13:79	3.73E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND

ND = not detected; analyte is below the reportable limit of quantitation for this sample
RT = retention time
ul = microliter
in. Hg = inches of mercury

Concentrations reported in micrograms per liter (ug/L)
ARF = average response factor
ml = milliliter
* = exceeds calibration range

6/21/96

ANALYST : Ragi Abraham

REVIEWED BY : Marcia LeFrancois

TABLE B-1
HALOGENATED AND AROMATIC HYDROCARBONS
FIELD ANALYSES RESULTS FOR SOIL GAS SAMPLES
BECHTEL, MCAS EL TORO, CALIFORNIA
25-TARGET COMPOUND LIST

PID/ELCD #2 - 6/25/96
FILE: 296OOSGR.WK3

SAMPLE ID			73W2366	73W2366	73W2366	73W2367	NA	NA	NA	NA
DATE			6/25/96	6/25/96	6/25/96	6/25/96	NA	NA	NA	NA
TIME			19:47	20:07	20:26	20:42	NA	NA	NA	NA
INJECTION VOLUME (ul)			500	50	10	500	NA	NA	NA	NA
PURGE VOLUME (ml)			NA	NA	NA	NA	NA	NA	NA	NA
VACUUM (in. Hg)			NA	NA	NA	NA	NA	NA	NA	NA
DILUTION FACTOR			1.0	10.0	50.0	1.0	NA	NA	NA	NA
COMMENTS	RT	ARF	Tedlar Bag Sample	Tedlar Bag Sample	Tedlar Bag Sample	Tedlar Bag Sample				
Dichlorodifluoromethane	2:77	4.34E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Vinyl chloride	3:05	1.70E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Chloroethane	3:37	8.47E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Trichlorofluoromethane	3:56	1.59E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2-Trichloro-trifluoroethane	4:17	3.69E+09	7.09E+07 38 *	1.26E+07 68	2.55E+06 69	0.00E+00 ND<1	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1-Dichloroethene	4:15	6.53E+07	3.06E+06 94 *	2.74E+05 84	7.08E+04 109	0.00E+00 ND<1	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Methylene chloride	4:71	2.61E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
trans-1,2-Dichloroethene	5:01	2.90E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1-Dichloroethane	5:46	2.85E+09	1.96E+06 1	0.00E+00 ND<10	0.00E+00 ND<50	0.00E+00 ND<1	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
cis-1,2-Dichloroethene	6:08	2.76E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Bromochloromethane (Surrogate)	6:23	1.49E+09	1.52E+07 204%	1.24E+07 166%	9.51E+06 128%	8.69E+06 116%	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Chloroform	6:41	5.39E+09	5.22E+05 ND<1	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,1-Trichloroethane	6:68	4.97E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Carbon tetrachloride	6:88	6.45E+09	2.66E+06 ND<1	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Benzene	7:09	2.59E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,2-Dichloroethane	7:10	4.72E+09	6.70E+05 ND<1	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Trichloroethene	7:87	3.88E+09	1.76E+08 91 *	6.96E+07 359 *	2.49E+07 641	0.00E+00 ND<1	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Toluene	9:57	2.74E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2-Trichlorethane	10:14	3.50E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Tetrachloroethene	10:41	4.64E+09	3.91E+06 2	0.00E+00 ND<10	0.00E+00 ND<50	0.00E+00 ND<1	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Chlorobenzene (Surrogate)	11:69	2.77E+08	1.02E+06 73%	1.07E+06 77%	1.15E+06 83%	1.07E+06 77%	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,1,2-Tetrachloroethane	11:84	4.59E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Ethylbenzene	11:86	2.39E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
meta and para-Xylene	12:05	5.57E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
ortho-Xylene	12:71	2.27E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2,2-Tetrachloroethane	13:79	3.73E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND

ND = not detected; analyte is below the reportable limit of quantitation for this sample
RT = retention time
ul = microliter
in. Hg = inches of mercury

Concentrations reported in micrograms per liter (ug/L)
ARF = average response factor
ml = milliliter
* = exceeds calibration range

6/25/96

ANALYST : David M. Pride

REVIEWED BY : Ragi Abraham

TABLE B-1
HALOGENATED AND AROMATIC HYDROCARBONS
FIELD ANALYSES RESULTS FOR SOIL GAS SAMPLES
BECHTEL, MCAS EL TORO, CALIFORNIA
25-TARGET COMPOUND LIST

PID/ELCD #1 - 7/1/96
FILE: 29BPSGRP.WK3

SAMPLE ID			73W2368-01	73W2368-01	73W2368-01	73W2369-01	73W2369-01	NA	NA	NA
DATE			7/1/96	7/1/96	7/1/96	7/1/96	7/1/96	NA	NA	NA
TIME			8:45	9:02	9:20	9:34	9:53	NA	NA	NA
INJECTION VOLUME (ul)			10	100	50	10	500	NA	NA	NA
PURGE VOLUME (ml)			NA	NA	NA	NA	NA	NA	NA	NA
VACUUM (in. Hg)			NA	NA	NA	NA	NA	NA	NA	NA
DILUTION FACTOR			50.0	5.0	10.0	50.0	1.0	NA	NA	NA
COMMENTS	RT	ARF	Tedlar Bag Sample	Tedlar Bag Sample	Tedlar Bag Sample	Tedlar Bag Sample	Tedlar Bag Sample			
Dichlorodifluoromethane	2:87	9.69E+07	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Vinyl chloride	3:20	4.52E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Chloroethane	3:48	1.95E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Trichlorofluoromethane	3:67	5.18E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2-Trichloro-trifluoroethane	4:28	6.74E+08	0.00E+00 ND<50	2.05E+08 30	7.86E+05 23	0.00E+00 ND<50	0.00E+00 ND<1	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1-Dichloroethene	4:26	3.78E+07	0.00E+00 ND<50	1.10E+05 29	5.85E+04 30	0.00E+00 ND<50	0.00E+00 ND<1	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Methylene chloride	4:91	1.10E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
trans-1,2-Dichloroethene	5:19	9.98E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1-Dichloroethane	5:68	1.03E+09	0.00E+00 ND	1.49E+04 ND<5	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
cis-1,2-Dichloroethene	6:34	9.71E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Bromochloromethane (Surrogate)	6:57	5.36E+08	2.27E+08 85%	2.26E+08 85%	2.26E+08 84%	2.25E+08 84%	2.69E+08 100%	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Chloroform	6:70	1.30E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,1-Trichloroethane	6:93	1.23E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Carbon tetrachloride	7:12	1.59E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Benzene	7:36	1.20E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,2-Dichloroethane	7:41	1.06E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Trichloroethene	8:16	1.15E+09	7.04E+05 61	1.62E+07 140 *	1.11E+07 194	0.00E+00 ND<50	0.00E+00 ND<1	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Toluene	9:84	1.17E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2-Trichlorethane	10:43	1.06E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Tetrachloroethene	10:65	9.95E+08	0.00E+00 ND	5.55E+04 ND<5	2.17E+04 ND<10	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Chlorobenzene (Surrogate)	11:87	8.93E+07	4.74E+05 106%	4.50E+05 101%	4.45E+05 100%	4.73E+05 106%	4.45E+05 100%	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,1,2-Tetrachloroethane	12:00	1.12E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Ethylbenzene	12:00	1.41E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
meta and para-Xylene	12:16	3.04E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
ortho-Xylene	12:77	1.08E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2,2-Tetrachloroethane	13:77	9.81E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND

ND = not detected; analyte is below the reportable limit of quantitation for this sample
RT = retention time
ul = microliter
in. Hg = inches of mercury

Concentrations reported in micrograms per liter (ug/L)
ARF = average response factor
ml = milliliter
* = exceeds calibration range

7/1/96

ANALYST : Raol Abraham

REVIEWED BY : David M. Pride

TABLE B-1
HALOGENATED AND AROMATIC HYDROCARBONS
FIELD ANALYSES RESULTS FOR SOIL GAS SAMPLES
BECHTEL, MCAS EL TORO, CALIFORNIA
25-TARGET COMPOUND LIST

PID/ELCD #2 – 7/2/96
FILE: 286QOSGR.WK3

SAMPLE ID			73W2370	73W2370	73W2370	73W2370	NA	NA	NA	NA
DATE			7/2/96	7/2/96	7/2/96	7/2/96	NA	NA	NA	NA
TIME			9:25	9:40	10:32	10:55	NA	NA	NA	NA
INJECTION VOLUME (ul)			10	100	50	50	NA	NA	NA	NA
PURGE VOLUME (ml)			NA	NA	NA	NA	NA	NA	NA	NA
VACUUM (in. Hg)			NA	NA	NA	NA	NA	NA	NA	NA
DILUTION FACTOR			50.0	5.0	10.0	10.0	NA	NA	NA	NA
COMMENTS	RT	ARF	Tedlar Bag Sample	Tedlar Bag Sample	Tedlar Bag Sample	Tedlar Bag Sample				
Dichlorodifluoromethane	2:77	4.34E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Vinyl chloride	3:05	1.70E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Chloroethane	3:37	8.47E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Trichlorofluoromethane	3:56	1.59E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2-Trichloro-trifluoroethane	4:17	3.69E+09	0.00E+00 ND<50	3.19E+07 87	1.02E+08 ND<10	2.52E+08 14	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1-Dichloroethene	4:15	6.53E+07	0.00E+00 ND<50	5.92E+05 91	4.15E+04 13	6.43E+04 20	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Methylene chloride	4:71	2.61E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
trans-1,2-Dichloroethene	5:01	2.90E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1-Dichloroethane	5:46	2.85E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
cis-1,2-Dichloroethene	6:08	2.76E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Bromochloromethane (Surrogate)	6:23	1.49E+09	8.78E+06 118%	1.02E+07 137%	1.39E+07 187%	7.82E+06 105%	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Chloroform	6:41	5.39E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,1-Trichloroethane	6:68	4.97E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Carbon tetrachloride	6:88	6.45E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Benzene	7:09	2.59E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,2-Dichloroethane	7:10	4.72E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Trichloroethene	7:87	3.88E+09	2.46E+08 63	9.90E+07 255 *	2.20E+07 113	4.49E+07 232	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Toluene	9:57	2.74E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2-Trichlorethane	10:14	3.50E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Tetrachloroethene	10:41	4.64E+09	0.00E+00 ND	1.20E+06 ND<5	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Chlorobenzene (Surrogate)	11:69	2.77E+08	1.18E+06 85%	1.19E+06 86%	1.18E+06 85%	1.28E+06 92%	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,1,2-Tetrachloroethane	11:84	4.59E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Ethylbenzene	11:86	2.39E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
meta and para-Xylene	12:05	5.57E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
ortho-Xylene	12:71	2.27E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2,2-Tetrachloroethane	13:79	3.73E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND

ND = not detected; analyte is below the reportable limit of quantitation for this sample
RT = retention time
ul = microliter
in. Hg = inches of mercury

Concentrations reported in micrograms per liter (ug/L)
ARF = average response factor
ml = milliliter
* = exceeds calibration range

7/2/96

ANALYST : David M. Pride

REVIEWED BY : Ragi Abraham RA

TABLE B-1
HALOGENATED AND AROMATIC HYDROCARBONS
FIELD ANALYSES RESULTS FOR SOIL GAS SAMPLES
BECHTEL, MCAS EL TORO, CALIFORNIA
25-TARGET COMPOUND LIST

PID/ELCD #1 - 7/5/96
FILE: 296RRSGRP.WK3

SAMPLE ID			73W2371-01	NA	NA	NA	NA	NA	NA	NA
DATE			7/5/96	NA	NA	NA	NA	NA	NA	NA
TIME			15:34	NA	NA	NA	NA	NA	NA	NA
INJECTION VOLUME (ul)			10	NA	NA	NA	NA	NA	NA	NA
PURGE VOLUME (ml)			NA	NA	NA	NA	NA	NA	NA	NA
VACUUM (In. Hg)			NA	NA	NA	NA	NA	NA	NA	NA
DILUTION FACTOR			50.0	NA	NA	NA	NA	NA	NA	NA
COMMENTS	RT	ARF	Tedlar Bag Sample							
Dichlorodifluoromethane	2:87	9.69E+07	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Vinyl chloride	3:20	4.52E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Chloroethane	3:48	1.95E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Trichlorofluoromethane	3:67	5.18E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2-Trichloro-trifluoroethane	4:26	6.74E+08	5.72E+05 85	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1-Dichloroethene	4:26	3.78E+07	2.63E+04 69	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Methylene chloride	4:91	1.10E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
trans-1,2-Dichloroethene	5:19	9.98E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1-Dichloroethane	5:68	1.03E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
cis-1,2-Dichloroethene	6:34	9.71E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Bromochloromethane (Surrogate)	6:57	5.36E+08	2.78E+06 104%	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Chloroform	6:70	1.30E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,1-Trichloroethane	6:93	1.23E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Carbon tetrachloride	7:12	1.59E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Benzene	7:36	1.20E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,2-Dichloroethane	7:41	1.06E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Trichloroethene	8:16	1.15E+09	4.91E+06 427	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Toluene	9:84	1.17E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2-Trichlorethane	10:43	1.06E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Tetrachloroethene	10:65	9.95E+08	6.47E+04 ND<50	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Chlorobenzene (Surrogate)	11:87	8.93E+07	4.92E+05 110%	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,1,2-Tetrachloroethane	12:00	1.12E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Ethylbenzene	12:00	1.41E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
meta and para-Xylene	12:16	3.04E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
ortho-Xylene	12:77	1.08E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2,2-Tetrachloroethane	13:77	9.81E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND

ND = not detected; analyte is below the reportable limit of quantitation for this sample
RT = retention time
ul = microliter
In. Hg = inches of mercury

Concentrations reported in micrograms per liter (ug/L)
ARF = average response factor
ml = milliliter
* = exceeds calibration range

7/5/96

ANALYST : Ragi Abraham

REVIEWED BY : David M. Pride

DP

TABLE B-1
HALOGENATED AND AROMATIC HYDROCARBONS
FIELD ANALYSES RESULTS FOR SOIL GAS SAMPLES
BECHTEL, MCAS EL TORO, CALIFORNIA
25-TARGET COMPOUND LIST

PID/ELCD #1 – 7/10/96
FILE: 29SSSGRP.WK3

SAMPLE ID			73W2373-01	NA	NA	NA	NA	NA	NA	NA
DATE			7/10/96	NA	NA	NA	NA	NA	NA	NA
TIME			12:49	NA	NA	NA	NA	NA	NA	NA
INJECTION VOLUME (ul)			10	NA	NA	NA	NA	NA	NA	NA
PURGE VOLUME (ml)			NA	NA	NA	NA	NA	NA	NA	NA
VACUUM (in. Hg)			NA	NA	NA	NA	NA	NA	NA	NA
DILUTION FACTOR			50.0	NA	NA	NA	NA	NA	NA	NA
COMMENTS	RT	ARF	Tedlar Bag Sample							
Dichlorodifluoromethane	2:87	9.69E+07	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Vinyl chloride	3:20	4.52E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Chloroethane	3:48	1.95E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Trichlorofluoromethane	3:67	5.18E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2-Trichloro-trifluoroethane	4:28	6.74E+08	2.19E+05 ND<50	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1-Dichloroethene	4:26	3.78E+07	2.70E+04 72	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Methylene chloride	4:91	1.10E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
trans-1,2-Dichloroethene	5:19	9.98E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1-Dichloroethane	5:68	1.03E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
cis-1,2-Dichloroethene	6:34	9.71E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Bromochloromethane (Surrogate)	6:57	5.36E+08	2.03E+06 76%	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Chloroform	6:70	1.30E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,1-Trichloroethane	6:93	1.23E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Carbon tetrachloride	7:12	1.59E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Benzene	7:36	1.20E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,2-Dichloroethane	7:41	1.06E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Trichloroethene	8:16	1.15E+09	4.63E+06 402	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Toluene	9:84	1.17E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2-Trichlorethane	10:43	1.06E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Tetrachloroethene	10:65	9.95E+08	1.04E+05 ND<50	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Chlorobenzene (Surrogate)	11:87	8.93E+07	5.17E+05 116%	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,1,2-Tetrachloroethane	12:00	1.12E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Ethylbenzene	12:00	1.41E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
meta and para-Xylene	12:16	3.04E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
ortho-Xylene	12:77	1.08E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2,2-Tetrachloroethane	13:77	9.81E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND

ND = not detected; analyte is below the reportable limit of quantitation for this sample
RT = retention time
ul = microliter
in. Hg = inches of mercury

Concentrations reported in micrograms per liter (ug/L)
ARF = average response factor
ml = milliliter
* = exceeds calibration range

7/10/96

ANALYST : David M. Pride

REVIEWED BY : Marcia LeFrancois

TABLE B-2
QUALITY ASSURANCE/QUALITY CONTROL REPORT
DAILY MID POINT, BLANK ANALYSIS, AND LAST GC TEST RUN
MAY 23, 1996

PID/ELCD #1

FILE: 296GGQCM.WK

		DAILY MID POINT			BLANK	LAST GC TEST RUN		
STANDARD CONC. (ug/L)		5000	AVERAGE		AMBIENT AIR	5000	AVERAGE	
INJECTION VOLUME(uL)		1.00	RESPONSE	PERCENT	500	1.00	RESPONSE	PERCENT
COMPOUND/WEIGHT(ug)	RT	0.00500	FACTOR	DIFFERENCE		0.00500	FACTOR	DIFFERENCE
Dichlorodifluoromethane	2:95	0			0.00E+00	0		
RF		0.00E+00	1.25E+08	NA	ND	0.00E+00	1.25E+08	NA
Vinyl chloride	3:31	0			0.00E+00	0		
RF		0.00E+00	4.24E+08	NA	ND	0.00E+00	4.24E+08	NA
Chloroethane	3:60	0			0.00E+00	0		
RF		0.00E+00	3.04E+08	NA	ND	0.00E+00	3.04E+08	NA
Trichlorofluoromethane	3:79	0			0.00E+00	0		
RF		0.00E+00	5.43E+08	NA	ND	0.00E+00	5.43E+08	NA
1,1,2-Trichloro-trifluoroethane	4:44	0			0.00E+00	0		
RF		0.00E+00	1.16E+09	NA	ND	0.00E+00	1.16E+09	NA
1,1-Dichloroethene (PID)	4:40	153329			0.00E+00	157770		
RF		3.07E+07	3.05E+07	1	ND	3.16E+07	3.05E+07	3
Methylene chloride	5:00	0			0.00E+00	0		
RF		0.00E+00	9.25E+08	NA	ND	0.00E+00	9.25E+08	NA
trans-1,2-Dichloroethene	5:28	4579457			0.00E+00	4355597		
RF		9.16E+08	9.18E+08	-0	ND	8.71E+08	9.18E+08	-5
1,1-Dichloroethane	5:76	4533657			0.00E+00	4279145		
RF		9.07E+08	8.84E+08	3	ND	8.56E+08	8.84E+08	-3
Cis-1,2-Dichloroethene	6:41	5393674			0.00E+00	4785572		
RF		1.08E+09	1.04E+09	4	ND	9.57E+08	1.04E+09	-8
Chloroform	6:75	0			0.00E+00	0		
RF		0.00E+00	1.18E+09	NA	ND	0.00E+00	1.18E+09	NA
1,1,1-Trichloroethane	7:00	5336477			0.00E+00	4503718		
RF		1.07E+09	1.03E+09	4	ND	9.01E+08	1.03E+09	-13
Carbon tetrachloride	7:20	0			0.00E+00	0		
RF		0.00E+00	1.27E+09	NA	ND	0.00E+00	1.27E+09	NA
Benzene (PID)	7:40	534827			0.00E+00	423633		
RF		1.07E+08	9.96E+07	7	ND	8.47E+07	9.96E+07	-15
1,2-Dichloroethane	7:47	5449461			0.00E+00	4407312		
RF		1.09E+09	1.03E+09	6	ND	8.81E+08	1.03E+09	-14
Trichloroethene	8:21	5570772			0.00E+00	4653507		
RF		1.11E+09	1.09E+09	2	ND	9.31E+08	1.09E+09	-15
Toluene (PID)	9:91	532228			0.00E+00	515667		
RF		1.06E+08	9.76E+07	9	ND	1.03E+08	9.76E+07	6
1,1,2-Trichloroethane	10:51	4717632			0.00E+00	4142631		
RF		9.44E+08	9.77E+08	-3	ND	8.29E+08	9.77E+08	-15
Tetrachloroethene	10:72	6237314			0.00E+00	5465118		
RF		1.25E+09	1.22E+09	2	ND	1.09E+09	1.22E+09	-10
1,1,1,2-Tetrachloroethane	12:10	0			0.00E+00	0		
RF		0.00E+00	1.06E+09	NA	ND	0.00E+00	1.06E+09	NA
Ethylbenzene (PID)	12:08	0			0.00E+00	0		
RF		0.00E+00	8.77E+07	NA	ND	0.00E+00	8.77E+07	NA
m,p-Xylene (PID)	12:24	1240970			0.00E+00	960810		
RF		2.48E+08	2.20E+08	13	ND	1.92E+08	2.20E+08	-13
o-Xylene (PID)	13:85	449929			0.00E+00	355249		
RF		9.00E+07	8.56E+07	5	ND	7.10E+07	8.56E+07	-17
1,1,2,2-Tetrachloroethane	13:88	0			0.00E+00	0		
RF		0.00E+00	9.48E+08	NA	ND	0.00E+00	9.48E+08	NA

RT = Retention Time
RF = Response Factor
NA = Not Applicable

ug/L = microgram per Liter
uL = microliter
ug = microgram

5/23/96

ANALYST: David M. Pride

REVIEWED BY: Ragi Abraham

TABLE B–2
QUALITY ASSURANCE/QUALITY CONTROL REPORT
DAILY MID POINT, BLANK ANALYSIS, AND LAST GC TEST RUN
MAY 28, 1996

PID/ELCD #1

FILE: 296HHQCM.WK

		DAILY MID POINT			BLANK	LAST GC TEST RUN		
STANDARD CONC. (ug/L)		5000	AVERAGE		AMBIENT AIR	5000	AVERAGE	
INJECTION VOLUME(uL)		1.00	RESPONSE	PERCENT	500	1.00	RESPONSE	PERCENT
COMPOUND/WEIGHT(ug)	RT	0.00500	FACTOR	DIFFERENCE		0.00500	FACTOR	DIFFERENCE
Dichlorodifluoromethane	2:95	0			0.00E+00	0		
RF		0.00E+00	1.25E+08	NA	ND	0.00E+00	1.25E+08	NA
Vinyl chloride	3:31	0			0.00E+00	0		
RF		0.00E+00	4.24E+08	NA	ND	0.00E+00	4.24E+08	NA
Chloroethane	3:60	0			0.00E+00	0		
RF		0.00E+00	3.04E+08	NA	ND	0.00E+00	3.04E+08	NA
Trichlorofluoromethane	3:79	0			0.00E+00	0		
RF		0.00E+00	5.43E+08	NA	ND	0.00E+00	5.43E+08	NA
1,1,2–Trichloro–trifluoroethane	4:44	0			0.00E+00	0		
RF		0.00E+00	1.16E+09	NA	ND	0.00E+00	1.16E+09	NA
1,1–Dichloroethene (PID)	4:40	148326			0.00E+00	130868		
RF		2.97E+07	3.05E+07	–3	ND	2.62E+07	3.05E+07	–14
Methylene chloride	5:00	0			0.00E+00	0		
RF		0.00E+00	9.25E+08	NA	ND	0.00E+00	9.25E+08	NA
trans–1,2–Dichloroethene	5:28	4343047			0.00E+00	4406235		
RF		8.69E+08	9.18E+08	–5	ND	8.81E+08	9.18E+08	–4
1,1–Dichloroethane	5:76	4173605			0.00E+00	4182298		
RF		8.35E+08	8.84E+08	–6	ND	8.36E+08	8.84E+08	–5
Cis–1,2–Dichloroethene	6:41	5024987			0.00E+00	4989922		
RF		1.00E+09	1.04E+09	–3	ND	9.98E+08	1.04E+09	–4
Chloroform	6:75	0			0.00E+00	5479153		
RF		0.00E+00	1.18E+09	NA	ND	1.10E+09	1.18E+09	–7
1,1,1–Trichloroethane	7:00	4989661			0.00E+00	4959383		
RF		9.98E+08	1.03E+09	–3	ND	9.92E+08	1.03E+09	–4
Carbon tetrachloride	7:20	0			0.00E+00	0		
RF		0.00E+00	1.27E+09	NA	ND	0.00E+00	1.27E+09	NA
Benzene (PID)	7:40	506609			0.00E+00	533045		
RF		1.01E+08	9.96E+07	2	ND	1.07E+08	9.96E+07	7
1,2–Dichloroethane	7:47	4865439			0.00E+00	4625625		
RF		9.73E+08	1.03E+09	–6	ND	9.25E+08	1.03E+09	–10
Trichloroethene	8:21	5143059			0.00E+00	5087072		
RF		1.03E+09	1.09E+09	–6	ND	1.02E+09	1.09E+09	–7
Toluene (PID)	9:91	420809			0.00E+00	545604		
RF		8.42E+07	9.76E+07	–14	ND	1.09E+08	9.76E+07	12
1,1,2–Trichloroethane	10:51	4553326			0.00E+00	4509004		
RF		9.11E+08	9.77E+08	–7	ND	9.02E+08	9.77E+08	–8
Tetrachloroethene	10:72	5763870			0.00E+00	5663141		
RF		1.15E+09	1.22E+09	–6	ND	1.13E+09	1.22E+09	–7
1,1,1,2–Tetrachloroethane	12:10	0			0.00E+00	0		
RF		0.00E+00	1.06E+09	NA	ND	0.00E+00	1.06E+09	NA
Ethylbenzene (PID)	12:08	0			0.00E+00	0		
RF		0.00E+00	8.77E+07	NA	ND	0.00E+00	8.77E+07	NA
m,p–Xylene (PID)	12:24	1198090			0.00E+00	1219499		
RF		2.40E+08	2.20E+08	9	ND	2.44E+08	2.20E+08	11
o–Xylene (PID)	13:85	436928			0.00E+00	451738		
RF		8.74E+07	8.56E+07	2	ND	9.03E+07	8.56E+07	6
1,1,2,2–Tetrachloroethane	13:88	0			0.00E+00	0		
RF		0.00E+00	9.48E+08	NA	ND	0.00E+00	9.48E+08	NA

RT = Retention Time
RF = Response Factor
NA = Not Applicable

ug/L = microgram per Liter
uL = microliter
ug = microgram

5/28/96

ANALYST: David M. Pride

REVIEWED BY: Marcia LeFrancois

TABLE B-2
QUALITY ASSURANCE/QUALITY CONTROL REPORT
DAILY MID-POINT, BLANK ANALYSIS, AND LAST GC TEST RUN
MAY 31, 1996

PID/ELCD #1

FILE: 296IIQCMP.WK

		DAILY MID-POINT			BLANK	LAST GC TEST RUN		
STANDARD CONC. (ug/L)		5000	AVERAGE		AMBIENT AIR	5000	AVERAGE	
INJECTION VOLUME(uL)		1.00	RESPONSE	PERCENT	500	1.00	RESPONSE	PERCENT
COMPOUND/WEIGHT(ug)	RT	0.00500	FACTOR	DIFFERENCE		0.00500	FACTOR	DIFFERENCE
Dichlorodifluoromethane	2:98	0			0.00E+00	0		
RF		0.00E+00	2.87E+08	NA	ND	0.00E+00	2.87E+08	NA
Vinyl chloride	3:34	0			0.00E+00	0		
RF		0.00E+00	6.34E+08	NA	ND	0.00E+00	6.34E+08	NA
Chloroethane	3:63	0			0.00E+00	0		
RF		0.00E+00	5.62E+08	NA	ND	0.00E+00	5.62E+08	NA
Trichlorofluoromethane	3:83	0			0.00E+00	0		
RF		0.00E+00	6.67E+08	NA	ND	0.00E+00	6.67E+08	NA
1,1,2-Trichloro-trifluoroethane	4:49	0			0.00E+00	0		
RF		0.00E+00	1.49E+09	NA	ND	0.00E+00	1.49E+09	NA
1,1-Dichloroethene (PID)	4:46	164031			0.00E+00	198222		
RF		3.28E+07	3.76E+07	-13	ND	3.96E+07	3.76E+07	5
Methylene chloride	5:03	0			0.00E+00	0		
RF		0.00E+00	1.19E+09	NA	ND	0.00E+00	1.19E+09	NA
trans-1,2-Dichloroethene	5:32	4692383			0.00E+00	4839388		
RF		9.38E+08	1.03E+09	-9	ND	9.68E+08	1.03E+09	-6
1,1-Dichloroethane	5:78	5045858			0.00E+00	5108303		
RF		1.01E+09	1.08E+09	-7	ND	1.02E+09	1.08E+09	-5
Cis-1,2-Dichloroethene	6:43	5476765			0.00E+00	4873831		
RF		1.10E+09	1.03E+09	6	ND	9.75E+08	1.03E+09	-5
Chloroform	6:77	6115782			0.00E+00	6419169		
RF		1.22E+09	1.34E+09	-9	ND	1.28E+09	1.34E+09	-4
1,1,1-Trichloroethane	7:02	5347789			0.00E+00	5734652		
RF		1.07E+09	1.02E+09	5	ND	1.15E+09	1.02E+09	12
Carbon tetrachloride	7:22	6916823			0.00E+00	7655445		
RF		1.38E+09	1.57E+09	-12	ND	1.53E+09	1.57E+09	-2
Benzene (PID)	7:43	642276			0.00E+00	716011		
RF		1.28E+08	1.37E+08	-6	ND	1.43E+08	1.37E+08	5
1,2-Dichloroethane	7:49	5230649			0.00E+00	5262702		
RF		1.05E+09	1.10E+09	-5	ND	1.05E+09	1.10E+09	-4
Trichloroethene	8:24	5548590			0.00E+00	5702779		
RF		1.11E+09	1.21E+09	-8	ND	1.14E+09	1.21E+09	-6
Toluene (PID)	9:92	648271			0.00E+00	681590		
RF		1.30E+08	1.52E+08	-15	ND	1.36E+08	1.52E+08	-10
1,1,2-Trichloroethane	10:52	5554230			0.00E+00	5843130		
RF		1.11E+09	1.19E+09	-7	ND	1.17E+09	1.19E+09	-2
Tetrachloroethene	10:74	6251358			0.00E+00	6232655		
RF		1.25E+09	1.32E+09	-5	ND	1.25E+09	1.32E+09	-6
1,1,1,2-Tetrachloroethane	12:10	0			0.00E+00	0		
RF		0.00E+00	1.24E+09	NA	ND	0.00E+00	1.24E+09	NA
Ethylbenzene (PID)	12:07	0			0.00E+00	0		
RF		0.00E+00	1.15E+08	NA	ND	0.00E+00	1.15E+08	NA
m,p-Xylene (PID)	12:23	1484939			0.00E+00	1436207		
RF		2.97E+08	3.28E+08	-9	ND	2.87E+08	3.28E+08	-12
o-Xylene (PID)	12:85	547558			0.00E+00	560174		
RF		1.10E+08	1.18E+08	-7	ND	1.12E+08	1.18E+08	-5
1,1,2,2-Tetrachloroethane	13:88	0			0.00E+00	0		
RF		0.00E+00	1.23E+09	NA	ND	0.00E+00	1.23E+09	NA

RT = Retention Time
RF = Response Factor
NA = Not Applicable

ug/L = microgram per Liter
uL = microliter
ug = microgram

5/31/96

ANALYST: Ragi Abraham

REVIEWED BY: Marcia LeFrancois

TABLE B-2
QUALITY ASSURANCE/QUALITY CONTROL REPORT
DAILY MID-POINT, BLANK ANALYSIS, AND LAST GC TEST RUN
JUNE 19, 1996

PID/ELCD #2

FILE: 367BQCMP.WK

		DAILY MID-POINT			BLANK	LAST GC TEST RUN		
STANDARD CONC. (ug/L)		5000	AVERAGE		AMBIENT AIR	5000	AVERAGE	
INJECTION VOLUME(uL)		1.00	RESPONSE	PERCENT	500	1.00	RESPONSE	PERCENT
COMPOUND/WEIGHT(ug)	RT	0.00500	FACTOR	DIFFERENCE		0.00500	FACTOR	DIFFERENCE
Dichlorodifluoromethane	2:77	0			0.00E+00	0		
RF		0.00E+00	4.34E+08	NA	ND	0.00E+00	4.34E+08	NA
Vinyl chloride	3:05	0			0.00E+00	0		
RF		0.00E+00	1.70E+09	NA	ND	0.00E+00	1.70E+09	NA
Chloroethane	3:37	0			0.00E+00	0		
RF		0.00E+00	8.47E+08	NA	ND	0.00E+00	8.47E+08	NA
Trichlorofluoromethane	3:56	0			0.00E+00	0		
RF		0.00E+00	1.59E+09	NA	ND	0.00E+00	1.59E+09	NA
1,1,2-Trichloro-trifluoroethane	4:17	0			0.00E+00	0		
RF		0.00E+00	3.69E+09	NA	ND	0.00E+00	3.69E+09	NA
1,1-Dichloroethene (PID)	4:15	350091			0.00E+00	357262		
RF		7.00E+07	6.53E+07	7	ND	7.15E+07	6.53E+07	9
Methylene chloride	4:71	0			0.00E+00	0		
RF		0.00E+00	2.61E+09	NA	ND	0.00E+00	2.61E+09	NA
trans-1,2-Dichloroethene	5:01	16657016			0.00E+00	14736496		
RF		3.33E+09	2.90E+09	15	ND	2.95E+09	2.90E+09	2
1,1-Dichloroethane	5:46	16038088			0.00E+00	15339208		
RF		3.21E+09	2.85E+09	13	ND	3.07E+09	2.85E+09	8
Cis-1,2-Dichloroethene	5:08	12790464			0.00E+00	14765672		
RF		2.56E+09	2.76E+09	-7	ND	2.95E+09	2.76E+09	7
Bromochloromethane (Surrogate)	5:23	0			5.00E+06	0		
RF		0.00E+00	1.49E+09	NA	67%	0.00E+00	1.49E+09	NA
Chloroform	5:41	0			0.00E+00	0		
RF		0.00E+00	5.39E+09	NA	ND	0.00E+00	5.39E+09	NA
1,1,1-Trichloroethane	5:68	26726912			0.00E+00	26809328		
RF		5.35E+09	4.97E+09	8	ND	5.36E+09	4.97E+09	8
Carbon tetrachloride	5:88	0			0.00E+00	0		
RF		0.00E+00	6.45E+09	NA	ND	0.00E+00	6.45E+09	NA
Benzene (PID)	7:09	1226660			0.00E+00	1161384		
RF		2.45E+08	2.59E+08	-5	ND	2.32E+08	2.59E+08	-10
1,2-Dichloroethane	7:10	24698656			0.00E+00	21937280		
RF		4.94E+09	4.72E+09	5	ND	4.39E+09	4.72E+09	-7
Trichloroethene	7:87	21899648			0.00E+00	17950048		
RF		4.38E+09	3.88E+09	13	ND	3.59E+09	3.88E+09	-7
Toluene (PID)	9:57	1213391			0.00E+00	1414313		
RF		2.43E+08	2.74E+08	-11	ND	2.83E+08	2.74E+08	3
1,1,2-Trichloroethane	10:14	18829568			0.00E+00	18933984		
RF		3.77E+09	3.50E+09	8	ND	3.79E+09	3.50E+09	8
Tetrachloroethene	10:41	24311616			0.00E+00	23109712		
RF		4.86E+09	4.64E+09	5	ND	4.62E+09	4.64E+09	-0
Chlorobenzene (Surrogate-PID)	11:69	0			1.17E+06	0		
RF		0.00E+00	2.77E+08	NA	85%	0.00E+00	2.77E+08	NA
1,1,1,2-Tetrachloroethane	11:84	0			0.00E+00	0		
RF		0.00E+00	4.59E+09	NA	ND	0.00E+00	4.59E+09	NA
Ethylbenzene (PID)	11:86	0			0.00E+00	0		
RF		0.00E+00	2.39E+08	NA	ND	0.00E+00	2.39E+08	NA
m,p-Xylene (PID)	12:05	2679646			0.00E+00	2971470		
RF		5.36E+08	5.57E+08	-4	ND	5.94E+08	5.57E+08	7
o-Xylene (PID)	12:71	1095136			0.00E+00	1212895		
RF		2.19E+08	2.27E+08	-4	ND	2.43E+08	2.27E+08	7
1,1,2,2-Tetrachloroethane	13:79	0			0.00E+00			
RF		0.00E+00	3.73E+09	NA	ND	0.00E+00	3.73E+09	NA

RT = Retention Time
RF = Response Factor
NA = Not Applicable

ug/L = microgram per Liter
uL = microliter
ug = microgram

6/19/96

ANALYST: Ragi Abraham

REVIEWED BY: Marcia LeFrancois

TABLE B-2
QUALITY ASSURANCE/QUALITY CONTROL REPORT
DAILY MID-POINT, BLANK ANALYSIS, AND LAST GC TEST RUN
JUNE 20, 1996

PID/ELCD #2

FILE: 296MMQCMP.WK

		DAILY MID-POINT			BLANK	LAST GC TEST RUN		
STANDARD CONC. (ug/L)		5000	AVERAGE		AMBIENT AIR	5000	AVERAGE	
INJECTION VOLUME(uL)		1.00	RESPONSE	PERCENT	500	1.00	RESPONSE	PERCENT
COMPOUND/WEIGHT(ug)	RT	0.00500	FACTOR	DIFFERENCE		0.00500	FACTOR	DIFFERENCE
Dichlorodifluoromethane	2:77	0			0.00E+00	0		
RF		0.00E+00	4.34E+08	NA	ND	0.00E+00	4.34E+08	NA
Vinyl chloride	3:05	0			0.00E+00	0		
RF		0.00E+00	1.70E+09	NA	ND	0.00E+00	1.70E+09	NA
Chloroethane	3:37	0			0.00E+00	0		
RF		0.00E+00	8.47E+08	NA	ND	0.00E+00	8.47E+08	NA
Trichlorofluoromethane	3:56	0			0.00E+00	0		
RF		0.00E+00	1.59E+09	NA	ND	0.00E+00	1.59E+09	NA
1,1,2-Trichloro-trifluoroethane	4:17	19358848			0.00E+00	19742800		
RF		3.87E+09	3.69E+09	5	ND	3.95E+09	3.69E+09	7
1,1-Dichloroethene (PID)	4:15	328267			0.00E+00	318897		
RF		6.57E+07	6.53E+07	1	ND	6.38E+07	6.53E+07	-2
Methylene chloride	4:71	0			0.00E+00	0		
RF		0.00E+00	2.61E+09	NA	ND	0.00E+00	2.61E+09	NA
trans-1,2-Dichloroethene	5:01	15579912			0.00E+00	14637408		
RF		3.12E+09	2.90E+09	7	ND	2.93E+09	2.90E+09	1
1,1-Dichloroethane	5:46	14636904			0.00E+00	13625656		
RF		2.93E+09	2.85E+09	3	ND	2.73E+09	2.85E+09	-4
Cis-1,2-Dichloroethene	6:08	14751496			0.00E+00	13924592		
RF		2.95E+09	2.76E+09	7	ND	2.78E+09	2.76E+09	1
Bromochloromethane (Surrogate)	6:23	0			8.10E+06	0		
RF		0.00E+00	1.49E+09	NA	109%	0.00E+00	1.49E+09	NA
Chloroform	6:41	0			0.00E+00	0		
RF		0.00E+00	5.39E+09	NA	ND	0.00E+00	5.39E+09	NA
1,1,1-Trichloroethane	6:68	21839936			0.00E+00	23078288		
RF		4.37E+09	4.97E+09	-12	ND	4.62E+09	4.97E+09	-7
Carbon tetrachloride	6:88	0			0.00E+00	0		
RF		0.00E+00	6.45E+09	NA	ND	0.00E+00	6.45E+09	NA
Benzene (PID)	7:09	1198251			0.00E+00	1333499		
RF		2.40E+08	2.59E+08	-7	ND	2.67E+08	2.59E+08	3
1,2-Dichloroethane	7:10	22938800			0.00E+00	20582768		
RF		4.59E+09	4.72E+09	-3	ND	4.12E+09	4.72E+09	-13
Trichloroethene	7:87	19165904			0.00E+00	19641088		
RF		3.83E+09	3.88E+09	-1	ND	3.93E+09	3.88E+09	1
Toluene (PID)	9:57	1175374			0.00E+00	1284450		
RF		2.35E+08	2.74E+08	-14	ND	2.57E+08	2.74E+08	-6
1,1,2-Trichloroethane	10:14	15244152			0.00E+00	15963256		
RF		3.05E+09	3.50E+09	-13	ND	3.19E+09	3.50E+09	-9
Tetrachloroethene	10:41	22492176			0.00E+00	24968736		
RF		4.50E+09	4.64E+09	-3	ND	4.99E+09	4.64E+09	8
Chlorobenzene (Surrogate-PID)	11:69	0			1.06E+06	0		
RF		0.00E+00	2.77E+08	NA	77%	0.00E+00	2.77E+08	NA
1,1,1,2-Tetrachloroethane	11:84	0			0.00E+00	0		
RF		0.00E+00	4.59E+09	NA	ND	0.00E+00	4.59E+09	NA
Ethylbenzene (PID)	11:86	0			0.00E+00	0		
RF		0.00E+00	2.39E+08	NA	ND	0.00E+00	2.39E+08	NA
m,p-Xylene (PID)	12:05	2603869			0.00E+00	2749341		
RF		5.21E+08	5.57E+08	-6	ND	5.50E+08	5.57E+08	-1
o-Xylene (PID)	12:71	1048740			0.00E+00	1040586		
RF		2.10E+08	2.27E+08	-8	ND	2.08E+08	2.27E+08	-8
1,1,2,2-Tetrachloroethane	13:79	0			0.00E+00			
RF		0.00E+00	3.73E+09	NA	ND	0.00E+00	3.73E+09	NA

RT = Retention Time
RF = Response Factor
NA = Not Applicable

ug/L = microgram per Liter
uL = microliter
ug = microgram

6/20/96

D. Price

ANALYST: Ragi Abraham

REVIEWED BY: Marcia LeFrancois

TABLE B-2
QUALITY ASSURANCE/QUALITY CONTROL REPORT
DAILY MID-POINT, BLANK ANALYSIS, AND LAST GC TEST RUN
JUNE 21, 1996

PID/ELCD #2

FILE: 296NNQCMP.WK

		DAILY MID-POINT			BLANK	LAST GC TEST RUN		
STANDARD CONC. (ug/L)		5000	AVERAGE		AMBIENT AIR	5000	AVERAGE	
INJECTION VOLUME(uL)		1.00	RESPONSE	PERCENT	500	1.00	RESPONSE	PERCENT
COMPOUND/WEIGHT(ug)	RT	0.00500	FACTOR	DIFFERENCE		0.00500	FACTOR	DIFFERENCE
Dichlorodifluoromethane	2:77	0			0.00E+00	0		
RF		0.00E+00	4.34E+08	NA	ND	0.00E+00	4.34E+08	NA
Vinyl chloride	3:05	0			0.00E+00	0		
RF		0.00E+00	1.70E+09	NA	ND	0.00E+00	1.70E+09	NA
Chloroethane	3:37	0			0.00E+00	0		
RF		0.00E+00	8.47E+08	NA	ND	0.00E+00	8.47E+08	NA
Trichlorofluoromethane	3:56	0			0.00E+00	0		
RF		0.00E+00	1.59E+09	NA	ND	0.00E+00	1.59E+09	NA
1,1,2-Trichloro-trifluoroethane	4:17	15284288			0.00E+00	20467616		
RF		3.06E+09	3.69E+09	-17	ND	4.09E+09	3.69E+09	11
1,1-Dichloroethene (PID)	4:15	368552			0.00E+00	317315		
RF		7.37E+07	6.53E+07	13	ND	6.35E+07	6.53E+07	-3
Methylene chloride	4:71	0			0.00E+00	0		
RF		0.00E+00	2.61E+09	NA	ND	0.00E+00	2.61E+09	NA
trans-1,2-Dichloroethene	5:01	12761784			0.00E+00	16930640		
RF		2.55E+09	2.90E+09	-12	ND	3.39E+09	2.90E+09	17
1,1-Dichloroethane	5:46	13939016			0.00E+00	16366440		
RF		2.79E+09	2.85E+09	-2	ND	3.27E+09	2.85E+09	15
Cis-1,2-Dichloroethene	6:08	15395968			0.00E+00	14504296		
RF		3.08E+09	2.76E+09	11	ND	2.90E+09	2.76E+09	5
Bromochloromethane (Surrogate)	6:23	0			6.89E+06	0		
RF		0.00E+00	1.49E+09	NA	92%	0.00E+00	1.49E+09	NA
Chloroform	6:41	0			0.00E+00	0		
RF		0.00E+00	5.39E+09	NA	ND	0.00E+00	5.39E+09	NA
1,1,1-Trichloroethane	6:68	24147504			0.00E+00	20509584		
RF		4.83E+09	4.97E+09	-3	ND	4.10E+09	4.97E+09	-17
Carbon tetrachloride	6:88	0			0.00E+00	0		
RF		0.00E+00	6.45E+09	NA	ND	0.00E+00	6.45E+09	NA
Benzene (PID)	7:09	1248084			0.00E+00	1265942		
RF		2.50E+08	2.59E+08	-4	ND	2.53E+08	2.59E+08	-2
1,2-Dichloroethane	7:10	23227712			0.00E+00	21153360		
RF		4.65E+09	4.72E+09	-2	ND	4.23E+09	4.72E+09	-10
Trichloroethene	7:87	21600928			0.00E+00	19015792		
RF		4.32E+09	3.88E+09	11	ND	3.80E+09	3.88E+09	-2
Toluene (PID)	9:57	1200997			0.00E+00	1223150		
RF		2.40E+08	2.74E+08	-12	ND	2.45E+08	2.74E+08	-11
1,1,2-Trichloroethane	10:14	15412072			0.00E+00	18726992		
RF		3.08E+09	3.50E+09	-12	ND	3.75E+09	3.50E+09	7
Tetrachloroethene	10:41	21474736			0.00E+00	22545856		
RF		4.29E+09	4.64E+09	-7	ND	4.51E+09	4.64E+09	-3
Chlorobenzene (Surrogate-PID)	11:69	0			1.14E+06	0		
RF		0.00E+00	2.77E+08	NA	82%	0.00E+00	2.77E+08	NA
1,1,1,2-Tetrachloroethane	11:84	0			0.00E+00	0		
RF		0.00E+00	4.59E+09	NA	ND	0.00E+00	4.59E+09	NA
Ethylbenzene (PID)	11:86	0			0.00E+00	0		
RF		0.00E+00	2.39E+08	NA	ND	0.00E+00	2.39E+08	NA
m,p-Xylene (PID)	12:05	2689702			0.00E+00	2724720		
RF		5.38E+08	5.57E+08	-3	ND	5.45E+08	5.57E+08	-2
o-Xylene (PID)	12:71	1094076			0.00E+00	1057278		
RF		2.19E+08	2.27E+08	-4	ND	2.11E+08	2.27E+08	-7
1,1,2,2-Tetrachloroethane	13:79	0			0.00E+00			
RF		0.00E+00	3.73E+09	NA	ND	0.00E+00	3.73E+09	NA

RT = Retention Time
RF = Response Factor
NA = Not Applicable

ug/L = microgram per Liter
uL = microliter
ug = microgram

6/21/96

ANALYST: Ragi Abraham

REVIEWED BY: Marcia LeFrancois

TABLE B-2
QUALITY ASSURANCE/QUALITY CONTROL REPORT
DAILY MID-POINT, BLANK ANALYSIS, AND LAST GC TEST RUN
JUNE 25, 1996

PID/ELCD #2

FILE: 296OOQCM.WK

		DAILY MID-POINT			BLANK	LAST GC TEST RUN		
STANDARD CONC. (ug/L)		5000	AVERAGE		AMBIENT AIR	5000	AVERAGE	
INJECTION VOLUME(uL)		1.00	RESPONSE	PERCENT	500	1.00	RESPONSE	PERCENT
COMPOUND/WEIGHT(ug)	RT	0.00500	FACTOR	DIFFERENCE		0.00500	FACTOR	DIFFERENCE
Dichlorodifluoromethane	2:77	0			0.00E+00	0		
RF		0.00E+00	4.34E+08	NA	ND	0.00E+00	4.34E+08	NA
Vinyl chloride	3:05	0			0.00E+00	0		
RF		0.00E+00	1.70E+09	NA	ND	0.00E+00	1.70E+09	NA
Chloroethane	3:37	0			0.00E+00	0		
RF		0.00E+00	8.47E+08	NA	ND	0.00E+00	8.47E+08	NA
Trichlorofluoromethane	3:56	0			0.00E+00	0		
RF		0.00E+00	1.59E+09	NA	ND	0.00E+00	1.59E+09	NA
1,1,2-Trichloro-trifluoroethane	4:17	14941512			0.00E+00	17303696		
RF		2.99E+09	3.69E+09	-19	ND	3.46E+09	3.69E+09	-6
1,1-Dichloroethene (PID)	4:15	347760			0.00E+00	338742		
RF		6.96E+07	6.53E+07	7	ND	6.77E+07	6.53E+07	4
Methylene chloride	4:71	0			0.00E+00	0		
RF		0.00E+00	2.61E+09	NA	ND	0.00E+00	2.61E+09	NA
trans-1,2-Dichloroethene	5:01	13462832			0.00E+00	12855584		
RF		2.69E+09	2.90E+09	-7	ND	2.57E+09	2.90E+09	-11
1,1-Dichloroethane	5:46	13671480			0.00E+00	13432952		
RF		2.73E+09	2.85E+09	-4	ND	2.69E+09	2.85E+09	-6
Cis-1,2-Dichloroethene	6:08	15094816			0.00E+00	16602272		
RF		3.02E+09	2.76E+09	9	ND	3.32E+09	2.76E+09	20
Bromochloromethane (Surrogate)	6:23	0			8.10E+06	0		
RF		0.00E+00	1.49E+09	NA	109%	0.00E+00	1.49E+09	NA
Chloroform	6:41	0			0.00E+00	0		
RF		0.00E+00	5.39E+09	NA	ND	0.00E+00	5.39E+09	NA
1,1,1-Trichloroethane	6:68	22765088			0.00E+00	23976064		
RF		4.55E+09	4.97E+09	-8	ND	4.80E+09	4.97E+09	-3
Carbon tetrachloride	6:88	0			0.00E+00	0		
RF		0.00E+00	6.45E+09	NA	ND	0.00E+00	6.45E+09	NA
Benzene (PID)	7:09	1230046			0.00E+00	1189319		
RF		2.46E+08	2.59E+08	-5	ND	2.38E+08	2.59E+08	-8
1,2-Dichloroethane	7:10	25822564			0.00E+00	23716016		
RF		5.16E+09	4.72E+09	9	ND	4.74E+09	4.72E+09	0
Trichloroethene	7:87	17230832			0.00E+00	20839840		
RF		3.45E+09	3.88E+09	-11	ND	4.17E+09	3.88E+09	7
Toluene (PID)	9:57	1233033			0.00E+00	1308556		
RF		2.47E+08	2.74E+08	-10	ND	2.62E+08	2.74E+08	-4
1,1,2-Trichloroethane	10:14	15111456			0.00E+00	15677448		
RF		3.02E+09	3.50E+09	-14	ND	3.14E+09	3.50E+09	-10
Tetrachloroethene	10:41	19988336			0.00E+00	22392768		
RF		4.00E+09	4.64E+09	-14	ND	4.48E+09	4.64E+09	-3
Chlorobenzene (Surrogate-PID)	11:69	0			1.06E+06	0		
RF		0.00E+00	2.77E+08	NA	77%	0.00E+00	2.77E+08	NA
1,1,1,2-Tetrachloroethane	11:84	0			0.00E+00	0		
RF		0.00E+00	4.59E+09	NA	ND	0.00E+00	4.59E+09	NA
Ethylbenzene (PID)	11:86	0			0.00E+00	0		
RF		0.00E+00	2.39E+08	NA	ND	0.00E+00	2.39E+08	NA
m,p-Xylene (PID)	12:05	2563098			0.00E+00	2517637		
RF		5.13E+08	5.57E+08	-8	ND	5.04E+08	5.57E+08	-10
o-Xylene (PID)	12:71	972573			0.00E+00	1115416		
RF		1.95E+08	2.27E+08	-14	ND	2.23E+08	2.27E+08	-2
1,1,2,2-Tetrachloroethane	13:79	0			0.00E+00			
RF		0.00E+00	3.73E+09	NA	ND	0.00E+00	3.73E+09	NA

RT = Retention Time
RF = Response Factor
NA = Not Applicable

ug/L = microgram per Liter
uL = microliter
ug = microgram

6/25/96

ANALYST: David M. Pride

REVIEWED BY: Ragi Abraham

TABLE B-2
QUALITY ASSURANCE/QUALITY CONTROL REPORT
DAILY MID-POINT, BLANK ANALYSIS, AND LAST GC TEST RUN
JULY 1, 1996

PID/ELCD #1

FILE: 296PPQCMP.WK

		DAILY MID-POINT			BLANK	LAST GC TEST RUN		
STANDARD CONC. (ug/L)		5000	AVERAGE		AMBIENT AIR	5000	AVERAGE	
INJECTION VOLUME(uL)		1.00	RESPONSE	PERCENT	500	1.00	RESPONSE	PERCENT
COMPOUND/WEIGHT(ug)	RT	0.00500	FACTOR	DIFFERENCE		0.00500	FACTOR	DIFFERENCE
Dichlorodifluoromethane	2:87	0			0.00E+00	0		
RF		0.00E+00	9.69E+07	NA	ND	0.00E+00	9.69E+07	NA
Vinyl chloride	3:20	0			0.00E+00	0		
RF		0.00E+00	4.52E+08	NA	ND	0.00E+00	4.52E+08	NA
Chloroethane	3:48	0			0.00E+00	0		
RF		0.00E+00	1.95E+08	NA	ND	0.00E+00	1.95E+08	NA
Trichlorofluoromethane	3:67	0			0.00E+00	0		
RF		0.00E+00	5.18E+08	NA	ND	0.00E+00	5.18E+08	NA
1,1,2-Trichloro-trifluoroethane	4:28	3344006			0.00E+00	3299979		
RF		6.69E+08	6.74E+08	-1	ND	6.60E+08	6.74E+08	-2
1,1-Dichloroethene (PID)	4:26	207329			0.00E+00	174153		
RF		4.15E+07	3.78E+07	10	ND	3.48E+07	3.78E+07	-8
Methylene chloride	4:91	0			0.00E+00	0		
RF		0.00E+00	1.10E+09	NA	ND	0.00E+00	1.10E+09	NA
trans-1,2-Dichloroethene	5:19	5082452			0.00E+00	5821293		
RF		1.02E+09	9.98E+08	2	ND	1.16E+09	9.98E+08	17
1,1-Dichloroethane	5:68	5143300			0.00E+00	5035853		
RF		1.03E+09	1.03E+09	0	ND	1.01E+09	1.03E+09	-2
Cis-1,2-Dichloroethene	6:34	4597937			0.00E+00	5326479		
RF		9.20E+08	9.71E+08	-5	ND	1.07E+09	9.71E+08	10
Bromochloromethane (Surrogate)	6:57	0			2.47E+06	0		
RF		0.00E+00	5.36E+08	NA	92%	0.00E+00	5.36E+08	NA
Chloroform	6:70	0			0.00E+00	0		
RF		0.00E+00	1.30E+09	NA	ND	0.00E+00	1.30E+09	NA
1,1,1-Trichloroethane	6:93	6594066			0.00E+00	5943968		
RF		1.32E+09	1.23E+09	7	ND	1.19E+09	1.23E+09	-4
Carbon tetrachloride	7:12	0			0.00E+00	0		
RF		0.00E+00	1.59E+09	NA	ND	0.00E+00	1.59E+09	NA
Benzene (PID)	7:36	510079			0.00E+00	611011		
RF		1.02E+08	1.20E+08	-15	ND	1.22E+08	1.20E+08	2
1,2-Dichloroethane	7:41	5132259			0.00E+00	5346150		
RF		1.03E+09	1.06E+09	-3	ND	1.07E+09	1.06E+09	1
Trichloroethene	8:16	5697979			0.00E+00	5214177		
RF		1.14E+09	1.15E+09	-1	ND	1.04E+09	1.15E+09	-9
Toluene (PID)	9:84	529798			0.00E+00	532727		
RF		1.06E+08	1.17E+08	-10	ND	1.07E+08	1.17E+08	-9
1,1,2-Trichloroethane	10:43	5340177			0.00E+00	5025669		
RF		1.07E+09	1.06E+09	1	ND	1.01E+09	1.06E+09	-5
Tetrachloroethene	10:65	4859150			0.00E+00	4561655		
RF		9.72E+08	9.95E+08	-2	ND	9.12E+08	9.95E+08	-8
Chlorobenzene (Surrogate-PID)	11:87	0			445862	0		
RF		0.00E+00	8.93E+07	NA	100%	0.00E+00	8.93E+07	NA
1,1,1,2-Tetrachloroethane	12:00	0			0.00E+00	0		
RF		0.00E+00	1.12E+09	NA	ND	0.00E+00	1.12E+09	NA
Ethylbenzene (PID)	12:00	0			0.00E+00	0		
RF		0.00E+00	1.41E+08	NA	ND	0.00E+00	1.41E+08	NA
m,p-Xylene (PID)	12:16	1426206			0.00E+00	1378048		
RF		2.85E+08	3.04E+08	-6	ND	2.76E+08	3.04E+08	-9
o-Xylene (PID)	12:77	544363			0.00E+00	546150		
RF		1.09E+08	1.08E+08	0	ND	1.09E+08	1.08E+08	1
1,1,2,2-Tetrachloroethane	13:77	0			0.00E+00	0		
RF		0.00E+00	9.81E+08	NA	ND	0.00E+00	9.81E+08	NA

RT = Retention Time
RF = Response Factor
NA = Not Applicable

ug/L = microgram per Liter
uL = microliter
ug = microgram

7/1/96

ANALYST: Ragi Abraham

REVIEWED BY: David M. Pride

TABLE B-2
QUALITY ASSURANCE/QUALITY CONTROL REPORT
DAILY MID-POINT, BLANK ANALYSIS, AND LAST GC TEST RUN
JULY 2, 1996

PID/ELCD #2

FILE: 29SQQCM.WK

		DAILY MID-POINT			BLANK	LAST GC TEST RUN		
STANDARD CONC. (ug/L)		5000	AVERAGE		AMBIENT AIR	5000	AVERAGE	
INJECTION VOLUME(uL)		1.00	RESPONSE	PERCENT	500	1.00	RESPONSE	PERCENT
COMPOUND/WEIGHT(ug)	RT	0.00500	FACTOR	DIFFERENCE		0.00500	FACTOR	DIFFERENCE
Dichlorodifluoromethane	2:77	0			0.00E+00	0		
RF		0.00E+00	4.34E+08	NA	ND	0.00E+00	4.34E+08	NA
Vinyl chloride	3:05	0			0.00E+00	0		
RF		0.00E+00	1.70E+09	NA	ND	0.00E+00	1.70E+09	NA
Chloroethane	3:37	0			0.00E+00	0		
RF		0.00E+00	8.47E+08	NA	ND	0.00E+00	8.47E+08	NA
Trichlorofluoromethane	3:56	0			0.00E+00	0		
RF		0.00E+00	1.59E+09	NA	ND	0.00E+00	1.59E+09	NA
1,1,2-Trichloro-trifluoroethane	4:17	18048048			0.00E+00	16069224		
RF		3.61E+09	3.69E+09	-2	ND	3.21E+09	3.69E+09	-13
1,1-Dichloroethene (PID)	4:15	308824			0.00E+00	372097		
RF		6.18E+07	6.53E+07	-5	ND	7.44E+07	6.53E+07	14
Methylene chloride	4:71	0			0.00E+00	0		
RF		0.00E+00	2.61E+09	NA	ND	0.00E+00	2.61E+09	NA
trans-1,2-Dichloroethene	5:01	15020256			0.00E+00	14453680		
RF		3.00E+09	2.90E+09	4	ND	2.89E+09	2.90E+09	-0
1,1-Dichloroethane	5:46	13797728			0.00E+00	15876160		
RF		2.76E+09	2.85E+09	-3	ND	3.18E+09	2.85E+09	12
Cis-1,2-Dichloroethene	5:08	15934944			0.00E+00	15092816		
RF		3.19E+09	2.76E+09	15	ND	3.02E+09	2.76E+09	9
Bromochloromethane (Surrogate)	5:23	0			0.00E+00	0		
RF		0.00E+00	1.49E+09	NA	ND	0.00E+00	1.49E+09	NA
Chloroform	5:41	0			0.00E+00	0		
RF		0.00E+00	5.39E+09	NA	ND	0.00E+00	5.39E+09	NA
1,1,1-Trichloroethane	5:68	21655824			0.00E+00	23291248		
RF		4.33E+09	4.97E+09	-13	ND	4.66E+09	4.97E+09	-6
Carbon tetrachloride	5:88	0			0.00E+00	0		
RF		0.00E+00	6.45E+09	NA	ND	0.00E+00	6.45E+09	NA
Benzene (PID)	7:09	1266953			0.00E+00	1233594		
RF		2.53E+08	2.59E+08	-2	ND	2.47E+08	2.59E+08	-5
1,2-Dichloroethane	7:10	23063056			0.00E+00	25126656		
RF		4.61E+09	4.72E+09	-2	ND	5.03E+09	4.72E+09	6
Trichloroethene	7:87	21910816			0.00E+00	22554832		
RF		4.38E+09	3.88E+09	13	ND	4.51E+09	3.88E+09	16
Toluene (PID)	9:57	1186114			0.00E+00	1159825		
RF		2.37E+08	2.74E+08	-13	ND	2.32E+08	2.74E+08	-15
1,1,2-Trichloroethane	10:14	17927584			0.00E+00	19688864		
RF		3.59E+09	3.50E+09	3	ND	3.94E+09	3.50E+09	13
Tetrachloroethene	10:41	24939600			0.00E+00	23175792		
RF		4.99E+09	4.64E+09	8	ND	4.64E+09	4.64E+09	-0
Chlorobenzene (Surrogate-PID)	11:69	0			0.00E+00	0		
RF		0.00E+00	2.77E+08	NA	ND	0.00E+00	2.77E+08	NA
1,1,1,2-Tetrachloroethane	11:84	0			0.00E+00	0		
RF		0.00E+00	4.59E+09	NA	ND	0.00E+00	4.59E+09	NA
Ethylbenzene (PID)	11:86	0			0.00E+00	0		
RF		0.00E+00	2.39E+08	NA	ND	0.00E+00	2.39E+08	NA
m,p-Xylene (PID)	12:05	2727845			0.00E+00	2557202		
RF		5.46E+08	5.57E+08	-2	ND	5.11E+08	5.57E+08	-8
o-Xylene (PID)	12:71	1042589			0.00E+00	971611		
RF		2.09E+08	2.27E+08	-8	ND	1.94E+08	2.27E+08	-15
1,1,2,2-Tetrachloroethane	13:79	0			0.00E+00			
RF		0.00E+00	3.73E+09	NA	ND	0.00E+00	3.73E+09	NA

RT = Retention Time
RF = Response Factor
NA = Not Applicable

ug/L = microgram per Liter
uL = microliter
ug = microgram

7/2/96

ANALYST: David M. Pride

REVIEWED BY: Ragi Abraham

TABLE B-2
QUALITY ASSURANCE/QUALITY CONTROL REPORT
DAILY MID-POINT, BLANK ANALYSIS, AND LAST GC TEST RUN
JULY 5, 1996

PID/ELCD #1

FILE: 296RRQCMP.WK

		DAILY MID-POINT			BLANK	LAST GC TEST RUN		
STANDARD CONC. (ug/L)		5000	AVERAGE		AMBIENT AIR	5000	AVERAGE	
INJECTION VOLUME(uL)		1.00	RESPONSE	PERCENT	500	1.00	RESPONSE	PERCENT
COMPOUND/WEIGHT(ug)	RT	0.00500	FACTOR	DIFFERENCE		0.00500	FACTOR	DIFFERENCE
Dichlorodifluoromethane	2:87	0			0.00E+00	0		
RF		0.00E+00	9.69E+07	NA	ND	0.00E+00	9.69E+07	NA
Vinyl chloride	3:20	0			0.00E+00	0		
RF		0.00E+00	4.52E+08	NA	ND	0.00E+00	4.52E+08	NA
Chloroethane	3:48	0			0.00E+00	0		
RF		0.00E+00	1.95E+08	NA	ND	0.00E+00	1.95E+08	NA
Trichlorofluoromethane	3:67	0			0.00E+00	0		
RF		0.00E+00	5.18E+08	NA	ND	0.00E+00	5.18E+08	NA
,1,2-Trichloro-trifluoroethane	4:28	3976493			0.00E+00	2810113		
RF		7.95E+08	6.74E+08	18	ND	5.62E+08	6.74E+08	-17
1,1-Dichloroethene (PID)	4:26	189131			0.00E+00	213557		
RF		3.78E+07	3.78E+07	0	ND	4.27E+07	3.78E+07	13
Methylene chloride	4:91	0			0.00E+00	0		
RF		0.00E+00	1.10E+09	NA	ND	0.00E+00	1.10E+09	NA
trans-1,2-Dichloroethene	5:19	4514545			0.00E+00	4933519		
RF		9.03E+08	9.98E+08	-10	ND	9.87E+08	9.98E+08	-1
,1-Dichloroethane	5:68	4594677			0.00E+00	5585151		
RF		9.19E+08	1.03E+09	-10	ND	1.12E+09	1.03E+09	9
Cis-1,2-Dichloroethene	6:34	4837609			0.00E+00	3968965		
RF		9.68E+08	9.71E+08	-0	ND	7.94E+08	9.71E+08	-18
Bromochloromethane (Surrogate)	6:57	0			2.27E+06	0		
RF		0.00E+00	5.36E+08	NA	85%	0.00E+00	5.36E+08	NA
Chloroform	6:70	0			0.00E+00	0		
RF		0.00E+00	1.30E+09	NA	ND	0.00E+00	1.30E+09	NA
,1,1-Trichloroethane	6:93	6058365			0.00E+00	5627638		
RF		1.21E+09	1.23E+09	-2	ND	1.13E+09	1.23E+09	-9
Carbon tetrachloride	7:12	0			0.00E+00	0		
RF		0.00E+00	1.59E+09	NA	ND	0.00E+00	1.59E+09	NA
Benzene (PID)	7:36	570308			0.00E+00	537129		
RF		1.14E+08	1.20E+08	-5	ND	1.07E+08	1.20E+08	-10
1,2-Dichloroethane	7:41	5087466			0.00E+00	4489072		
RF		1.02E+09	1.06E+09	-4	ND	8.98E+08	1.06E+09	-15
Trichloroethene	8:16	5421791			0.00E+00	4638243		
RF		1.08E+09	1.15E+09	-6	ND	9.28E+08	1.15E+09	-19
Toluene (PID)	9:84	615002			0.00E+00	567235		
RF		1.23E+08	1.17E+08	5	ND	1.13E+08	1.17E+08	-3
,1,2-Trichloroethane	10:43	5230510			0.00E+00	4930709		
RF		1.05E+09	1.06E+09	-1	ND	9.86E+08	1.06E+09	-7
Tetrachloroethene	10:65	4963103			0.00E+00	4575627		
RF		9.93E+08	9.95E+08	-0	ND	9.15E+08	9.95E+08	-8
Chlorobenzene (Surrogate-PID)	11:87	0			538324	0		
RF		0.00E+00	8.93E+07	NA	121%	0.00E+00	8.93E+07	NA
1,1,1,2-Tetrachloroethane	12:00	0			0.00E+00	0		
RF		0.00E+00	1.12E+09	NA	ND	0.00E+00	1.12E+09	NA
Ethylbenzene (PID)	12:00	0			0.00E+00	0		
RF		0.00E+00	1.41E+08	NA	ND	0.00E+00	1.41E+08	NA
m,p-Xylene (PID)	12:16	1309518			0.00E+00	1509919		
RF		2.62E+08	3.04E+08	-14	ND	3.02E+08	3.04E+08	-1
-Xylene (PID)	12:77	542305			0.00E+00	577499		
RF		1.08E+08	1.08E+08	0	ND	1.15E+08	1.08E+08	7
1,1,2,2-Tetrachloroethane	13:77	0			0.00E+00	0		
RF		0.00E+00	9.81E+08	NA	ND	0.00E+00	9.81E+08	NA

RT = Retention Time
RF = Response Factor
NA = Not Applicable

ug/L = microgram per Liter
uL = microliter
ug = microgram

7/5/96

ANALYST: Ragi Abraham

REVIEWED BY: David M. Pride

TABLE B-2
QUALITY ASSURANCE/QUALITY CONTROL REPORT
DAILY MID-POINT, BLANK ANALYSIS, AND LAST GC TEST RUN
JULY 10, 1996

PID/ELCD #1

FILE: 296SSQCM.WK

		DAILY MID-POINT			BLANK	LAST GC TEST RUN		
STANDARD CONC. (ug/L)		5000	AVERAGE		AMBIENT AIR	5000	AVERAGE	
INJECTION VOLUME(uL)		1.00	RESPONSE	PERCENT	500	1.00	RESPONSE	PERCENT
COMPOUND/WEIGHT(ug)	RT	0.00500	FACTOR	DIFFERENCE		0.00500	FACTOR	DIFFERENCE
Dichlorodifluoromethane	2:87	0			0.00E+00	0		
RF		0.00E+00	9.69E+07	NA	ND	0.00E+00	9.69E+07	NA
Vinyl chloride	3:20	0			0.00E+00	0		
RF		0.00E+00	4.52E+08	NA	ND	0.00E+00	4.52E+08	NA
Chloroethane	3:48	0			0.00E+00	0		
RF		0.00E+00	1.95E+08	NA	ND	0.00E+00	1.95E+08	NA
Trichlorofluoromethane	3:67	0			0.00E+00	0		
RF		0.00E+00	5.18E+08	NA	ND	0.00E+00	5.18E+08	NA
1,1,2-Trichloro-trifluoroethane	4:28	0			0.00E+00	0		
RF		0.00E+00	6.74E+08	NA	ND	0.00E+00	6.74E+08	NA
1,1-Dichloroethene (PID)	4:26	160530			0.00E+00	211069		
RF		3.21E+07	3.78E+07	-15	ND	4.22E+07	3.78E+07	12
Methylene chloride	4:91	0			0.00E+00	0		
RF		0.00E+00	1.10E+09	NA	ND	0.00E+00	1.10E+09	NA
trans-1,2-Dichloroethene	5:19	5243047			0.00E+00	4803131		
RF		1.05E+09	9.98E+08	5	ND	9.61E+08	9.98E+08	-4
1,1-Dichloroethane	5:68	5535052			0.00E+00	5203640		
RF		1.11E+09	1.03E+09	8	ND	1.04E+09	1.03E+09	1
Cis-1,2-Dichloroethene	6:34	4299792			0.00E+00	4722435		
RF		8.60E+08	9.71E+08	-11	ND	9.44E+08	9.71E+08	-3
Bromochloromethane (Surrogate)	6:57	0			2.69E+06	0		
RF		0.00E+00	5.36E+08	NA	100%	0.00E+00	5.36E+08	NA
Chloroform	6:70	0			0.00E+00	0		
RF		0.00E+00	1.30E+09	NA	ND	0.00E+00	1.30E+09	NA
1,1,1-Trichloroethane	6:93	5971323			0.00E+00	6196937		
RF		1.19E+09	1.23E+09	-3	ND	1.24E+09	1.23E+09	0
Carbon tetrachloride	7:12	0			0.00E+00	0		
RF		0.00E+00	1.59E+09	NA	ND	0.00E+00	1.59E+09	NA
Benzene (PID)	7:36	522651			0.00E+00	638238		
RF		1.05E+08	1.20E+08	-13	ND	1.28E+08	1.20E+08	7
1,2-Dichloroethane	7:41	5318307			0.00E+00	4344759		
RF		1.06E+09	1.06E+09	0	ND	8.69E+08	1.06E+09	-18
Trichloroethene	8:16	5842586			0.00E+00	6662864		
RF		1.17E+09	1.15E+09	1	ND	1.33E+09	1.15E+09	16
Toluene (PID)	9:84	613138			0.00E+00	706312		
RF		1.23E+08	1.17E+08	4	ND	1.41E+08	1.17E+08	20
1,1,2-Trichloroethane	10:43	5305532			0.00E+00	4413011		
RF		1.06E+09	1.06E+09	0	ND	8.83E+08	1.06E+09	-17
Tetrachloroethene	10:65	5421365			0.00E+00	5280622		
RF		1.08E+09	9.95E+08	9	ND	1.06E+09	9.95E+08	6
Chlorobenzene (Surrogate-PID)	11:87	0			478157	0		
RF		0.00E+00	8.93E+07	NA	107%	0.00E+00	8.93E+07	NA
1,1,1,2-Tetrachloroethane	12:00	0			0.00E+00	0		
RF		0.00E+00	1.12E+09	NA	ND	0.00E+00	1.12E+09	NA
Ethylbenzene (PID)	12:00	0			0.00E+00	0		
RF		0.00E+00	1.41E+08	NA	ND	0.00E+00	1.41E+08	NA
m,p-Xylene (PID)	12:16	1467666			0.00E+00	1418298		
RF		2.94E+08	3.04E+08	-3	ND	2.84E+08	3.04E+08	-7
o-Xylene (PID)	12:77	496969			0.00E+00	584321		
RF		9.94E+07	1.08E+08	-8	ND	1.17E+08	1.08E+08	8
1,1,2,2-Tetrachloroethane	13:77	0			0.00E+00	0		
RF		0.00E+00	9.81E+08	NA	ND	0.00E+00	9.81E+08	NA

RT = Retention Time
RF = Response Factor
NA = Not Applicable

ug/L = microgram per Liter
uL = microliter
ug = microgram

7/10/96

ANALYST: David M. Pride

REVIEWED BY: Marcia LeFrancois

TABLE B-3
RESPONSE FACTORS FOR THREE POINT CALIBRATION
SUBJECT SITE, CALIFORNIA
JUNE 11, 1996

PIDUBLCD #1

FILE: 061136FT.WK3

STANDARD CONC. (ug/L)		5000	5000	5000	AVERAGE		RELATIVE
INJECTION VOLUME (uL)		0.50	1.00	2.00	RESPONSE	STANDARD	% STANDARD
COMPOUND/WEIGHT(ug)	RT	0.0025	0.0050	0.0100	FACTOR	DEVIATION	DEVIATION
Dichlorodifluoromethane	2:87	242694	491385	953537			
CF		9.71E+07	9.83E+07	9.54E+07	9.69E+07	1.47E+06	2
Vinyl chloride	3:20	1222677	1969214	4735684			
CF		4.89E+08	3.94E+08	4.74E+08	4.52E+08	5.11E+07	11
Chloroethane	3:48	465013	904500	2170714			
CF		1.86E+08	1.81E+08	2.17E+08	1.95E+08	1.96E+07	10
Trichlorofluoromethane	3:67	1543304	2024479	5326518			
CF		6.17E+08	4.05E+08	5.33E+08	5.18E+08	1.07E+08	21
1,1,2-Trichloro-trifluoroethane	4:28	1717670	3352063	6659969			
CF		6.87E+08	6.70E+08	6.66E+08	6.74E+08	1.11E+07	2
1,1-Dichloroethene (PID)	4:26	98098	199100	343179			
CF		3.92E+07	3.98E+07	3.43E+07	3.78E+07	3.02E+06	8
Methylene chloride	4:91	3130434	4873284	10690733			
CF		1.25E+09	9.75E+08	1.07E+09	1.10E+09	1.41E+08	13
trans-1,2-Dichloroethene	5:19	2703538	4428074	10280368			
CF		1.08E+09	8.86E+08	1.03E+09	9.98E+08	1.01E+08	10
1,1-Dichloroethane	5:68	2834524	4618221	10205546			
CF		1.13E+09	9.24E+08	1.02E+09	1.03E+09	1.05E+08	10
cis-1,2-Dichloroethene	6:34	2690851	4471766	9423301			
CF		1.08E+09	8.94E+08	9.42E+08	9.71E+08	9.43E+07	10
Bromochloromethane (Surrogate)	6:57	1331478	2536433	5678421			
CF		5.33E+08	5.07E+08	5.68E+08	5.36E+08	3.04E+07	6
Chloroform	6:70	2922162	7042828	13206540			
CF		1.17E+09	1.41E+09	1.32E+09	1.30E+09	1.21E+08	9
1,1,1-Trichloroethane	6:93	3407288	5593457	12192926			
CF		1.36E+09	1.12E+09	1.22E+09	1.23E+09	1.23E+08	10
Carbon tetrachloride	7:12	4383040	7222286	15752193			
CF		1.75E+09	1.44E+09	1.58E+09	1.59E+09	1.55E+08	10
Benzene (PID)	7:36	330160	539019	1192756			
CF		1.32E+08	1.08E+08	1.19E+08	1.20E+08	1.21E+07	10
1,2-Dichloroethane	7:41	2837031	5119321	10212894			
CF		1.13E+09	1.02E+09	1.02E+09	1.06E+09	6.48E+07	6
Trichloroethene	8:16	3176619	5541815	10765678			
CF		1.27E+09	1.11E+09	1.08E+09	1.15E+09	1.04E+08	9
Toluene (PID)	9:84	284042	594722	1197331			
CF		1.14E+08	1.19E+08	1.20E+08	1.17E+08	3.33E+06	3
1,1,2-Trichloroethane	10:43	2691128	5984053	9078205			
CF		1.08E+09	1.20E+09	9.08E+08	1.06E+09	1.45E+08	14
Tetrachloroethene	10:65	2338885	5978956	8524493			
CF		9.36E+08	1.20E+09	8.52E+08	9.95E+08	1.79E+08	18
Chlorobenzene (Surrogate-PID)	11:87	194631	441745	1016675			
CF		7.79E+07	8.83E+07	1.02E+08	8.93E+07	1.19E+07	13
1,1,1,2-Tetrachloroethane	12:00	2673943	6464342	9926914			
CF		1.07E+09	1.29E+09	9.93E+08	1.12E+09	1.56E+08	14
Ethylbenzene (PID)	12:00	417647	728604	1100433			
CF		1.67E+08	1.46E+08	1.10E+08	1.41E+08	2.88E+07	20
m,p-Xylene (PID)	12:16	858044	1532849	2621210			
CF		3.43E+08	3.07E+08	2.62E+08	3.04E+08	4.06E+07	13
o-Xylene (PID)	12:77	254627	839803	953345			
CF		1.02E+08	1.28E+08	9.53E+07	1.08E+08	1.73E+07	16
1,1,2,2-Tetrachloroethane	13:77	2591864	5074712	8921429			
CF		1.04E+09	1.01E+09	8.92E+08	9.81E+08	7.80E+07	8

RT = Retention Time
CF = Calibration Factor

ug/L = Micrograms per Liter
uL = Microliter
ug = Microgram

6/11/96

Analyst: Ragi Abraham

Reviewed by: David M. Pride

TABLE B-3
RESPONSE FACTORS FOR THREE POINT CALIBRATION
SUBJECT SITE, CALIFORNIA
JUNE 17, 1996

PIDVEL.CO #2

FILE: [illegible]

STANDARD CONC. (ug/L)		5000	5000	5000	AVERAGE		RELATIVE
INJECTION VOLUME (uL)		0.50	1.00	2.00	RESPONSE	STANDARD	% STANDARD
COMPOUND/WEIGHT(ug)	RT	0.0025	0.0050	0.0100	FACTOR	DEVIATION	DEVIATION
Dichlorodifluoromethane	2:77	1120302	2289141	3963594			
CF		4.48E+08	4.58E+08	3.96E+08	4.34E+08	3.30E+07	8
Vinyl chloride	3:05	4291670	5970762	21771728			
CF		1.72E+09	1.19E+09	2.18E+09	1.70E+09	4.92E+08	29
Chloroethane	3:37	2646218	3598668	7620973			
CF		1.06E+09	7.20E+08	7.62E+08	8.47E+08	1.85E+08	22
Trichlorofluoromethane	3:56	2866068	9996371	16164987			
CF		1.15E+09	2.00E+09	1.62E+09	1.59E+09	4.27E+08	27
1,1,2-Trichloro-trifluoroethane	4:17	8845318	17204704	40791520			
CF		3.54E+09	3.44E+09	4.08E+09	3.69E+09	3.44E+08	9
1,1-Dichloroethene (PID)	4:15	142769	402464	581974			
CF		5.71E+07	8.05E+07	5.82E+07	6.53E+07	1.32E+07	20
Methylene chloride	4:71	6907298	15255744	20239056			
CF		2.76E+09	3.05E+09	2.02E+09	2.81E+09	5.30E+08	20
trans-1,2-Dichloroethene	5:01	8463738	13709056	25738752			
CF		3.39E+09	2.74E+09	2.57E+09	2.90E+09	4.26E+08	15
1,1-Dichloroethane	5:46	7397354	13449600	28904816			
CF		2.96E+09	2.69E+09	2.89E+09	2.85E+09	1.40E+08	5
cis-1,2-Dichloroethene	6:06	6862186	15250784	24927984			
CF		2.74E+09	3.05E+09	2.49E+09	2.76E+09	2.79E+08	10
Bromochloromethane (Surrogate)	6:23	2859290	8884845	15547160			
CF		1.14E+09	1.78E+09	1.55E+09	1.49E+09	3.21E+08	22
Chloroform	6:41	15619488	22316272	54605504			
CF		6.25E+09	4.46E+09	5.46E+09	5.39E+09	8.94E+08	17
1,1,1-Trichloroethane	6:68	14888552	21500544	46440544			
CF		5.96E+09	4.30E+09	4.64E+09	4.97E+09	8.74E+08	18
Carbon tetrachloride	6:88	12821160	38235008	65894784			
CF		5.13E+09	7.65E+09	6.59E+09	6.45E+09	1.26E+09	20
Benzene (PID)	7:09	619403	1240367	2805845			
CF		2.48E+08	2.48E+08	2.81E+08	2.59E+08	1.88E+07	7
1,2-Dichloroethane	7:10	14382362	19396272	45410568			
CF		5.75E+09	3.88E+09	4.54E+09	4.72E+09	9.50E+08	20
Trichloroethene	7:87	10012272	17717632	40867168			
CF		4.00E+09	3.54E+09	4.09E+09	3.88E+09	2.93E+08	8
Toluene (PID)	9:57	677539	1364120	2773917			
CF		2.71E+08	2.73E+08	2.77E+08	2.74E+08	3.29E+06	1
1,1,2-Trichloroethane	10:14	8440988	15785432	39541440			
CF		3.38E+09	3.16E+09	3.95E+09	3.50E+09	4.12E+08	12
Tetrachloroethene	10:41	11172400	19704160	54992352			
CF		4.47E+09	3.94E+09	5.50E+09	4.64E+09	7.93E+08	17
Chlorobenzene (Surrogate-PID)	11:69	689413	1373704	2819880			
CF		2.76E+08	2.75E+08	2.82E+08	2.77E+08	3.92E+06	1
1,1,1,2-Tetrachloroethane	11:84	11861600	20430544	49379232			
CF		4.74E+09	4.09E+09	4.94E+09	4.59E+09	4.47E+08	10
Ethylbenzene (PID)	11:86	571432	1180557	2526626			
CF		2.29E+08	2.36E+08	2.53E+08	2.39E+08	1.23E+07	5
m,p-Xylene (PID)	12:05	1368642	2742866	5738429			
CF		5.47E+08	5.49E+08	5.74E+08	5.57E+08	1.49E+07	3
o-Xylene (PID)	12:71	541468	1142100	2372133			
CF		2.17E+08	2.28E+08	2.37E+08	2.27E+08	1.04E+07	5
1,1,2,2-Tetrachloroethane	13:79	9222918	17263984	40405472			
CF		3.69E+09	3.45E+09	4.04E+09	3.73E+09	2.96E+08	8

RT = Retention Time
CF = Calibration Factor

ug/L = Micrograms per Liter
uL = Microliter
ug = Microgram

6/17/96

Analyst: Ragi Abraham

Reviewed by: David M. Pride

TABLE B-3
RESPONSE FACTORS FOR THREE POINT CALIBRATION
SUBJECT SITE, CALIFORNIA
MAY 29, 1996

PIDVELCD #1

FILE: 05293PT.WK3

STANDARD CONC. (ug/L) INJECTION VOLUME(uL) COMPOUND/WEIGHT(ug)	RT	5000 0.50 0.0025	5000 1.00 0.0050	5000 2.00 0.0100	AVERAGE RESPONSE FACTOR	STANDARD DEVIATION	RELATIVE % STANDARD DEVIATION
Dichlorodifluoromethane	2:96	810318	1304923	2745758			
CF		3.24E+08	2.61E+08	2.75E+08	2.87E+08	3.32E+07	12
Vinyl chloride	3:32	1825975	3000213	5715667			
CF		7.30E+08	6.00E+08	5.72E+08	6.34E+08	8.47E+07	13
Chloroethane	3:61	1475621	2488133	5985375			
CF		5.90E+08	4.98E+08	5.99E+08	5.62E+08	5.60E+07	10
Trichlorofluoromethane	3:79	1446521	3556310	7125783			
CF		5.79E+08	7.11E+08	7.13E+08	6.67E+08	7.70E+07	12
1,1,2-Trichloro-trifluoroethane	4:45	3533299	8042216	14559981			
CF		1.41E+09	1.61E+09	1.46E+09	1.49E+09	1.03E+08	7
1,1-Dichloroethene (PID)	4:42	93668	162318	427729			
CF		3.75E+07	3.25E+07	4.28E+07	3.76E+07	5.16E+06	14
Methylene chloride	5:01	3408478	5611795	10950023			
CF		1.36E+09	1.12E+09	1.10E+09	1.19E+09	1.48E+08	12
trans-1,2-Dichloroethene	5:29	2958224	4764529	9427377			
CF		1.18E+09	9.53E+08	9.43E+08	1.03E+09	1.36E+08	13
1,1-Dichloroethane	5:76	3009014	5016787	10229822			
CF		1.20E+09	1.00E+09	1.02E+09	1.08E+09	1.10E+08	10
cis-1,2-Dichloroethene	6:40	2849928	4868023	9887094			
CF		1.14E+09	9.74E+08	9.89E+08	1.03E+09	9.20E+07	9
Chloroform	6:75	3795750	6258293	12642365			
CF		1.52E+09	1.25E+09	1.26E+09	1.34E+09	1.50E+08	11
1,1,1-Trichloroethane	6:99	3316620	5626015	11501537			
CF		1.33E+09	1.13E+09	1.15E+09	1.20E+09	1.10E+08	9
Carbon tetrachloride	7:19	4385037	7480685	14703725			
CF		1.75E+09	1.50E+09	1.47E+09	1.57E+09	1.57E+08	10
Benzene (PID)	7:41	385807	644210	1272637			
CF		1.54E+08	1.29E+08	1.27E+08	1.37E+08	1.52E+07	11
1,2-Dichloroethane	7:47	2967703	5206516	10741522			
CF		1.19E+09	1.04E+09	1.07E+09	1.10E+09	7.65E+07	7
Trichloroethene	8:21	3365925	5616256	11715171			
CF		1.35E+09	1.12E+09	1.17E+09	1.21E+09	1.17E+08	10
Toluene (PID)	9:90	341248	880259	1432929			
CF		1.36E+08	1.76E+08	1.43E+08	1.52E+08	2.11E+07	14
1,1,2-Trichloroethane	10:50	3423996	5767923	10582088			
CF		1.37E+09	1.15E+09	1.06E+09	1.19E+09	1.60E+08	13
Tetrachloroethene	10:72	3638328	6167243	12803544			
CF		1.46E+09	1.23E+09	1.28E+09	1.32E+09	1.17E+08	9
1,1,1,2-Tetrachloroethane	12:08	3482832	6062960	11208577			
CF		1.39E+09	1.21E+09	1.12E+09	1.24E+09	1.39E+08	11
Ethylbenzene (PID)	12:06	317083	535879	1106471			
CF		1.27E+08	1.07E+08	1.11E+08	1.15E+08	1.05E+07	9
m,p-Xylene (PID)	12:22	967955	1546610	2887939			
CF		3.87E+08	3.09E+08	2.89E+08	3.28E+08	5.19E+07	16
o-Xylene (PID)	12:84	352008	524218	1080265			
CF		1.41E+08	1.05E+08	1.08E+08	1.18E+08	1.99E+07	17
1,1,2,2-Tetrachloroethane	13:86	3478808	5903736	11230671			
CF		1.39E+09	1.18E+09	1.12E+09	1.23E+09	1.41E+08	11

RT = Retention Time
CF = Calibration Factor

ug/L = Micrograms per Liter
uL = Microliter
ug = Microgram

5/29/96

Analyst: David M. Pride

Reviewed by: Ragi Abraham

TABLE B-3
RESPONSE FACTORS FOR THREE POINT CALIBRATION
SUBJECT SITE, CALIFORNIA
MAY 22, 1996

PID/ELCD #1

FILE: 05223PT.WK3

STANDARD CONC. (ug/L) INJECTION VOLUME(uL) COMPOUND/WEIGHT(ug)	RT	5000 0.50 0.0025	5000 1.00 0.0050	5000 2.00 0.0100	AVERAGE RESPONSE FACTOR	STANDARD DEVIATION	RELATIVE % STANDARD DEVIATION
Dichlorodifluoromethane	2:97	288358	593711	1413232			
CF		1.15E+08	1.19E+08	1.41E+08	1.25E+08	1.41E+07	11
Vinyl chloride	3:33	898968	1888791	5344417			
CF		3.60E+08	3.78E+08	5.34E+08	4.24E+08	9.61E+07	23
Chloroethane	3:62	674734	1461085	3511565			
CF		2.70E+08	2.92E+08	3.51E+08	3.04E+08	4.20E+07	14
Trichlorofluoromethane	3:81	1390162	2069393	6581512			
CF		5.56E+08	4.14E+08	6.58E+08	5.43E+08	1.23E+08	23
1,1,2-Trichloro-trifluoroethane	4:47	2641983	5835195	12637896			
CF		1.06E+09	1.17E+09	1.26E+09	1.16E+09	1.04E+08	9
1,1-Dichloroethene (PID)	4:45	70368	136513	359738			
CF		2.81E+07	2.73E+07	3.60E+07	3.05E+07	4.78E+06	16
Methylene chloride	5:02	2103247	4476132	10380821			
CF		8.41E+08	8.95E+08	1.04E+09	9.25E+08	1.02E+08	11
trans-1,2-Dichloroethene	5:31	2518054	4024020	9413172			
CF		1.01E+09	8.05E+08	9.41E+08	9.18E+08	1.03E+08	11
1,1-Dichloroethane	5:78	2427007	3894451	9030242			
CF		9.71E+08	7.79E+08	9.03E+08	8.84E+08	9.73E+07	11
cis-1,2-Dichloroethene	6:42	2804001	4662718	10802202			
CF		1.12E+09	9.33E+08	1.08E+09	1.04E+09	9.94E+07	10
Chloroform	6:77	3160497	5359737	11983468			
CF		1.26E+09	1.07E+09	1.20E+09	1.18E+09	9.77E+07	8
1,1,1-Trichloroethane	7:01	2793602	4584996	10547914			
CF		1.12E+09	9.17E+08	1.05E+09	1.03E+09	1.03E+08	10
Carbon tetrachloride	7:21	3430579	5783777	12924546			
CF		1.37E+09	1.16E+09	1.29E+09	1.27E+09	1.09E+08	9
Benzene (PID)	7:43	248282	488270	1017676			
CF		9.93E+07	9.77E+07	1.02E+08	9.96E+07	2.07E+06	2
1,2-Dichloroethane	7:48	2679215	4874237	10359169			
CF		1.07E+09	9.75E+08	1.04E+09	1.03E+09	4.90E+07	5
Trichloroethene	8:23	2865500	4971336	11193353			
CF		1.15E+09	9.94E+08	1.12E+09	1.09E+09	8.11E+07	7
Toluene (PID)	9:93	248451	477240	980491			
CF		9.94E+07	9.54E+07	9.80E+07	9.76E+07	2.00E+06	2
1,1,2-Trichloroethane	10:51	2654174	4532598	9640443			
CF		1.06E+09	9.07E+08	9.64E+08	9.77E+08	7.84E+07	8
Tetrachloroethene	10:72	3175501	5665857	12452090			
CF		1.27E+09	1.13E+09	1.25E+09	1.22E+09	7.30E+07	6
1,1,1,2-Tetrachloroethane	12:09	2846951	5031700	10473957			
CF		1.14E+09	1.01E+09	1.05E+09	1.06E+09	6.78E+07	6
Ethylbenzene (PID)	12:09	223652	430339	875439			
CF		8.95E+07	8.61E+07	8.75E+07	8.77E+07	1.70E+06	2
m,p-Xylene (PID)	12:25	554788	1097912	2183941			
CF		2.22E+08	2.20E+08	2.18E+08	2.20E+08	1.79E+06	1
o-Xylene (PID)	12:86	213008	438942	839269			
CF		8.52E+07	8.78E+07	8.39E+07	8.56E+07	1.97E+06	2
1,1,2,2-Tetrachloroethane	13:87	2507047	4477848	9464526			
CF		1.00E+09	8.96E+08	9.46E+08	9.48E+08	5.36E+07	6

RT = Retention Time
CF = Calibration Factor

ug/L = Micrograms per Liter
uL = Microliter
ug = Microgram

5/22/96

Analyst: Ragi Abraham

Reviewed by: David M. Pride

TABLE B-4
QUALITY ASSURANCE/QUALITY CONTROL REPORT
LAB CONTROL SAMPLE, BLANK ANALYSIS, AND LAST GC TEST RUN
JUNE 11, 1996

PID/ELCD #1

FILE: 0611QCLC.WK

		LAB CONTROL SAMPLE			BLANK	LAST GC TEST RUN		
STANDARD CONC. (ug/L)		5000	AVERAGE		AMBIENT AIR	5000	AVERAGE	
INJECTION VOLUME(uL)		1.00	RESPONSE	PERCENT	500	1.00	RESPONSE	PERCENT
COMPOUND/WEIGHT(ug)	RT	0.00500	FACTOR	DIFFERENCE		0.00500	FACTOR	DIFFERENCE
Dichlorodifluoromethane	2:87	453350			0.00E+00	0		
RF		9.07E+07	9.69E+07	-6	ND	0.00E+00	9.69E+07	NA
Vinyl chloride	3:20	2183288			0.00E+00	0		
RF		4.37E+08	4.52E+08	-3	ND	0.00E+00	4.52E+08	NA
Chloroethane	3:48	1010596			0.00E+00	0		
RF		2.02E+08	1.95E+08	4	ND	0.00E+00	1.95E+08	NA
Trichlorofluoromethane	3:67	2367574			0.00E+00	0		
RF		4.74E+08	5.18E+08	-9	ND	0.00E+00	5.18E+08	NA
1,1,2-Trichloro-trifluoroethane	4:28	3785969			0.00E+00	0		
RF		7.57E+08	6.74E+08	12	ND	0.00E+00	6.74E+08	NA
1,1-Dichloroethene (PID)	4:26	161782			0.00E+00	0		
RF		3.24E+07	3.78E+07	-14	ND	0.00E+00	3.78E+07	NA
Methylene chloride	4:91	5346191			0.00E+00	0		
RF		1.07E+09	1.10E+09	-3	ND	0.00E+00	1.10E+09	NA
trans-1,2-Dichloroethene	5:19	4768086			0.00E+00	0		
RF		9.54E+08	9.98E+08	-4	ND	0.00E+00	9.98E+08	NA
1,1-Dichloroethane	5:68	4778432			0.00E+00	0		
RF		9.56E+08	1.03E+09	-7	ND	0.00E+00	1.03E+09	NA
Cis-1,2-Dichloroethene	6:34	4556263			0.00E+00	0		
RF		9.11E+08	9.71E+08	-6	ND	0.00E+00	9.71E+08	NA
Bromochloromethane (Surrogate)	6:57	2712801			0.00E+00	0		
RF		5.43E+08	5.36E+08	1	ND	0.00E+00	5.36E+08	NA
Chloroform	6:70	6851478			0.00E+00	0		
RF		1.37E+09	1.30E+09	5	ND	0.00E+00	1.30E+09	NA
1,1,1-Trichloroethane	6:93	5698736			0.00E+00	0		
RF		1.14E+09	1.23E+09	-8	ND	0.00E+00	1.23E+09	NA
Carbon tetrachloride	7:12	7459200			0.00E+00	0		
RF		1.49E+09	1.59E+09	-6	ND	0.00E+00	1.59E+09	NA
Benzene (PID)	7:36	572027			0.00E+00	0		
RF		1.14E+08	1.20E+08	-4	ND	0.00E+00	1.20E+08	NA
1,2-Dichloroethane	7:41	5079459			0.00E+00	0		
RF		1.02E+09	1.06E+09	-4	ND	0.00E+00	1.06E+09	NA
Trichloroethene	8:16	5506176			0.00E+00	0		
RF		1.10E+09	1.15E+09	-4	ND	0.00E+00	1.15E+09	NA
Toluene (PID)	9:84	613380			0.00E+00	0		
RF		1.23E+08	1.17E+08	4	ND	0.00E+00	1.17E+08	NA
1,1,2-Trichloroethane	10:43	4915909			0.00E+00	0		
RF		9.83E+08	1.06E+09	-7	ND	0.00E+00	1.06E+09	NA
Tetrachloroethene	10:65	4853417			0.00E+00	0		
RF		9.71E+08	9.95E+08	-2	ND	0.00E+00	9.95E+08	NA
Chlorobenzene (Surrogate-PID)	11:87	469588			0.00E+00	0		
RF		9.39E+07	8.93E+07	5	ND	0.00E+00	8.93E+07	NA
1,1,1,2-Tetrachloroethane	12:00	6221628			0.00E+00	0		
RF		1.24E+09	1.12E+09	11	ND	0.00E+00	1.12E+09	NA
Ethylbenzene (PID)	12:00	770291			0.00E+00	0		
RF		1.54E+08	1.41E+08	9	ND	0.00E+00	1.41E+08	NA
m,p-Xylene (PID)	12:16	1521317			0.00E+00	0		
RF		3.04E+08	3.04E+08	0	ND	0.00E+00	3.04E+08	NA
o-Xylene (PID)	12:77	555113			0.00E+00			
RF		1.11E+08	1.08E+08	2	ND	0.00E+00	1.08E+08	NA
1,1,2,2-Tetrachloroethane	13:77	4895281			0.00E+00			
RF		9.79E+08	9.81E+08	-0	ND	0.00E+00	9.81E+08	NA

RT = Retention Time
RF = Response Factor
NA = Not Applicable

ug/L = microgram per Liter
uL = microliter
ug = microgram

6/11/96

ANALYST: Ragi Abraham

REVIEWED BY: David M. Pride

TABLE B-4
QUALITY ASSURANCE/QUALITY CONTROL REPORT
LAB CONTROL SAMPLE, BLANK ANALYSIS, AND LAST GC TEST RUN
JUNE 17, 1996

PID/ELCD #2

FILE: 0617QCLC.WK

		LAB CONTROL SAMPLE			BLANK	LAST GC TEST RUN		
STANDARD CONC. (ug/L)		5000	AVERAGE		AMBIENT AIR	5000	AVERAGE	
INJECTION VOLUME(uL)		1.00	RESPONSE	PERCENT	500	1.00	RESPONSE	PERCENT
COMPOUND/WEIGHT(ug)	RT	0.00500	FACTOR	DIFFERENCE		0.00500	FACTOR	DIFFERENCE
Dichlorodifluoromethane	2:77	2362898			0.00E+00	0		
RF		4.73E+08	4.34E+08	9	ND	0.00E+00	4.34E+08	NA
Vinyl chloride	3:05	10202848			0.00E+00	0		
RF		2.04E+09	1.70E+09	20	ND	0.00E+00	1.70E+09	NA
Chloroethane	3:37	3121528			0.00E+00	0		
RF		6.24E+08	8.47E+08	-26	ND	0.00E+00	8.47E+08	NA
Trichlorofluoromethane	3:56	9698003			0.00E+00	0		
RF		1.94E+09	1.59E+09	22	ND	0.00E+00	1.59E+09	NA
1,1,2-Trichloro-trifluoroethane	4:17	14517888			0.00E+00	0		
RF		2.90E+09	3.69E+09	-21	ND	0.00E+00	3.69E+09	NA
1,1-Dichloroethene (PID)	4:15	307677			0.00E+00	0		
RF		6.15E+07	6.53E+07	-6	ND	0.00E+00	6.53E+07	NA
Methylene chloride	4:71	11195496			0.00E+00	0		
RF		2.24E+09	2.61E+09	-14	ND	0.00E+00	2.61E+09	NA
trans-1,2-Dichloroethene	5:01	12682616			0.00E+00	0		
RF		2.54E+09	2.90E+09	-13	ND	0.00E+00	2.90E+09	NA
1,1-Dichloroethane	5:46	13277976			0.00E+00	0		
RF		2.66E+09	2.85E+09	-7	ND	0.00E+00	2.85E+09	NA
Cis-1,2-Dichloroethene	6:08	13209800			0.00E+00	0		
RF		2.64E+09	2.76E+09	-4	ND	0.00E+00	2.76E+09	NA
Bromochloromethane (Surrogate)	6:23	7750611			0.00E+00	0		
RF		1.55E+09	1.49E+09	4	ND	0.00E+00	1.49E+09	NA
Chloroform	6:41	28327392			0.00E+00	0		
RF		5.67E+09	5.39E+09	5	ND	0.00E+00	5.39E+09	NA
1,1,1-Trichloroethane	6:68	22563184			0.00E+00	0		
RF		4.51E+09	4.97E+09	-9	ND	0.00E+00	4.97E+09	NA
Carbon tetrachloride	6:88	34828768			0.00E+00	0		
RF		6.97E+09	6.45E+09	8	ND	0.00E+00	6.45E+09	NA
Benzene (PID)	7:09	1345364			0.00E+00	0		
RF		2.69E+08	2.59E+08	4	ND	0.00E+00	2.59E+08	NA
1,2-Dichloroethane	7:10	26342864			0.00E+00	0		
RF		5.27E+09	4.72E+09	12	ND	0.00E+00	4.72E+09	NA
Trichloroethene	7:87	21447728			0.00E+00	0		
RF		4.29E+09	3.88E+09	11	ND	0.00E+00	3.88E+09	NA
Toluene (PID)	9:57	1298746			0.00E+00	0		
RF		2.60E+08	2.74E+08	-5	ND	0.00E+00	2.74E+08	NA
1,1,2-Trichloroethane	10:14	16744632			0.00E+00	0		
RF		3.35E+09	3.50E+09	-4	ND	0.00E+00	3.50E+09	NA
Tetrachloroethene	10:41	24037072			0.00E+00	0		
RF		4.81E+09	4.64E+09	4	ND	0.00E+00	4.64E+09	NA
Chlorobenzene (Surrogate-PID)	11:69	1329675			0.00E+00	0		
RF		2.66E+08	2.77E+08	-4	ND	0.00E+00	2.77E+08	NA
1,1,1,2-Tetrachloroethane	11:84	25040256			0.00E+00	0		
RF		5.01E+09	4.59E+09	9	ND	0.00E+00	4.59E+09	NA
Ethylbenzene (PID)	11:86	1160790			0.00E+00	0		
RF		2.32E+08	2.39E+08	-3	ND	0.00E+00	2.39E+08	NA
m,p-Xylene (PID)	12:05	2786085			0.00E+00	0		
RF		5.57E+08	5.57E+08	0	ND	0.00E+00	5.57E+08	NA
o-Xylene (PID)	12:71	1105797			0.00E+00			
RF		2.21E+08	2.27E+08	-3	ND	0.00E+00	2.27E+08	NA
1,1,2,2-Tetrachloroethane	13:79	19632640			0.00E+00			
RF		3.93E+09	3.73E+09	5	ND	0.00E+00	3.73E+09	NA

RT = Retention Time
RF = Response Factor
NA = Not Applicable

ug/L = microgram per Liter
uL = microliter
ug = microgram

6/17/96

ANALYST: Ragi Abraham

REVIEWED BY: David M. Pride

TABLE B-4
QUALITY ASSURANCE/QUALITY CONTROL REPORT
LAB CONTROL SAMPLE, BLANK ANALYSIS, AND LAST GC TEST RUN
MAY 29, 1996

PID/ELCD #1

FILE: 0529QCLC.WK

		LAB CONTROL SAMPLE			BLANK	LAST GC TEST RUN		
STANDARD CONC. (ug/L)		5000	AVERAGE		AMBIENT AIR	5000	AVERAGE	
INJECTION VOLUME(uL)		1.00	RESPONSE	PERCENT	500	1.00	RESPONSE	PERCENT
COMPOUND/WEIGHT(ug)	RT	0.00500	FACTOR	DIFFERENCE		0.00500	FACTOR	DIFFERENCE
Dichlorodifluoromethane	2:98	1337477			0.00E+00	0		
RF		2.67E+08	2.87E+08	-7	ND	0.00E+00	1.29E+09	NA
Vinyl chloride	3:34	3196283			0.00E+00	0		
RF		6.39E+08	6.34E+08	1	ND	0.00E+00	6.34E+08	NA
Chloroethane	3:63	2556506			0.00E+00	0		
RF		5.11E+08	5.62E+08	-9	ND	0.00E+00	5.62E+08	NA
Trichlorofluoromethane	3:83	3742058			0.00E+00	0		
RF		7.48E+08	6.67E+08	12	ND	0.00E+00	6.67E+08	NA
1,1,2-Trichloro-trifluoroethane	4:49	8014866			0.00E+00	0		
RF		1.60E+09	1.49E+09	8	ND	0.00E+00	1.49E+09	NA
1,1-Dichloroethene (PID)	4:46	160728			0.00E+00	0		
RF		3.21E+07	3.76E+07	-15	ND	0.00E+00	3.76E+07	NA
Methylene chloride	5:03	5663166			0.00E+00	0		
RF		1.13E+09	1.19E+09	-5	ND	0.00E+00	1.19E+09	NA
trans-1,2-Dichloroethene	5:32	4607110			0.00E+00	0		
RF		9.21E+08	1.03E+09	-11	ND	0.00E+00	1.03E+09	NA
1,1-Dichloroethane	5:78	5076599			0.00E+00	0		
RF		1.02E+09	1.08E+09	-6	ND	0.00E+00	1.08E+09	NA
Cis-1,2-Dichloroethene	6:43	4802583			0.00E+00	0		
RF		9.61E+08	1.03E+09	-7	ND	0.00E+00	1.03E+09	NA
Chloroform	6:77	6404579			0.00E+00	0		
RF		1.28E+09	1.34E+09	-4	ND	0.00E+00	1.34E+09	NA
1,1,1-Trichloroethane	7:02	5738509			0.00E+00	0		
RF		1.15E+09	1.02E+09	13	ND	0.00E+00	1.02E+09	NA
Carbon tetrachloride	7:22	7478899			0.00E+00	0		
RF		1.50E+09	1.57E+09	-5	ND	0.00E+00	1.57E+09	NA
Benzene (PID)	7:43	617773			0.00E+00	0		
RF		1.24E+08	1.37E+08	-10	ND	0.00E+00	1.37E+08	NA
1,2-Dichloroethane	7:49	5233482			0.00E+00	0		
RF		1.05E+09	1.10E+09	-5	ND	0.00E+00	1.10E+09	NA
Trichloroethene	8:24	5499932			0.00E+00	0		
RF		1.10E+09	1.21E+09	-9	ND	0.00E+00	1.21E+09	NA
Toluene (PID)	9:92	738645			0.00E+00	0		
RF		1.48E+08	1.52E+08	-3	ND	0.00E+00	1.52E+08	NA
1,1,2-Trichloroethane	10:52	5673295			0.00E+00	0		
RF		1.13E+09	1.19E+09	-5	ND	0.00E+00	1.19E+09	NA
Tetrachloroethene	10:74	5992031			0.00E+00	0		
RF		1.20E+09	1.32E+09	-9	ND	0.00E+00	1.32E+09	NA
1,1,1,2-Tetrachloroethane	12:10	5793442			0.00E+00	0		
RF		1.16E+09	1.24E+09	-7	ND	0.00E+00	1.24E+09	NA
Ethylbenzene (PID)	12:07	539405			0.00E+00	0		
RF		1.08E+08	1.15E+08	-6	ND	0.00E+00	1.15E+08	NA
m,p-Xylene (PID)	12:23	1484520			0.00E+00	0		
RF		2.97E+08	3.28E+08	-9	ND	0.00E+00	3.28E+08	NA
o-Xylene (PID)	12:85	573616			0.00E+00	0		
RF		1.15E+08	1.18E+08	-3	ND	0.00E+00	1.18E+08	NA
1,1,2,2-Tetrachloroethane	13:88	5871901			0.00E+00	0		
RF		1.17E+09	1.23E+09	-5	ND	0.00E+00	1.23E+09	NA

RT = Retention Time
RF = Response Factor
NA = Not Applicable

ug/L = microgram per Liter
uL = microliter
ug = microgram

5/29/96

ANALYST: David M. Pride

REVIEWED BY: Ragi Abraham

TABLE B-4
QUALITY ASSURANCE/QUALITY CONTROL REPORT
LAB CONTROL SAMPLE, BLANK ANALYSIS, AND LAST GC TEST RUN
MAY 22, 1996

PID/ELCD #1

FILE: 0522QCLC.WK

		LAB CONTROL SAMPLE			BLANK	LAST GC TEST RUN		
STANDARD CONC. (ug/L)		5000	AVERAGE		AMBIENT AIR	5000	AVERAGE	
INJECTION VOLUME(uL)		1.00	RESPONSE	PERCENT	500	1.00	RESPONSE	PERCENT
COMPOUND/WEIGHT(ug)	RT	0.00500	FACTOR	DIFFERENCE		0.00500	FACTOR	DIFFERENCE
Dichlorodifluoromethane	2:95	671995			0.00E+00	0		
RF		1.34E+08	1.25E+08	7	ND	0.00E+00	1.25E+08	NA
Vinyl chloride	3:31	2421791			0.00E+00	0		
RF		4.84E+08	4.24E+08	14	ND	0.00E+00	4.24E+08	NA
Chloroethane	3:60	1504223			0.00E+00	0		
RF		3.01E+08	3.04E+08	-1	ND	0.00E+00	3.04E+08	NA
Trichlorofluoromethane	3:79	3022467			0.00E+00	0		
RF		6.04E+08	5.43E+08	11	ND	0.00E+00	5.43E+08	NA
1,1,2-Trichloro-trifluoroethane	4:44	6689007			0.00E+00	0		
RF		1.34E+09	1.16E+09	15	ND	0.00E+00	1.16E+09	NA
1,1-Dichloroethene (PID)	4:40	144637			0.00E+00	0		
RF		2.89E+07	3.05E+07	-5	ND	0.00E+00	3.05E+07	NA
Methylene chloride	5:00	4984400			0.00E+00	0		
RF		9.97E+08	9.25E+08	8	ND	0.00E+00	9.25E+08	NA
trans-1,2-Dichloroethene	5:28	4356119			0.00E+00	0		
RF		8.71E+08	9.18E+08	-5	ND	0.00E+00	9.18E+08	NA
1,1-Dichloroethane	5:76	4371174			0.00E+00	0		
RF		8.74E+08	8.84E+08	-1	ND	0.00E+00	8.84E+08	NA
Cis-1,2-Dichloroethene	6:41	5175442			0.00E+00	0		
RF		1.04E+09	1.04E+09	-1	ND	0.00E+00	1.04E+09	NA
Chloroform	6:75	5862219			0.00E+00	0		
RF		1.17E+09	1.18E+09	-0	ND	0.00E+00	1.18E+09	NA
1,1,1-Trichloroethane	7:00	5088617			0.00E+00	0		
RF		1.02E+09	1.03E+09	-1	ND	0.00E+00	1.03E+09	NA
Carbon tetrachloride	7:20	6394429			0.00E+00	0		
RF		1.28E+09	1.27E+09	0	ND	0.00E+00	1.27E+09	NA
Benzene (PID)	7:40	503591			0.00E+00	0		
RF		1.01E+08	9.96E+07	1	ND	0.00E+00	9.96E+07	NA
1,2-Dichloroethane	7:47	5040526			0.00E+00	0		
RF		1.01E+09	1.03E+09	-2	ND	0.00E+00	1.03E+09	NA
Trichloroethene	8:21	5358464			0.00E+00	0		
RF		1.07E+09	1.09E+09	-1	ND	0.00E+00	1.09E+09	NA
Toluene (PID)	9:91	499446			0.00E+00	0		
RF		9.99E+07	9.76E+07	2	ND	0.00E+00	9.76E+07	NA
1,1,2-Trichloroethane	10:51	4764205			0.00E+00	0		
RF		9.53E+08	9.77E+08	-3	ND	0.00E+00	9.77E+08	NA
Tetrachloroethene	10:72	5937888			0.00E+00	0		
RF		1.19E+09	1.22E+09	-2	ND	0.00E+00	1.22E+09	NA
1,1,1,2-Tetrachloroethane	12:10	5265245			0.00E+00	0		
RF		1.05E+09	1.06E+09	-1	ND	0.00E+00	1.06E+09	NA
Ethylbenzene (PID)	12:08	434428			0.00E+00	0		
RF		8.69E+07	8.77E+07	-1	ND	0.00E+00	8.77E+07	NA
m,p-Xylene (PID)	12:24	1074317			0.00E+00	0		
RF		2.15E+08	2.20E+08	-2	ND	0.00E+00	2.20E+08	NA
o-Xylene (PID)	12:85	415953			0.00E+00	0		
RF		8.32E+07	8.56E+07	-3	ND	0.00E+00	8.56E+07	NA
1,1,2,2-Tetrachloroethane	13:88	4880341			0.00E+00	0		
RF		9.76E+08	9.48E+08	3	ND	0.00E+00	9.48E+08	NA

RT = Retention Time
RF = Response Factor
NA = Not Applicable

ug/L = microgram per Liter
uL = microliter
ug = microgram

5/22/96

ANALYST: Ragi Abraham

REVIEWED BY: David M. Pride

Appendix C

CHAIN-OF-CUSTODY FORMS

BECHTEL CLEAN II

CHAIN-OF-CUSTODY RECORD

1821

Site Name: Site 24 VOC Source Area
CTO Number: 073

Sampler's Name(s): Dan Eldredge
Sampler's Signature(s): [signature]

Site Contact/Supervisor: Carl Lind.

Analytical Laboratory Name: EST
Analytical Laboratory Address: 23011 Moulton Parkway Suite E6 Laguna Hills, CA
Field QC Package Number:
Field Logbook/Page Number: AT-73W001 Page 34
Date: 5-23-96

Pay Items/Analyses Required: 8021 VOC

QC Level: C | (D) | E

TAT (in days): (2) | 7 | 14 | 30

Preservation: None

Sample ID Number (7 digit)	Date/Time Collected	Station Description	Sample Matrix	Archive	Type of Container	Container Nos. (2 digit)	Remarks (e.g., MS, MSD)
73W2350	5-23-96 1900	DATE 5-22-96 DGDBMW 45	Soil Gas		Tedlar 1 liter	01	

Relinquished By	Received By	Date	Time	Reason for Transfer	Comments/Instructions:
[signature]	Marcia A. Francis	5-23-96	1:25	Transport to Lab	Pat Brooks Project Mgr. 619-687-8851

Method of Shipment: Hand Carry

Airbill No.:

Total No. of Coolers Shipped: 1

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EAI

CHAIN-OF-CUSTODY RECORD

12069

Site Name: Site 24 VOC Source Area
CTO Number: 073

Sampler's Name(s): Don Eldredge
Sampler's Signature(s): Don Eldredge

Site Contact/Supervisor: Carl Lind.

Analytical Laboratory Name: EST
Analytical Laboratory Address: 23011 Moulton Pky. Suite E6 Laguna Hills CA
Field QC Package Number:
Field Logbook/Page Number: AT-73W001
Date: 5-28-96

Pay Items/Analyses Required: 700.5 Total VOC, 700.6 O2, 700.6 CO2

QC Level: C | (D) | E

TAT (in days): (2) | 7 | 14 | 30

Preservation: None | None | None

Sample ID Number (7 digit)	Date/Time Collected	Station Description	Sample Matrix	Archive	Type of Container	Container Nos. (2 digit)										Remarks (e.g., MS, MSD)
73W2351	5-28-96 1400	VES System	Soil GAS		Tedlar 1 liter	01										
73W2352	5-28-96 1400	24AS 1	Soil GAS		Tedlar 1 liter	01	02	03								

Relinquished By	Received By	Date	Time	Reason for Transfer
Don Eldredge	Marcia A. Fernandez	5/28/96	3:15	Transport to Lab.
Marcia A. Fernandez	R. Forsyth	5/28/96	5:30	

Comments/Instructions: Pat Brooks Project Mgr. 619 687-8851

Method of Shipment: Hand Carry

Airbill No.: ——

Total No. of Coolers Shipped: 1

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CLEAN II

CHAIN-OF-CUSTODY RECORD

9605-235

12070

Site Name: Site 24 VOC Source Area
CTO Number: 073

Sampler's Name(s): Dan Eldridge
Sampler's Signature(s): Dan Eldridge

Site Contact/Supervisor: Carl Lind

Analytical Laboratory Name: EST
Analytical Laboratory Address: 23011 Moulton Pkwy Suite E6 Laguna Hills CA
Field QC Package Number: OPE 5-30-96
Field Logbook/Page Number: ~~AF~~ VT-73W-002
Date: 5-30-96

Pay Items/Analyses Required: 8260 VOC's; 8021 VOC's; 8260 VOC's

QC Level: C | (D) | E

TAT (in days): 2 | (7) | 14 | 30

Preservation: NONE | NONE | NONE

Sample ID Number (7 digit)	Date/Time Collected	Station Description	Sample Matrix	Archive	Type of Container	Container Nos. (2 digit)			Remarks (e.g., MS, MSD)
73W2353	1035 5-30-96	24SVE 1	Soil GAS		1 liter Tedlar	01	02	03	9124
73W2354	1026 5-30-96	VES Sys. Exhaust	Soil GAS		1 liter Tedlar	01			9125
1015 5-30-96									

Relinquished By	Received By	Date	Time	Reason for Transfer
Dan Eldridge	Marcia A. Estancio	5/30/96	4:20	Transport to lab.
Marcia A. Estancio	Rick Forsyth	5/30/96	5:30	"

Comments/Instructions: Pat Brooks (619) 687-8851

Method of Shipment: Hand Carry

Airbill No.: NA

Total No. of Coolers Shipped: 1

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BECHTEL CLEAN II

CHAIN-OF-CUSTODY RECORD

13728

Site Name: MCAS El Toro CTO Number: 073	Sampler's Name(s): Carl J. Lind Sampler's Signature(s): [signature]	Site Contact/Supervisor: Carl J. Lind

Analytical Laboratory Name: EST
Analytical Laboratory Address: 23011 Moulton Parkway, Suite E6 Laguna Hills CA 92653
Field QC Package Number: NA
Field Logbook/Page Number: VT-73W-002 / 0027
Date: 06/10/96

Pay Items/Analyses Required: 700.5 / 8010/8020

QC Level: C | (D) | E

TAT (in days): (2) | 7 | 14 | 30

Sample ID Number (7 digit)	Date/Time Collected	Station Description	Sample Matrix	Archive	Type of Container	Preservation: NA	Container Nos. (2 digit)									Remarks (e.g., MS, MSD)
~~73W2348~~	6-10/1740	24 SVE1	SG	NO	TEDLAR		01									REG
unused 73W2355																

Relinquished By	Received By	Date	Time	Reason for Transfer	Comments/Instructions:
[signature]	Marcia LeFrancois	6/11/96	12:40		Soil Gas

Method of Shipment: HAND CARRY
Airbill No.: NA
Total No. of Coolers Shipped:

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CLEAN II

CHAIN-OF-CUSTODY RECORD

13727

Site Name: MCAS EL TORO
CTO Number: 073

Sampler's Name(s): Carl J. Lind
Sampler's Signature(s): Carl J. Lind

Site Contact/Supervisor: Carl J. Lind

Analytical Laboratory Name: EST
Analytical Laboratory Address: 23011 Moulton Parkway, Suite E6, Laguna Niguel, CA 92653
Field QC Package Number: NA
Field Logbook/Page Number: VT-73W-002 / 0028
Date: 06/11/96

Pay Items/Analyses Required: 8010/8020, 7040.5

QC Level: C | (D) | E

TAT (in days): (2) | 7 | 14 | 30

Preservation: NA

Sample ID Number (7 digit)	Date/Time Collected	Station Description	Sample Matrix	Archive	Type of Container	Container Nos. (2 digit)	Remarks (e.g., MS, MSD)
~~73W2349~~ 73W2356	6-11/1623 ML	245VE1	SG	NO	TEDLAR	01	REG

Relinquished By	Received By	Date	Time	Reason for Transfer
Carl J. Lind	Maria J. Darmi	6/11/96	5:25	Analysis

Comments/Instructions: Soil GAS

Method of Shipment: HAND CARRY

Airbill No.: NA

Total No. of Coolers Shipped: 1

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CLEAN II

CHAIN-OF-CUSTODY RECORD

13729

Site Name: MCAS El Toro	Sampler's Name(s): Carl J. Lind	Site Contact/Supervisor: Carl J. Lind
CTO Number: 073	Sampler's Signature(s): Carl J. Lind	

Analytical Laboratory Name: EST
Analytical Laboratory Address: 23011 Moulton Parkway, Suite E6, Laguna Hills, CA 92653
Field QC Package Number: NA
Field Logbook/Page Number: VT-73W-002/009
Date:

Pay Items/Analyses Required: 700.5 / 8010/8020

QC Level: C | (D) | E

TAT (in days): (2) | 7 | 14 | 30

Sample ID Number (7 digit)	Date/Time Collected	Station Description	Sample Matrix	Archive	Type of Container	Preservation: NA	Container Nos. (2 digit)									Remarks (e.g., MS, MSD)
73W23500 (unused)	6-12/1740	24SVE1	SG	NO	TEDLAR		01									REG
73W23537 MC	6-12															

06-12-96

Relinquished By	Received By	Date	Time	Reason for Transfer	Comments/Instructions:
Carl J. Lind	Marcia A. LeDuncker	6/13/96	8:03	ANALYSES	Soil Gas

Method of Shipment: HAND CARRY

Airbill No.: NA

Total No. of Coolers Shipped: 1

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CLEAN II

CHAIN-OF-CUSTODY RECORD

13726

Site Name: MCAS El Toro
CTO Number: 073

Sampler's Name(s): Carl J. Lind
Sampler's Signature(s): Carl J. Lind

Site Contact/Supervisor: Carl J Lind

Analytical Laboratory Name: EST
Analytical Laboratory Address: 23011 Moulton Parkway, Suite E-6, Laguna Hills, CA 92653
Field QC Package Number: NA
Field Logbook/Page Number: VT-73W-002 / 0030
Date: 6-13-96

Pay Items/Analyses Required: 700.5, 8010/8020

QC Level: C | (D) | E

TAT (in days): (2) | 7 | 14 | 30

Sample ID Number (7 digit)	Date/Time Collected	Station Description	Sample Matrix	Archive	Type of Container	Preservation	Container Nos. (2 digit)	Remarks (e.g., MS, MSD)
73W2351	6-13/1	245VE1	SG	NO	TEDLAR		01	REG
73W2358 MK								

Relinquished By	Received By	Date	Time	Reason for Transfer
Carl J. Lind	Maria Mezzancello	6/14/96	8:25	ANALYSIS

Comments/Instructions: Soil Gas

Method of Shipment: HAND CARRY

Airbill No.: NA

Total No. of Coolers Shipped: 1

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BECHTEL CLEAN II

CHAIN-OF-CUSTODY RECORD

13725

Site Name: MCAS El Toro
CTO Number: 073

Sampler's Name(s): CARL J. LIND
Sampler's Signature(s): Carl J. Lind

Site Contact/Supervisor: CARL J. LIND

Analytical Laboratory Name: EST
Analytical Laboratory Address: 23011 Moulton Parkway, Ste E-6 Laguna Hills, CA 92653
Field QC Package Number: NA
Field Logbook/Page Number: VT-73W-002/N0031
Date: 06-14-96

Pay Items/Analyses Required: 700.5 / 8010/8020

QC Level: C | (D) | E

TAT (in days): (2) | 7 | 14 | 30

Preservation: NA

Sample ID Number (7 digit)	Date/Time Collected	Station Description	Sample Matrix	Archive	Type of Container	Container Nos. (2 digit)	Remarks (e.g., MS, MSD)
73W2352 (SW2359)	6-14/1023	245VE1	SOG	NO	TEDLAR	01	REG/ EFFLUENT
73W2353 (SW2360)	6-14/1210	245VE1	SOG	NO	TEDLAR	01	REG/ INFLUENT

(no) revised

Carl J. Lind 6-14-96

Relinquished By	Received By	Date	Time	Reason for Transfer
Carl J. Lind	Michael McCullough	6/14/96	4:10pm	Analysis

Comments/Instructions: Soil Gas

Method of Shipment: HAND CARRY

Airbill No.: NA

Total No. of Coolers Shipped: 1

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CLEAN II

CHAIN-OF-CUSTODY RECORD

13724

Site Name: MCAS El Toro
CTO Number: 073

Sampler's Name(s): Dan Eldridge
Sampler's Signature(s): Dan Eldridge

Site Contact/Supervisor: Carl Lind

Analytical Laboratory Name: EST
Analytical Laboratory Address: 23011 Moulton Parkway Ste K-6 Laguna Hills CA
Field QC Package Number: NA
Field Logbook/Page Number: VT-73W-001/0023
Date: 6-18-96

Pay Items/Analyses Required: 8010/8020/8015

QC Level: C D E

TAT (in days): 2 7 14 30

Preservation: NA

Sample ID Number (7 digit)	Date/Time Collected	Station Description	Sample Matrix	Archive	Type of Container	Container Nos. (2 digit)										Remarks (e.g., MS, MSD)
73W2361	6-18-96 0826	24SVE 1	SOG	NO	Tedlar Bag	01										Reg. ~~IN~~/Effluent appr 6-18-96

Relinquished By	Received By	Date	Time	Reason for Transfer
Dan Eldridge	Marcia DeFrancesco	6/18/96	2:45pm	Transport to lab.

Comments/Instructions:
Soil Gas
Patric Brooks (619) 687-8851

Method of Shipment: Hand carry

Airbill No.: — NA —

Total No. of Coolers Shipped: 1

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EAI

CHAIN-OF-CUSTODY RECORD

12076

Site Name: MCAS EL TORO
CTO Number: 073

Sampler's Name(s): Dan Eldridge
Sampler's Signature(s): Dan Eldridge

Site Contact/Supervisor: Carl Lind

Analytical Laboratory Name: EST
Analytical Laboratory Address: 23011 Moulton Pkwy — Suite 6 Laguna Hills CA
Field QC Package Number: NA
Field Logbook/Page Number: SG-73W-010/38
Date: 6-19-96

Pay Items/Analyses Required: 8021 VOC 7000.5

QC Level: C | D | E

TAT (in days): 2 | 7 | 14 | 30

Sample ID Number (7 digit)	Date/Time Collected	Station Description	Sample Matrix	Archive	Type of Container	Preservation: 1 A 2 1	Container Nos. (2 digit)	Remarks (e.g., MS, MSD)
73W2362 01	1545 6-19-95	24SVE 1	SOG	NO	1 Liter Tedlar		01	Influent

Relinquished By	Received By	Date	Time	Reason for Transfer	Comments/Instructions:
Dan Eldridge	Maria A Estrancolo	6-20-96	12:25	Analyses	Pat Brooks (619) 687-8851

Method of Shipment: Hand Carry
Airbill No.: — NA —
Total No. of Coolers Shipped: 1

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CLEAN II

CHAIN-OF-CUSTODY RECORD

13723

Site Name: MCAS EL TORO
CTO Number: 073

Sampler's Name(s): Dan Eldridge
Sampler's Signature(s): Dan Eldridge

Site Contact/Supervisor: Carl Lind

Analytical Laboratory Name: EST
Analytical Laboratory Address: 23011 Moulton Pkwy Suite 6 Laguna Hills CA
Field QC Package Number: -NA-
Field Logbook/Page Number: VT 73 - 001/24
Date: 6-20-96

Pay Items/Analyses Required: VOC 8021, 700.5

QC Level: C | (D) | E

TAT (in days): (2) | 7 | 14 | 30

Sample ID Number (7 digit)	Date/Time Collected	Station Description	Sample Matrix	Archive	Type of Container	Preservation: None	Container Nos. (2 digit)	Remarks (e.g., MS, MSD)
73W2364	1400 6-20-96	24 VES 1	SOG	NO	1 liter Tedlar		01	Influent

Relinquished By	Received By	Date	Time	Reason for Transfer
Dan Eldridge	M. Lefrancois	6/20/96	4:00	Transport to Lab

Comments/Instructions: Pat Brooks (619) 687-8851

Method of Shipment: Hand Carry

Airbill No.: -NA-

Total No. of Coolers Shipped: 1

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BECHTEL CLEAN II

CHAIN-OF-CUSTODY RECORD

13715

Site Name: MCAS EL TORO	Sampler's Name(s): Dan Eldridge	Site Contact/Supervisor: Carl Lind.
CTO Number: 073	Sampler's Signature(s): [signature]	

Analytical Laboratory Name: EST
Analytical Laboratory Address: 23011 Moulton Pkwy Laguna Hills CA #6
Field QC Package Number: -NA-
Field Logbook/Page Number: VT-73W001/26
Date: 6-20-96

Pay Items/Analyses Required: 8021 VOCs 2000.5

Preservation: None

QC Level: C D E

TAT (in days): 2 7 14 30

Sample ID Number (7 digit)	Date/Time Collected	Station Description	Sample Matrix	Archive	Type of Container	Container Nos. (2 digit)	Remarks (e.g., MS, MSD)
73W2365	1100 6-20-96	24SVE 1	SOG	NO	1 liter Tedlar	01	Influent

Relinquished By	Received By	Date	Time	Reason for Transfer
[signature]	Maria [signature]	6/21/96	1300	Transport to lab

Comments/Instructions: Pat Brooks 619 687-8851

Method of Shipment: Hand Carry

Airbill No.: -NA-

Total No. of Coolers Shipped: 1

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CLEAN II

CHAIN-OF-CUSTODY RECORD

13716

Site Name: MCAS EL TORO
CTO Number: 073

Sampler's Name(s): Dan Eldredge
Sampler's Signature(s): Dan Eldredge

Site Contact/Supervisor: Carl Lind

Analytical Laboratory Name: EST
Analytical Laboratory Address: 23011 Moulton Pkwy, Laguna Hills CA
Field QC Package Number: -NA-
Field Logbook/Page Number: VT-73W-001/6 SG-73W-011/29
Date: 6-25-96

Pay Items/Analyses Required: 8021 VOC's 8021 VOC's

QC Level: C D E

TAT (in days): 2 7 14 30

Sample ID Number (7 digit)	Date/Time Collected	Station Description	Sample Matrix	Archive	Type of Container	None	None									Remarks (e.g., MS, MSD)
						Preservation										
						Container Nos. (2 digit)										
73W2366	6-25-96 1455	24SVE 1	SOG	NO	1 liter Tedlar	01										Influent
73W2367	6-25-96 1450	24SVE 1	SOG	NO	1 liter Tedlar	01										Effluent (Stack)

Relinquished By	Received By	Date	Time	Reason for Transfer
Dan Eldredge	Marcia A. Edmunds	6/25/96	15:30	Transport to lab

Comments/Instructions: Pat Brooks (619) 687-8851

Method of Shipment: Hand carry

Airbill No.: -NA-

~~Total~~ No. of Coolers Shipped: 1

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BECHTEL CLEAN II

CHAIN-OF-CUSTODY RECORD

13722

Site Name: MCAS EL TORO
CTO Number: 073

Sampler's Name(s): Don Eldridge
Sampler's Signature(s): Don Eldridge

Site Contact/Supervisor: Carol Lind

Analytical Laboratory Name: EST
Analytical Laboratory Address: 23011 Moulton Pkwy Laguna Hills CA
Field QC Package Number: -NA-
Field Logbook/Page Number: VT 73W-001
Date: 6-28-96

Pay Items/Analyses Required: 8021 VOC's 7000's

QC Level: C (D) E

TAT (in days): (2) 7 14 30

Preservation: None

Sample ID Number (7 digit)	Date/Time Collected	Station Description	Sample Matrix	Archive	Type of Container	Container Nos. (2 digit)	Remarks (e.g., MS, MSD)
73W2368	1345 6-28-96	24SVE 1	SOG	NO	1 liter Tedlar	01	Influent
73W2369	1350 6-28-96	24SVE 1	SOG	NO	1 liter Tedlar	01	Effluent

Relinquished By	Received By	Date	Time	Reason for Transfer
Don Eldridge	Marshall M Calloway	6/28/96	3:55pm	Transport to lab

Comments/Instructions: Pat Brooks 619 687 8851

Method of Shipment: Hand Carry

Airbill No.: -NA-

Total No. of Coolers Shipped: 1

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CLEAN II

CHAIN-OF-CUSTODY RECORD

13721

Site Name: MCAS EL TORO
CTO Number: 073

Sampler's Name(s): Don Eldridge
Sampler's Signature(s): Don Eldridge

Site Contact/Supervisor: Jaque Lord

Analytical Laboratory Name: EST
Analytical Laboratory Address: 23011 Moulton Pkwy. Laguna Hills CA 92653
Field QC Package Number: -NA-
Field Logbook/Page Number: SG-73W-011 / Pg 31
Date: 7-1-96

Pay Items/Analyses Required: SO21 VOC TO015

QC Level: C D E

TAT (in days): 2 7 14 30

Preservation: None

Sample ID Number (7 digit)	Date/Time Collected	Station Description	Sample Matrix	Archive	Type of Container	Container Nos. (2 digit)	Remarks (e.g., MS, MSD)
73W2370	7-1-96 1315	24SVE 1	SOG	NO	1 liter Tedlar	01	Instant

Relinquished By	Received By	Date	Time	Reason for Transfer
Don Eldridge	Michael McCullough	7/1/96	1:58	Transport to lab

Comments/Instructions: Pat Brooks (619) 687-8851

Method of Shipment: Hand carry

Airbill No.: -NA-

Total No. of Coolers Shipped: 1

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BECHTEL CLEAN II

CHAIN-OF-CUSTODY RECORD

13717

Site Name: MCAS EL TORO
CTO Number: 073

Sampler's Name(s): Dan Eldridge
Sampler's Signature(s): [signature]

Site Contact/Supervisor: Jacques Lord

Analytical Laboratory Name: EST
Analytical Laboratory Address: 23011 Moulton Pky Laguna Hills CA
Field QC Package Number: -NA-
Field Logbook/Page Number: SG-73W-011
Date:

Pay Items/Analyses Required: 8021 7010/5

QC Level: C D E

TAT (in days): 2 7 14 30

Preservation: None

Sample ID Number (7 digit)	Date/Time Collected	Station Description	Sample Matrix	Archive	Type of Container	Container Nos. (2 digit)	Remarks (e.g., MS, MSD)
73W2321	7-3-96 1500	24SVG 1	SOG	NO	1 Liter Tedlar	01	Influent

Relinquished By	Received By	Date	Time	Reason for Transfer	Comments/Instructions:
[signature]	[signature]	7/3/96	4:01pm	Transport to lab	Pat Brooks 619 687 8851

Method of Shipment: Hand Carry
Airbill No.: -NA-
Total No. of Coolers Shipped: 1

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1829

CLEAN II

CHAIN-OF-CUSTODY RECORD

Site Name: MCAS EL TORO CA.	Sampler's Name(s): Don Eldredge	Site Contact/Supervisor: Pat Castle
CTO Number: 073	Sampler's Signature(s): Don Eldredge	

Analytical Laboratory Name: EST

Analytical Laboratory Address: 23011 Moulton Pkwy. Laguna Hills CA #6

Field QC Package Number: -NA-

Field Logbook/Page Number: SG73W-011/4

Date: 7-8-96

Pay Items/Analyses Required: 8021 VOC 700.5; CO2 700.6; O2 700.6

QC Level: C | (D) | E

TAT (in days): (2) | 7 | 14 | 30

Sample ID Number (7 digit)	Date/Time Collected	Station Description	Sample Matrix	Archive	Type of Container	Preservation: NONE										Remarks (e.g., MS, MSD)
						Container Nos. (2 digit)										
73W2373	7-8-96 1406	24SVE 1	SOG	NO	1 liter Tedlar	01	02	03								Influent

Relinquished By	Received By	Date	Time	Reason for Transfer	Comments/Instructions:
Don Eldredge	Marcia A. LeFrancois	7/10/96	15:23	Transport to Lab	Pat Brooks (619) 687-8851

Method of Shipment: Hand Carry

Airbill No.: -NA-

Total No. of Coolers Shipped: 1

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