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Temporary Accumulation Area (TAA) 779
Marine Corps Air Station
El Toro, California

Contract No. N62474-98-D-2076 – Contract Task Order 0024
DCN 5436, Revision 0 - February 5, 2003

Addendum to Closure Report

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Appendix V Report

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File: etswtr7Feb2003TAA779.doc

Transmittal

Date: 7 February 2003

From: Lynn Marie Hornecker

To: **Triss Chesney**
State of California Environmental Protection Agency
Department of Toxic Substances Control (DTSC), Region 4
Site Mitigation Branch, Base Closure Unit
5796 Corporate Avenue
Cypress, CA 90630

Subj: Temporary Accumulation Area (TAA) 779
Solid Waste Management Unit (SWMU) 227
Former Marine Corps Air Station, El Toro

Provided for your review as the attachment is the Addendum for the Summary Report for Former TAA 779 that was submitted in March 2002. TAA 779 was designated as Solid Waste Management Unit (SWMU) 227 during the Resource Conservation and Recovery Act Facility Assessment (RFA). TAA 779 is located in the northeastern section of the Station within a parcel that has been tentatively designated for future use an open space/exposition center according to the Great Park Land Use Plan (City of Irvine June 2002). TAA 779 is approximately 17 feet long by 12 feet wide.

We observed site conditions and the previous RFA sample location, and discussed potential sampling locations at TAA 779 during your site visit of 10 December 2002. We collected additional information from soil borings at three locations adjacent to TAA 779 in mid-December 2002, and our evaluation of the recently collected data is presented in the attached Addendum.

The cancer risk calculations for both the residential and industrial land use scenarios were less than 1×10^{-6} when risks attributable to background levels were subtracted. The hazard index (HI) calculations for both the residential and industrial scenarios resulted in HI values that were significantly less than 1 when background risks were subtracted.

Based upon our evaluation of the recently collected field data and the screening risk calculations, we are recommending that no further action status be designated for TAA 779 (SWMU 227) in the next BRAC Business Plan update. Additionally, we are recommending that Environmental Condition of Property (ECP) category 3 be designated for TAA 779.

If we do not receive comments from your office within sixty (60) days of receipt of this transmittal, then we will assume that you concur with our recommendation to designate no further action status for TAA 779.

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Please do not hesitate to call me at (619) 532-0783 if you have questions on the attachment.
Thank you very much.

Attachment
Addendum (IT Group February 2003)

CF:
Andy Piszkin (MCAS El Toro BEC)
Project File (MCAS El Toro)

ADDENDUM TO CLOSURE REPORT
TEMPORARY ACCUMULATION AREA (TAA) 779
FORMER MARINE CORPS AIR STATION
EL TORO, CALIFORNIA

Environmental Remedial Action
Contract No. N62474-98-D-2076
Contract Task Order 0024

Document Control Number 5436
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February 5, 2003

Submitted to:

U.S. Department of the Navy
Southwest Division
Naval Facilities Engineering Command
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ADDENDUM TO CLOSURE REPORT
TEMPORARY ACCUMULATION AREA (TAA) 779
FORMER MARINE CORPS AIR STATION
EL TORO, CALIFORNIA

Environmental Remedial Action
Contract No. N62474-98-D-2076
Contract Task Order 0024

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Revision 0

February 5, 2003

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2/4/03

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Abbreviations and Acronyms

BNI	Bechtel National Inc.
BRAC	Base Realignment and Closure
CA LUFT	California Leaking Underground Fuel Tank
CCR	California Code of Regulations
CFR	Code of Federal Regulations
CRDL	contract required detection limit
DO	delivery order
DSA	drum storage area
DTSC	Department of Toxic Substances Control
DV	The DV Group, Inc.
EPA	United States Environmental Protection Agency
HI	hazard index
HSP	Health and Safety Plan
IRP	Installation Restoration Program
IT	IT Corporation
JEG	Jacobs Engineering Group Inc.
LCS	laboratory control sample
LCSD	laboratory control sample duplicate
m/z	mass-to-change
MCAS	Marine Corps Air Station
MDL	method detection limit
mg/kg	milligram per kilogram
MS	matrix spike
MSD	matrix spike duplicate
NFA	no further action
OHM	OHM Remediation Services Corp.
PR	preliminary review
PRG	Preliminary Remediation Goal
QA	quality assurance
QC	quality control
RCRA	Resource Conservation and Recovery Act
RDL	reporting detection limit
RFA	RCRA facility assessment
RPD	relative percent difference
RRF	relative response factor
SIM	selected ion monitoring
SVOC	semi-volatile organic compound
SWDIV	Southwest Division Naval Facilities Engineering Command
SWMU	Solid Waste Management Unit
TAA	temporary accumulation area
TCL	target analyte compound
TPH	total petroleum hydrocarbons
VOC	volatile organic compound

Abbreviations and Acronyms (Cont.)

VSI	Visual Site Inspection
%D	percent difference
%R	percent recovery
µg/kg	micrograms per kilogram

1.0 Introduction

This closure report summarizes the confirmation soil sampling activities performed at Temporary Accumulation Area (TAA) 779, at the former Marine Corps Air Station (MCAS) El Toro (hereinafter referred to as the "Station"), California. IT Corporation (IT) performed the work for Southwest Division, Naval Facilities Engineering Command (SWDIV) under EFA West Contract No. N62474-98-D-2076, Contract Task Order (CTO) 24.

Soil sampling activities were conducted in accordance with the Navy, Station, and California Department of Toxic Substances Control (DTSC)-approved *Final Supplemental Work Plan, Closure of Various Temporary Accumulation Areas and RCRA Facility Assessment Sites, Marine Corps Air Station El Toro, California* (OHM Remediation Services Corp. [OHM], 1997a) and approved *Revised Addendum to the Draft Supplemental Work Plan, Marine Corps Air Station El Toro, California* (IT, 2002).

1.1 Site Location and Background

The objective of this report is to address comments provided by the DTSC in their letter dated 29 October 2002 and to provide supplemental information for the Summary Report submitted by SWDIV in March 2002. The Station is located approximately 45 miles southeast of the City of Los Angeles in Orange County, California, 1 mile north of the intersection of the Interstate 5 (Santa Ana) and Interstate 405 (San Diego) freeways. The Station covers approximately 4,738 acres. Former TAA 779 location and surrounding areas are shown in Figure 1-1. Former TAA 779, located in the northeast quadrant of the Station and 250 feet northeast of Tank Farm 6, is a former Hazardous Waste Storage Area (HWSA).

The Station closed on 1 July 1999 in accordance with the Base Realignment and Closure Act of 1993 (BRAC III). Former TAA 779 was investigated as Solid Waste Management Unit (SWMU) 227 during the Resource Conservation and Recovery Act Facility Assessment (RFA). Former TAA 779 consists of an approximately 17-foot by 12-foot fenced in concrete-surface pad, 6-inch concrete berm, metal roof, ramp, and no sump. Based on historical records, former TAA 779 was used from approximately 1983 through 1999.

Former TAA 779 is located within a parcel designated for future use as Open Space, Exposition Center area according to the Great Park Land Use Plan that was issued by the City of Irvine in June 2002. The Great Park Land Use Plan is provided in Appendix A.

Former TAA 799 is located in close vicinity to Tank Farm 6. Tank Farm 6 includes former UST Sites 204, 205, 206, and 207. UST Sites 205 and 207 were closed by the Orange County Health Care Agency. Fieldwork is in progress at UST sites 204 and 206.

The depth to groundwater in the vicinity of the former TAA 779 site is based on available water level data collected from the nearest groundwater-monitoring well TF6MW-02, located approximately 270 feet southwest of former TAA 779. Based on this data, the depth to the groundwater at former TAA 779 is approximately 185 feet below ground surface (CDM, 2002).

1.2 Project Objectives

The objectives of this project were the following:

- Verify that all stored hazardous wastes, residues, and constituents that may pose a potential health risk have been removed from former TAA 779 in accordance with the MCAS El Toro Detailed Plan (IT, 2002).
- Perform verification soil sampling and analysis to obtain "closure status" of former TAA 779.

1.3 Regulatory Background and Cleanup Goals

The closure activities at TAAs 779 were completed in accordance with the appropriate Federal and state requirements. TAA 779 is characterized as a "*hazardous waste accumulation area*" according to the Code of Federal Regulations (CFR), Title 40, Part 262.34, and the California Code of Regulations (CCR), Title 22, Section 66262.34. Because hazardous wastes have been stored at the site, closure of TAA779 is also subject to Federal and state regulations for closure of less than 90 days hazardous waste management facilities (CFR 40, part 264, Subpart G; and CCR 22, Section 66264, Article 7, respectively).

The cleanup goals established for former TAA 779 are based on the following:

<u>Soil</u>

- United States Environmental Protection Agency (EPA), 2002, *Region IX Preliminary Remediation Goals (PRGs) for Residential Land Use for Organic Contaminants*, October 1
- *Background Concentrations for Metals Contaminants* (Bechtel National Inc. [BNI], 1996b)

- 5,000-milligrams per kilogram (mg/kg) concentration limit for total petroleum hydrocarbons (TPH)-purgeable
- 10,000-mg/kg concentration limit for TPH-extractable

2.0 Previous Inspections and Site Background

The following section summarizes results from previous investigations and background history at the former TAA 779 site. Background information regarding former TAA 779 was obtained from the following documents:

- SWDIV, *Summary Report, Former Temporary Accumulation Area (TAA) 779, Summary Report, Former Temporary Accumulation Area (TAA) 779, Solid Waste Management Unit (SWMU) 277, Former Marine Corps Air Station, El Toro, California*.
- Jacobs Engineering Group Inc., [JEG]), *Final RCRA Facility Assessment Report, Marine Corps Air Station El Toro, California*, 1993.
- BNI, *Final Addendum RCRA Facility Assessment Report, Marine Corps Air Station El Toro, California*, 1996a
- Integrated Environmental Management, Inc., *Storm Water Pollution Prevention Plan (SWPPP) for Marine Corps Air Station, El Toro, El Toro, California*, 1997.
- Science Applications International Corporation, *Final, Marine Corps Air Station, El Toro, Hazardous Material/Hazardous Waste Management Plan*, 1994.
- JEG, *Marine Corps Air Station El Toro, El Toro, California, Final Environmental Baseline Survey Report*, 1995.
- SWDIV, *Base Realignment and Closure Business Plan for Marine Corps Air Station, El Toro, California*, 2002.
- SWDIV, *MCAS El Toro Plant Account Records*, 1997.

2.1 Environmental Program Records

2002 Summary Report, Temporary Accumulation Area (TAA) 779

In 2002, SWDIV submitted a Summary Report for TAA 779. During a field visit to TAA 779 in March 2002, no stains were observed on the concrete surfaces of the floor or on the berm of the TAA. No significant cracks were observed in the concrete surfaces of the floor or on the berm. No stains were observed on the unpaved areas surrounding the TAA (SWDIV, 2002).

Resource Conservation and Recovery Act (RCRA) Facility Assessment (RFA)

In 1991, JEG, as part of the Resource Conservation and Recovery Act (RCRA) Facility Assessment (RFA), performed a Preliminary Review (PR) and a Visual Site Inspection (VSI) of the 307 SWMUs within the Station. JEG also conducted a site visit to observe the current conditions of the SWMUs and/or TAAs, and performed limited sampling. During a field RFA

visit in April 1991, JEG identified SWMU 227 (also known as TAA 779) as an inactive temporary hazardous waste storage area.

Per JEG's VSI Evaluation form, SWMU 227 (TAA 779) is described as a 12-ft by 18-ft concrete storage surface surrounded by a concrete berm with a chain-link fence and aluminum roof. At the time of the visit, several cases of Kodak 55 Developer were stored inside the storage area. During the site visit there was no evidence of a release outside the storage area. Because the TAA was used as a hazardous waste storage area (HWSA) in the past, SWMU 227 (TAA 779) was recommended for a sampling visit (JEG, 1993).

During a sampling visit in 1992, JEG advanced one angle soil boring (227A1) on the southwest side of SWMU 227 (TAA 779). Soil boring 227A1 was drilled using a hollow-stem auger rig to a depth of 59 feet below ground surface (below ground surface). A total of six soil samples were collected at approximately 10-foot intervals to 57 feet below ground surface. Analysis of all six soil samples indicated maximum concentrations of compounds detected above laboratory reporting limits were the following:

- Total petroleum hydrocarbons (TPH) at 79 mg/kg at 10 feet below ground surface
- Silver at 0.73 mg/kg at 40 feet below ground surface
- Barium at 329 mg/kg at 40 feet below ground surface.

Because the concentrations of detected compounds were below established cleanup goals for the site and/or below the contract required detection limit (CRDL) from the RFA, JEG recommended *"No Further Action (NFA)"* for SWMU 227 (TAA 779).

After review of the JEG RFA report, DTSC requested additional information about the TAAs to determine the closure requirements. BNI performed visual assessments at 73 TAAs to provide additional information for a closure strategy for TAAs.

During the BNI VSI in December 1994, former TAA 779 was observed to be a 15-foot by 10-foot concrete pad with berm. Three drums were observed on a rack on the concrete pad, and the concrete pad was observed to be clean (BNI, 1996). BNI did not recommend sampling for the TAA. Copies of the former TAA 779 VSI evaluation forms from the BNI Final RFA Addendum report and the JEG RFA report are included in Appendix B.

Storm Water Pollution Prevention Plan (SWPPP)

The Storm Water Pollution Prevention Plan (SWPPP) includes visual inspections of areas where hazardous materials and hazardous wastes were stored. The SWPPP indicated that Building 779 (TAA 779) was a building of concern due to the quality of storm water discharges. The Best

Management Practice recommended in the SWPPP was personnel education Building 779 (TAA 779) was described as a Hazardous Waste Collection Facility. The SWPPP also includes a spill history table in Section 5, and this table does not identify historic spills at TAA 779 (IEM, 1997). Excerpts from the SWPPP are included in Appendix C.

Hazardous Materials/Hazardous Waste Engineering Management Plan (HM/HWMP)
The Station's environmental compliance program management plans were acquired and reviewed in order to identify any locations at or near former TAA 779 that may have been designated for storage of hazardous wastes. The Hazardous Material/Hazardous Waste Management Plan (HM/HWMP)(SAIC, 1994) identifies Building 779 as a hazardous waste accumulation location. Extracts from the plan are presented in Appendix D.

Environmental Baseline Survey (EBS)
The EBS describes former TAA 779 as Satellite Accumulation Area (SAA) 779. The EBS indicates that former TAA 779 was inactive at the time the EBS was prepared in 1995. TAA 779 is described as an area type 3. The EBS identifies an environmental condition of area type 3 as: *areas where storage, release, disposal, and/or migration of hazardous substances or petroleum products has occurred, but at concentrations that do not require a removal or remedial action.* Extract from the EBS are presented in Appendix E.

Base Realignment and Closure (BRAC) Business Plan

The BRAC Business Plan includes a summary of locations of concern on the base. Locations of concern in the vicinity of TAA 779, along with their status are presented in the table below.

LOC	Approximate Relative Location	Status
UST T-9	20 feet Northeast	Closed by OCHCA in July 1997
UST 204	250 feet Southwest	Removed, Closure report submitted to RWQCB
UST 206	100 feet Southwest	Removed, Closure report submitted to RWQCB
UST 763B	100 feet Northwest	Closed by OCHCA in July 2000
TAA 698	100 feet Northwest	Inactive, Closure report to be submitted to DTSC
OWS 763A	100 feet Southwest	Closed by OCHCA in July 2000
IRP Site 4	400 feet Northeast	NFA ROD sign in September 1997

MCAS, El Toro Plant Account Records
According to the MCAS, El Toro Plant Account Records, Building 779 (TAA 779) was constructed in 1983, and is twelve feet by seventeen feet in size. A copy of the records for Building 779 is provided in Appendix F

2.2 Site Inspection

Former TAA 779 was inspected by OHM/IT in 1999. Former TAA 779 was observed to be an inactive TAA, consisting of a concrete pad with concrete berm and a metal roof, with no sump. Wood pallets were present on the TAA during the inspection. The surface of the concrete pad was clean and intact without any major cracks. No evidence of a release was observed around the former TAA 779.

SWDIV inspected TAA 779 on 1, 8, 15, and 22 March 2002 during the preparation of the March 2002 Summary Report. Observations from the inspections are included in the March 2002 Report (SWDIV, 2002).

During a site visit to various TAA sites on 10 December 2002, representatives from SWDIV, IT, and the DTSC visited the former TAA 779 site and during the site visit no evidence of a release was observed on or adjacent to the concrete pad. Also, it was mutually agreed that three hand auger soil borings should be advanced in close proximity to the TAA. A photo log of former TAA 779 is included in Appendix G.

3.0 Field Activities

The following subsections describe the activities that were performed by IT at former TAA 779. Field activities were conducted in accordance with the approved *Final Supplemental Work Plan* (OHM, 1997a) and approved *Revised Addendum to the Draft Supplemental Work Plan, Marine Corps Air Station El Toro, California* (IT, 2002). Field activities conducted at former TAA 779 included confirmation soil sampling and land surveying activities.

3.1 Confirmation Soil Sampling

As agreed during the 10 December 2002 site visit, six confirmation soil samples and one duplicate were collected on 18 December 2002 from three hand-auger locations at former TAA 779. A Site Plan, with the hand auger locations, is provided on Figure 3-1.

Soil samples were collected in standard stainless steel sleeves to a total depth of 36 inches. Details on the analytical methods, data quality assessment, and laboratory analytical results and data validation are discussed in Section 4.

After completing the confirmation soil sampling at former TAA 779, the hand-auger soil boring location was surveyed by Cal Vada Surveying Inc., a California-licensed land surveyor. The surveyed locations was measured to ±0.01 foot horizontally and tied to the California State Plane Coordinate Systems, North American Datum 1983. The surveyed elevations were measured to ±0.01 foot vertically and tied to mean sea level datum. A copy of the survey drawing is provided in Appendix H.

4.0 Sampling Analytical Results and Data Quality Assessment

The objective of confirmation soil sampling and selected analytical methods were to provide analytical data to characterize the soil condition in the vicinity of former TAA 779. The sampling methodology, analytical methods, analytical results, and interpretation of confirmation soil sampling have been performed in accordance with the analytical strategy presented in the DTSC-approved *Final Supplemental Work Plan* (OHM, 1997a) and are described in the following text and approved *Revised Addendum to the Draft Supplemental Work Plan, Marine Corps Air Station El Toro, California* (IT, 2002) and are described in the following text.

The laboratory analyses were performed according to test methods specified in EPA Solid Waste-846 (Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods, June 1997) and California Leaking Underground Fuel Tank (CA LUFT) Manual (State Water Resources Control Board, 1989). The test methods used for analyses were selected on the basis of their ability to detect the chemicals of potential concern with suitable detection limits to verify that no significant release of chemicals in surrounding soil at former TAA 779 and to provide data for assessment of risk to human health and the environment. A list of all the analytical methods that were performed for former TAA 779 is provided in Section 4.2.

All samples were analyzed by EMAX Laboratories, Inc., which is a state of California-certified and Naval Facilities Engineering Services Center-approved analytical laboratory.

4.1 Field Sampling Summary

4.1.1 Confirmation Soil Sampling

The sampling strategy for former TAA 779 focused on two aspects of the site: possible releases on the surface of the TAA or possible releases into the soil surrounding the TAA. Soil samples were collected and analyzed for the constituents contained in the wastes that may have been stored at former TAA 779.

The sample location was selected based on a site visit discussion on 10 December 2002. A total of six-confirmation soil samples and one duplicate (sample numbers 818655-B3123 through 818655-B3129) were collected at former TAA 779 from three hand auger borings (SB-A, SB-B, and SB-C).

A hand auger was used to bore into the soil. Soil samples were collected at 18, 24, and 36 inches below ground surface from SB-A; at 18 and 36 inches below ground surface from SB-B; and at

18 and 36 inches below ground surface from SB-C using a hammer-driven split core sampler that contained a stainless steel sleeve. Following the collection of the soil samples, the excess soil was placed back in the open boreholes. (No airborne volatile organic compounds [VOCs] were identified by the photoionization detector.) The surface was then finished to match the existing ground surface.

4.1.2 Quality Control

Field quality assurance/quality control (QA/QC) samples were collected at the TAA site as follows:

- Equipment rinsate samples were collected at a frequency of 1 per day.
- Trip blank samples were collected at a frequency of 1 per sample cooler for coolers containing samples for volatile analysis

One equipment rinsate sample (sample number 818655-B3130) and one trip blank (sample number 818655-B3122) were collected on 18 December 2002.

EMAX Laboratories, Inc. performed the following laboratory QA/QC sample analysis:

- Laboratory control sample/sample duplicate analysis was performed at a frequency of 1 sample per batch.
- Laboratory matrix spike/spike duplicate sample analysis was performed at a frequency of 1 per 20 samples or per batch.
- Laboratory method blank analysis was performed at a frequency of 1 per batch.

4.1.3 Equipment Decontamination

Equipment used in the exclusion zone was decontaminated prior to removal from the site, as identified in the site specific Health and Safety Plan (HSP). The equipment used for collecting soil samples was decontaminated between each use. The hand auger assembly was washed in a typical three step procedure consisting of decontaminating the equipment first using a brush in a bucket of Alconox™ detergent and water, then a second bucket of water for immediate rinse, and again in a third bucket of analyte-free water for the final rinse.

4.2 Analytical Methods

Analytical methods were selected to encompass all the chemicals of potential concern at former TAA 779. The following methods were performed to characterize samples collected from former TAA 779:

- Volatile organic compounds (VOCs) by EPA Method 5035/8260B
- Semi-volatile organic compounds (SVOCs) by EPA Method 8270C/3550B
- Total petroleum hydrocarbons (TPH) as gasoline by EPA Method 5035 and CA LUFT 8015 Modified
- TPH as diesel by CA LUFT 8015 Modified (extraction)
- Pesticides EPA Method 8081A/SW3550B
- Metals by EPA Method 6010B/3050B.

Additionally, the Selected Ion Monitoring (SIM) technique was used on the following six semi-volatile organic compounds in order to achieve detection limits lower than the Region IX PRGs (EPA, 2002):

- Benzo(a)pyrene
- bis(2-Chloroethyl)ether
- Dibenzo(a,h)anthracene
- Hexachlorobenzene
- Indeno(1,2,3-cd)pyrene
- n-Nitrosodi-n-propylamine.

SIM is a recognized gas chromatograph/mass spectrometer technique used to lower detection limits for organic compounds. As specified in EPA Method 8270B, semi-volatile compounds are introduced into the gas chromatograph by direct injection. The components of the sample are separated by the gas chromatograph and detected by the mass spectrometer, which provides both qualitative and quantitative information.

For each component or compound separated by the gas chromatograph, the mass spectrometer produces a characteristic mass spectrum. The mass spectrometer ionizes the sample molecules and separates any resulting fragments by mass-to-charge (m/z) ratios. The fragmentation pattern is used to determine the structure of the original molecule. The intensity of one or more of the fragments is used to quantitate the identified compound.

Upon identification of a target compound by comparison of the acquired mass spectrum with the mass spectrum of a standard, EPA Method 8270B specifies a fragment or characteristic ion to use for quantitation of the analyte. Method 8270B requires that the mass spectrometer scan from 35 to 500 amu (m/z) every 1-second or less. In SIM, the entire mass range is not scanned. Typically, only a few m/z are monitored. As a result, the mass spectrometer is able to collect more data from a specific m/z, resulting in an improved signal-to-noise ratio, which in turn improves detection limits. There is, however, a practical limitation to the number of m/z that can be monitored at one time so that the total scan time does not exceed 1 second. As a result, the number of compounds that can be measured in a single SIM analysis is limited.

4.3 Laboratory Analytical Results

This section provides summary and assessment of the analytical results from the sampling performed at former TAA 779. The analytical results for the confirmation soil samples at former TAA 779 with comparison to the standard background concentrations and PRGs are presented in Table 4-1. QC sample analytical data for former TAA 779 are presented in Table 4-2. The hard copies of the analytical results with QA/QC data obtained from EMAX Analytical Laboratory are included in Appendix I.

4.3.1 Soil Sample Analytical Results

Total Petroleum Hydrocarbons – TPH as gasoline, and diesel were not detected above the laboratory reporting limits in any confirmation soil samples collected from former TAA 779.

Volatile Organic Compounds – VOCs were not detected in any confirmation soil samples above laboratory reporting limits.

Pesticides – Pesticide compounds were not detected above the laboratory reporting limits in any of the confirmation soil samples collected from former TAA 779

Semi-Volatile Organic Compounds – No SVOCs were detected above the laboratory reporting limits in the confirmation soil samples collected from former TAA 779.

To ensure that the laboratory reporting limits were lower than the residential PRGs, the following seven SVOCs were analyzed using the SIM technique:

- Benzo(a)pyrene
- bis(2-Chloroethyl)ether
- Dibenzo(a,h)anthracene
- Hexachlorobenzene

- Indeno(1,2,3-cd)pyrene
- n-Nitrosodi-n-propylamine.

The IT criterion for acceptance of this SIM data was that the laboratory method detection limit (MDL) must be equal to or less than half of the PRG.

Metals – The following metals were reported above the reporting limit in the confirmation soil samples as presented in Table 4-1: barium, beryllium, calcium, chromium, cobalt, copper, lead, magnesium, nickel, potassium, sodium, vanadium, and zinc. The reporting limits and positive results for several analytes exceeded the established background levels and PRG levels. Results that exceeded background levels are flagged with a B and results that exceed PRG levels are flagged with an X or a Y in Table 4-1.

4.3.2 QC Sample Analytical Results

One trip blank was collected for former TAA 779 (818655-B3122). The trip blank was analyzed for VOCs. A copy of the analytical results for the trip blank is provided in Table 4-2.

One equipment rinsate sample (818655-B3130) was collected and analyzed for TPH, pesticides, VOCs, SVOCs, and metals. A copy of the analytical results for the equipment rinsate is provided in Table 4-2.

4.4 Data Quality Assessment

Former TAA 779 analytical data were reviewed and validated with respect to the QA/QC parameters specified in the work plan. The following were evaluated:

- EPA recommended holding times
- Cooler condition upon receipt by the laboratory
- Initial and continuing calibration standards
- Method blanks
- Surrogate recoveries
- Matrix spike/matrix spike duplicate (MS/MSD) recoveries
- Laboratory control samples (LCS) recoveries.

All samples were prepared and analyzed within EPA recommended holding times. The sample cooler was received intact and within the required temperature range of 4±2 degrees Celsius. Any sample results associated with QC parameters that were out of compliance with the Work Plan have been flagged and annotated in Tables 4-1 and 4-2. All data are useable as qualified.

4.5 Data Validation

Analytical data were reviewed and validated in accordance with the EPA *National Functional Guidelines for Organic and Inorganic Data Review* (1994). The DV Group, Inc. (DV), an independent data validation company, performed Level III and Level IV validation on the data. A hard copy of the DV report is provided in Appendix J.

Laboratory analytical data were subjected to a four-stage process of evaluation: completeness checks, verification of hard copy and electronic results, validation of the data, and final evaluation based on the professional judgment of the project chemist.

The data were qualified by DV to indicate whether the data has been affected by any deviation from the analytical protocols established in the Final Supplemental Work Plan (OHM, 1997a). Unusable data was qualified with an "R" (rejected). All other results were either unqualified (no flag), nondetected ("U" flag), nondetected with uncertainty in the report detection limits ("UJ" flag), or detected with uncertainty in the reported concentration ("J" flag).

Summary – All data associated with former TAA 779 were usable and acceptable as qualified. Overall precision and accuracy were met. The analytical results and associated qualifiers are summarized in Tables 4-1 and 4-2.

5.0 Risk Characterization and Hazard Index Calculation

This section briefly describes the approach used to estimate risk and summarizes the baseline screening level risk assessment results for former TAA 779. A screening level risk assessment for human health was conducted following the guidance provided in the EPA Region IX PRGs Memorandum dated 1 October 2002 (EPA, 2002). The analytical results of IT confirmation soil boring (SB-A, SB-B, and SB-C) and the RCRA Facility Assessment (RFA) angle boring (227A1) conducted at former TAA 779 were used to calculate risks.

5.1 Physical Characteristics

Based on the review of the RFA boring log (227A1), the subsurface lithology at former TAA 779 consists of primarily of silts and sands. These units appear typical of the channel and overbank deposits in comprising the Holocene deposits on the Tustin Plain. The groundwater is present at a depth of approximately 185 feet below ground surface (CDM, 2002).

5.2 Exposure Assessment

Former TAA 779 was used as a temporary hazardous waste storage area for storage of hazardous waste. Areas surrounding former TAA 779 are unpaved and covered with grass.

The Station officially closed on 2 July 1999 in accordance with the Base Closure and Realignment Act of 1993 (BRAC III). Former TAA 779 is located within a parcel designated for future use as Open Space; Exposition Center area according to the Great Park Land Use Plan that was issued by the City of Irvine in June 2002.

For screening purposes, the ingestion, dermal contact, and inhalation exposure pathways are assumed to be complete for former TAA 779, as if the area were unpaved. Should the screening fail, further evaluation of the exposure pathways would be required. A site conceptual model for former TAA 779 is shown on Figure 5-1.

Under an industrial and/or residential land use scenario at former TAA 779, workers or humans could be potentially exposed to surrounding soil by ingestion, dermal contact, or inhalation of dust or volatilized contaminants. These are the same exposure pathways evaluated by the EPA PRGs (EPA, 2002). Figure 5-2 presents the potential migration pathways at TAA 779.

For the purposes of this risk screening evaluation, the residential scenario is used as the worst-case scenario. If the risk were acceptable for the residential land use scenario, the risk would also be acceptable for both the current and future land use scenarios.

5.3 Toxicity Assessment

The PRGs incorporate the toxicity values from the Integrated Risk Information System, the Health Effects Assessment Summary Tables, and the National Center for Environmental Assessment. Cancer PRGs incorporate cancer toxicity values and the noncancer PRGs incorporate the toxicity values for chronic health affects other than cancer (EPA, 2002). Both cancer risk and noncancer hazards were evaluated in this screening risk assessment.

5.4 Risk Characterization

The PRGs are concentrations calculated using standard exposure factors that are protective of humans, including sensitive groups, over a lifetime. These PRG concentrations pose acceptable cancer risk or non-cancer hazard under the exposure scenarios evaluated. Generally, a cancer risk of 10^{-6} and a non-cancer hazard index (HI) of 1.0 or less are considered acceptable levels of exposure. Therefore, the PRG concentrations are calculated to the lower end of the acceptable cancer risk range of 10^{-6} and to a non-cancer hazard index of 1.0.

Cancer risk is calculated by dividing the site concentration by the PRG for each chemical. The ratios are added and the sum is then multiplied by 10^{-6}. The hazard index is calculated by dividing the site concentration by the PRG for each chemical and adding the resultant ratios.

Although maximum concentrations for chemicals detected at the site are used for this risk screening, comparisons are not made to maximum detected background concentrations. To maintain a conservative estimate of background risk, the 95th quantile background concentrations calculated for the Station (BNI, 1996b) are used to calculate background contributions to cancer risk.

At former TAA 779, the only detected carcinogen in soil was chromium, which was detected below background levels established for the station. The summed cancer risk for soil under the potential future residential scenario after subtracting background is less than 10^{-6} (Table 5-1). The net cancer risk for the current industrial scenario after subtracting background is also less than 10^{-6} (Table 5-2).

Compounds that were detected at former TAA 779 that contribute to the non-cancer HI include barium, beryllium, chromium, cobalt, copper, lead, nickel, vanadium, silver and zinc. The summed non-cancer hazard index for soil under the potential future residential scenario is less than 1.0 (Table 5-1). This is a conservative HI because it includes background contributions, assumes that maximum detected concentrations are representative of the entire site, and is summed across all toxicological endpoints.

Summary

The site-related incremental cancer risk and non-cancer hazard index at former TAA 779 are acceptable for the following reasons:

- The net carcinogenic risk is less than 10^{-6} for the residential scenario and the industrial scenario.
- The non-cancer hazard index for detected chemicals is less than 1.0 for the residential scenario and the industrial scenario.

The non-cancer hazard index for the potential future residential land use is less than 1.0 for individual target organs using average concentrations for the potential contributors to the HI.

6.0 Conclusions and Recommendations

The following conclusions are based upon existing background information, previous field investigations, and IT's confirmation soil sampling analytical results and screening level risk assessment calculations:

- Former TAA 779 consists of an approximately 17-foot by 12-foot fenced in concrete pad and berm with a metal roof that was used for approximately 17 years. No sump is located at former TAA 779 and no cracks, or stains were observed on the surface of the TAA.
- Former TAA 779 was investigated as SWMU 227 during the RFA.
- During a field RFA visit in April 1991, JEG identified SWMU 227 (also known as TAA 779) as a temporary hazardous waste storage area. Because the TAA was used as a HWSA in the past, SWMU 227 (TAA 779) was recommended for a sampling visit (JEG, 1993).
- JEG advanced one angle soil boring (227A1) on the southwest side of SWMU 227 (TAA 779). Soil boring 227A1 was drilled using a hollow-stem auger rig to a depth of 59 feet below ground surface (below ground surface). Because the concentrations of detected compounds were below established cleanup goals for the site and/or below the contract required detection limit (CRDL) from the RFA, JEG recommended *"No Further Action (NFA)"* for SWMU 227 (TAA 779)
- In 1994, as part of the RFA, Bechtel National Inc. (BNI) visited former TAA 779, and observed a 15-foot by 10-foot, concrete pad with roof at Building 779. Three drums were observed on a rack on the concrete pad, and the concrete pad was observed to be clean. Based on observations during their site visit, BNI did not recommend sampling at the TAA
- Former TAA 779 was inspected by OHM/IT in 1999. No spills, stains, or major cracks were observed during the site visit. The concrete pad appeared to be in good condition.
- Representatives from SWDIV, Station, IT, and the DTSC visited former TAA 779 site on 10 December 2002 and discussed sampling strategy plans prior to field sampling activities.
- A total of six soil samples and one duplicate were collected from three hand-auger boring locations (SB-A, SB-B, and SB-C), in close proximity to TAA 779. TPH as gasoline, and diesel, VOCs, pesticides, and SVOCs were not detected above the laboratory reporting limits in any confirmation soil samples collected from former TAA 779. Based on the review of analytical data, there was no indication of a significant release.

- At former TAA 779, the only detected carcinogen in soil was chromium, (maximum concentration was 23.8 mg/kg) which was detected below established background levels for Station (26.9 mg/kg). The detected carcinogens were evaluated to determine the risk associated with their presence. Compounds that were detected at former TAA 779 that contribute to the non-cancer HI include barium, beryllium, chromium, cobalt, copper, lead, nickel, vanadium, silver and zinc.

- The residential and industrial risk calculations for former TAA 779 resulted in a site-related net cancer risk less background risk of less than 10^{-6}. The residential and industrial non-cancer HI's less background risk was less than 1.0

The objectives of this project are considered to be achieved, since former TAA 779 is no longer used for storage of hazardous waste. Confirmation soil sampling was conducted at former TAA 779 to verify that concentrations of contaminants were at or below acceptable background or health-risk based concentrations.

Based upon the absence of evidence of a significant release at former TAA 779, the screening risk calculations, it is recommended that former TAA 779 (SWMU 227) should be identified as "closed" in the next Base Realignment Closure Business Plan update.

7.0 References

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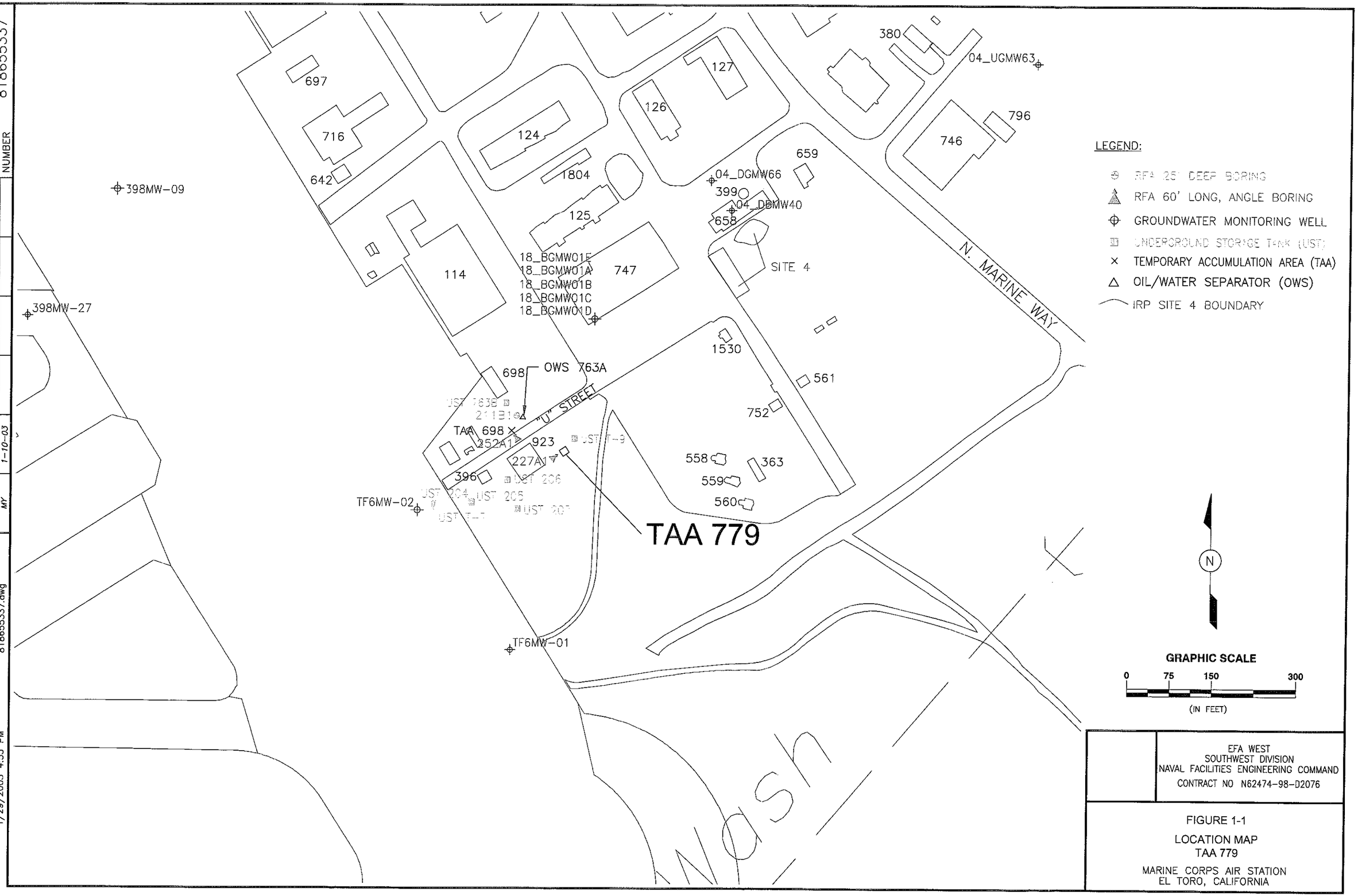
FIGURES



EFA WEST
SOUTHWEST DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
CONTRACT NO N62474-98-D2076

FIGURE 1-1
LOCATION MAP
TAA 779
MARINE CORPS AIR STATION
EL TORO, CALIFORNIA

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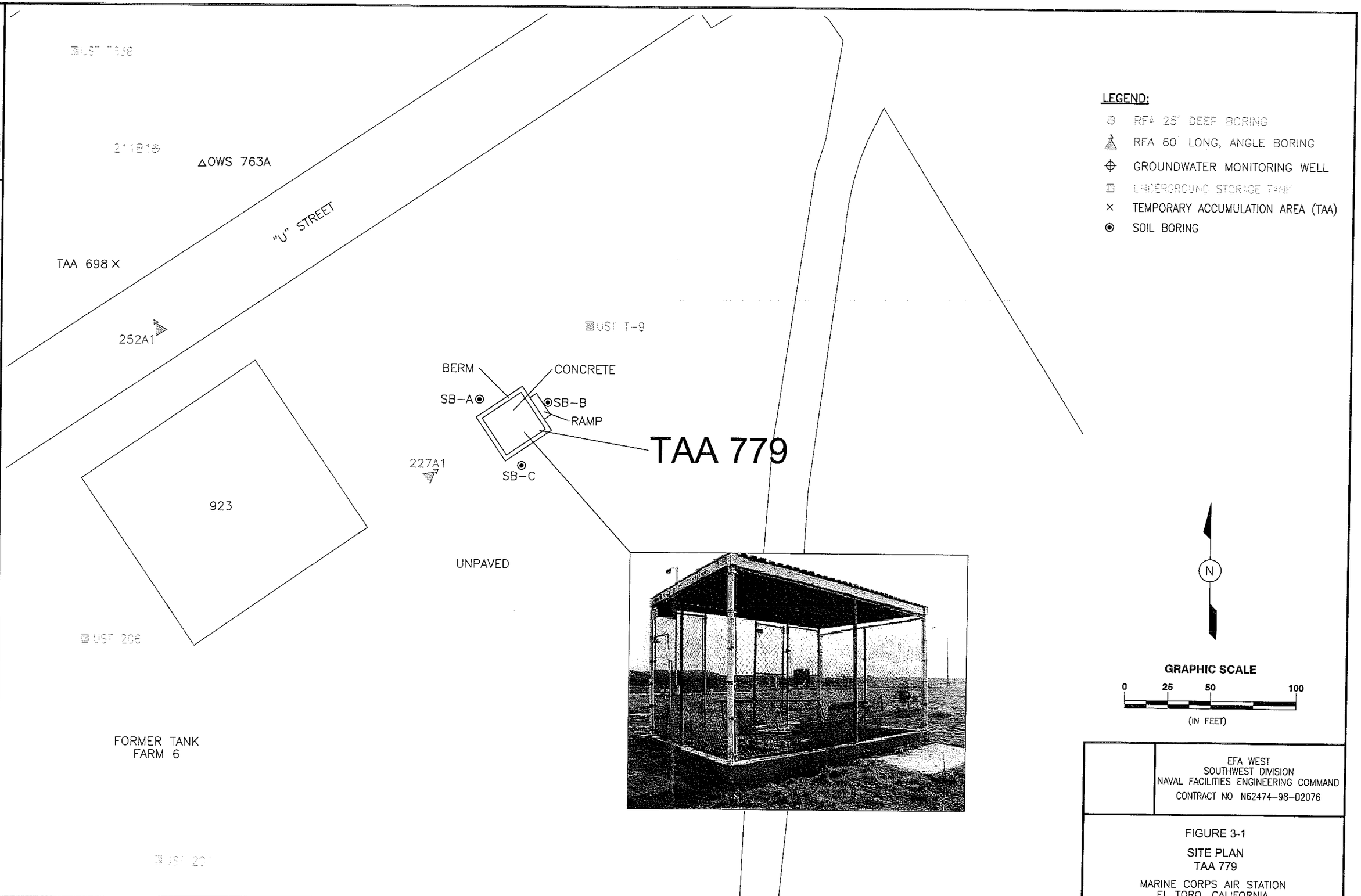

EFA WEST
SOUTHWEST DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
CONTRACT NO N62474-98-D2076

FIGURE 3-1

SITE PLAN
TAA 779

MARINE CORPS AIR STATION
EL TORO, CALIFORNIA

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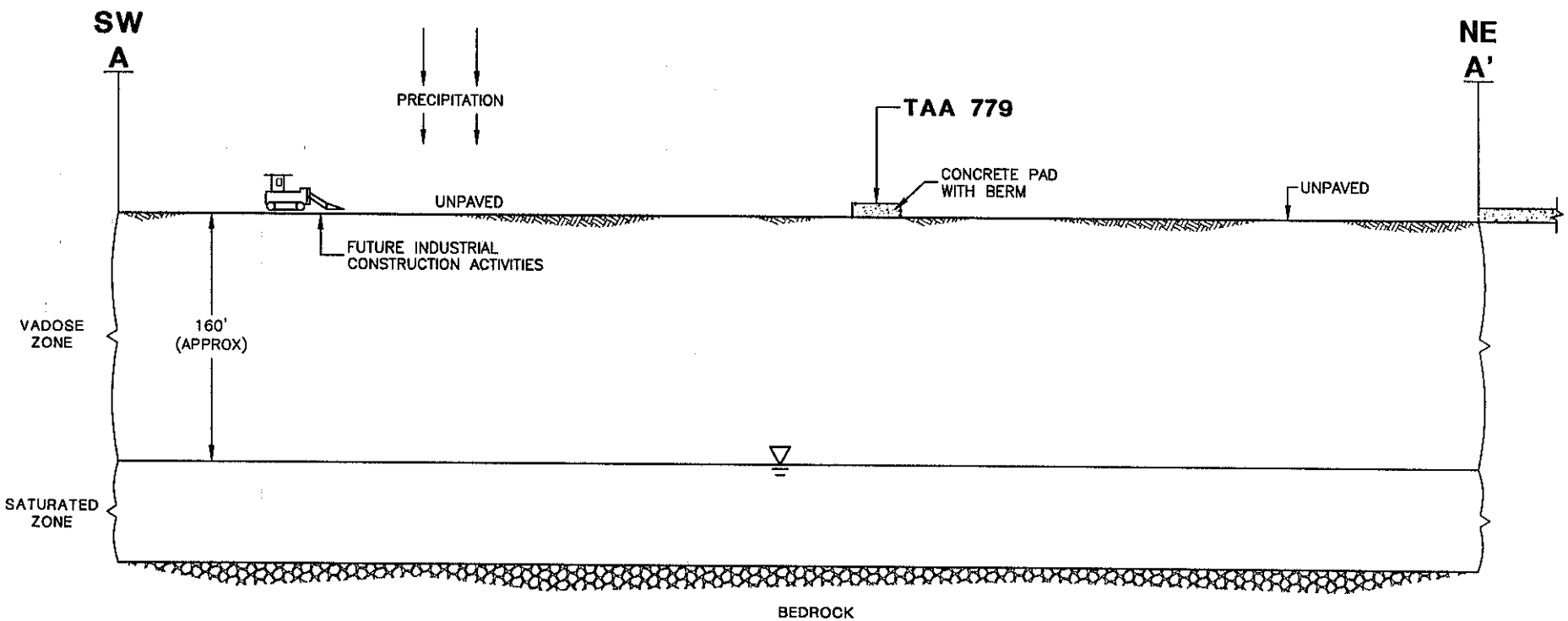

EXPLANATION:

RECEPTORS:

WORKERS

PATHWAYS:

GROUNDWATER

PRECIPITATION

REFERENCE:
103M2088.DWG

IT CORPORATION

EFA WEST
SOUTHWEST DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
CTO 24

FIGURE 5-1

CONCEPTUAL SITE MODEL
TAA 779

MARINE CORPS AIR STATION
EL TORO, CALIFORNIA

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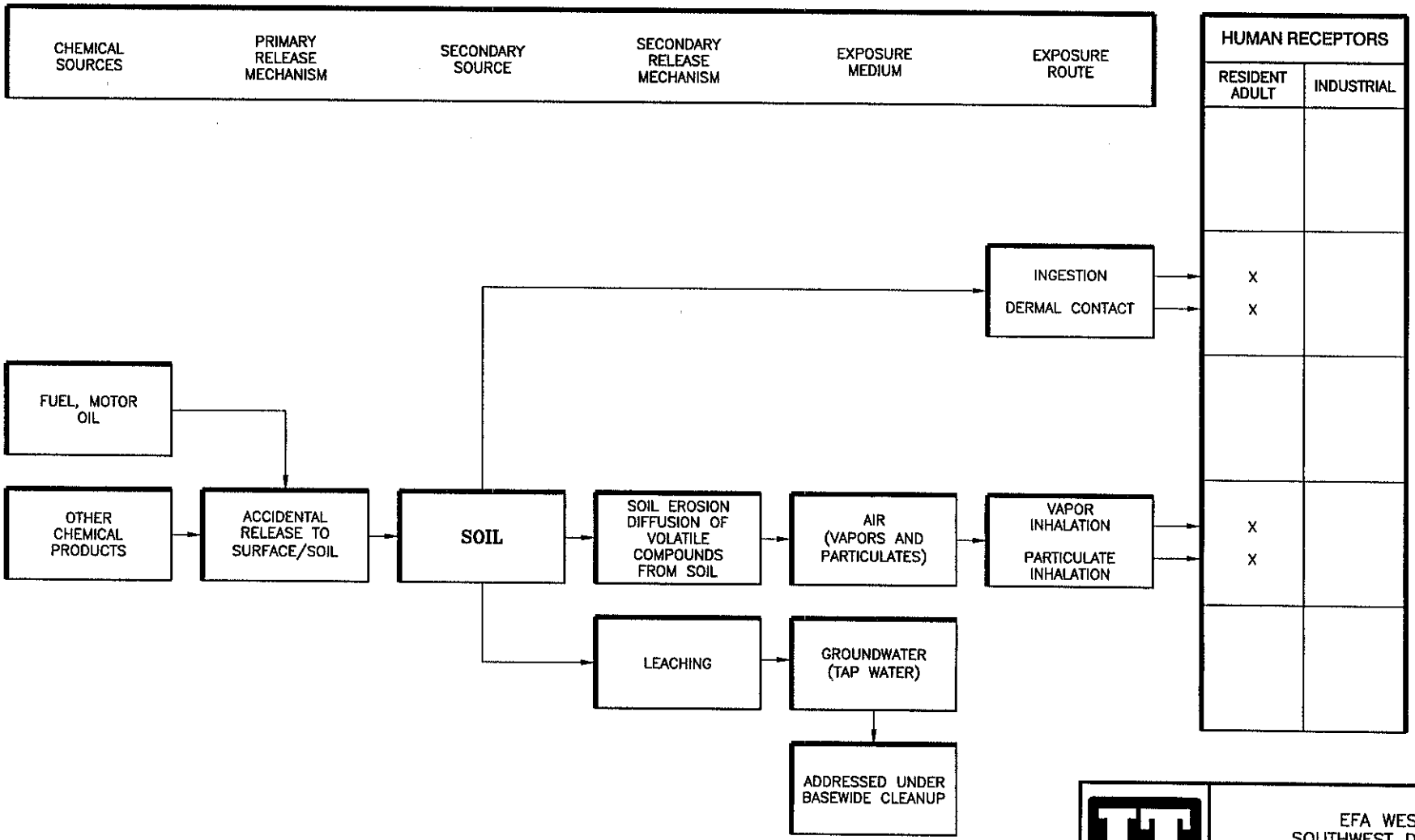


EXPLANATION:

X COMPLETE PATHWAY

REFERENCE:
103C2089.DXF

IT CORPORATION

EFA WEST
SOUTHWEST DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
CTO 24

FIGURE 5-2
POTENTIAL MIGRATION PATHWAYS, EXPOSURE ROUTES AND RECEPTORS
TAA 779
MARINE CORPS AIR STATION
EL TORO, CALIFORNIA

TABLES

Table 4-1
Summary of Analytical Results for Confirmation Soil Samples - TAA 779

Location Code					818655-B3125	818655-B3126 (Dup)	818655-B3127	818655-B3123	818655-B3124	818655-B3128	818655-B3129
Date Sampled					TAA779-SBA-18"	TAA779-SBA-24"	TAA779-SBA-36"	TAA779-SBB-18"	TAA779-SBB-36"	TAA779-SBC-18"	TAA779-SBC-36"
Depth (feet below ground surface)					12/18/02	12/18/02	12/18/02	12/18/02	12/18/02	12/18/02	12/18/02
					1.5	2	3	1.5	3	1.5	3
	Unit	Background	PRG Residential	PRG Industrial							
TPH											
Diesel	mg/kg	NE	NE	NE	11 U	10 U	12 U	11 U	11 U	11 U	10 U
Gasoline	mg/kg	NE	NE	NE	9.4 U	9.6 U	9.6 U	10 U	9.6 U	9.6 U	9.4 U
PESTICIDES											
4,4'-DDD	mg/kg	0.0361	2.4	9.9	.0043 U	.0042 U	.0049 U	.0042 U	.0042 U	.0043 U	.0041 U
4,4'-DDE	mg/kg	0.145	1.7	7.0	.0043 U	.0042 U	.0049 U	.0042 U	.0042 U	.0043 U	.0041 U
4,4'-DDT	mg/kg	0.236	1.7	7.0	.0043 U	.0042 U	.0049 U	.0042 U	.0042 U	.0043 U	.0041 U
Aldrin	mg/kg	NE	0.029	0.10	.0021 U	.0021 U	.0024 U	.0021 U	.0021 U	.0021 U	.0021 U
Alpha-BHC	mg/kg	NE	0.090	0.36	.0021 U	.0021 U	.0024 U	.0021 U	.0021 U	.0021 U	.0021 U
Alpha-Chlordane	mg/kg	0.00224	NE	NE	.0021 U	.0021 U	.0024 U B	.0021 U	.0021 U	.0021 U	.0021 U
Beta-BHC	mg/kg	NE	0.32	1.3	.0021 U	.0021 U	.0024 U	.0021 U	.0021 U	.0021 U	.0021 U
Delta-BHC	mg/kg	NE	NE	NE	.0021 U	.0021 U	.0024 U	.0021 U	.0021 U	.0021 U	.0021 U
Dieldrin	mg/kg	0.0199	0.030	0.11	.0043 U	.0042 U	.0049 U	.0042 U	.0042 U	.0043 U	.0041 U
Endosulfan I	mg/kg	0.000179	370	3700	.0043 U B	.0042 U B	.0049 U B	.0042 U B	.0042 U B	.0043 U B	.0041 U B
Endosulfan II	mg/kg	0.00222	NE	NE	.0043 U B	.0042 U B	.0049 U B	.0042 U B	.0042 U B	.0043 U B	.0041 U B
Endosulfan Sulfate	mg/kg	0.0031	NE	NE	.0043 U B	.0042 U B	.0049 U B	.0042 U B	.0042 U B	.0043 U B	.0041 U B
Endrin	mg/kg	0.00222	18	185	.0032 U B	.0031 U B	.0037 U B	.0032 U B	.0032 U B	.0032 U B	.0031 U B
Endrin Aldehyde	mg/kg	0.00222	NE	NE	.0043 U B	.0042 U B	.0049 U B	.0042 U B	.0042 U B	.0043 U B	.0041 U B
Endrin Ketone	mg/kg	NE	NE	NE	.0032 U	.0031 U	.0037 U	.0032 U	.0032 U	.0032 U	.0031 U
Gamma-BHC	mg/kg	NE	0.44	1.74	.0021 U	.0021 U	.0024 U	.0021 U	.0021 U	.0021 U	.0021 U
Gamma-Chlordane	mg/kg	0.0027	NE	NE	.0021 U	.0021 U	.0024 U	.0021 U	.0021 U	.0021 U	.0021 U
Heptachlor	mg/kg	NE	0.11	0.38	.0021 U	.0021 U	.0024 U	.0021 U	.0021 U	.0021 U	.0021 U
Heptachlor Epoxide	mg/kg	NE	0.053	0.19	.0021 U	.0021 U	.0024 U	.0021 U	.0021 U	.0021 U	.0021 U
Methoxychlor	mg/kg	NE	300	3100	.021 UJ	.021 UJ	.024 UJ	.021 UJ	.021 UJ	.021 UJ	.021 UJ
Toxaphene	mg/kg	NE	0.44	1.6	.11 U	.1 U	.12 U	.11 U	.11 U	.11 U	.1 U
VOLATILES											
1,1,1-Trichloroethane	µg/kg	NE	1200000	1200000	5 U	5 U	6.1 U	4.8 U	4.9 U	5 U	4.8 U
1,1,2,2-Tetrachloroethane	µg/kg	NE	410	930	5 U	5 U	6.1 U	4.8 U	4.9 U	5 U	4.8 U
1,1,2-Trichloroethane	µg/kg	NE	730	1600	5 U	5 U	6.1 U	4.8 U	4.9 U	5 U	4.8 U
1,1-Dichloroethane	µg/kg	NE	510000 <2800>	1700000	5 U	5 U	6.1 U	4.8 U	4.9 U	5 U	4.8 U
1,1-Dichloroethene	µg/kg	NE	120000	410000	5 U	5 U	6.1 U	4.8 U	4.9 U	5 U	4.8 U
1,2-Dichloroethane	µg/kg	NE	280	600	5 U	5 U	6.1 U	4.8 U	4.9 U	5 U	4.8 U
1,2-Dichloropropane	µg/kg	NE	340	740	5 U	5 U	6.1 U	4.8 U	4.9 U	5 U	4.8 U
2-Butanone	µg/kg	NE	7300000	27000000	50 U	50 U	61 U	48 U	49 U	50 U	48 U

Table 4-1
Summary of Analytical Results for Confirmation Soil Samples - TAA 779

Location Code					818655-B3125	818655-B3126 (Dup)	818655-B3127	818655-B3123	818655-B3124	818655-B3128	818655-B3129
Date Sampled					TAA779-SBA-18"	TAA779-SBA-24"	TAA779-SBA-36"	TAA779-SBB-18"	TAA779-SBB-36"	TAA779-SBC-18"	TAA779-SBC-36"
Depth (feet below ground surface)					12/18/02	12/18/02	12/18/02	12/18/02	12/18/02	12/18/02	12/18/02
					1.5	2	3	1.5	3	1.5	3
	Unit	Background	PRG Residential	PRG Industrial							
2-Chloroethyl Vinyl Ether	µg/kg	NE	NE	NE	50 U	50 U	61 U	48 U	49 U	50 U	48 U
2-Hexanone	µg/kg	NE	NE	NE	50 U	50 U	61 U	48 U	49 U	50 U	48 U
4-Methyl-2-Pentanone	µg/kg	NE	790000	2800000	50 UJ	50 UJ	61 UJ	48 UJ	49 UJ	50 UJ	48 UJ
Acetone	µg/kg	NE	1600000	6000000	50 U	50 U	61 U	48 U	49 U	50 U	48 U
Benzene	µg/kg	NE	600	1300	5 U	5 U	6.1 U	4.8 U	4.9 U	5 U	4.8 U
Bromodichloromethane	µg/kg	NE	820	1800	5 U	5 U	6.1 U	4.8 U	4.9 U	5 U	4.8 U
Bromoform	µg/kg	NE	62000	220000	5 UJ	5 UJ	6.1 UJ	4.8 UJ	4.9 UJ	5 UJ	4.8 UJ
Bromomethane	µg/kg	NE	3900	13000	5 UJ	5 UJ	6.1 UJ	4.8 UJ	4.9 UJ	5 UJ	4.8 UJ
Carbon Disulfide	µg/kg	NE	360000	720000	5 U	5 U	6.1 U	4.8 U	4.9 U	5 U	4.8 U
Carbon Tetrachloride	µg/kg	NE	250	550	5 U	5 U	6.1 U	4.8 U	4.9 U	5 U	4.8 U
Chlorobenzene	µg/kg	NE	150000	530000	5 U	5 U	6.1 U	4.8 U	4.9 U	5 U	4.8 U
Chloroethane	µg/kg	NE	3000	6500	5 U	5 U	6.1 U	4.8 U	4.9 U	5 U	4.8 U
Chloroform	µg/kg	NE	3600 <940>	12000	5 U	5 U	6.1 U	4.8 U	4.9 U	5 U	4.8 U
Chloromethane	µg/kg	NE	1200	2600	5 U	5 U	6.1 U	4.8 U	4.9 U	5 U	4.8 U
Cis-1,2-Dichloroethene	µg/kg	NE	43000	150000	5 U	5 U	6.1 U	4.8 U	4.9 U	5 U	4.8 U
Cis-1,3-Dichloropropene	µg/kg	NE	780	1800	5 U	5 U	6.1 U	4.8 U	4.9 U	5 U	4.8 U
Dibromochloromethane	µg/kg	NE	1100	2600	5 U	5 U	6.1 U	4.8 U	4.9 U	5 U	4.8 U
Ethylbenzene	µg/kg	NE	8900	19000	5 U	5 U	6.1 U	4.8 U	4.9 U	5 U	4.8 U
Methyl Tert-Butyl Ether	µg/kg	NE	62000 <17000>	160000	10 U	10 U	12 U	9.6 U	9.8 U	9.9 U	9.6 U
Methylene Chloride	µg/kg	NE	9100	21000	5 U	5 U	6.1 U	4.8 U	4.9 U	5 U	5 U
Styrene	µg/kg	NE	1700000	1700000	5 U	5 U	6.1 U	4.8 U	4.9 U	5 U	4.8 U
Tetrachloroethene	µg/kg	NE	1500	3400	5 U	5 U	6.1 U	4.8 U	4.9 U	5 U	4.8 U
Toluene	µg/kg	NE	520000	520000	5 U	5 U	6.1 U	4.8 U	4.9 U	5 U	4.8 U
Trans-1,2-Dichloroethene	µg/kg	NE	69000	230000	5 U	5 U	6.1 U	4.8 U	4.9 U	5 U	4.8 U
Trans-1,3-Dichloropropene	µg/kg	NE	780	1800	5 U	5 U	6.1 U	4.8 U	4.9 U	5 U	4.8 U
Trichloroethene	µg/kg	NE	53	110	5 U	5 U	6.1 U	4.8 U	4.9 U	5 U	4.8 U
Vinyl Acetate	µg/kg	NE	420000	1400000	50 UJ	50 UJ	61 UJ	48 UJ	49 UJ	50 UJ	48 UJ
Vinyl Chloride	µg/kg	NE	79	NE	5 U	5 U	6.1 U	4.8 U	4.9 U	5 U	4.8 U
Xylene, (Total)	µg/kg	NE	270000	420000	5 U	5 U	6.1 U	4.8 U	4.9 U	5 U	4.8 U
SEMI-VOLATILES											
1,2,4-Trichlorobenzene	µg/kg	NE	650000	3000000	350 U	340 U	400 U	350 U	350 U	350 U	340 U
1,2-Dichlorobenzene	µg/kg	NE	370000	370000	350 U	340 U	400 U	350 U	350 U	350 U	340 U
1,3-Dichlorobenzene	µg/kg	NE	16000	63000	350 U	340 U	400 U	350 U	350 U	350 U	340 U
1,4-Dichlorobenzene	µg/kg	NE	3400	7900	350 U	340 U	400 U	350 U	350 U	350 U	340 U

Table 4-1
Summary of Analytical Results for Confirmation Soil Samples - TAA 779

Location Code Date Sampled Depth (feet below ground surface)	Unit	Background	PRG Residential	PRG Industrial	818655-B3125 TAA779-SBA-18" 12/18/02 1.5	818655-B3126 (Dup) TAA779-SBA-24" 12/18/02 2	818655-B3127 TAA779-SBA-36" 12/18/02 3	818655-B3123 TAA779-SBB-18" 12/18/02 1.5	818655-B3124 TAA779-SBB-36" 12/18/02 3	818655-B3128 TAA779-SBC-18" 12/18/02 1.5	818655-B3129 TAA779-SBC-36" 12/18/02 3
2,4,5-Trichlorophenol	µg/kg	NE	6100000	62000000	890 U	860 U	1000 U	870 U	880 U	890 U	860 U
2,4,6-Trichlorophenol	µg/kg	NE	6100 <6900>	62000	350 U	340 U	400 U	350 U	350 U	350 U	340 U
2,4-Dichlorophenol	µg/kg	NE	180000	1900000	350 U	340 U	400 U	350 U	350 U	350 U	340 U
2,4-Dimethylphenol	µg/kg	NE	1200000	12000000	350 U	340 U	400 U	350 U	350 U	350 U	340 U
2,4-Dinitrophenol	µg/kg	NE	120000	1200000	890 U	860 U	1000 U	870 U	880 U	890 U	860 U
2,4-Dinitrotoluene	µg/kg	NE	120000	1200000	350 U	340 U	400 U	350 U	350 U	350 U	340 U
2,6-Dinitrotoluene	µg/kg	NE	61000	620000	350 U	340 U	400 U	350 U	350 U	350 U	340 U
2-Chloronaphthalene	µg/kg	NE	4900000	23000000	350 U	340 U	400 U	350 U	350 U	350 U	340 U
2-Chlorophenol	µg/kg	NE	63000	240000	350 U	340 U	400 U	350 U	350 U	350 U	340 U
2-Methylnaphthalene	µg/kg	NE	NE	NE	350 U	340 U	400 U	350 U	350 U	350 U	340 U
2-Methylphenol	µg/kg	NE	3000000	31000000	350 U	340 U	400 U	350 U	350 U	350 U	340 U
2-Nitroaniline	µg/kg	NE	1700	18000	890 U	860 U	1000 U	870 U	880 U	890 U	860 U
2-Nitrophenol	µg/kg	NE	NE	NE	350 U	340 U	400 U	350 U	350 U	350 U	340 U
3,3'-Dichlorobenzidine	µg/kg	NE	1100	3800	350 U	340 U	400 U	350 U	350 U	350 U	340 U
3-Nitroaniline	µg/kg	NE	NE	NE	890 U	860 U	1000 U	870 U	880 U	890 U	860 U
4,6-Dinitro-2-Methylphenol	µg/kg	NE	NE	NE	890 U	860 U	1000 U	870 U	880 U	890 U	860 U
4-Bromophenyl Phenyl Ether	µg/kg	NE	NE	NE	350 U	340 U	400 U	350 U	350 U	350 U	340 U
4-Chloro-3-Methylphenol	µg/kg	NE	NE	NE	350 U	340 U	400 U	350 U	350 U	350 U	340 U
4-Chloroaniline	µg/kg	NE	240000	2500000	350 U	340 U	400 U	350 U	350 U	350 U	340 U
4-Chlorophenyl Phenyl Ether	µg/kg	NE	NE	NE	350 U	340 U	400 U	350 U	350 U	350 U	340 U
4-Methylphenol	µg/kg	NE	310000	3100000	350 U	340 U	400 U	350 U	350 U	350 U	340 U
4-Nitroaniline	µg/kg	NE	NE	NE	890 U	860 U	1000 U	870 U	880 U	890 U	860 U
4-Nitrophenol	µg/kg	NE	NE	NE	890 U	860 U	1000 U	870 U	880 U	890 U	860 U
Acenaphthene	µg/kg	NE	3700000	29000000	350 U	340 U	400 U	350 U	350 U	350 U	340 U
Acenaphthylene	µg/kg	NE	NE	NE	350 U	340 U	400 U	350 U	350 U	350 U	340 U
Anthracene	µg/kg	NE	22000000	100000000	350 U	340 U	400 U	350 U	350 U	350 U	340 U
Benzo(A)Anthracene	µg/kg	22	620	2100	350 U B	340 U B	400 U B	350 U B	350 U B	350 U B	340 U B
Benzo(A)Pyrene	µg/kg	27	62	210	35 U B	34 U B	40 U B	35 U B	35 U B	35 U B	34 U B
Benzo(B)Fluoranthene	µg/kg	28	620	2100	350 U B	340 U B	400 U B	350 U B	350 U B	350 U B	340 U B
Benzo(Ghi)Perylene	µg/kg	29	NE	NE	350 U B	340 U B	400 U B	350 U B	350 U B	350 U B	340 U B
Benzo(K)Fluoranthene	µg/kg	24	6200 <380>	21000	350 U B	340 U B	400 U B	350 U B	350 U B	350 U B	340 U B
Bis(2-Chloroethoxy)Methane	µg/kg	NE	NE	NE	350 U	340 U	400 U	350 U	350 U	350 U	340 U
Bis(2-Chloroethyl)Ether	µg/kg	NE	210	550	35 U	34 U	40 U	35 U	35 U	35 U	34 U
Bis(2-Chloroisopropyl)Ether	µg/kg	NE	2900	7400	350 UJ	340 UJ	400 UJ	350 UJ	350 UJ	350 UJ	340 UJ

Table 4-1
Summary of Analytical Results for Confirmation Soil Samples - TAA 779

Location Code					818655-B3125	818655-B3126 (Dup)	818655-B3127	818655-B3123	818655-B3124	818655-B3128	818655-B3129
Date Sampled					TAA779-SBA-18" 12/18/02	TAA779-SBA-24" 12/18/02	TAA779-SBA-36" 12/18/02	TAA779-SBB-18" 12/18/02	TAA779-SBB-36" 12/18/02	TAA779-SBC-18" 12/18/02	TAA779-SBC-36" 12/18/02
Depth (feet below ground surface)					1.5	2	3	1.5	3	1.5	3
	Unit	Background	PRG Residential	PRG Industrial							
Bis(2-Ethylhexyl)Phthalate	µg/kg	NE	35000	120000	350 U	340 U	400 U	350 U	350 U	350 U	340 U
Butyl Benzyl Phthalate	µg/kg	NE	12000000	100000000	350 U	340 U	400 U	350 U	350 U	350 U	340 U
Chrysene	µg/kg	31	62000 <3900>	210000	350 U B	340 U B	400 U B	350 U B	350 U B	350 U B	340 U B
Di-N-Butyl Phthalate	µg/kg	NE	6100000	62000000	350 U	340 U	400 U	350 U	350 U	350 U	340 U
Di-N-Octyl Phthalate	µg/kg	NE	2400000	25000000	350 U	340 U	400 U	350 U	350 U	350 U	340 U
Dibenzo(a,h)Anthracene	µg/kg	8	62	210	35 U B	34 U B	40 U B	35 U B	35 U B	35 U B	34 U B
Dibenzofuran	µg/kg	NE	290000	3100000	350 U	340 U	400 U	350 U	350 U	350 U	340 U
Diethyl Phthalate	µg/kg	NE	49000000	100000000	350 U	340 U	400 U	350 U	350 U	350 U	340 U
Dimethyl Phthalate	µg/kg	NE	100000000	100000000	350 U	340 U	400 U	350 U	350 U	350 U	340 U
Fluoranthene	µg/kg	45	2300000	22000000	350 U B	340 U B	400 U B	350 U B	350 U B	350 U B	340 U B
Fluorene	µg/kg	NE	2700000	26000000	350 U	340 U	400 U	350 U	350 U	350 U	340 U
Hexachlorobenzene	µg/kg	NE	300	1100	80 U	78 U	91 U	79 U	79 U	80 U	77 U
Hexachlorobutadiene	µg/kg	NE	6200	22000	350 U	340 U	400 U	350 U	350 U	350 U	340 U
Hexachlorocyclopentadiene	µg/kg	NE	370000	3700000	350 U	340 U	400 U	350 U	350 U	350 U	340 U
Hexachloroethane	µg/kg	NE	35000	120000	350 U	340 U	400 U	350 U	350 U	350 U	340 U
Indeno(1,2,3-Cd)Pyrene	µg/kg	21	620	2100	37 U B	36 U B	43 U B	37 U B	37 U B	37 U B	36 U B
N-Nitroso-Di-N-Propylamine	µg/kg	NE	69	250	35 U	34 U	40 U	35 U	35 U	35 U	34 U
N-Nitrosodiphenylamine	µg/kg	NE	99000	350000	350 U	340 U	400 U	350 U	350 U	350 U	340 U
Naphthalene	µg/kg	NE	60000	190000	350 U	340 U	400 U	350 U	350 U	350 U	340 U
Nitrobenzene	µg/kg	NE	20000	100000	350 U	340 U	400 U	350 U	350 U	350 U	340 U
Pentachlorophenol	µg/kg	NE	3000	9000	210 U	210 U	240 U	210 U	210 U	210 U	210 U
Phenanthrene	µg/kg	18	NE	NE	350 U B	340 U B	400 U B	350 U B	350 U B	350 U B	340 U B
Phenol	µg/kg	NE	37000000	100000000	350 U	340 U	400 U	350 U	350 U	350 U	340 U
Pyrene	µg/kg	41	2300000	29000000	350 U B	340 U B	400 U B	350 U B	350 U B	350 U B	340 U B
METALS											
Aluminum	mg/kg	14800	76000	100000	10400 J	42900 J B	20000 J B	12600 J	13500 J	12400 J	10400 J
Antimony	mg/kg	3.06	31	410	5.34 U B	5.2 U B	6.09 U B	5.26 U B	5.27 U B	5.35 U B	5.16 U B
Arsenic	mg/kg	6.86	0.39	1.6	2.15 Y X	6.12 Y X	3.25 Y X	2.58 Y X	2.27 Y X	2 Y X	1.7 Y X
Barium	mg/kg	173	5400	67000	99	199 B	148	112	102	119	107
Beryllium	mg/kg	0.669	150	1900	.323	1.25 B	.6	.439	.424	.417	.345
Cadmium	mg/kg	2.35	37 <1.7>	450	.534 U	.52 U	.609 U	.526 U	.527 U	.535 U	.516 U
Calcium	mg/kg	46000	NE	NE	4690	9870	4630	5200	5080	5900	2780
Chromium	mg/kg	26.9	210	450	7.13	23.8	12.6	8.46	8.96	9.35	8.35
Cobalt	mg/kg	6.98	900	1900	4.39	13 B	6.6	5.19	5.03	5.06	5.11

Table 4-1
Summary of Analytical Results for Confirmation Soil Samples - TAA 779

Location Code					818655-B3125	818655-B3126 (Dup)	818655-B3127	818655-B3123	818655-B3124	818655-B3128	818655-B3129
Date Sampled					TAA779-SBA-18" 12/18/02	TAA779-SBA-24" 12/18/02	TAA779-SBA-36" 12/18/02	TAA779-SBB-18" 12/18/02	TAA779-SBB-36" 12/18/02	TAA779-SBC-18" 12/18/02	TAA779-SBC-36" 12/18/02
Depth (feet below ground surface)					1.5	2	3	1.5	3	1.5	3
	Unit	Background	PRG Residential	PRG Industrial							
Copper	mg/kg	10.5	3100	41000	5.21	14.2 B	9.57	5.58	6.09	5.6	5.58
Iron	mg/kg	18400	23000	100000	9650 J	31600 J B Y	16100 J	11700 J	12200 J	12000 J	10500 J
Lead	mg/kg	15.1	400 <150>	750	4.26	7.62	3.46	3.53	4.1	2.59	2.1
Magnesium	mg/kg	8370	NE	NE	4020	16100 B	7250	4950	5200	5190	3760
Manganese	mg/kg	291	1800	19000	182 J	385 J B	274 J	199 J	212 J	199 J	211 J
Mercury	mg/kg	0.22	NE	NE	.107 U	.104 U	.122 U	.105 U	.105 U	.107 U	.103 U
Molybdenum	mg/kg	NE	390	5100	5.34 U	5.2 U	6.09 U	5.26 U	5.27 U	5.35 U	5.16 U
Nickel	mg/kg	15.3	1600	20000	4.36	12	6.31	5.01	5.13	5.11	5.06
Potassium	mg/kg	4890	NE	NE	2840	9150 B	4520	3380	3690	3490	3220
Selenium	mg/kg	0.32	390	5100	1.07 U B	.728 J B	.351 J B	.302 J	1.05 U B	.466 J B	1.03 U B
Silver	mg/kg	0.539	390	5100	2.13 U B	2.08 U B	2.44 U B	2.11 U B	2.11 U B	2.14 U B	2.06 U B
Sodium	mg/kg	405	NE	NE	34.7 J	233	124	73.8 J	85.1 J	80 J	71.1 J
Thallium	mg/kg	0.42	5.2	67.0	.524 J B	1.58 B	.45 J B	.603 J B	.645 J B	.438 J B	.504 J B
Vanadium	mg/kg	71.8	550	7200	23.9	75.7 B	41.9	28.7	29.5	30.8	25.4
Zinc	mg/kg	77.9	23000	100000	33.3	84.2 B	46	32.3	36.4	34.7	30.7

B - result exceeds background
J - estimated value
M - modified
MCAS - Marine Corps Air Station
mg/kg - milligrams per kilogram
NE - not established
TPH - total petroleum hydrocarbons
U - not detected at or above the stated reporting limit
UJ - estimated reporting limit
X - result exceeds industrial PRGs
Y - result exceeds residential PRGs
µg/kg - micrograms per kilogram
< > - California preliminary remediation goal
** - Background level @ MCAS El Toro*

Table 4-2
Summary of Analytical Results for QC Samples - TAA 779

Sample Identification Location Code Date Sampled	Unit	818655-B3130 EQUIPMENT RINSATE 12/18/02	818655-B3122 TRIP BLANK 12/18/02
TPH			
Diesel	mg/L	.094 U	NA
Gasoline	mg/L	.087 J	NA
PESTICIDES			
4,4'-Ddd	µg/L	.19 U	NA
4,4'-Dde	µg/L	.19 U	NA
4,4'-Ddt	µg/L	.19 U	NA
Aldrin	µg/L	.094 U	NA
Alpha-Bhc	µg/L	.094 U	NA
Alpha-Chlordane	µg/L	.094 U	NA
Beta-Bhc	µg/L	.094 U	NA
Delta-Bhc	µg/L	.094 U	NA
Dieldrin	µg/L	.19 U	NA
Endosulfan I	µg/L	.094 U	NA
Endosulfan Ii	µg/L	.19 U	NA
Endosulfan Sulfate	µg/L	.19 U	NA
Endrin	µg/L	.094 U	NA
Endrin Aldehyde	µg/L	.19 U	NA
Endrin Ketone	µg/L	.094 U	NA
Gamma-Bhc	µg/L	.094 U	NA
Gamma-Chlordane	µg/L	.094 U	NA
Heptachlor	µg/L	.094 U	NA
Heptachlor Epoxide	µg/L	.094 U	NA
Methoxychlor	µg/L	.94 UJ	NA
Toxaphene	µg/L	2.8 U	NA
VOLATILES			
1,1,1-Trichloroethane	µg/L	5 U	5
1,1,2,2-Tetrachloroethane	µg/L	5 U	5
1,1,2-Trichloroethane	µg/L	5 U	5
1,1-Dichloroethane	µg/L	5 U	5
1,1-Dichloroethene	µg/L	5 U	5
1,2-Dichloroethane	µg/L	5 U	5
1,2-Dichloropropane	µg/L	5 U	5
2-Butanone	µg/L	50 U	50

Table 4-2
Summary of Analytical Results for QC Samples - TAA 779

Sample Identification		818655-B3130	818655-B3122
Location Code		EQUIPMENT RINSATE	TRIP BLANK
Date Sampled		12/18/02	12/18/02
	Unit		
2-Chloroethyl Vinyl Ether	µg/L	50 U	50
2-Hexanone	µg/L	50 U	50
4-Methyl-2-Pentanone	µg/L	50 U	50
Acetone	µg/L	50 UJ	50
Benzene	µg/L	5 U	5
Bromodichloromethane	µg/L	5 U	5
Bromoform	µg/L	5 U	5
Bromomethane	µg/L	5 U	5
Carbon Disulfide	µg/L	5 U	5
Carbon Tetrachloride	µg/L	5 U	5
Chlorobenzene	µg/L	5 U	5
Chloroethane	µg/L	5 U	5
Chloroform	µg/L	5 U	5
Chloromethane	µg/L	5 U	5
Cis-1,2-Dichloroethene	µg/L	5 U	5
Cis-1,3-Dichloropropene	µg/L	5 U	5
Dibromochloromethane	µg/L	5 U	5
Ethylbenzene	µg/L	5 U	5 U
Methyl Tert-Butyl Ether	µg/L	10 U	10 U
Methylene Chloride	µg/L	5 U	5 U
Styrene	µg/L	5 U	5 U
Tetrachloroethene	µg/L	5 U	5 U
Toluene	µg/L	5 U	5 U
Trans-1,2-Dichloroethene	µg/L	5 U	5 U
Trans-1,3-Dichloropropene	µg/L	5 U	5 U
Trichloroethene	µg/L	5 U	5 U
Vinyl Acetate	µg/L	50 U	50 U
Vinyl Chloride	µg/L	5 U	5 U
Xylene, (Total)	µg/L	5 U	5 UJ
SEMI-VOLATILES			
1,2,4-Trichlorobenzene	µg/L	9.5 U	NA
1,2-Dichlorobenzene	µg/L	9.5 U	NA
1,3-Dichlorobenzene	µg/L	9.5 U	NA
1,4-Dichlorobenzene	µg/L	9.5 U	NA

Table 4-2
Summary of Analytical Results for QC Samples - TAA 779

Sample Identification Location Code Date Sampled		818655-B3130 EQUIPMENT RINSATE 12/18/02	818655-B3122 TRIP BLANK 12/18/02
	Unit		
2,4,5-Trichlorophenol	µg/L	24 U	NA
2,4,6-Trichlorophenol	µg/L	9.5 U	NA
2,4-Dichlorophenol	µg/L	9.5 U	NA
2,4-Dimethylphenol	µg/L	9.5 U	NA
2,4-Dinitrophenol	µg/L	24 U	NA
2,4-Dinitrotoluene	µg/L	9.5 U	NA
2,6-Dinitrotoluene	µg/L	9.5 U	NA
2-Chloronaphthalene	µg/L	9.5 U	NA
2-Chlorophenol	µg/L	9.5 U	NA
2-Methylnaphthalene	µg/L	9.5 U	NA
2-Methylphenol	µg/L	9.5 U	NA
2-Nitroaniline	µg/L	24 U	NA
2-Nitrophenol	µg/L	9.5 U	NA
3,3'-Dichlorobenzidine	µg/L	9.5 U	NA
3-Nitroaniline	µg/L	24 U	NA
4,6-Dinitro-2-Methylphenol	µg/L	24 U	NA
4-Bromophenyl Phenyl Ether	µg/L	9.5 U	NA
4-Chloro-3-Methylphenol	µg/L	9.5 U	NA
4-Chloroaniline	µg/L	9.5 U	NA
4-Chlorophenyl Phenyl Ether	µg/L	9.5 U	NA
4-Methylphenol	µg/L	9.5 U	NA
4-Nitroaniline	µg/L	24 U	NA
4-Nitrophenol	µg/L	24 U	NA
Acenaphthene	µg/L	9.5 U	NA
Acenaphthylene	µg/L	9.5 U	NA
Anthracene	µg/L	9.5 U	NA
Benzo(A)Anthracene	µg/L	9.5 U	NA
Benzo(A)Pyrene	µg/L	9.5 U	NA
Benzo(B)Fluoranthene	µg/L	9.5 U	NA
Benzo(Ghi)Perylene	µg/L	9.5 U	NA
Benzo(K)Fluoranthene	µg/L	9.5 U	NA
Bis(2-Chloroethoxy)Methane	µg/L	9.5 U	NA
Bis(2-Chloroethyl)Ether	µg/L	9.5 U	NA
Bis(2-Chloroisopropyl)Ether	µg/L	9.5 UJ	NA

Table 4-2

Summary of Analytical Results for QC Samples - TAA 779

Sample Identification Location Code Date Sampled		818655-B3130 EQUIPMENT RINSATE 12/18/02	818655-B3122 TRIP BLANK 12/18/02
	Unit		
Bis(2-Ethylhexyl)Phthalate	µg/L	19 U	NA
Butyl Benzyl Phthalate	µg/L	9.5 U	NA
Chrysene	µg/L	9.5 U	NA
Di-N-Butyl Phthalate	µg/L	9.5 U	NA
Di-N-Octyl Phthalate	µg/L	9.5 U	NA
Dibenzo(A,H)Anthracene	µg/L	9.5 U	NA
Dibenzofuran	µg/L	9.5 U	NA
Diethyl Phthalate	µg/L	9.5 U	NA
Dimethyl Phthalate	µg/L	9.5 U	NA
Fluoranthene	µg/L	9.5 U	NA
Fluorene	µg/L	9.5 U	NA
Hexachlorobenzene	µg/L	9.5 U	NA
Hexachlorobutadiene	µg/L	9.5 U	NA
Hexachlorocyclopentadiene	µg/L	9.5 U	NA
Hexachloroethane	µg/L	9.5 U	NA
Indeno(1,2,3-Cd)Pyrene	µg/L	9.5 U	NA
N-Nitroso-Di-N-Propylamine	µg/L	9.5 U	NA
N-Nitrosodiphenylamine	µg/L	9.5 U	NA
Naphthalene	µg/L	9.5 U	NA
Nitrobenzene	µg/L	9.5 U	NA
Pentachlorophenol	µg/L	9.5 U	NA
Phenanthrene	µg/L	9.5 U	NA
Phenol	µg/L	9.5 U	NA
Pyrene	µg/L	9.5 U	NA
METALS			U
Aluminum	µg/L	500 U	NA U
Antimony	µg/L	500 U	NA U
Arsenic	µg/L	5 U	NA U
Barium	µg/L	100 U	NA U
Beryllium	µg/L	10 U	NA U
Cadmium	µg/L	5 U	NA U
Calcium	µg/L	56.2 U	NA U
Chromium	µg/L	50 U	NA U
Cobalt	µg/L	50 U	NA U

Table 4-2

Summary of Analytical Results for QC Samples - TAA 779

Sample Identification Location Code Date Sampled		818655-B3130 EQUIPMENT RINSATE 12/18/02	818655-B3122 TRIP BLANK 12/18/02
	Unit		
Copper	µg/L	50 U	NA U
Iron	µg/L	1000 U	NA U
Lead	µg/L	5 U	NA U
Magnesium	µg/L	1000 U	NA U
Manganese	µg/L	20 U	NA U
Mercury	µg/L	.2 U	NA U
Molybdenum	µg/L	100 U	NA U
Nickel	µg/L	150 U	NA U
Potassium	µg/L	5000 U	NA U
Selenium	µg/L	5 U	NA U
Silver	µg/L	50 U	NA U
Sodium	µg/L	383 J	NA U
Thallium	µg/L	10 U	NA U
Vanadium	µg/L	100 U	NA U
Zinc	µg/L	20 U	NA U

Table 5-1
Residential Risk Screening Worksheet for Soil
TAA 779

Detected Chemical	Maximum TAA 779 Soil Concentration (mg/kg)	MCAS El Toro Background Concentration[a] (mg/kg)	CANCER			NON-CANCER		
			Residential PRG[b] (mg/kg)	TAA 779 Maximum Ratio[c]	MCAS El Toro Background Ratio[d]	Residential PRG[e] (mg/kg)	TAA 779 Maximum Ratio[f]	MCAS El Toro Background Ratio[f]
METALS								
Barium	329	173	NE	NE	NE	5.4E+03	6.09E-02	3.20E-02
Beryllium	1.25	0.669	NE	NE	NE	1.5E+02	8.33E-03	4.46E-03
Chromium	23.8	26.9	2.1E+02	1.13E-01	1.13E-01	NE	NE	NE
Cobalt	13	6.98	NE	NE	NE	4.7E+03	2.77E-03	1.49E-03
Copper	14.2	10.5	NE	NE	NE	2.9E+03	4.90E-03	3.62E-03
Lead	7.62	15.1	NE	NE	NE	4.0E+02	1.91E-02	3.78E-02
Nickel	12	15.3	NE	NE	NE	4.0E+02	3.00E-02	3.83E-02
Vanadium	75.7	71.8	NE	NE	NE	5.5E+02	1.38E-01	1.31E-01
Silver	0.73	233	NE	NE	NE	3.9E+02	1.87E-03	5.97E-01
Zinc	84.2	77.9	NE	NE	NE	2.3E+04	3.66E-03	3.39E-03
Subtotal sum of ratios				1.13E-01	1.13E-01		2.69E-01	8.49E-01
MCAS EL TORO BACKGROUND RISK RATIOS			CANCER RISK		1.13E-07	NON-CANCER HAZARD INDEX		0.85
TAA 779 SUMMED RISK			CANCER RISK	1.13E-07		NON-CANCER HAZARD INDEX	0.27	
TAA 779 RISK LESS BACKGROUND RISK (NET RISK)			NET CANCER RISK	$<1 \times 10^{6}$				

[a] *MCAS El Toro Background upper threshold limit concentrations from Final Technical Memorandum Background and Reference Levels, Bechtel National, Inc. 1996.*

[b] *Residential soil PRG for cancer from the EPA Region 9, November, 2002 list.*

[c] *The Ratio is determined by dividing the Concentration by the respective PRG.*

[d] *Where the background concentration exceeds the maximum concentration the background ratio was defaulted to the maximum ratio.*

[e] *Residential soil PRG for non-cancer from the EPA Region 9, November, 2002 list.*

[f] *The Ratio is determined by dividing the Concentration by the respective PRG.No ratios were calculated for chemicals detected below background levels.*

mg/kg - Milligrams per kilogram.

NE - Not established/No entry.

PRG - Preliminary remediation goal.

Maximum detected values used were taken from IT, 2002 and JEG, 1992 RFA soil borings.

Table 5-2
Industrial Risk Screening Worksheet for Soil
TAA 779

Detected Chemical	Maximum TAA 779 Soil Concentration (mg/kg)	MCAS El Toro Background Concentration[a] (mg/kg)	CANCER			NON-CANCER		
			Industrial PRG[b] (mg/kg)	TAA 779 Maximum Ratio[c]	MCAS El Toro Background Ratio[d]	Industrial PRGe (mg/kg)	TAA 779 Maximum Ratio[f]	MCAS El Toro Background Ratio[f]
METALS								
Barium	329	173	NE	NE	NE	5.4E+03	6.09E-02	3.20E-02
Beryllium	1.25	0.669	NE	NE	NE	1.9E+03	6.58E-04	3.52E-04
Chromium	23.8	26.9	4.5E+02	5.29E-02	5.29E-02	NE	NE	NE
Cobalt	13	6.98	NE	NE	NE	4.7E+03	2.77E-03	1.49E-03
Copper	14.2	10.5	NE	NE	NE	2.9E+03	4.90E-03	3.62E-03
Lead	7.62	15.1	NE	NE	NE	7.5E+02	1.02E-02	2.01E-02
Nickel	12	15.3	NE	NE	NE	2.0E+04	6.00E-04	7.65E-04
Vanadium	75.7	71.8	NE	NE	NE	1.4E+04	5.41E-03	5.13E-03
Silver	0.73	0.539	NE	NE	NE	5.1E+03	1.43E-04	1.06E-04
Zinc	84.2	77.9	NE	NE	NE	1.0E+05	8.42E-04	7.79E-04
Subtotal sum of ratios				5.29E-02	5.29E-02		8.64E-02	6.44E-02
MCAS EL TORO BACKGROUND RISK RATIOS			**CANCER RISK**		**5.29E-08**	**NON-CANCER HAZARD INDEX**		**0.06**
TAA 779 SUMMED RISK			**CANCER RISK**	**5.29E-08**		**NON-CANCER HAZARD INDEX**	**0.09**	
TAA 779 RISK LESS BACKGROUND RISK (NET RISK)			**NET CANCER RISK**	**<1 x 10^{6}**				

[a] MCAS El Toro Background upper threshold limit concentrations from Final Technical Memorandum Background and Reference Levels, Bechtel National, Inc. 1996.

[b] Residential soil PRG for cancer from the EPA Region 9, November, 2002 list.

[c] The Ratio is determined by dividing the Concentration by the respective PRG.

[d] Where the background concentration exceeds the maximum concentration the background ratio was defaulted to the maximum ratio.

[e] Residential soil PRG for non-cancer from the EPA Region 9, November. 2002 list.

[f] The Ratio is determined by dividing the Concentration by the respective PRG.No ratios were calculated for chemicals detected below background levels.

Maximum detected values used were taken from IT, 2002 and JEG, 1992 RFA soil borings.

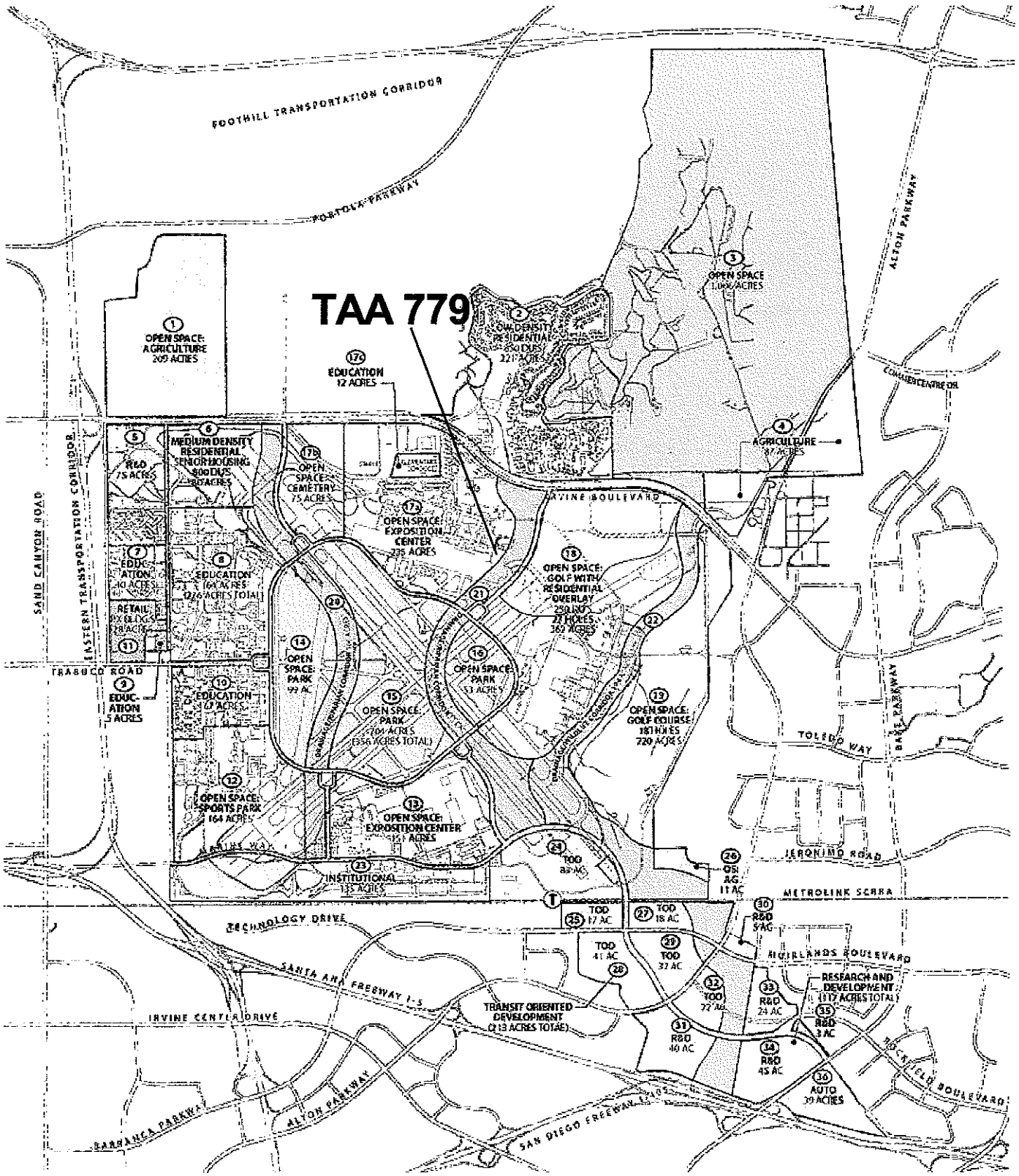
mg/kg - Milligrams per kilogram.

NE - Not established/No entry.

PRG - Preliminary remediation goal.

Irv\WP\Prod\EFA West\CTO 0024\DCN 5436\Tables 5-1 and 5-2.xls
02/04/03

APPENDIX A
GREAT PARK LAND USE PLAN



Great Park Land Use Plan

The Orange County Great Park

June 12, 2002

APPENDIX B
RFA BACKGROUND INFORMATION

MARINE CORPS AIR STATION EL TORO
EL TORO, CALIFORNIA
INSTALLATION RESTORATION PROGRAM
FINAL RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) FACILITY ASSESSMENT REPORT

PREPARED BY:
Southwest Division, Naval Facilities Engineering Command
1220 Pacific Highway
San Diego, California 92132-5190

THROUGH:
CONTRACT #N68711-89-D-9296
CTO #193
DOCUMENT CONTROL NO:
CLE-C01-01F193-S2-0001

WITH:
Jacobs Engineering Group, Inc.
3655 Nobel Drive, Suite 200
San Diego, California 92122

In association with:
International Technology Corporation
CH2M HILL

M. W. Arends 7/16/93

Mike Arends, P.E. — Date
CLEAN Project Manager
CH2M HILL, Inc.

Raoul Portillo 15 July 1993

Raoul Portillo — Date
CLEAN Technical Reviewer
Jacobs Engineering Group Inc.

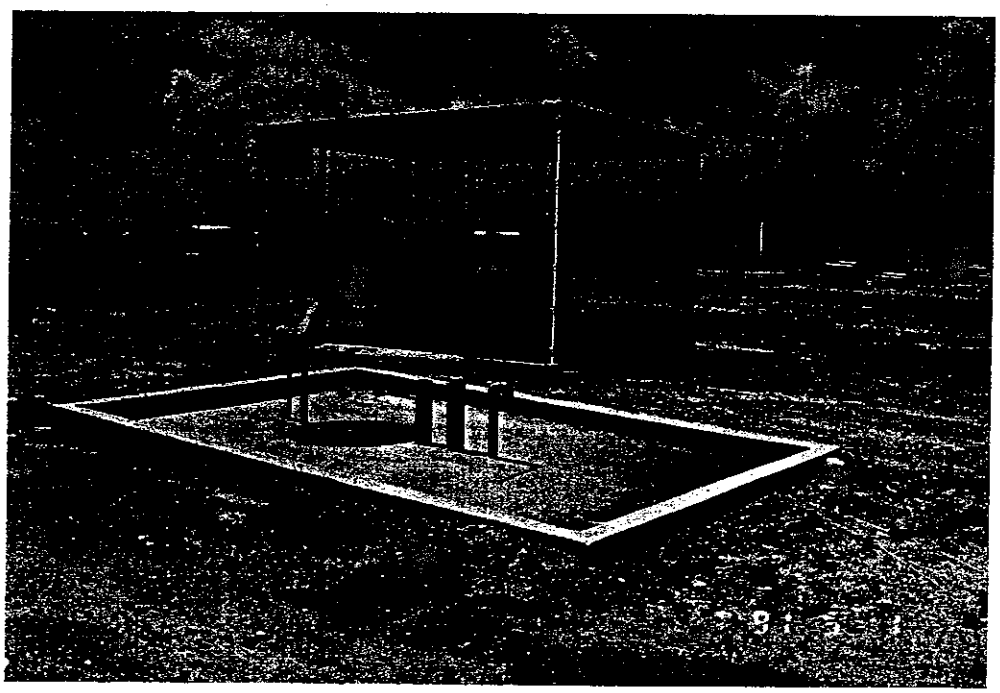
Evaluation Form
SWMU/Area of Concern
Number 227

Name: Hazardous Waste Storage Area 779

Location: South of Underground Storage Tank T-09

Size: 204 sq ft

Date of Site Visit: 01 May 1991



Period of Operation

Currently inactive

Evaluation Form
SWMU/Area of Concern
Number 227

Unit Characteristics

This HWSA is one of the six DHS-permitted HWSAs at MCAS El Toro. These six HWSAs (SWMU/AOC Numbers 222 through 227) are not planned for future use. Historically, these six HWSAs have had drums stored outside of the storage area.

This HWSA is approximately 12 x 18 ft in dimension. It consists of a concrete storage surface surrounded by a concrete berm approximately 6 in. high. The HWSA is enclosed by a chain-link fence and covered by an aluminum roof.

The HWSA is intended to be inactive. At the time of the visit, however, several cases of Kodak 55 Developer were placed inside the storage area by a departing squadron without authorization. Some of the photodeveloper had leaked within the HWSA; it was contained completely by the berm.

Waste Characteristics

Photodeveloper
Unknown in past

Migration Pathways

Soil

Evidence of Release

Photodeveloper had leaked inside the storage area

Exposure Potential

Authorized on-Station personnel

Recommendations

Although there was no evidence of a release outside of the storage area, the past and present HWSAs at MCAS El Toro are recommended for a sampling visit.

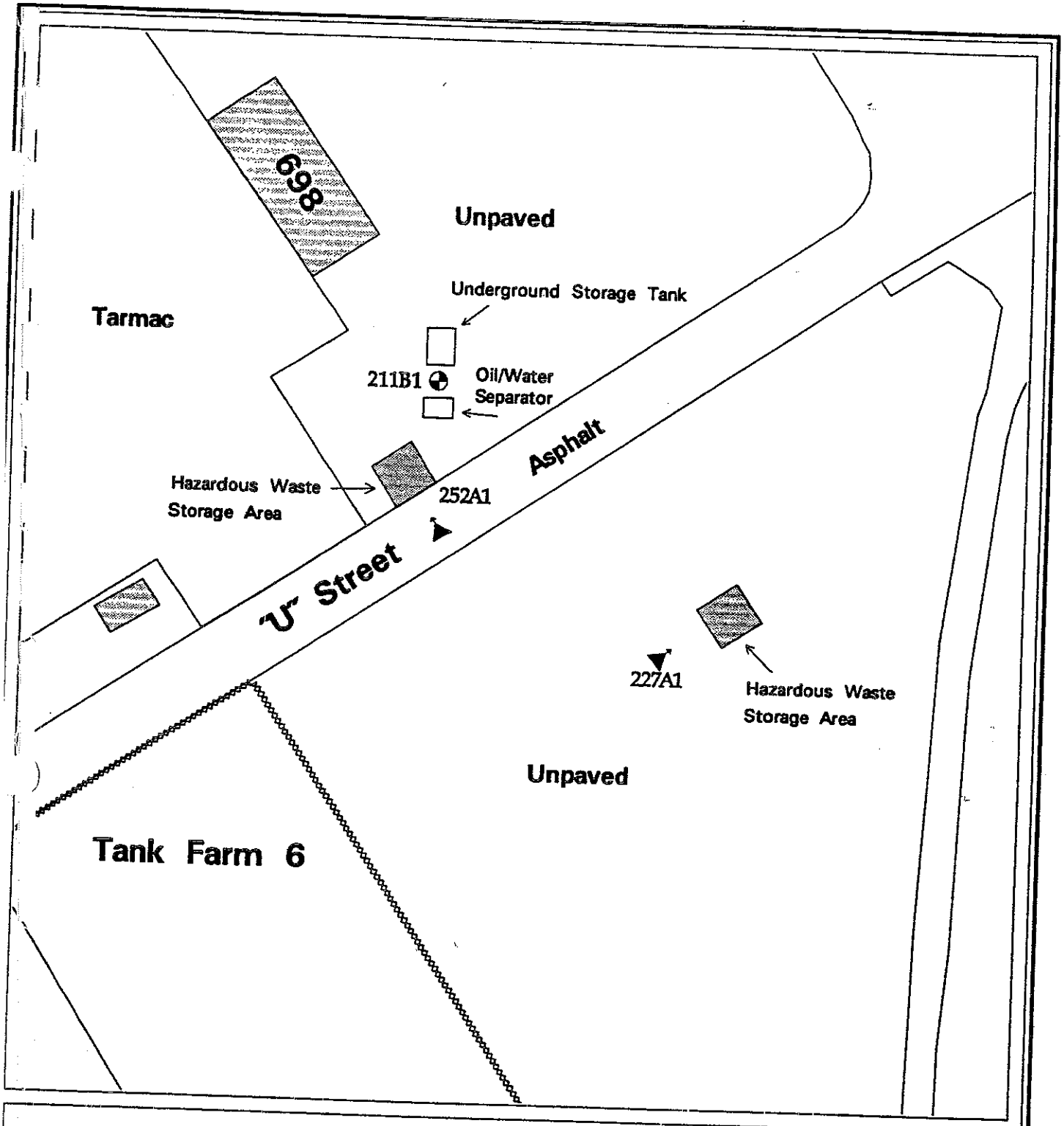


Figure 64 Sample Location Map

Boring Location and Number:

- 123H4 5' Deep Boring
- 123B4 25' Deep Boring
- 123A4 60' Long, Angle Boring

Features:

- Building
- Concrete
- Fence
- Railroad

Scale

0 20 40 80 Feet

SWMU/AOC Number and Type:

211 - Oil/Water Separator

227 - Hazardous Water Storage Area

252 - Hazardous Waste Storage Area

MCAS El Toro
RCRA Facility Assessment

MCAS EL TORO RCRA FACILITY ASSESSMENT -- SAMPLING VISIT RESULTS

SWMU/AOC NUMBER	SWMU/AOC TYPE (FIGURE)	BORING NUMBER	SAMPLE DEPTH (FEET)	ANALYTICAL TEST RESULTS							RECOMMENDATIONS	
				TPH (mg/kg)	TFH (mg/kg)		VOCs (ug/kg)	SVOCs (ug/kg)	PESTICIDES/PCBs (ug/kg)	METALS (mg/kg)	Action	Rationale
					Gasoline	Diesel						
227	Hazardous Waste Storage Area (64)	A1	10	79	ND	ND	Methylene Chloride-7 BJ * Acetone-13 B *	ND	ND	Silver-ND Barium-80.5	NFA	TPH/TFH < 100 ppm VOCs < CRDL SVOCs < CRDL Pest/PCB < CRDL Metals < ETM & PRG CRDL - Contract Required Detection Limit
			25	58	ND	ND	Methylene Chloride-6 BJ *	ND	ND	Silver-ND Barium-174		
			30	76	ND	ND	Methylene Chloride-11 BJ * Acetone-10 BJ *	Butylbenzylphthalate-310 J	ND	Silver-0.41 B Barium-134		
			40	ND	ND	ND	Methylene Chloride-14 B * Acetone-17 B *	ND	ND	Silver-0.73 B Barium-329		
			50	39	ND	ND	Methylene Chloride-8 BJ * Acetone-14 B *	ND	ND	Silver-0.59 B Barium-169		
			57	35	ND	ND	Methylene Chloride-7 BJ * Acetone-8 BJ *	ND	ND	Silver-0.48 B Barium-169		

MCAS EL TORO RCRA FACILITY ASSESSMENT -- SAMPLING VISIT RESULTS

SWMU/AOC NUMBER	SWMU/AOC TYPE	BORING NUMBER	SAMPLE DEPTH (FEET)	ANALYTICAL TEST RESULTS: TPH (mg/kg)	TFH (mg/kg): Gasoline	TFH (mg/kg): Diesel	VOCs (ug/kg)	SVOCs (ug/kg)	PESTICIDES/PCBs (ug/kg)	METALS (mg/kg)	RECOMMENDATIONS: Action	RECOMMENDATIONS: Rationale
This column gives the SWMU/AOC number.	This column briefly describes the purpose or type of area sampled. (The Figure number associated with the SWMU/AOC is presented here. The figures are located in Appendix B.)	This column identifies the boring number, which consists of a letter and a number. The letters represent the following: H = Hand Auger B = 25-ft Vertical Boring A = 60-ft Angle Boring The numbers designate the boring number at the site.	Depth below the ground surface, in feet, at which the sample was collected. Duplicate samples are listed directly below the original samples.	Total petroleum hydrocarbon concentration, in mg/kg, as measured by Method 418.1. ND - Not detected above detection limit of Method 418.1. NA - Not analyzed for TPH.	Total fuel hydrocarbon concentrations in mg/kg, as measured by Method 8015 for diesel and for gasoline. ND - Not detected above detection limit of Method 8015. NA - Not analyzed for TFH. Z - Unknown hydrocarbons.		This column presents the Volatile Organic Compounds detected at each depth. The concentrations are presented in ug/kg. ND - No VOCs were detected above the CRDLs. If compounds are listed, then all other compounds not listed are below detection limits. Qualifiers are defined as follows: B = Analyte is found in associated blank as well as the sample. J = Indicates an estimated value. E = Compound may be above or below linear range of instrument. D = Indicates compound has been diluted to bring the concentration into linear range. X = Indicates the compound concentration has been manually modified or the EPA qualifier has been manually modified or added. * = Indicates compound was eliminated from further consideration due to laboratory contamination.	This column presents the Semivolatile Organic Compounds detected at each depth. The concentrations are presented in ug/kg. ND - No SVOCs were detected above the CRDLs. If compounds are listed, then all other compounds not listed are below detection limits. NA - Not analyzed for SVOCs Qualifiers are defined as follows: B = Analyte is found in associated blank as well as the sample. J = Indicates an estimated value. E = Compound may be above or below linear range of instrument. D = Indicates compound has been diluted to bring the concentration into linear range. X = Indicates the compound concentration has been manually modified or the EPA qualifier has been manually modified or added. * = Indicates compound was eliminated from further consideration due to laboratory contamination.	This column presents the Pesticides/PCBs detected at each depth. The concentrations are presented in ug/kg. ND - No Pesticides/PCBs were detected above the CRDLs. If compounds are listed, then all other compounds not listed are below detection limits. NA - Not analyzed for Pesticides/PCBs Qualifiers are defined as follows: B = Analyte is found in associated blank as well as the sample. J = Indicates an estimated value. E = Compound may be above or below linear range of instrument. D = Indicates compound has been diluted to bring the concentration into linear range. C = Presence of compound has been confirmed by GC/MS analysis.	This column presents the results of the metals analyses. Concentrations are only presented if at least one sample is above background threshold concentrations. The concentrations are presented in mg/kg. NA - Indicates that samples were not analyzed for metals. NAB - Indicates that metals were analyzed, but concentrations are not above background threshold concentrations. Qualifiers are defined as follows: B = Reported value was less than the CRDL but greater than the IDL. E = Value was estimated due to interference. M = Duplicate injection precision not met. N = Spiked sample recovery not within control limits.	This column presents the recommended action for each site and describes the rationale that led to the recommendation. NFA = No Further Action. CRDL = Contract Required Limit. BGT = Background Threshold Value. ETM = El Toro Model. PRG = Preliminary Remedial Goals.	

Southwest Division
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

FINAL ADDENDUM TO THE RCRA FACILITY ASSESSMENT MCAS EL TORO, CALIFORNIA (VOLUME 6 OF THE FINAL RFA REPORT)

CTO-0065/0170

May 1996

Prepared by:

BECHTEL NATIONAL, INC.
401 West A Street, Suite 1000
San Diego, CA 92101

Signature: _____ Date: 31 May 1996
Jacques Lord, CTO Leader

ACCUMULATION AREA EVALUATION CHECKLIST

(CIRCLE AS APPROPRIATE AND FILL IN COMPLETELY)

JOB 22214 CTO-0065
NAVY CLEAN II MCAS EL TORO RFA CONFIRMATION ACTIVITIES

GENERAL DESCRIPTION:

SWMU #: **227** Accumulation Area (AA) #: **779**
Location (bldg): **HWSA/Bldg. 779**
Site Contact: **Leta Suarez** Ext: **2772**
Permission for Access? (Y) ~~N~~ If yes, explain: **locked fence around berm.**
Type of Wastes Observed: **None**

TYPE: (CIRCLE AS APPROPRIATE)

~~Locker~~ ~~Cabinet~~ (Pad) (Concrete) ~~Soil/Asphalt~~ floor
(Berm) (Fence) Fence Type: **Cyclone** ~~Indoor~~
(Pallets) (Drum(s)) No. of Drums: **6** (Outdoor)

CONDITION:

~~Stain(s)~~ ~~Odor(s)~~ ~~Crack(s)~~
Placards/Labels: (Y) ~~N~~ If Yes, list: **JP-5**
Synthetic Oil

Observations: **Clean concrete pad. Roof over pad. Vacant.**
Status: **Active as of 11-10-95. 3 barrels, spill kits, eyewash.**

DIMENSIONS: (ESTIMATED SIZE OR AREA IN FT)

AA/SWMU: **15x10 ft.**
"Stain(s)": **None.**
Any Restrictions To Access?: **Fence, roof and poles.**

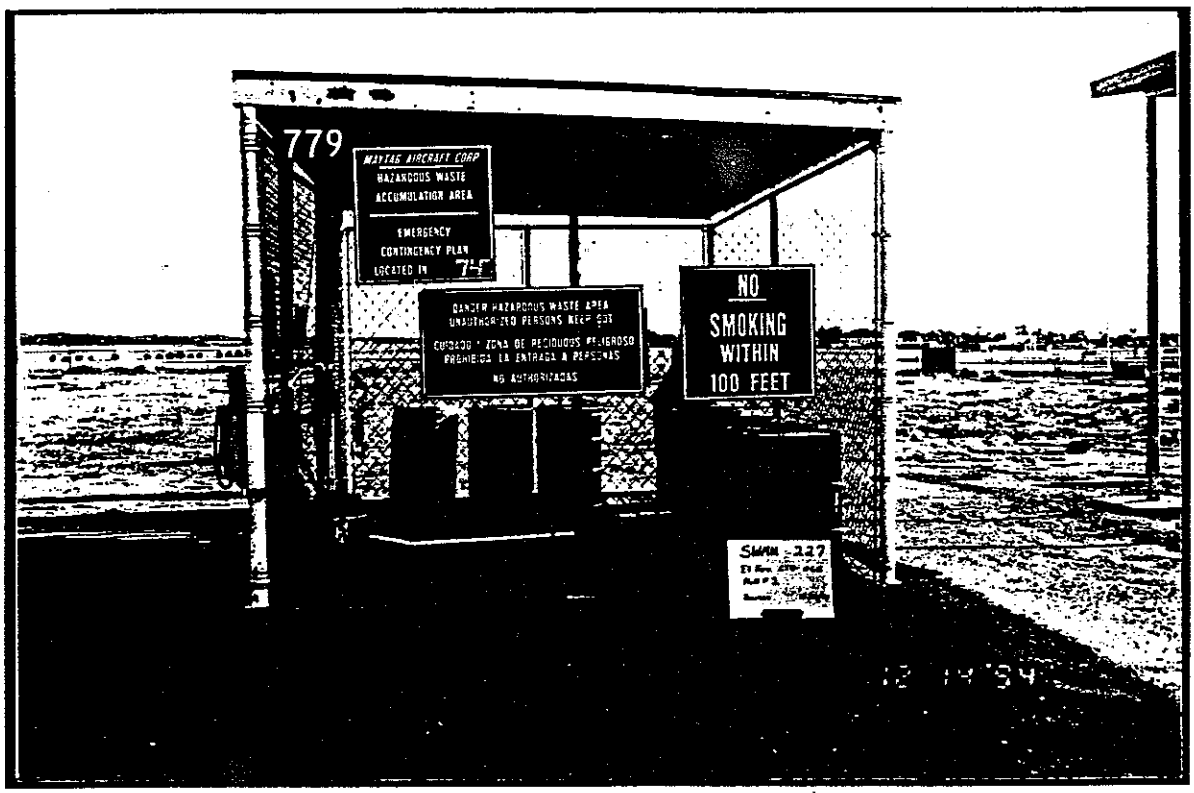
EVALUATION OF REMOVAL/DECONTAMINATION STRATEGY (CIRCLE AS APPROPRIATE)

Yes	(No)	Potential for release evident based on this surveillance
(Yes)	No	Potential for simple removal
Yes	(No)	Potential for decontamination activities prior to removal
Yes	(No)	Potential for sampling (describe:)
Yes	No	Potential for removal after additional assessment activities

SKETCH: (MAKE A SKETCH or ATTACH PHOTO(S) OF RELEVANT ACCESS, OBJECTS, WORK SPACE, ETC , AS APPROPRIATE, ON REVERSE OF THIS FORM)

DATE/TIME OF SURVEILLANCE: 12-7-94/10:50
UPDATED: 11-10-95
SURVEILLANCE PERFORMED BY: Larry Bauman

PHOTO LOG



SWMU #: 227

PHOTO DATE: 12-15-94

APPENDIX C
EXCERPTS FROM SWPPP

STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

FOR

MARINE CORPS AIR STATION EL TORO
EL TORO, CALIFORNIA

CONTRACT NO. N68711-96-D-2059
DELIVERY ORDER NO. 0002

VOLUME 1

DECEMBER, 1996
INTEGRATED ENVIRONMENTAL MANAGEMENT, INC.

TABLE 5-10
BASIN 8
SUMMARY OF BMPs

BLDG #	BASIN	BUILDING DESCRIPTION	TENANT	Concern Level	BMP STATUS	BMP #	BMP Description
763	08	ACFT Washrack Utility Building	MAG-11	Concern	Rec	01	Personnel Education
					Rec	04	Spill Prevention, Control, Countermeasures Plans
					Rec	10	Perform Routine Maintenance of Oil/Water Separator
764	08	Vehicle Washrack Utility Building	MALS-11	Previous			No Additional BMPs Recommended
779	08	HW Collection Facility	Environment	Concern	Rec	01	Personnel Education
					Existing	04	Spill Prevention, Control, Countermeasures Plans
					Existing	06	Construct Berm or Provide Secondary Containment
					Existing	17	Cover Area with Roof
					Existing	36	Place Spill Kit in Area
840	08	Explosives Safety Office	MALS-11	Limited			No Additional BMPs Recommended
900	08	Haz/Flam Materials Storehouse	Environment	Previous			No Additional BMPs Recommended
921	08	Haz/Flam Materials Storehouse	MALS-11	Previous			No Additional BMPs Recommended
923	08	Drop Tank Rinse Facility	MAG-11	Previous			No Additional BMPs Recommended

TABLE 5-39
MCAS EL TORO
SPILL HISTORY

Date	Incident No.	Description
November 28, 1995	N/A	Approximately 2 quarts of hydraulic fluid were lost on the roadway and shoulder when a forklift's hydraulic line was inadvertently punctured. A drip pan was placed under the leaking line to contain the leak and contaminated soil was removed and drummed as hazardous waste.
September 18, 1995	N/A	A one gallon container of liquid scale dissolver spilled when it was dropped by warehouse personnel. The spill was diked and absorbed with ash. Spill contained to the warehouse floor.
September 12, 1995	N/A	Three quarts of hydraulic fluid spilled onto the concrete warehouse floor when a forklift's fork punctured the stored material during issuance. Spilled cleaned up with speedy dry absorbent. Spill contained to the warehouse floor.
July 21, 1995	N/A	Approximately 80 gallons of JP-5 fuel spilled when a fuel truck attempted to fuel an aircraft with an open fuel cell. Spill cleaned up with speedy dry absorbent. Spill contained to the flightline.
July 20, 1995	N/A	Approximately 10 gallons of JP-5 fuel spilled when an aircraft vented it's tanks. Spill cleaned up with speedy dry absorbent. Spill contained to the flightline.
June 29, 1995	N/A	Approximately 70 gallons of JP-5 fuel spilled from an aircraft fuel tank with a dysfunctional valve. Spill cleaned up with speedy dry absorbent. Spill contained to the flightline.
November 1, 1994	N/A	Approximately 400 gallons of JP-5 fuel leaked from an F/A-18 aircraft. Three hundred gallons were recovered and 100 gallons were cleaned up with speedy dry absorbent. Spill contained to the flightline.
November 1, 1994	N/A	Approximately 250 gallons of JP-5 fuel leaked from an F/A-18 aircraft. Spill cleaned up with speedy dry absorbent. Spill contained to the flightline.
September 1, 1994	N/A	Approximately 1 gallon of hydrochloric acid and another gallon of chlorine spilled when

TABLE 5-39
MCAS EL TORO
SPILL HISTORY

Date	Incident No.	Description
		their lines ruptured. Pumping through the line was stopped immediately and the spill was cleaned up with sodium bicarbonate. Spill contained to the flightline.
August 12, 1994	N/A	A small amount of paint stripper (methylene chloride) from a 5 gallon can spilled when the can overheated and blew its cap. The small amount evaporated before cleanup could occur.
July 14, 1994	249777	Approximately 25 gallons of transformer oil, possibly containing more than 55 ppm PCBs, spilled when the personnel handling the transformer overturned it. The initial responders laid down absorbent socks, mats pads and Lite-Dri absorbent around the spill and on the liquid. Workers then removed and drummed soil from the spill area as hazardous waste. Cleanup began immediately on 14 July 94 and was completed 15 July 94. Additional hazardous waste included the absorbent materials, personal protective gear rags and mops used to cleanup the spill.
April 26, 1994	N/A	Approximately 100 gallons of JP-5 fuel spilled when an aircraft vented its tanks. Spill cleaned up with speedy dry absorbent. Spill contained to the flightline.
March 8, 1994	N/A	Approximately 20 gallons of JP-5 fuel spilled when an aircraft was refueling. Spill cleaned up with speedy dry absorbent. Spill contained to the flightline.
May 11, 1993	318	Caustic soap leaked from a container behind Bldg. 317.
March 1, 1993	146	Approximately one quart of methyl ethyl ketone spilled to the ground at Bldg. 306.
September 9, 1992	873	Unknown quantity of fumigant released into the soil at Strawberry Field.
August 16, 1992	788	Fire occurred at Bldg. 751 with a van containing Hg, Li, Cd, and Pb-acid batteries. This caused a chemical release into the atmosphere.

TABLE 5-39
MCAS EL TORO
SPILL HISTORY

Date	Incident No.	Description
June 1, 1992	560	Approximately 3,950 gallons of JP-5 spilled from a refueler. Fuel was contained and did not enter storm drains.
May 28, 1992	552	JP-5 smell coming from storm drain at Bldg. 368. Flow from drain diverted to oil/water separators.
March 5, 1992	228	Three quarts of Hg spilled at Bldg. 297. The spill was contained.
March 5, 1992	223	Tractor trailer spilled 15-20 gallons of diesel fuel into sanitary sewer. Sewer system was diked and covered.
February 5, 1992	121	One gallon of transformer oil containing PCBs spilled at Bldg. 439. The spill was contained.
January 17, 1992	053	Approximately 100 gallons of antifreeze spilled into ditch and then to Agua Chinon.
December 18, 1991	1092	Lithium battery exploded at Bldg. 17. The debris was contained with some off-gassing.
November 19, 1991	997	Approximately 10 Lithium Batteries leaking and off-gassing at Bldg. 673T3.
September 16, 1991	754	Contaminated oil spilled into sewer at Bldg 295.
July 12, 1991	580	Paint stripper spilled into ditch near Bldg. 800. The spill was diverted to oil/water separator.
May 23, 1991	453	Unknown white substance found at Officer's Club crystal room.

A reference to a major spill is contained in the May 1990 SPCCP written for the MCAS. The SPCC states that "one major unauthorized release has occurred in the last two years. In August

APPENDIX D
EXCERPTS FROM HM/HWMP

Final

Marine Corps Air Station El Toro Hazardous Material/Hazardous Waste Management Plan

August 1994

Prepared for:

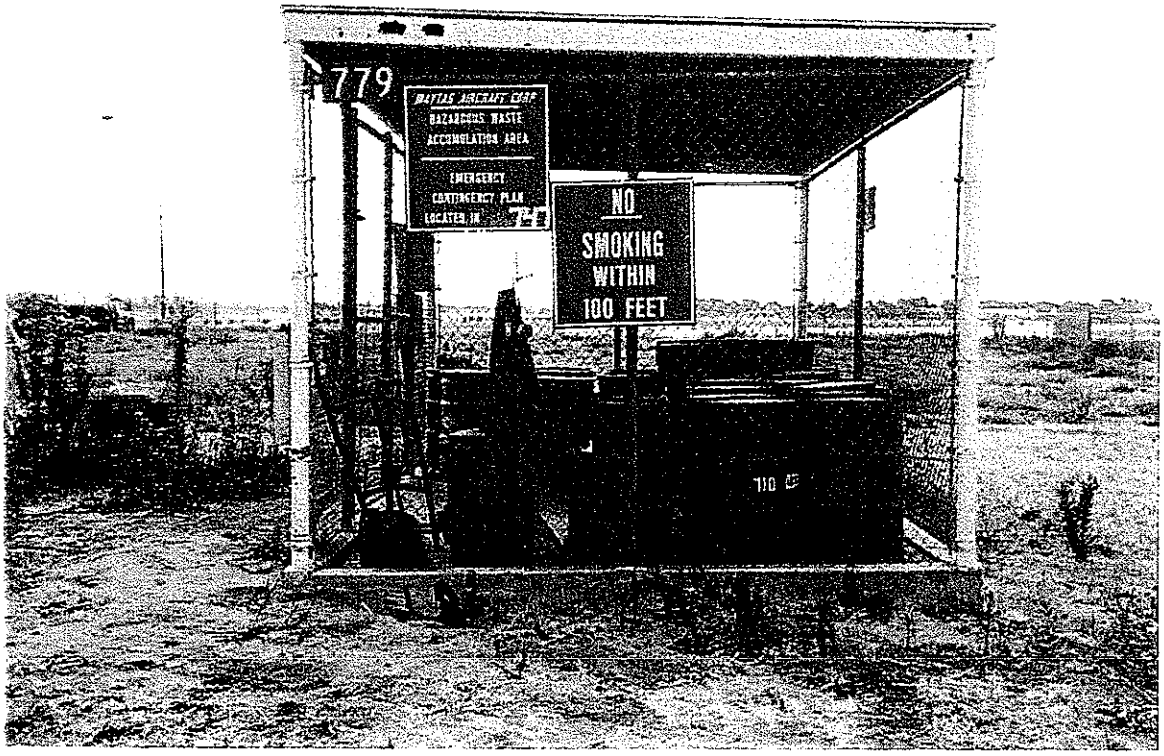
Southwest Division Naval Facilities Engineering Command
1220 Pacific Highway
San Diego, CA 92132-5190

Prepared by:

Science Applications International Corporation
Engineering Sciences Division
10260 Campus Point Drive
San Diego, CA 92121

Contract No. N68711-92-D-4658
Delivery Order No. 0004

Hazardous Waste Accumulation Point Summary		
Unit	Bldg #	Coordinates
Aero Club	10	R5
Armory	744	O2
Auto Hobby Shop	626	M3
CSSD-14	388	U8
Environmental Above Ground Storage Tank	n/a	U6
FMD Shops, Bldg 1601	370	T6
Fuels Division	314	U9
H&HS 38	22	R4
MACG-38 MWCS 38	HGR 5	R4
MAG-46	51	Q4
MAG-46 Fixed Wing	296	T9
MAG-46 Helo Mals-46	295	S8
MALS-11 Air Frames	130	M9
MALS-11 Avionics	856	Q12
MALS-11 Cryogenics (ALSS)	636	R12
MALS-11 GSE North	392	M9
MALS-11 Ordinance	673	P12
MALS-11 Power Plant	658	N10
MALS-11 Power Plant	634	N9
MALS-11 Supply	441	P12
Maytag Aircraft Corp	779	N10
MOD Team	115	N9
Motor Pool (G-4), Bldg 770	386	T7
MWHS-3	7	Q5
MWR Auto #1	651	O2
MWR Golf Course	390	P13
MWSS-Utilities	31	S4
MWSS-373 HQ	800	U10
MWSS-373 Refuelers	671	U9
SOMS HQ	289	N5
SOMS Maintenance	HGR 2	O4
SOMS Recovery		
Supply	320	U7
VMFA (AW)-121	462	R11
VMFA (AW) 225	698	N9
VMFA (AW)-242	461	R11
VMFAT-101	371	Q10
VMFA-323	606	N8
VMGR-352	297	T8
VFMA-314	605	N7



Maytag Aircraft Corporation Bldg 779

Maytag Aircraft Corporation Bldg 779

APPENDIX E
EXCERPTS FROM EBS

MARINE CORPS AIR STATION EL TORO
EL TORO, CALIFORNIA
INSTALLATION RESTORATION PROGRAM
FINAL ENVIRONMENTAL BASELINE SURVEY REPORT

01 April 1995

Revision 0

PREPARED BY:
Southwest Division, Naval Facilities
Engineering Command
1220 Pacific Highway
San Diego, California 92132-5190

THROUGH:
CONTRACT #N68711-89-D-8296
CTO #284
DOCUMENT CONTROL NO.
CLE-C01-01F284-SZ-8004

WITH:
Jacobs Engineering Group Inc.
401 West A Street, Suite 1905
San Diego, California 92101

IT association with:
International Technology Corporation
CH2M HILL

M. N. Arends 3/31/95

Mike Arends, P.E. Date
CLEAN Project Manager
CH2M HILL, Inc.

Max Pan 3-31-95

Max Pan, P.E. Date
CLEAN Technical Reviewer
IT Corporation

SCO100217CD.WPS\95\MA

Table 3-7
Less Than 90-Day Accumulation Area Inventory
MCAS El Toro EBS Report - April 1995

Database Tracking	Building Number	Status	SWMU/ AOC	Comments	AREA TYPE
SAA 441	441	Inactive	256	RFA recommended NFA	3
SAA 442	442	Inactive	126	Sampling Visit Not Recommended During PR/VSI	2
SAA 445	445	Inactive	127	Sampling Visit Not Recommended During PR/VSI	2
SAA 447	447	Inactive	130	RFA recommended NFA	3
SAA 456	456	Inactive	135	Sampling Visit Not Recommended During PR/VSI	2
SAA 461	461	Active	138	RFA recommended NFA (1)	2
SAA 462	462	Active	140	Sampling Visit Not Recommended During PR/VSI	2
SAA 529	529	Inactive	144	RFA recommended NFA	2
SAA 534	534	Inactive	146	Sampling Visit Not Recommended During PR/VSI	2
SAA 602	602	Inactive	147	RFA recommended NFA	3
SAA 605	605	Active	149	RFA recommended NFA	3
SAA 606	606	Active	255	RFA recommended NFA	2
SAA 626	626	Active	158	IRP Site 20 (1)	7
SAA 634	634	Active		Identified in 1994 SPCC Plan	7
SAA 636	636	Inactive	160	RFA recommended NFA	3
SAA 651	651	Active	165	Located within SWMU/AOC 164	3
SAA 658	658	Active	171	Shallow soil borings recommended	7
SAA 671	671	Active	172	RFA recommended NFA	2
SAA 672	672	Inactive	177	Sampling Visit Not Recommended During PR/VSI	2
SAA 673	673	Active	186	RFA recommended NFA	2
SAA 693	693	Active		Identified in Station's HW Open Drum Inspection Report	7
SAA 698	698	Active		Identified in 1994 SPCC Plan	7
SAA 744	744	Active		Identified in 1994 SPCC Plan	7
SAA 746	746	Active		Identified in Station's HW Open Drum Inspection Report	7
SAA 747	747	Actvie		Identified in Station's HW Open Drum Inspection Report	7
SAA 761	761	Inactive		Located at IRP Site 6 (2)	7
SAA 765	765	Inactive	266	Sampling Visit Not Recommended During PR/VSI	2
SAA 769	769	Inactive	222	RFA recommended NFA	2
SAA 770	770	Inactive	223	RFA recommended NFA	3
SAA 771	771	Inactive	224	RFA recommended NFA	2
SAA 772	772	Inactive	225	RFA recommended NFA	3
SAA 778	778	Inactive	226	RFA recommended NFA	3
SAA 779	779	Inactive	227	RFA recommended NFA	3
SAA 800	800	Active	229	RFA recommended NFA	2
SAA 831	831	Active		Identified in Station's HW Open Drum Inspection Report	7
SAA 856	856	Active	234	RFA recommended NFA	3
SAA 900	900	Active		Environmental Office accumulation area	7

Table 3-7
Less Than 90-Day Accumulation Area Inventory
MCAS El Toro EBS Report - April 1995

Database Tracking	Building Number	Status	SWMU/ AOC	Comments	AREA TYPE

NOTES:
(1) - SWMUs/AOCs that were determined to be located within RI/FS site boundaries were eliminated from RFA sampling visits
These SWMUs/AOCs will be investigated in the IRP
(2) - Accumulation areas are currently being evaluated for removal and/or decontamination strategies.
* - Indicates RFA recommendation of "no further action" is pending U.S. EPA approval
PR/VSI - Preliminary Review/Visual Site Inspection performed as part of the RFA.
IRP - Installation Restoration Program
RFA - RCRA Facility Assessment
NFA - No Further Action

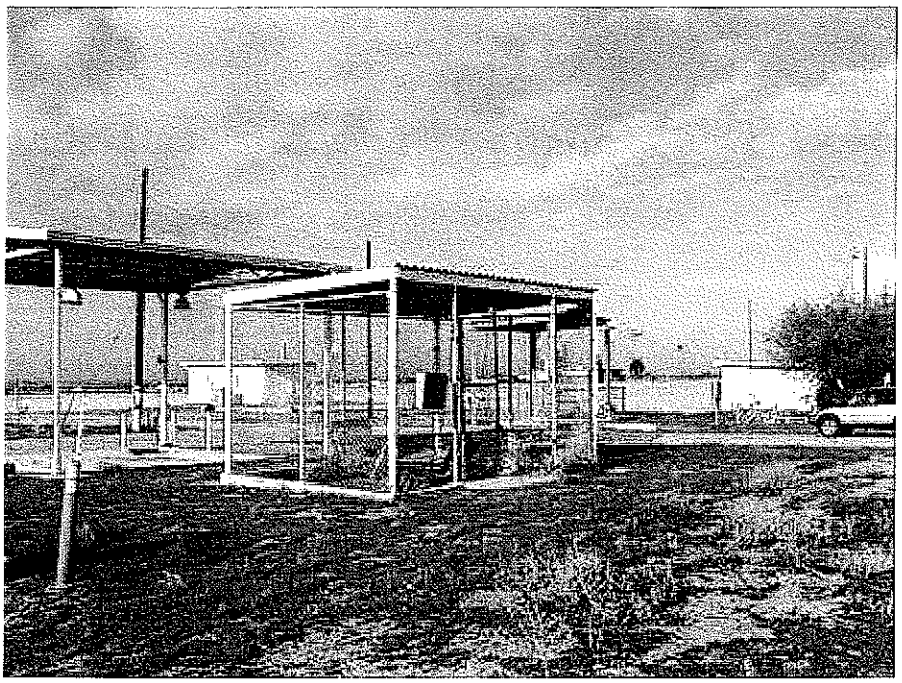
Sources:
Jacobs, 1993. MCAS El Toro Final RCRA Facility Assessment Report.
MCAS El Toro Hazardous Waste Open Drum Inspection Report Sheet
SAIC, 1994. Draft Oil and Hazardous Substances Spill Prevention and Countermeasure Plan and Contingency Plan (SPCC).

Table 4-1
Definitions of BCP Area Types
MCAS El Toro EBS Report - April 1995

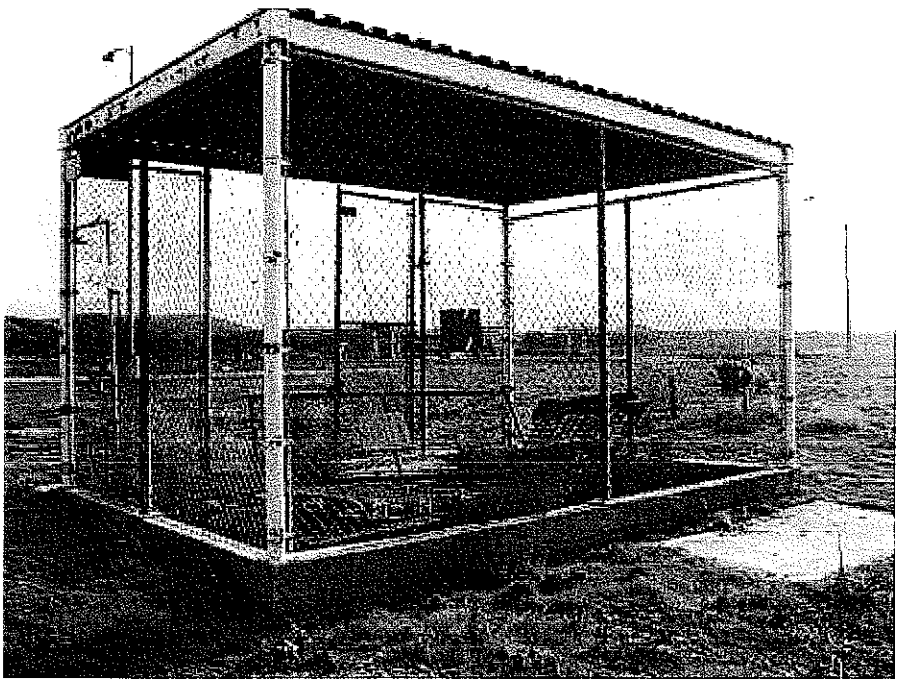
Area Type	Definition
1	Areas where no storage, release, or disposal of hazardous substances or petroleum products has occurred (including no migration of these substances from adjacent areas).
2	Areas where only storage of hazardous substances or petroleum products has occurred (but no release, disposal, or migration from adjacent areas has occurred).
3	Areas where storage, release, disposal, and/or migration of hazardous substances or petroleum products has occurred, but at concentrations that do not require a removal or remedial action.
4	Areas where storage, release, disposal, and/or migration of hazardous substances or petroleum products has occurred, and all remedial actions necessary to protect human health and the environment have been taken.
5	Areas where storage, release, disposal, and/or migration of hazardous substances or petroleum products has occurred, removal and/or remedial actions are underway, but all required remedial actions have not yet been taken.
6	Areas where storage, release, disposal, and/or migration of hazardous substances or petroleum products has occurred, but required response actions have not yet been implemented.
7	Areas that are unevaluated or require additional evaluation to assess whether a release will require remedial action.

Source: Department of Defense, BRAC Cleanup Plan (BCP) Guidebook.

APPENDIX F
MCAS, EL TORO PLANT ACCOUNT RECORDS



View of TAA 779 and surrounding unpaved area

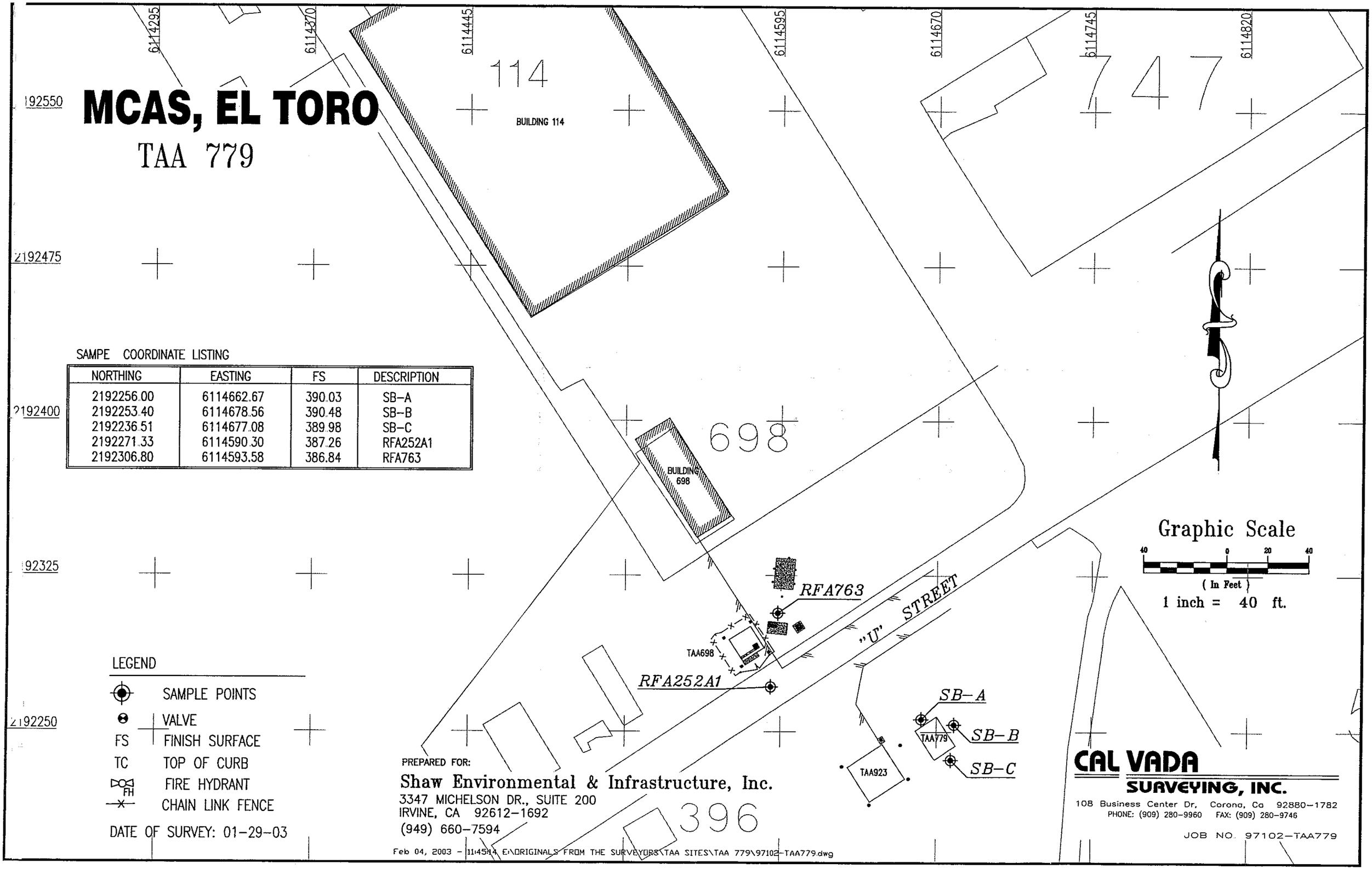


TAA 779

APPENDIX H
LAND SURVEY DRAWING

MCAS, EL TORO

TAA 779



SAMPE COORDINATE LISTING

NORTHING	EASTING	FS	DESCRIPTION
2192256.00	6114662.67	390.03	SB-A
2192253.40	6114678.56	390.48	SB-B
2192236.51	6114677.08	389.98	SB-C
2192271.33	6114590.30	387.26	RFA252A1
2192306.80	6114593.58	386.84	RFA763

LEGEND

- SAMPLE POINTS
- VALVE
- FS FINISH SURFACE
- TC TOP OF CURB
- FH FIRE HYDRANT
- CHAIN LINK FENCE

DATE OF SURVEY: 01-29-03

PREPARED FOR:

Shaw Environmental & Infrastructure, Inc.
3347 MICHELSON DR., SUITE 200
IRVINE, CA 92612-1692
(949) 660-7594

CAL VADA SURVEYING, INC.
108 Business Center Dr, Corona, Ca 92880-1782
PHONE: (909) 280-9960 FAX: (909) 280-9746

JOB NO. 97102-TAA779

Feb 04, 2003 - 11:45:14 E:\ORIGINALS FROM THE SURVEYORS\TAA SITES\TAA 779\97102-TAA779.dwg

APPENDIX I
ANALYTICAL REPORT

the IT group

IT Corporation
2790 Mosside Blvd.
Monroeville, PA 15146-2792
(412)372-7701

CHAIN-OF-CUSTODY RECORD

PROJECT DATA MANAGER'S COPY

A 15871

FORM 0019 REV. 9-99

IT'S LAB COORDINATOR: LYNN JEFFERSON	LAB COORDINATOR'S PHONE: 949 660.7537	LAB COORDINATOR'S FAX: 949.475.5433	LABORATORY SERVICE ID: EMAX	LABORATORY CONTACT: YE MYNT	MAIL REPORT (COMPANY NAME): SHAW E&I
PROJECT NAME: MCAS EL TORO	PROJECT LOCATION: MCAS EL TORO	PROJECT NUMBER: 818655	LABORATORY PHONE: 310.618.8889	LABORATORY FAX: 310.618.0818	RECIPIENT NAME: DWAYNE ISHIDA
PROJECT CONTACT: DHANANJAY RANAL	PROJECT PHONE NUMBER: 949.660.7576	PROJECT FAX: 949 474-8309	LABORATORY ADDRESS: 1835 W 205th ST.		ADDRESS: 3347 MICHELSON DR. SUITE 200
PROJECT ADDRESS: MCAS EL TORO	CITY, STATE AND ZIP CODE: SANTA ANA, CA	CLIENT: EFA WEST	CITY, STATE AND ZIP CODE: TORRANCE, CA 90501		CITY, STATE AND ZIP CODE: IRVINE, CA 92612
PROJECT MANAGER: DHANANJAY RANAL	PROJECT MANAGER'S PHONE: 949.660.7576	PROJECT MANAGER'S FAX: 949.474.8309			

Item	Sample Identifier	Matrix	Date 2002	Time	Preserved	# of Cont.	QC Level	T.A.T.	Analyses: 8260 (VOC)	8270 (SVOC)	8270 (SIM)	8015 (GAS)	8015 (DIESEL)	8081 (PESTICIDE)	6010 (METALS)	Comments
1	818655-B3122	W	12/18	0900	HCl	3	3	5 DAY	X							
2	818655-B3123	↓	↓	1300 ~~1010~~	4°C	7	↓	↓	X	X	X	X	X	X	X	
3	818655-B3124	↓	↓	1345 ~~1025~~	↓	↓	↓	↓	X	X	X	X	X	X	X	
4	818655-B3125	↓	↓	1400	↓	↓	↓	↓	X	X	X	X	X	X	X	
5	818655-B3126	↓	↓	1405	↓	↓	↓	↓	X	X	X	X	X	X	X	
6	818655-B3127	↓	↓	1410	↓	↓	↓	↓	X	X	X	X	X	X	X	
7	818655-B3128	↓	↓	1415	↓	↓	↓	↓	X	X	X	X	X	X	X	
8	818655-B3129	↓	↓	1420	↓	↓	↓	↓	X	X	X	X	X	X	X	
9	818655-B3130	↓	↓	1435	HCl HNO_3	11	↓	↓	X	X		X	X	X	X	
10							DR 12/15/02									

SAMPLES COLLECTED BY: P REEVES, L JEFFERSON COURIER AND AIR BILL NUMBER: EMAX COURIER

COOLER TEMPERATURE UPON RECEIPT:

RELINQUISHED BY	RECEIVED BY	DATE	TIME	SAMPLE'S CONDITION UPON RECEIPT
[signature] 1500	[signature]	12-18-02	3:00	

Distribution: White - Laboratory (To be returned with Analytical Report); Goldenrod - Project File; Manilla - Project Data Manager

Project Information Section For Project Personnel Only Do Not Submit to Laboratory

Sample Point Location	Sample Type: G	C	F	QC
1) TRIP BLANK			X	X
2) TAA-SB-02 1779 @ ~~24" 26"~~ 18"				
3) ~~TAA-SB-01~~ TAA779-SB-02 ~~@32" (Dup)~~ 36"				
4) TAA-SB-01 @18" 799	X		X	
5) TAA-SB01 @24" (DUP) 799	X		X	X
6) TAA-SB01 @ 36" 799	X		X	
7) TAA779-SB-03 @18"	X			
8) TAA 779-SB-03 @ 36"	X			
9) EQUIPMENT RINSATE	X		X	X
10)				

Comments

Sample Type: G - Grab, C - Composite, F - Field Sample, QC - Quality Control Sample

EMAX
LABORATORIES, INC.
1835 W 205th Street
Torrance, CA 90501
Telephone: (310) 618-8889
Fax: (310) 618-0818

Date: 01-02-2003
EMAX Batch No.: 02L117

Attn: Way-Lynn Jefferson

Shaw E&I
3347 Michelson Dr., Suite 200
Irvine CA 92612

Subject: Laboratory Report
Project: El Toro, CTO 0024

Enclosed is the Laboratory report for samples received on 12/18/02. The data reported include :

Sample ID	Control #	Col Date	Matrix	Analysis
818655-B3122	L117-01	12/18/02	WATER	VOLATILE ORGANICS BY GC/MS
818655-B3123	L117-02	12/18/02	SOIL	TPH DIESEL
				SEMIVOLATILE ORGANICS SIM
				SEMIVOLATILE ORGANICS BY GCMS
				MERCURY
				METALS TAL BY ICP
				PESTICIDES ORGANOCHLORINE
				TPH GASOLINE
				VOLATILE ORGANICS BY GC/MS
818655-B3124	L117-03	12/18/02	SOIL	TPH DIESEL
				SEMIVOLATILE ORGANICS SIM
				SEMIVOLATILE ORGANICS BY GCMS
				MERCURY
				METALS TAL BY ICP
				PESTICIDES ORGANOCHLORINE
				TPH GASOLINE
				VOLATILE ORGANICS BY GC/MS
818655-B3125	L117-04	12/18/02	SOIL	TPH DIESEL
				SEMIVOLATILE ORGANICS SIM

Sample ID	Control #	Col Date	Matrix	Analysis
				SEMIVOLATILE ORGANICS BY GCMS
				MERCURY
				METALS TAL BY ICP
				PESTICIDES ORGANOCHLORINE
				TPH GASOLINE
				VOLATILE ORGANICS BY GC/MS
818655-B3126	L117-05	12/18/02	SOIL	TPH DIESEL
				SEMIVOLATILE ORGANICS SIM
				SEMIVOLATILE ORGANICS BY GCMS
				MERCURY
				METALS TAL BY ICP
				PESTICIDES ORGANOCHLORINE
				TPH GASOLINE
				VOLATILE ORGANICS BY GC/MS
818655-B3127	L117-06	12/18/02	SOIL	TPH DIESEL
				SEMIVOLATILE ORGANICS SIM
				SEMIVOLATILE ORGANICS BY GCMS
				MERCURY
				METALS TAL BY ICP
				PESTICIDES ORGANOCHLORINE
				TPH GASOLINE
				VOLATILE ORGANICS BY GC/MS
818655-B3128	L117-07	12/18/02	SOIL	TPH DIESEL
				SEMIVOLATILE ORGANICS SIM
				SEMIVOLATILE ORGANICS BY GCMS
				MERCURY
				METALS TAL BY ICP
				PESTICIDES ORGANOCHLORINE
				TPH GASOLINE
				VOLATILE ORGANICS BY GC/MS
818655-B3129	L117-08	12/18/02	SOIL	TPH DIESEL
				SEMIVOLATILE ORGANICS SIM
				SEMIVOLATILE ORGANICS BY GCMS
				MERCURY
				METALS TAL BY ICP
				PESTICIDES ORGANOCHLORINE
				TPH GASOLINE
				VOLATILE ORGANICS BY GC/MS
818655-B3130	L117-09	12/18/02	WATER	VOLATILE ORGANICS BY GC/MS
				SEMIVOLATILE ORGANICS BY GCMS
				TPH GASOLINE

EMAX LABORATORIES, INC., 1835 W 205th Street Torrance, CA 90501 TEL: (310) 618-8889 FAX: (310) 618-0818

Sample ID	Control #	Col Date	Matrix	Analysis
				TPH DIESEL
				PESTICIDES ORGANOCHLORINE
				METALS TAL BY ICP
				MERCURY

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,

Kam Y. Pang, Ph.D.
Laboratory Director

EMAX LABORATORIES, INC., 1835 W 205th Street Torrance CA 90501 TEL: (310) 618-8889 FAX: (310) 618-0818

METHOD 5030B/M8015
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client : SHAW E&I
Project : EL TORO, CTO 0024
Batch No. : 02L117

Matrix : WATER
Instrument ID : GCT039

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	SURR (%)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	VA39L19B	ND	95	1	NA	.1	.005	12/19/0211:27	12/19/0211:27	EL19003A	EL19002A	VA39L19	NA	12/19/02
LCS1W	VA39L19L	.513	120	1	NA	.1	.005	12/19/0212:01	12/19/0212:01	EL19004A	EL19002A	VA39L19	NA	12/19/02
LCD1W	VA39L19C	.53	119	1	NA	.1	.005	12/19/0212:35	12/19/0212:35	EL19005A	EL19002A	VA39L19	NA	12/19/02
818655-B3130**	L117-09	.087J	84	1	NA	.1	.005	12/19/0213:43	12/19/0213:43	EL19007A	EL19002A	VA39L19	12/18/02	12/18/02

RL : Reporting Limit
** : Presence of discrete peak, a non-gasoline pattern

METHOD 5035/M8015
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client : SHAW E&I
Project : EL TORO, CTO 0024
Batch No. : 02L117

Matrix : SOIL
Instrument ID : GCT039

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	SURR (%)	DLF	MOIST	RL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1S	VM39L17B	ND	92	1	NA	10	.524	12/19/0218:07	12/19/0218:07	EL19013A	EL19009A	VM39L17	NA	12/19/02
LCS1S	VM39L17L	26	115	1	NA	10	.524	12/19/0216:15	12/19/0216:15	EL19011A	EL19009A	VM39L17	NA	12/19/02
LCD1S	VM39L17C	26.9	120	1	NA	10	.524	12/19/0216:49	12/19/0216:49	EL19012A	EL19009A	VM39L17	NA	12/19/02
818655-B3123	L117-02	ND	91	1	NA	10	.52	12/19/0218:41	12/19/0218:41	EL19014A	EL19009A	VM39L17	12/18/02	12/18/02
818655-B3124	L117-03	ND	92	.96	NA	9.6	.5	12/19/0219:15	12/19/0219:15	EL19015A	EL19009A	VM39L17	12/18/02	12/18/02
818655-B3125	L117-04	ND	94	.94	NA	9.4	.49	12/19/0219:49	12/19/0219:49	EL19016A	EL19009A	VM39L17	12/18/02	12/18/02
818655-B3126	L117-05	ND	90	.96	NA	9.6	.5	12/19/0220:23	12/19/0220:23	EL19017A	EL19009A	VM39L17	12/18/02	12/18/02
818655-B3127	L117-06	ND	92	.96	NA	9.6	.5	12/19/0220:57	12/19/0220:57	EL19018A	EL19009A	VM39L17	12/18/02	12/18/02
818655-B3128	L117-07	ND	92	.96	NA	9.6	.5	12/19/0221:31	12/19/0221:31	EL19019A	EL19009A	VM39L17	12/18/02	12/18/02
818655-B3129	L117-08	ND	91	.94	NA	9.4	.49	12/19/0222:05	12/19/0222:05	EL19020A	EL19009A	VM39L17	12/18/02	12/18/02

RL : Reporting Limit
MEOH Extraction : VM39L17 12/08/02 11:45

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

C ENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
BATCH NO.: 02L117
M HOD: METHOD 5035/M8015

MATRIX: SOIL % MOISTURE: NA

D UTION FACTOR:	1	1	1		
S PLE ID:	MBLK1S				
LAB SAMP ID:	VM39L17B	VM39L17L	VM39L17C		
LAB FILE ID:	EL19013A	EL19011A	EL19012A		
D TE EXTRACTED:	12/19/0218:07	12/19/0216:15	12/19/0216:49	DATE COLLECTED:	NA
D E ANALYZED:	12/19/0218:07	12/19/0216:15	12/19/0216:49	DATE RECEIVED:	12/19/02
P P. BATCH:	VM39L17	VM39L17	VM39L17		
CALIB. REF:	EL19009A	EL19009A	EL19009A		

A ESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
G oline	ND	27.5	26	95	27.5	26.9	98	3	57-146	50

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	QC LIMIT (%)
E mofluorobenzene	1	1.15	115	1	1.2	120	63-154

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
BATCH NO.: 02L117
METHOD: METHOD 5030B/M8015

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	VA39L19B	VA39L19L	VA39L19C		
LAB FILE ID:	EL19003A	EL19004A	EL19005A		
DATE EXTRACTED:	12/19/0211:27	12/19/0212:01	12/19/0212:35	DATE COLLECTED:	NA
DATE ANALYZED:	12/19/0211:27	12/19/0212:01	12/19/0212:35	DATE RECEIVED:	12/19/02
PREP. BATCH:	VA39L19	VA39L19	VA39L19		
CALIB. REF:	EL19002A	EL19002A	EL19002A		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Gasoline	ND	.55	.513	93	.55	.53	96	3	67-136	30

SURROGATE PARAMETER	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	QC LIMIT (%)
Bromofluorobenzene	.02	.024	120	.02	.0237	119	63-154

CA LUFT/M8015
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client : SHAW E&I
Project : EL TORO, CTO 0024
Batch No. : 02L117

Matrix : SOIL
Instrument ID : GCT050

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	SUR1 (%)	SUR2 (%)	DLF	MOIST	RL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1S	DSL014SB	ND	99	97	1	NA	10	4	12/19/0215:09	12/19/0212:30	TL19003A	TL19002A	DSL014S	NA	12/19/02
LCS1S	DSL014SL	503	100	99	1	NA	10	4	12/19/0215:58	12/19/0212:30	TL19004A	TL19002A	DSL014S	NA	12/19/02
818655-B3123	L117-02	ND	102	99	1	5.0	11	4.2	12/19/0216:47	12/19/0212:30	TL19005A	TL19002A	DSL014S	12/18/02	12/18/02
818655-B3123MS	L117-02M	576	113	101	1	5.0	10.5	4.21	12/19/0217:36	12/19/0212:30	TL19006A	TL19002A	DSL014S	12/18/02	12/18/02
818655-B3123MSD	L117-02S	602	120	109	1	5.0	10.5	4.21	12/19/0218:24	12/19/0212:30	TL19007A	TL19002A	DSL014S	12/18/02	12/18/02
818655-B3124	L117-03	ND	101	100	1	5.2	11	4.2	12/19/0219:13	12/19/0212:30	TL19008A	TL19002A	DSL014S	12/18/02	12/18/02
818655-B3125	L117-04	ND	100	100	1	6.3	11	4.3	12/19/0220:02	12/19/0212:30	TL19009A	TL19002A	DSL014S	12/18/02	12/18/02
818655-B3126	L117-05	ND	102	99	1	3.9	10	4.2	12/19/0220:50	12/19/0212:30	TL19010A	TL19002A	DSL014S	12/18/02	12/18/02
818655-B3127	L117-06	ND	103	103	1	17.9	12	4.9	12/19/0221:39	12/19/0212:30	TL19011A	TL19002A	DSL014S	12/18/02	12/18/02
818655-B3128	L117-07	ND	104	104	1	6.5	11	4.3	12/19/0222:28	12/19/0212:30	TL19012A	TL19002A	DSL014S	12/18/02	12/18/02
818655-B3129	L117-08	ND	101	103	1	3.1	10	4.1	12/19/0223:16	12/19/0212:30	TL19013A	TL19002A	DSL014S	12/18/02	12/18/02

RL : Reporting Limit
SURR1 : Bromobenzene
SURR2 : Hexacosane

Parameter	H-C Range
Diesel	C10-C38

METHOD 3520C/M8015
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client : SHAW E&I
Project : EL TORO, CTO 0024
Batch No. : 02L117

Matrix : WATER
Instrument ID : GCT050

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	SUR1 (%)	SUR2 (%)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	DSL015WB	ND	92	101	1	NA	.1	.1	12/20/0212:34	12/20/0209:30	TL20003A	TL20002A	DSL015W	NA	12/20/02
LCS1W	DSL015WL	5.55	96	105	1	NA	.1	.1	12/20/0213:22	12/20/0209:30	TL20004A	TL20002A	DSL015W	NA	12/20/02
LCD1W	DSL015WC	5.59	93	108	1	NA	.1	.1	12/20/0214:11	12/20/0209:30	TL20005A	TL20002A	DSL015W	NA	12/20/02
818655-B3130	L117-09	ND	101	112	.94	NA	.094	.094	12/20/0217:26	12/20/0209:30	TL20009A	TL20002A	DSL015W	12/18/02	12/18/02

RL : Reporting Limit
SURR1 : Bromobenzene
SURR2 : Hexacosane

Parameter	H-C Range
Diesel	C10-C38

EMAX QUALITY CONTROL DATA
LCS ANALYSIS

IENT: SHAW E&I
ROJECT: EL TORO, CTO 0024
BATCH NO.: 02L117
THOD: CA LUFT/M8015

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MATRIX: SOIL % MOISTURE: NA
LUTION FACTOR: 1 1
MPLE ID: MBLK1S
B SAMP ID: DSL014SB DSL014SL
LAB FILE ID: TL19003A TL19004A
DATE EXTRACTED: 12/19/0212:30 12/19/0212:30 DATE COLLECTED: NA
TE ANALYZED: 12/19/0215:09 12/19/0215:58 DATE RECEIVED: 12/19/02
EP. BATCH: DSL014S DSL014S
CALIB. REF: TL19002A TL19002A

CESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	QC LIMIT (%)
esel	ND	500	503	101	65-135

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SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	QC LIMIT (%)
omobenzene	100	100	100	50-150
xacosane	25	24.8	99	30-160

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
BATCH NO.: 02L117
METHOD: METHOD 3520C/M8015

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	DSL015WB	DSL015WL	DSL015WC		
LAB FILE ID:	TL20003A	TL20004A	TL20005A		
DATE EXTRACTED:	12/20/0209:30	12/20/0209:30	12/20/0209:30	DATE COLLECTED:	NA
DATE ANALYZED:	12/20/0212:34	12/20/0213:22	12/20/0214:11	DATE RECEIVED:	12/20/02
PREP. BATCH:	DSL015W	DSL015W	DSL015W		
CALIB. REF:	TL20002A	TL20002A	TL20002A		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Diesel	ND	5	5.55	111	5	5.59	112	1	65-135	30

SURROGATE PARAMETER	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	QC LIMIT (%)
Bromobenzene	1	.959	96	1	.933	93	50-150
Hexacosane	.25	.263	105	.25	.269	108	40-160

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

IENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
BATCH NO.: 02L117
THOD: CA LUFT/M8015

MATRIX: SOIL % MOISTURE: 5.0

PLUTION FACTOR:	1	1	1		
MPLE ID:	818655-B3123				
B SAMP ID:	L117-02	L117-02M	L117-02S		
LAB FILE ID:	TL19005A	TL19006A	TL19007A		
DATE EXTRACTED:	12/19/0212:30	12/19/0212:30	12/19/0212:30	DATE COLLECTED:	12/18/02
TE ANALYZED:	12/19/0216:47	12/19/0217:36	12/19/0218:24	DATE RECEIVED:	12/18/02
EP. BATCH:	DSL014S	DSL014S	DSL014S		
CALIB. REF:	TL19002A	TL19002A	TL19002A		

CESSION:

PARAMETER	SMPL RSLT (mg/kg)	SPIKE AMT (mg/kg)	MS RSLT (mg/kg)	MS % REC	SPIKE AMT (mg/kg)	MSD RSLT (mg/kg)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
esel	ND	526	576	110	526	602	114	4	65-135	50

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	MS RSLT (mg/kg)	MS % REC	SPIKE AMT (mg/kg)	MSD RSLT (mg/kg)	MSD % REC	QC LIMIT (%)
omobenzene	105	119	113	105	126	120	45-165
xacosane	26.3	26.5	101	26.3	28.8	109	27-176

SW3550B/8081A
PESTICIDES

Client : SHAW E&I	Date Collected: 12/18/02
Project : EL TORO, CTO 0024	Date Received: 12/18/02
Batch No. : 02L117	Date Extracted: 12/19/02 14:00
Sample ID: 818655-B3123	Date Analyzed: 12/21/02 01:28
Lab Samp ID: L117-02	Dilution Factor: 1
Lab File ID: WL19034A	Matrix : SOIL
Ext Btch ID: CPL013S	% Moisture : 5.0
Calib. Ref.: WL19028A	Instrument ID : GCT016

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
ALPHA-BHC	(ND)|ND	.0021	.00021|.00021
GAMMA-BHC (LINDANE)	(ND)|ND	.0021	.00021|.00021
BETA-BHC	(ND)|ND	.0021	.00021|.00021
HEPTACHLOR	(ND)|ND	.0021	.0011|.0011
DELTA-BHC	(ND)|ND	.0021	.00021|.00021
ALDRIN	(ND)|ND	.0021	.00053|.00053
HEPTACHLOR EPOXIDE	(ND)|ND	.0021	.00021|.00021
GAMMA-CHLORDANE	(ND)|ND	.0021	.00021|.00021
ALPHA-CHLORDANE	(ND)|ND	.0021	.00021|.00021
ENDOSULFAN I	(ND)|ND	.0042	.0011|.0011
4,4'-DDE	(ND)|ND	.0042	.0011|.0011
DIELDRIN	(ND)|ND	.0042	.00053|.00053
ENDRIN	(ND)|ND	.0032	.0011|.0011
4,4'-DDD	(ND)|ND	.0042	.0011|.0011
ENDOSULFAN II	(ND)|ND	.0042	.00053|.00053
4,4'-DDT	(ND)|ND	.0042	.0011|.0011
ENDRIN ALDEHYDE	(ND)|ND	.0042	.00053|.00053
ENDOSULFAN SULFATE	(ND)|ND	.0042	.00053|.00053
ENDRIN KETONE	(ND)|ND	.0032	.0011|.0011
METHOXYCHLOR	(ND)|ND	.021	.0042|.0042
TOXAPHENE	(ND)|ND	.11	.0084|.0084

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
TETRACHLORO-M-XYLENE	(68)|69	35-135
DECACHLOROBIPHENYL	(76)|78	25-143

RL : Reporting limit
Left of | is related to first column ; Right of | related to second column
( ) included the reported column

SW3550B/8081A
PESTICIDES

Client : SHAW E&I	Date Collected: 12/18/02
Project : EL TORO, CTO 0024	Date Received: 12/18/02
Batch No. : 02L117	Date Extracted: 12/19/02 14:00
Sample ID: 818655-B3124	Date Analyzed: 12/21/02 02:44
Lab Samp ID: L117-03	Dilution Factor: 1
Lab File ID: WL19037A	Matrix : SOIL
Lab Btch ID: CPL013S	% Moisture : 5.2
Calib. Ref.: WL19028A	Instrument ID : GCT016

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
ALPHA-BHC	(ND) | ND	.0021	.00021 | .00021
GAMMA-BHC (LINDANE)	(ND) | ND	.0021	.00021 | .00021
DELTA-BHC	(ND) | ND	.0021	.00021 | .00021
HEPTACHLOR	(ND) | ND	.0021	.0011 | .0011
BETA-BHC	(ND) | ND	.0021	.00021 | .00021
ALDRIN	(ND) | ND	.0021	.00053 | .00053
HEPTACHLOR EPOXIDE	(ND) | ND	.0021	.00021 | .00021
GAMMA-CHLORDANE	(ND) | ND	.0021	.00021 | .00021
ALPHA-CHLORDANE	(ND) | ND	.0021	.00021 | .00021
ENDOSULFAN I	(ND) | ND	.0042	.0011 | .0011
4,4'-DDE	(ND) | ND	.0042	.0011 | .0011
DIELDRIN	(ND) | ND	.0042	.00053 | .00053
ENDRIN	(ND) | ND	.0032	.0011 | .0011
4,4'-DDD	(ND) | ND	.0042	.0011 | .0011
ENDOSULFAN II	(ND) | ND	.0042	.00053 | .00053
4,4'-DDT	(ND) | ND	.0042	.0011 | .0011
ENDRIN ALDEHYDE	(ND) | ND	.0042	.00053 | .00053
ENDOSULFAN SULFATE	(ND) | ND	.0042	.00053 | .00053
ENDRIN KETONE	(ND) | ND	.0032	.0011 | .0011
METHOXYCHLOR	(ND) | ND	.021	.0042 | .0042
TOXAPHENE	(ND) | ND	.11	.0084 | .0084

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
TETRACHLORO-M-XYLENE	(70) | 73	35-135
DECACHLOROBIPHENYL	(77) | 78	25-143

RL : Reporting limit
Left of | is related to first column ; Right of | related to second column
( ) included the reported column

SW3550B/8081A
PESTICIDES

Client	: SHAW E&I	Date Collected:	12/18/02
Project	: EL TORO, CTO 0024	Date Received:	12/18/02
Batch No.	: 02L117	Date Extracted:	12/19/02 14:00
Sample ID:	818655-B3125	Date Analyzed:	12/21/02 03:09
Lab Samp ID:	L117-04	Dilution Factor:	1
Lab File ID:	WL19038A	Matrix :	SOIL
Ext Btch ID:	CPL013S	% Moisture :	6.3
Calib. Ref.:	WL19028A	Instrument ID :	GCT016

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
ALPHA-BHC	(ND) | ND	.0021	.00021 | .00021
GAMMA-BHC (LINDANE)	(ND) | ND	.0021	.00021 | .00021
BETA-BHC	(ND) | ND	.0021	.00021 | .00021
HEPTACHLOR	(ND) | ND	.0021	.0011 | .0011
DELTA-BHC	(ND) | ND	.0021	.00021 | .00021
ALDRIN	(ND) | ND	.0021	.00053 | .00053
HEPTACHLOR EPOXIDE	(ND) | ND	.0021	.00021 | .00021
GAMMA-CHLORDANE	(ND) | ND	.0021	.00021 | .00021
ALPHA-CHLORDANE	(ND) | ND	.0021	.00021 | .00021
ENDOSULFAN I	(ND) | ND	.0043	.0011 | .0011
4,4'-DDE	(ND) | ND	.0043	.0011 | .0011
DIELDRIN	(ND) | ND	.0043	.00053 | .00053
ENDRIN	(ND) | ND	.0032	.0011 | .0011
4,4'-DDD	(ND) | ND	.0043	.0011 | .0011
ENDOSULFAN II	(ND) | ND	.0043	.00053 | .00053
4,4'-DDT	(ND) | ND	.0043	.0011 | .0011
ENDRIN ALDEHYDE	(ND) | ND	.0043	.00053 | .00053
ENDOSULFAN SULFATE	(ND) | ND	.0043	.00053 | .00053
ENDRIN KETONE	(ND) | ND	.0032	.0011 | .0011
METHOXYCHLOR	(ND) | ND	.021	.0043 | .0043
TOXAPHENE	(ND) | ND	.11	.0085 | .0085

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
TETRACHLORO-M-XYLENE	(80) | 78	35-135
DECACHLOROBIPHENYL	(77) | 74	25-143

RL : Reporting limit
Left of | is related to first column ; Right of | related to second column
( ) included the reported column

SW3550B/8081A
PESTICIDES

Client	: SHAW E&I	Date Collected:	12/18/02
Project	: EL TORO, CTO 0024	Date Received:	12/18/02
Batch No.	: 02L117	Date Extracted:	12/19/02 14:00
Sample ID	: 818655-B3126	Date Analyzed:	12/21/02 03:35
Lab Samp ID	: L117-05	Dilution Factor:	1
Lab File ID	: WL19039A	Matrix	: SOIL
Prep Btch ID	: CPL013S	% Moisture	: 3.9
Calib. Ref.	: WL19028A	Instrument ID	: GCT016

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
ALPHA-BHC	(ND)|ND	.0021	.00021|.00021
GAMMA-BHC (LINDANE)	(ND)|ND	.0021	.00021|.00021
BETA-BHC	(ND)|ND	.0021	.00021|.00021
HEPTACHLOR	(ND)|ND	.0021	.001|.001
DELTA-BHC	(ND)|ND	.0021	.00021|.00021
ALDRIN	(ND)|ND	.0021	.00052|.00052
HEPTACHLOR EPOXIDE	(ND)|ND	.0021	.00021|.00021
GAMMA-CHLORDANE	(ND)|ND	.0021	.00021|.00021
ALPHA-CHLORDANE	(ND)|ND	.0021	.00021|.00021
ENDOSULFAN I	(ND)|ND	.0042	.001|.001
4,4'-DDE	(ND)|ND	.0042	.001|.001
DIELDRIN	(ND)|ND	.0042	.00052|.00052
ENDRIN	(ND)|ND	.0031	.001|.001
4,4'-DDD	(ND)|ND	.0042	.001|.001
ENDOSULFAN II	(ND)|ND	.0042	.00052|.00052
4,4'-DDT	(ND)|ND	.0042	.001|.001
ENDRIN ALDEHYDE	(ND)|ND	.0042	.00052|.00052
ENDOSULFAN SULFATE	(ND)|ND	.0042	.00052|.00052
ENDRIN KETONE	(ND)|ND	.0031	.001|.001
METHOXYCHLOR	(ND)|ND	.021	.0042|.0042
TOXAPHENE	(ND)|ND	.1	.0083|.0083

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
TETRACHLORO-M-XYLENE	(69)|69	35-135
DECACHLOROBIPHENYL	(76)|73	25-143

RL : Reporting limit
Left of | is related to first column ; Right of | related to second column
( ) included the reported column

SW3550B/8081A
PESTICIDES

Client	: SHAW E&I	Date Collected:	12/18/02
Project	: EL TORO, CTO 0024	Date Received:	12/18/02
Batch No.	: 02L117	Date Extracted:	12/19/02 14:00
Sample ID:	818655-B3127	Date Analyzed:	12/21/02 04:00
Lab Samp ID:	L117-06	Dilution Factor:	1
Lab File ID:	WL19040A	Matrix :	SOIL
Ext Btch ID:	CPL013S	% Moisture :	17.9
Calib. Ref.:	WL19028A	Instrument ID :	GCT016

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
ALPHA-BHC	(ND)|ND	.0024	.00024|.00024
GAMMA-BHC (LINDANE)	(ND)|ND	.0024	.00024|.00024
BETA-BHC	(ND)|ND	.0024	.00024|.00024
HEPTACHLOR	(ND)|ND	.0024	.0012|.0012
DELTA-BHC	(ND)|ND	.0024	.00024|.00024
ALDRIN	(ND)|ND	.0024	.00061|.00061
HEPTACHLOR EPOXIDE	(ND)|ND	.0024	.00024|.00024
GAMMA-CHLORDANE	(ND)|ND	.0024	.00024|.00024
ALPHA-CHLORDANE	(ND)|ND	.0024	.00024|.00024
ENDOSULFAN I	(ND)|ND	.0049	.0012|.0012
4,4'-DDE	(ND)|ND	.0049	.0012|.0012
DIELDRIN	(ND)|ND	.0049	.00061|.00061
ENDRIN	(ND)|ND	.0037	.0012|.0012
4,4'-DDD	(ND)|ND	.0049	.0012|.0012
ENDOSULFAN II	(ND)|ND	.0049	.00061|.00061
4,4'-DDT	(ND)|ND	.0049	.0012|.0012
ENDRIN ALDEHYDE	(ND)|ND	.0049	.00061|.00061
ENDOSULFAN SULFATE	(ND)|ND	.0049	.00061|.00061
ENDRIN KETONE	(ND)|ND	.0037	.0012|.0012
METHOXYCHLOR	(ND)|ND	.024	.0049|.0049
TOXAPHENE	(ND)|ND	.12	.0097|.0097

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
TETRACHLORO-M-XYLENE	(75)|74	35-135
DECACHLOROBIPHENYL	(76)|77	25-143

RL : Reporting limit
Left of | is related to first column ; Right of | related to second column
( ) included the reported column

SW3550B/8081A
PESTICIDES

Client	: SHAW E&I	Date Collected:	12/18/02
Project	: EL TORO, CTO 0024	Date Received:	12/18/02
Batch No.	: 02L117	Date Extracted:	12/19/02 14:00
Sample ID	: 818655-B3128	Date Analyzed:	12/21/02 04:25
Lab Samp ID	: L117-07	Dilution Factor:	1
Lab File ID	: WL19041A	Matrix	: SOIL
Qc Btch ID	: CPL013S	% Moisture	: 6.5
Calib. Ref.	: WL19028A	Instrument ID	: GCT016

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
ALPHA-BHC	(ND) | ND	.0021	.00021 | .00021
GAMMA-BHC (LINDANE)	(ND) | ND	.0021	.00021 | .00021
BETA-BHC	(ND) | ND	.0021	.00021 | .00021
HEPTACHLOR	(ND) | ND	.0021	.0011 | .0011
DELTA-BHC	(ND) | ND	.0021	.00021 | .00021
ALDRIN	(ND) | ND	.0021	.00053 | .00053
HEPTACHLOR EPOXIDE	(ND) | ND	.0021	.00021 | .00021
GAMMA-CHLORDANE	(ND) | ND	.0021	.00021 | .00021
ALPHA-CHLORDANE	(ND) | ND	.0021	.00021 | .00021
ENDOSULFAN I	(ND) | ND	.0043	.0011 | .0011
4,4'-DDE	(ND) | ND	.0043	.0011 | .0011
DIELDRIN	(ND) | ND	.0043	.00053 | .00053
ENDRIN	(ND) | ND	.0032	.0011 | .0011
4,4'-DDD	(ND) | ND	.0043	.0011 | .0011
ENDOSULFAN II	(ND) | ND	.0043	.00053 | .00053
4,4'-DDT	(ND) | ND	.0043	.0011 | .0011
ENDRIN ALDEHYDE	(ND) | ND	.0043	.00053 | .00053
ENDOSULFAN SULFATE	(ND) | ND	.0043	.00053 | .00053
ENDRIN KETONE	(ND) | ND	.0032	.0011 | .0011
METHOXYCHLOR	(ND) | ND	.021	.0043 | .0043
TOXAPHENE	(ND) | ND	.11	.0086 | .0086

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
TETRACHLORO-M-XYLENE	(72) | 75	35-135
DECACHLOROBIPHENYL	(81) | 83	25-143

RL : Reporting limit
Left of | is related to first column ; Right of | related to second column
( ) included the reported column

SW3550B/8081A
PESTICIDES

Client	: SHAW E&I	Date Collected:	12/18/02
Project	: EL TORO, CTO 0024	Date Received:	12/18/02
Batch No.	: 02L117	Date Extracted:	12/19/02 14:00
Sample ID:	818655-B3129	Date Analyzed:	12/21/02 04:50
Lab Samp ID:	L117-08	Dilution Factor:	1
Lab File ID:	WL19042A	Matrix :	SOIL
Ext Btch ID:	CPL013S	% Moisture :	3.1
Calib. Ref.:	WL19028A	Instrument ID :	GCT016

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
ALPHA-BHC	(ND) | ND	.0021	.00021 | .00021
GAMMA-BHC (LINDANE)	(ND) | ND	.0021	.00021 | .00021
BETA-BHC	(ND) | ND	.0021	.00021 | .00021
HEPTACHLOR	(ND) | ND	.0021	.001 | .001
DELTA-BHC	(ND) | ND	.0021	.00021 | .00021
ALDRIN	(ND) | ND	.0021	.00052 | .00052
HEPTACHLOR EPOXIDE	(ND) | ND	.0021	.00021 | .00021
GAMMA-CHLORDANE	(ND) | ND	.0021	.00021 | .00021
ALPHA-CHLORDANE	(ND) | ND	.0021	.00021 | .00021
ENDOSULFAN I	(ND) | ND	.0041	.001 | .001
4,4'-DDE	(ND) | ND	.0041	.001 | .001
DIELDRIN	(ND) | ND	.0041	.00052 | .00052
ENDRIN	(ND) | ND	.0031	.001 | .001
4,4'-DDD	(ND) | ND	.0041	.001 | .001
ENDOSULFAN II	(ND) | ND	.0041	.00052 | .00052
4,4'-DDT	(ND) | ND	.0041	.001 | .001
ENDRIN ALDEHYDE	(ND) | ND	.0041	.00052 | .00052
ENDOSULFAN SULFATE	(ND) | ND	.0041	.00052 | .00052
ENDRIN KETONE	(ND) | ND	.0031	.001 | .001
METHOXYCHLOR	(ND) | ND	.021	.0041 | .0041
TOXAPHENE	(ND) | ND	.1	.0083 | .0083

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
TETRACHLORO-M-XYLENE	(74) | 75	35-135
DECACHLOROBIPHENYL	(77) | 77	25-143

RL : Reporting limit
Left of | is related to first column ; Right of | related to second column
( ) included the reported column

SW3520C/8081A
PESTICIDES

Client	: SHAW E&I	Date Collected:	12/18/02
Project	: EL TORO, CTO 0024	Date Received:	12/18/02
tch No.	: 02L117	Date Extracted:	12/20/02 09:30
mple ID:	818655-B3130	Date Analyzed:	12/20/02 20:50
Lab Samp ID:	L117-09	Dilution Factor:	.94
b File ID:	WL19023A	Matrix	: WATER
t Btch ID:	CPL014W	% Moisture	: NA
lib. Ref.:	WL19003A	Instrument ID	: GCT016

RAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
PHA-BHC	(ND)|ND	.094	.0094|.0094
MMA-BHC (LINDANE)	(ND)|ND	.094	.0094|.0094
TA-BHC	(ND)|ND	.094	.0094|.0094
HEPTACHLOR	(ND)|ND	.094	.0094|.0094
LTA-BHC	(ND)|ND	.094	.0094|.0094
DRIN	(ND)|ND	.094	.0094|.0094
PTACHLOR EPOXIDE	(ND)|ND	.094	.0094|.0094
GAMMA-CHLORDANE	(ND)|ND	.094	.0094|.0094
PHA-CHLORDANE	(ND)|ND	.094	.0094|.0094
DOSULFAN I	(ND)|ND	.094	.028|.028
4,4'-DDE	(ND)|ND	.19	.028|.028
DIELDRIN	(ND)|ND	.19	.094|.094
DRIN	(ND)|ND	.094	.0094|.0094
4'-DDD	(ND)|ND	.19	.028|.028
ENDOSULFAN II	(ND)|ND	.19	.0094|.0094
4,4'-DDT	(ND)|ND	.19	.019|.019
DRIN ALDEHYDE	(ND)|ND	.19	.0094|.0094
DOSULFAN SULFATE	(ND)|ND	.19	.0094|.0094
ENDRIN KETONE	(ND)|ND	.094	.0094|.0094
METHOXYCHLOR	(ND)|ND	.94	.094|.094
XAPHENE	(ND)|ND	2.8	1.2|1.2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
TRACHLORO-M-XYLENE	(71)|75	45-125
CACHLOROBIPHENYL	(92)|96	34-133

RL : Reporting limit
ft of | is related to first column ; Right of | related to second column
) included the reported column

SW3550B/8081A
PESTICIDES

Client	: SHAW E&I	Date Collected:	NA
Project	: EL TORO, CTO 0024	Date Received:	12/19/02
Batch No.	: 02L117	Date Extracted:	12/19/02 14:00
Sample ID:	MBLK1S	Date Analyzed:	12/21/02 00:38
Lab Samp ID:	CPL013SB	Dilution Factor:	1
Lab File ID:	WL19032A	Matrix :	SOIL
Ext Btch ID:	CPL013S	% Moisture :	NA
Calib. Ref.:	WL19028A	Instrument ID :	GCT016

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
ALPHA-BHC	(ND) | ND	.002	.0002 | .0002
GAMMA-BHC (LINDANE)	(ND) | ND	.002	.0002 | .0002
BETA-BHC	(ND) | ND	.002	.0002 | .0002
HEPTACHLOR	(ND) | ND	.002	.001 | .001
DELTA-BHC	(ND) | ND	.002	.0002 | .0002
ALDRIN	(ND) | ND	.002	.0005 | .0005
HEPTACHLOR EPOXIDE	(ND) | ND	.002	.0002 | .0002
GAMMA-CHLORDANE	(ND) | ND	.002	.0002 | .0002
ALPHA-CHLORDANE	(ND) | ND	.002	.0002 | .0002
ENDOSULFAN I	(ND) | ND	.004	.001 | .001
4,4'-DDE	(ND) | ND	.004	.001 | .001
DIELDRIN	(ND) | ND	.004	.0005 | .0005
ENDRIN	(ND) | ND	.003	.001 | .001
4,4'-DDD	(ND) | ND	.004	.001 | .001
ENDOSULFAN II	(ND) | ND	.004	.0005 | .0005
4,4'-DDT	(ND) | ND	.004	.001 | .001
ENDRIN ALDEHYDE	(ND) | ND	.004	.0005 | .0005
ENDOSULFAN SULFATE	(ND) | ND	.004	.0005 | .0005
ENDRIN KETONE	(ND) | ND	.003	.001 | .001
METHOXYCHLOR	(ND) | ND	.02	.004 | .004
TOXAPHENE	(ND) | ND	.1	.008 | .008

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
TETRACHLORO-M-XYLENE	(76) | 83	35-135
DECACHLOROBIPHENYL	(84) | 86	25-143

RL : Reporting limit
Left of | is related to first column ; Right of | related to second column
( ) included the reported column

SW3520C/8081A
PESTICIDES

Client : SHAW E&I	Date Collected: NA
Project : EL TORO, CTO 0024	Date Received: 12/20/02
Batch No. : 02L117	Date Extracted: 12/20/02 09:30
Sample ID: MBLK1W	Date Analyzed: 12/20/02 17:27
Lab Samp ID: CPL014WB	Dilution Factor: 1
Lab File ID: WL19015A	Matrix : WATER
Ext Btch ID: CPL014W	% Moisture : NA
Calib. Ref.: WL19003A	Instrument ID : GCT016

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ALPHA-BHC	(ND) | ND	.1	.01 | .01
GAMMA-BHC (LINDANE)	(ND) | ND	.1	.01 | .01
BETA-BHC	(ND) | ND	.1	.01 | .01
HEPTACHLOR	(ND) | ND	.1	.01 | .01
DELTA-BHC	(ND) | ND	.1	.01 | .01
ALDRIN	(ND) | ND	.1	.01 | .01
HEPTACHLOR EPOXIDE	(ND) | ND	.1	.01 | .01
GAMMA-CHLORDANE	(ND) | ND	.1	.01 | .01
ALPHA-CHLORDANE	(ND) | ND	.1	.01 | .01
ENDOSULFAN I	(ND) | ND	.1	.03 | .03
4,4'-DDE	(ND) | ND	.2	.03 | .03
DIELDRIN	(ND) | ND	.2	.1 | .1
ENDRIN	(ND) | ND	.1	.01 | .01
4,4'-DDD	(ND) | ND	.2	.03 | .03
ENDOSULFAN II	(ND) | ND	.2	.01 | .01
4,4'-DDT	(ND) | ND	.2	.02 | .02
ENDRIN ALDEHYDE	(ND) | ND	.2	.01 | .01
ENDOSULFAN SULFATE	(ND) | ND	.2	.01 | .01
ENDRIN KETONE	(ND) | ND	.1	.01 | .01
METHOXYCHLOR	(ND) | ND	1	.1 | .1
TOXAPHENE	(ND) | ND	3	1.2 | 1.2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
TETRACHLORO-M-XYLENE	(54) | 54	45-125
DECACHLOROBIPHENYL	(87) | 93	34-133

RL : Reporting limit
Left of | is related to first column ; Right of | related to second column
( ) included the reported column

EMAX QUALITY CONTROL DATA
LCS ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
BATCH NO.: 02L117
METHOD: SW3550B/8081A

MATRIX: SOIL % MOISTURE: NA
DILUTION FACTOR: 1 1
SAMPLE ID: MBLK1S
LAB SAMP ID: CPL013SB CPL013SL
LAB FILE ID: WL19032A WL19033A
DATE EXTRACTED: 12/19/0214:00 12/19/0214:00 DATE COLLECTED: NA
DATE ANALYZED: 12/21/0200:38 12/21/0201:03 DATE RECEIVED: 12/19/02
PREP. BATCH: CPL013S CPL013S
CALIB. REF: WL19028A WL19028A

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	QC LIMIT (%)
alpha-BHC	(ND)|ND	.00667	(.00497)|.00566	(75)|85	65-135
gamma-BHC (Lindane)	(ND)|ND	.00667	(.00536)|.00587	(80)|88	63-130
beta-BHC	(ND)|ND	.00667	(.00596)|.00641	(89)|96	41-133
Heptachlor	(ND)|ND	.00667	(.00556)|.00635	(83)|95	35-138
delta-BHC	(ND)|ND	.00667	(.00588)|.00529	(88)|79	65-136
Aldrin	(ND)|ND	.00667	(.00547)|.00555	(82)|83	37-126
Heptachlor Epoxide	(ND)|ND	.00667	(.0055)|.00563	(82)|84	43-144
gamma-Chlordane	(ND)|ND	.00667	(.00539)|.00556	(81)|83	31-133
alpha-Chlordane	(ND)|ND	.00667	(.00555)|.00546	(83)|82	31-135
Endosulfan I	(ND)|ND	.00667	(.00733)|.00585	(110)|88	39-153
4,4'-DDE	(ND)|ND	.0133	(.00979)|.0111	(73)|83	35-149
Dieldrin	(ND)|ND	.0133	(.0101)|.0106	(76)|80	32-142
Endrin	(ND)|ND	.0133	(.0103)|.0107	(77)|80	33-144
4,4'-DDD	(ND)|ND	.0133	(.0106)|.00741	(80)|56	38-146
Endosulfan II	(ND)|ND	.0133	(.0122)|.0146	(92)|110	65-169
4,4'-DDT	(ND)|ND	.0133	(.0115)|.0106	(86)|80	25-153
Endrin Aldehyde	(ND)|ND	.0133	(.0136)|.013	(102)|98	65-160
Endosulfan Sulfate	(ND)|ND	.0133	(.0133)|.0121	(100)|91	36-151
Endrin Ketone	(ND)|ND	.0133	(.013)|.0133	(98)|100	65-160
Methoxychlor	(ND)|ND	.0667	(.0698)|.0625	(105)|94	63-152

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	QC LIMIT (%)
Tetrachloro-m-xylene	.0133	(.00982)|.0108	(74)|81	35-135
Decachlorobiphenyl	.0266	(.0217)|.0213	(81)|79	25-143

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
BATCH NO.: 02L117
METHOD: SW3520C/8081A

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1 1
SAMPLE ID: MBLK1W
LAB SAMP ID: CPL014WB CPL014WL CPL014WC
LAB FILE ID: WL19015A WL19016A WL19017A
DATE EXTRACTED: 12/20/0209:30 12/20/0209:30 12/20/0209:30 DATE COLLECTED: NA
DATE ANALYZED: 12/20/0217:27 12/20/0217:53 12/20/0218:18 DATE RECEIVED: 12/20/02
PREP. BATCH: CPL014W CPL014W CPL014W
CALIB. REF: WL19003A WL19003A WL19003A

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)		SPIKE AMT (ug/L)	BS RSLT (ug/L)		BS % REC		SPIKE AMT (ug/L)	BSD RSLT (ug/L)		BSD % REC		RPD (%)		QC LIMIT (%)	MAX RPD (%)
alpha-BHC	(ND)	ND	.2	(.136)	.139	(68*)	70*	.2	(.138)	.141	(69*)	70*	(1)	1	75-125	30
gamma-BHC (Lindane)	(ND)	ND	.2	(.146)	.155	(73)	78	.2	(.149)	.158	(74)	79	(2)	2	73-125	30
beta-BHC	(ND)	ND	.2	(.158)	.177	(79)	88	.2	(.162)	.18	(81)	90	(2)	2	51-125	30
Heptachlor	(ND)	ND	.2	(.163)	.159	(82)	79	.2	(.16)	.159	(80)	79	(2)	0	45-128	30
delta-BHC	(ND)	ND	.2	(.176)	.175	(88)	88	.2	(.177)	.18	(88)	90	(1)	3	75-126	30
Aldrin	(ND)	ND	.2	(.152)	.155	(76)	78	.2	(.153)	.158	(76)	79	(1)	2	47-125	30
Heptachlor Epoxide	(ND)	ND	.2	(.17)	.176	(85)	88	.2	(.173)	.179	(86)	90	(2)	2	53-134	30
gamma-Chlordane	(ND)	ND	.2	(.168)	.176	(84)	88	.2	(.171)	.179	(86)	90	(2)	2	41-125	30
alpha-Chlordane	(ND)	ND	.2	(.173)	.175	(86)	88	.2	(.176)	.179	(88)	90	(2)	2	41-125	30
Endosulfan I	(ND)	ND	.2	(.22)	.185	(110)	92	.2	(.216)	.188	(108)	94	(2)	2	49-143	30
4,4'-DDE	(ND)	ND	.4	(.331)	.373	(83)	93	.4	(.346)	.381	(86)	95	(4)	2	45-139	30
Dieldrin	(ND)	ND	.4	(.317)	.335	(79)	84	.4	(.323)	.342	(81)	86	(2)	2	42-132	30
Endrin	(ND)	ND	.4	(.325)	.341	(81)	85	.4	(.331)	.346	(83)	86	(2)	1	43-134	30
4,4'-DDD	(ND)	ND	.4	(.345)	.262	(86)	66	.4	(.352)	.266	(88)	66	(2)	2	48-136	30
Endosulfan II	(ND)	ND	.4	(.378)	.443	(94)	111	.4	(.385)	.449	(96)	112	(2)	1	75-159	30
4,4'-DDT	(ND)	ND	.4	(.368)	.351	(92)	88	.4	(.376)	.355	(94)	89	(2)	1	34-143	30
Endrin Aldehyde	(ND)	ND	.4	(.405)	.399	(101)	100	.4	(.413)	.401	(103)	100	(2)	1	75-150	30
Endosulfan Sulfate	(ND)	ND	.4	(.403)	.385	(101)	96	.4	(.411)	.39	(103)	97	(2)	1	46-141	30
Endrin Ketone	(ND)	ND	.4	(.406)	.42	(101)	105	.4	(.413)	.429	(103)	107	(2)	2	75-150	30
Methoxychlor	(ND)	ND	2	(2.17)	1.99	(108)	100	2	(2.21)	2.04	(110)	102	(2)	2	73-142	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)		BS % REC		SPIKE AMT (ug/L)	BSD RSLT (ug/L)		BSD % REC		QC LIMIT (%)
Tetrachloro-m-xylene	.4	(.265)	.28	(66)	70	.4	(.267)	.283	(67)	71	45-125
Decachlorobiphenyl	.8	(.669)	.664	(84)	83	.8	(.682)	.673	(85)	84	34-133

5050

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
BATCH NO.: 02L117
METHOD: SW3550B/8081A

MATRIX: SOIL % MOISTURE: 5.0

DILUTION FACTOR:	1	1	1
SAMPLE ID:	818655-B3123		
LAB SAMP ID:	L117-02	L117-02M	L117-02S
LAB FILE ID:	WL19034A	WL19035A	WL19036A
DATE EXTRACTED:	12/19/0214:00	12/19/0214:00	12/19/0214:00
DATE ANALYZED:	12/21/0201:28	12/21/0201:53	12/21/0202:19
PREP. BATCH:	CPL013S	CPL013S	CPL013S
CALIB. REF:	WL19028A	WL19028A	WL19028A

DATE COLLECTED: 12/18/02
DATE RECEIVED: 12/18/02

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)		SPIKE AMT (mg/kg)	MS RSLT (mg/kg)		MS % REC		SPIKE AMT (mg/kg)	MSD RSLT (mg/kg)		MSD % REC		RPD (%)		QC LIMIT (%)	MAX RPD (%)
alpha-BHC	(ND)	ND	.00702	(.00605)	.00604	(86)	86	.00702	(.00616)	.00611	(88)	87	(2)	1	65-135	50
gamma-BHC (Lindane)	(ND)	ND	.00702	(.00653)	.00839	(93)	119	.00702	(.00666)	.00729	(95)	104	(2)	14	63-130	50
beta-BHC	(ND)	ND	.00702	(.0077)	.00687	(110)	98	.00702	(.00785)	.00701	(112)	100	(2)	2	41-133	50
Heptachlor	(ND)	ND	.00702	(.00649)	.00709	(92)	101	.00702	(.0066)	.00706	(94)	101	(2)	0	35-138	50
delta-BHC	(ND)	ND	.00702	(.00769)	.00607	(110)	86	.00702	(.00786)	.00629	(112)	90	(2)	4	65-136	50
Aldrin	(ND)	ND	.00702	(.00636)	.00747	(91)	106	.00702	(.00646)	.00761	(92)	108	(2)	2	37-126	50
Heptachlor Epoxide	(ND)	ND	.00702	(.00619)	.0062	(88)	88	.00702	(.00628)	.00626	(89)	89	(1)	1	43-144	50
gamma-Chlordane	(ND)	ND	.00702	(.00619)	.00608	(88)	87	.00702	(.0063)	.00621	(90)	88	(2)	2	31-133	50
alpha-Chlordane	(ND)	ND	.00702	(.00634)	.00624	(90)	89	.00702	(.00645)	.00633	(92)	90	(2)	1	31-135	50
Endosulfan I	(ND)	ND	.00702	(.00852)	.00649	(121)	92	.00702	(.00828)	.00659	(118)	94	(3)	2	39-153	50
4,4'-DDE	(ND)	ND	.014	(.0112)	.0129	(80)	92	.014	(.0118)	.0131	(84)	93	(5)	2	35-149	50
Dieldrin	(ND)	ND	.014	(.0113)	.0113	(81)	81	.014	(.0115)	.0114	(82)	81	(2)	1	32-142	50
Endrin	(ND)	ND	.014	(.0117)	.0119	(83)	85	.014	(.0119)	.012	(85)	86	(2)	1	33-144	50
4,4'-DDD	(ND)	ND	.014	(.0126)	.00968	(90)	69	.014	(.0129)	.00975	(92)	69	(2)	1	38-146	50
Endosulfan II	(ND)	ND	.014	(.013)	.0134	(93)	95	.014	(.0132)	.0133	(94)	95	(2)	1	65-169	50
4,4'-DDT	(ND)	ND	.014	(.014)	.0128	(100)	91	.014	(.0143)	.013	(102)	93	(2)	2	25-153	50
Endrin Aldehyde	(ND)	ND	.014	(.0146)	.0143	(104)	102	.014	(.0148)	.0144	(105)	103	(1)	1	65-160	50
Endosulfan Sulfate	(ND)	ND	.014	(.0142)	.0132	(101)	94	.014	(.0146)	.0136	(104)	97	(3)	3	36-151	50
Endrin Ketone	(ND)	ND	.014	(.0141)	.0138	(100)	98	.014	(.0143)	.0139	(102)	99	(1)	1	65-160	50
Methoxychlor	(ND)	ND	.0702	(.0776)	.0676	(111)	96	.0702	(.0793)	.0687	(113)	98	(2)	2	63-152	50

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	MS RSLT (mg/kg)		MS % REC		SPIKE AMT (mg/kg)	MSD RSLT (mg/kg)		MSD % REC		QC LIMIT (%)
Tetrachloro-m-xylene	.014	(.011)	.011	(78)	78	.014	(.0111)	.011	(79)	79	35-135
Decachlorobiphenyl	.028	(.0228)	.0219	(81)	78	.028	(.023)	.022	(82)	78	25-143

SW 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: SHAW E&I	Date Collected:	12/18/02
Project	: EL TORO, CTO 0024	Date Received:	12/18/02
tch No.	: 02L117	Date Extracted:	12/24/02 03:24
mple ID:	818655-B3122	Date Analyzed:	12/24/02 03:24
Lab Samp ID:	L117-01	Dilution Factor:	1
Lab File ID:	RLQ411	Matrix :	WATER
t Btch ID:	VO05L41	% Moisture :	NA
lib. Ref.:	RLQ194	Instrument ID :	T-005

RAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	5	2
1 1,2,2-TETRACHLOROETHANE	ND	5	2
1,2-TRICHLOROETHANE	ND	5	2
1-DICHLOROETHANE	ND	5	2
1,1-DICHLOROETHENE	ND	5	2
1 2-DICHLOROETHANE	ND	5	2
2-DICHLOROPROPANE	ND	5	2
BUTANONE (MEK)	ND	50	5
2-HEXANONE	ND	50	5
2-CHLOROETHYLVINYLETHER	ND	50	2
METHYL-2-PENTANONE (MIBK)	ND	50	5
ETONE	ND	50	5
BENZENE	ND	5	2
BROMODICHLOROMETHANE	ND	5	2
OMOFORM	ND	5	2
OMOMETHANE	ND	5	3
CARBON DISULFIDE	ND	5	2
CARBON TETRACHLORIDE	ND	5	2
LOROBENZENE	ND	5	2
LOROETHANE	ND	5	2
LOROFORM	ND	5	2
CHLOROMETHANE	ND	5	2.5
S-1,2-DICHLOROETHENE	ND	5	2
S-1,3-DICHLOROPROPENE	ND	5	2
BROMOCHLOROMETHANE	ND	5	2
ETHYLBENZENE	ND	5	2
XYLENE,TOTAL	ND	5	3
THYLENE CHLORIDE	ND	5	2
BE	ND	10	2
STYRENE	ND	5	2
TOLUENE	ND	5	2
ANS-1,2-DICHLOROETHENE	ND	5	2
ANS-1,3-DICHLOROPROPENE	ND	5	2
TRICHLOROETHENE	ND	5	2
TETRACHLOROETHENE	ND	5	2
NYL ACETATE	ND	50	2
NYL CHLORIDE	ND	5	2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2-DICHLOROETHANE-D4	106	86-118
BROMOFLUOROBENZENE	96	86-115
TOLUENE-D8	97	88-110

SW 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: SHAW E&I	Date Collected:	12/18/02
Project	: EL TORO, CTO 0024	Date Received:	12/18/02
Batch No.	: 02L117	Date Extracted:	12/24/02 04:01
Sample ID:	818655-B3130	Date Analyzed:	12/24/02 04:01
Lab Samp ID:	L117-09	Dilution Factor:	1
Lab File ID:	RLQ412	Matrix :	WATER
Ext Btch ID:	V005L41	% Moisture :	NA
Calib. Ref.:	RLQ194	Instrument ID :	T-005

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	5	2
1,1,2,2-TETRACHLOROETHANE	ND	5	2
1,1,2-TRICHLOROETHANE	ND	5	2
1,1-DICHLOROETHANE	ND	5	2
1,1-DICHLOROETHENE	ND	5	2
1,2-DICHLOROETHANE	ND	5	2
1,2-DICHLOROPROPANE	ND	5	2
2-BUTANONE (MEK)	ND	50	5
2-HEXANONE	ND	50	5
2-CHLOROETHYLVINYLETHER	ND	50	2
4-METHYL-2-PENTANONE (MIBK)	ND	50	5
ACETONE	ND	50	5
BENZENE	ND	5	2
BROMODICHLOROMETHANE	ND	5	2
BROMOFORM	ND	5	2
BROMOMETHANE	ND	5	3
CARBON DISULFIDE	ND	5	2
CARBON TETRACHLORIDE	ND	5	2
CHLOROBENZENE	ND	5	2
CHLOROETHANE	ND	5	2
CHLOROFORM	ND	5	2
CHLOROMETHANE	ND	5	2.5
CIS-1,2-DICHLOROETHENE	ND	5	2
CIS-1,3-DICHLOROPROPENE	ND	5	2
DIBROMOCHLOROMETHANE	ND	5	2
ETHYLBENZENE	ND	5	2
XYLENE,TOTAL	ND	5	3
METHYLENE CHLORIDE	ND	5	2
MTBE	ND	10	2
STYRENE	ND	5	2
TOLUENE	ND	5	2
TRANS-1,2-DICHLOROETHENE	ND	5	2
TRANS-1,3-DICHLOROPROPENE	ND	5	2
TRICHLOROETHENE	ND	5	2
TETRACHLOROETHENE	ND	5	2
VINYL ACETATE	ND	50	2
VINYL CHLORIDE	ND	5	2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	108	86-118
BROMOFLUOROBENZENE	92	86-115
TOLUENE-D8	95	88-110

SW 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: SHAW E&I	Date Collected:	NA
Project	: EL TORO, CTO 0024	Date Received:	12/24/02
Batch No.	: 02L117	Date Extracted:	12/24/02 02:47
Sample ID:	MBLK1W	Date Analyzed:	12/24/02 02:47
Lab Samp ID:	V005L41B	Dilution Factor:	1
Lab File ID:	RLQ410	Matrix :	WATER
Prep Btch ID:	V005L41	% Moisture :	NA
Blank Ref.:	RLQ194	Instrument ID :	T-005

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	5	2
1,1,2,2-TETRACHLOROETHANE	ND	5	2
1,2-TRICHLOROETHANE	ND	5	2
1-DICHLOROETHANE	ND	5	2
1,1-DICHLOROETHENE	ND	5	2
1,2-DICHLOROETHANE	ND	5	2
2-DICHLOROPROPANE	ND	5	2
BUTANONE (MEK)	ND	50	5
2-HEXANONE	ND	50	5
2-CHLOROETHYLVINYLETHER	ND	50	2
METHYL-2-PENTANONE (MIBK)	ND	50	5
ETONE	ND	50	5
BENZENE	ND	5	2
BROMODICHLOROMETHANE	ND	5	2
OMOFORM	ND	5	2
OMOMETHANE	ND	5	3
CARBON DISULFIDE	ND	5	2
CARBON TETRACHLORIDE	ND	5	2
CHLOROBENZENE	ND	5	2
LOROETHANE	ND	5	2
LOROFORM	ND	5	2
CHLOROMETHANE	ND	5	2.5
CIS-1,2-DICHLOROETHENE	ND	5	2
S-1,3-DICHLOROPROPENE	ND	5	2
BROMOCHLOROMETHANE	ND	5	2
ETHYLBENZENE	ND	5	2
XYLENE,TOTAL	ND	5	3
THYLENE CHLORIDE	ND	5	2
BE	ND	10	2
STYRENE	ND	5	2
TOLUENE	ND	5	2
ANS-1,2-DICHLOROETHENE	ND	5	2
ANS-1,3-DICHLOROPROPENE	ND	5	2
TRICHLOROETHENE	ND	5	2
TETRACHLOROETHENE	ND	5	2
NYL ACETATE	ND	50	2
NYL CHLORIDE	ND	5	2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2-DICHLOROETHANE-D4	105	86-118
BROMOFLUOROBENZENE	91	86-115
TOLUENE-D8	95	88-110

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
BATCH NO.: 02L117
METHOD: SW 5030B/8260B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	V005L41B	V005L41L	V005L41C		
LAB FILE ID:	RLQ410	RLQ408	RLQ409		
DATE EXTRACTED:	12/24/0202:47	12/24/0201:33	12/24/0202:10	DATE COLLECTED:	NA
DATE ANALYZED:	12/24/0202:47	12/24/0201:33	12/24/0202:10	DATE RECEIVED:	12/24/02
PREP. BATCH:	V005L41	V005L41	V005L41		
CALIB. REF:	RLQ194	RLQ194	RLQ194		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	10	10.5	105	10	10.6	106	1	75-125	20
Benzene	ND	10	9.96	100	10	9.97	100	0	75-125	20
Chlorobenzene	ND	10	9.94	99	10	9.99	100	0	75-125	20
Toluene	ND	10	9.72	97	10	9.91	99	2	74-125	20
Trichloroethene	ND	10	9.61	96	10	9.57	96	0	71-125	20

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	10	10.3	103	10	10.4	104	86-118
Bromofluorobenzene	10	9.61	96	10	9.6	96	86-115
Toluene-d8	10	9.65	97	10	9.57	96	88-110

SW 5035/8260B
VOLATILE ORGANICS BY GC/MS

Client	: SHAW E&I	Date Collected:	NA
Project	: EL TORO, CTO 0024	Date Received:	12/20/02
Batch No.	: 02L117	Date Extracted:	12/20/02 16:31
Sample ID	: MBLK2S	Date Analyzed:	12/20/02 16:31
Lab Samp ID	: VPL004SB	Dilution Factor:	1.0
Lab File ID	: RLW462	Matrix :	SOIL
Ext Btch ID	: V006L48	% Moisture :	NA
Calib. Ref.	: RKW560	Instrument ID :	T-006

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5	2
1,1,2,2-TETRACHLOROETHANE	ND	5	2
1,2-TRICHLOROETHANE	ND	5	2
1-DICHLOROETHANE	ND	5	2
1,1-DICHLOROETHENE	ND	5	2
1,2-DICHLOROETHANE	ND	5	2
2-DICHLOROPROPANE	ND	5	2
BUTANONE (MEK)	ND	50	5
2-HEXANONE	ND	50	5
2-CHLOROETHYLVINYLETHER	ND	50	2
METHYL-2-PENTANONE (MIBK)	ND	50	5
ETONE	ND	50	5
BENZENE	ND	5	2
BROMODICHLOROMETHANE	ND	5	2
ROMOFORM	ND	5	2
ROMOMETHANE	ND	5	3
ARBON DISULFIDE	ND	5	2
CARBON TETRACHLORIDE	ND	5	2
HLOROBENZENE	ND	5	2
HLOROETHANE	ND	5	3
HLOROFORM	ND	5	2
CHLOROMETHANE	ND	5	5
CIS-1,2-DICHLOROETHENE	ND	5	2
IS-1,3-DICHLOROPROPENE	ND	5	2
BROMOCHLOROMETHANE	ND	5	2
ETHYLBENZENE	ND	5	2
XYLENE,TOTAL	ND	5	3
ETHYLENE CHLORIDE	2.2J	5	2
TBE	ND	10	2
STYRENE	ND	5	2
TOLUENE	ND	5	2
RANS-1,2-DICHLOROETHENE	ND	5	2
RANS-1,3-DICHLOROPROPENE	ND	5	2
RICHLOROETHENE	ND	5	2
TETRACHLOROETHENE	ND	5	2
NYL ACETATE	ND	50	2
NYL CHLORIDE	ND	5	2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
,2-DICHLOROETHANE-D4	111	70-130
ROMOFLUOROBENZENE	81	70-130
TOLUENE-D8	95	70-130

Preservation Date: 12/18/02 18:00

SW 5035/8260B
VOLATILE ORGANICS BY GC/MS

Client : SHAW E&I	Date Collected: 12/18/02
Project : EL TORO, CTO 0024	Date Received: 12/18/02
Batch No. : 02L117	Date Extracted: 12/20/02 17:08
Sample ID: 818655-B3123	Date Analyzed: 12/20/02 17:08
Lab Samp ID: L117-02	Dilution Factor: .91
Lab File ID: RLW463	Matrix : SOIL
Ext Btch ID: V006L48	% Moisture : 5.0
Calib. Ref.: RKW560	Instrument ID : T-006

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	4.8	1.9
1,1,2,2-TETRACHLOROETHANE	ND	4.8	1.9
1,1,2-TRICHLOROETHANE	ND	4.8	1.9
1,1-DICHLOROETHANE	ND	4.8	1.9
1,1-DICHLOROETHENE	ND	4.8	1.9
1,2-DICHLOROETHANE	ND	4.8	1.9
1,2-DICHLOROPROPANE	ND	4.8	1.9
2-BUTANONE (MEK)	ND	48	4.8
2-HEXANONE	ND	48	4.8
2-CHLOROETHYLVINYLETHER	ND	48	1.9
4-METHYL-2-PENTANONE (MIBK)	ND	48	4.8
ACETONE	26J	48	4.8
BENZENE	ND	4.8	1.9
BROMODICHLOROMETHANE	ND	4.8	1.9
BROMOFORM	ND	4.8	1.9
BROMOMETHANE	ND	4.8	2.9
CARBON DISULFIDE	ND	4.8	1.9
CARBON TETRACHLORIDE	ND	4.8	1.9
CHLOROBENZENE	ND	4.8	1.9
CHLOROETHANE	ND	4.8	2.9
CHLOROFORM	ND	4.8	1.9
CHLOROMETHANE	ND	4.8	4.8
CIS-1,2-DICHLOROETHENE	ND	4.8	1.9
CIS-1,3-DICHLOROPROPENE	ND	4.8	1.9
DIBROMOCHLOROMETHANE	ND	4.8	1.9
ETHYLBENZENE	ND	4.8	1.9
XYLENE,TOTAL	ND	4.8	2.9
METHYLENE CHLORIDE	2J	4.8	1.9
MTBE	ND	9.6	1.9
STYRENE	ND	4.8	1.9
TOLUENE	ND	4.8	1.9
TRANS-1,2-DICHLOROETHENE	ND	4.8	1.9
TRANS-1,3-DICHLOROPROPENE	ND	4.8	1.9
TRICHLOROETHENE	ND	4.8	1.9
TETRACHLOROETHENE	ND	4.8	1.9
VINYL ACETATE	ND	48	1.9
VINYL CHLORIDE	ND	4.8	1.9

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	113	70-130
BROMOFLUOROBENZENE	87	70-130
TOLUENE-D8	99	70-130

Preservation Date: 12/18/02 18:00

SW 5035/8260B
VOLATILE ORGANICS BY GC/MS

..ient	: SHAW E&I	Date Collected:	12/18/02
Project	: EL TORO, CTO 0024	Date Received:	12/18/02
..tch No.	: 02L117	Date Extracted:	12/20/02 17:44
..mple ID:	818655-B3124	Date Analyzed:	12/20/02 17:44
..b Samp ID:	L117-03	Dilution Factor:	.93
Lab File ID:	RLW464	Matrix :	SOIL
..t Btch ID:	V006L48	% Moisture :	5.2
..lib. Ref..:	RKW560	Instrument ID :	T-006

RAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	4.9	2
1.1,2,2-TETRACHLOROETHANE	ND	4.9	2
1,2-TRICHLOROETHANE	ND	4.9	2
1-DICHLOROETHANE	ND	4.9	2
1,1-DICHLOROETHENE	ND	4.9	2
1,2-DICHLOROETHANE	ND	4.9	2
2-DICHLOROPROPANE	ND	4.9	2
BUTANONE (MEK)	ND	49	4.9
2-HEXANONE	ND	49	4.9
2-CHLOROETHYLVINYLETHER	ND	49	2
METHYL-2-PENTANONE (MIBK)	ND	49	4.9
ETONE	16J	49	4.9
BENZENE	ND	4.9	2
BROMODICHLOROMETHANE	ND	4.9	2
..OMOFORM	ND	4.9	2
OMOMETHANE	ND	4.9	2.9
..RBON DISULFIDE	ND	4.9	2
CARBON TETRACHLORIDE	ND	4.9	2
CHLOROBENZENE	ND	4.9	2
LOROETHANE	ND	4.9	2.9
LOROFORM	ND	4.9	2
CHLOROMETHANE	ND	4.9	4.9
CIS-1,2-DICHLOROETHENE	ND	4.9	2
S-1,3-DICHLOROPROPENE	ND	4.9	2
BROMOCHLOROMETHANE	ND	4.9	2
ETHYLBENZENE	ND	4.9	2
XYLENE,TOTAL	ND	4.9	2.9
THYLENE CHLORIDE	2.4J	4.9	2
BE	ND	9.8	2
STYRENE	ND	4.9	2
TOLUENE	ND	4.9	2
ANS-1,2-DICHLOROETHENE	ND	4.9	2
ANS-1,3-DICHLOROPROPENE	ND	4.9	2
..ICHLOROETHENE	ND	4.9	2
TETRACHLOROETHENE	ND	4.9	2
NYL ACETATE	ND	49	2
NYL CHLORIDE	ND	4.9	2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2-DICHLOROETHANE-D4	112	70-130
OMOFLUOROBENZENE	86	70-130
TOLUENE-D8	97	70-130

..eservation Date: 12/18/02 18:00

SW 5035/8260B
VOLATILE ORGANICS BY GC/MS

Client : SHAW E&I	Date Collected: 12/18/02
Project : EL TORO, CTO 0024	Date Received: 12/18/02
Batch No. : 02L117	Date Extracted: 12/20/02 18:20
Sample ID: 818655-B3125	Date Analyzed: 12/20/02 18:20
Lab Samp ID: L117-04	Dilution Factor: .94
Lab File ID: RLW465	Matrix : SOIL
Ext Btch ID: V006L48	% Moisture : 6.3
Calib. Ref.: RKW560	Instrument ID : T-006

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5	2
1,1,2,2-TETRACHLOROETHANE	ND	5	2
1,1,2-TRICHLOROETHANE	ND	5	2
1,1-DICHLOROETHANE	ND	5	2
1,1-DICHLOROETHENE	ND	5	2
1,2-DICHLOROETHANE	ND	5	2
1,2-DICHLOROPROPANE	ND	5	2
2-BUTANONE (MEK)	ND	50	5
2-HEXANONE	ND	50	5
2-CHLOROETHYLVINYLETHER	ND	50	2
4-METHYL-2-PENTANONE (MIBK)	ND	50	5
ACETONE	12J	50	5
BENZENE	ND	5	2
BROMODICHLOROMETHANE	ND	5	2
BROMOFORM	ND	5	2
BROMOMETHANE	ND	5	3
CARBON DISULFIDE	ND	5	2
CARBON TETRACHLORIDE	ND	5	2
CHLOROBENZENE	ND	5	2
CHLOROETHANE	ND	5	3
CHLOROFORM	ND	5	2
CHLOROMETHANE	ND	5	5
CIS-1,2-DICHLOROETHENE	ND	5	2
CIS-1,3-DICHLOROPROPENE	ND	5	2
DIBROMOCHLOROMETHANE	ND	5	2
ETHYLBENZENE	ND	5	2
XYLENE,TOTAL	ND	5	3
METHYLENE CHLORIDE	2.1J	5	2
MTBE	ND	10	2
STYRENE	ND	5	2
TOLUENE	ND	5	2
TRANS-1,2-DICHLOROETHENE	ND	5	2
TRANS-1,3-DICHLOROPROPENE	ND	5	2
TRICHLOROETHENE	ND	5	2
TETRACHLOROETHENE	ND	5	2
VINYL ACETATE	ND	50	2
VINYL CHLORIDE	ND	5	2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	110	70-130
BROMOFLUOROBENZENE	83	70-130
TOLUENE-D8	95	70-130

Preservation Date: 12/18/02 18:00

SW 5035/8260B
VOLATILE ORGANICS BY GC/MS

Client	: SHAW E&I	Date Collected:	12/18/02
Project	: EL TORO, CTO 0024	Date Received:	12/18/02
Batch No.	: 02L117	Date Extracted:	12/20/02 18:56
Sample ID:	818655-B3126	Date Analyzed:	12/20/02 18:56
Lab Samp ID:	L117-05	Dilution Factor:	.96
Lab File ID:	RLW466	Matrix :	SOIL
Ext Btch ID:	V006L48	% Moisture :	3.9
Calib. Ref.:	RKW560	Instrument ID :	T-006

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5	2
1,1,2,2-TETRACHLOROETHANE	ND	5	2
1,1,2-TRICHLOROETHANE	ND	5	2
1,1-DICHLOROETHANE	ND	5	2
1,1-DICHLOROETHENE	ND	5	2
1,2-DICHLOROETHANE	ND	5	2
1,2-DICHLOROPROPANE	ND	5	2
2-BUTANONE (MEK)	ND	50	5
2-HEXANONE	ND	50	5
2-CHLOROETHYLVINYLETHER	ND	50	2
4-METHYL-2-PENTANONE (MIBK)	ND	50	5
ACETONE	15J	50	5
BENZENE	ND	5	2
BROMODICHLOROMETHANE	ND	5	2
BROMOFORM	ND	5	2
BROMOMETHANE	ND	5	3
CARBON DISULFIDE	ND	5	2
CARBON TETRACHLORIDE	ND	5	2
CHLOROBENZENE	ND	5	2
CHLOROETHANE	ND	5	3
CHLOROFORM	ND	5	2
CHLOROMETHANE	ND	5	5
CIS-1,2-DICHLOROETHENE	ND	5	2
CIS-1,3-DICHLOROPROPENE	ND	5	2
DIBROMOCHLOROMETHANE	ND	5	2
ETHYLBENZENE	ND	5	2
XYLENE,TOTAL	ND	5	3
METHYLENE CHLORIDE	2.3J	5	2
MTBE	ND	10	2
STYRENE	ND	5	2
TOLUENE	ND	5	2
TRANS-1,2-DICHLOROETHENE	ND	5	2
TRANS-1,3-DICHLOROPROPENE	ND	5	2
TRICHLOROETHENE	ND	5	2
TETRACHLOROETHENE	ND	5	2
VINYL ACETATE	ND	50	2
VINYL CHLORIDE	ND	5	2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	115	70-130
BROMOFLUOROBENZENE	84	70-130
TOLUENE-D8	99	70-130

Preservation Date: 12/18/02 18:00

SW 5035/8260B
VOLATILE ORGANICS BY GC/MS

Client : SHAW E&I	Date Collected: 12/18/02
Project : EL TORO, CTO 0024	Date Received: 12/18/02
Batch No. : 02L117	Date Extracted: 12/20/02 19:32
Sample ID: 818655-B3127	Date Analyzed: 12/20/02 19:32
Lab Samp ID: L117-06	Dilution Factor: 1.0
Lab File ID: RLW467	Matrix : SOIL
Ext Btch ID: V006L48	% Moisture : 17.9
Calib. Ref.: RKW560	Instrument ID : T-006

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	6.1	2.4
1,1,2,2-TETRACHLOROETHANE	ND	6.1	2.4
1,1,2-TRICHLOROETHANE	ND	6.1	2.4
1,1-DICHLOROETHANE	ND	6.1	2.4
1,1-DICHLOROETHENE	ND	6.1	2.4
1,2-DICHLOROETHANE	ND	6.1	2.4
1,2-DICHLOROPROPANE	ND	6.1	2.4
2-BUTANONE (MEK)	ND	61	6.1
2-HEXANONE	ND	61	6.1
2-CHLOROETHYLVINYLETHER	ND	61	2.4
4-METHYL-2-PENTANONE (MIBK)	ND	61	6.1
ACETONE	21J	61	6.1
BENZENE	ND	6.1	2.4
BROMODICHLOROMETHANE	ND	6.1	2.4
BROMOFORM	ND	6.1	2.4
BROMOMETHANE	ND	6.1	3.7
CARBON DISULFIDE	ND	6.1	2.4
CARBON TETRACHLORIDE	ND	6.1	2.4
CHLOROBENZENE	ND	6.1	2.4
CHLOROETHANE	ND	6.1	3.7
CHLOROFORM	ND	6.1	2.4
CHLOROMETHANE	ND	6.1	6.1
CIS-1,2-DICHLOROETHENE	ND	6.1	2.4
CIS-1,3-DICHLOROPROPENE	ND	6.1	2.4
DIBROMOCHLOROMETHANE	ND	6.1	2.4
ETHYLBENZENE	ND	6.1	2.4
XYLENE,TOTAL	ND	6.1	3.7
METHYLENE CHLORIDE	2.8J	6.1	2.4
MTBE	ND	12	2.4
STYRENE	ND	6.1	2.4
TOLUENE	ND	6.1	2.4
TRANS-1,2-DICHLOROETHENE	ND	6.1	2.4
TRANS-1,3-DICHLOROPROPENE	ND	6.1	2.4
TRICHLOROETHENE	ND	6.1	2.4
TETRACHLOROETHENE	ND	6.1	2.4
VINYL ACETATE	ND	61	2.4
VINYL CHLORIDE	ND	6.1	2.4

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	114	70-130
BROMOFLUOROBENZENE	83	70-130
TOLUENE-D8	96	70-130

Preservation Date: 12/18/02 18:00

SW 5035/8260B
VOLATILE ORGANICS BY GC/MS

Client	: SHAW E&I	Date Collected:	12/18/02
Project	: EL TORO, CTO 0024	Date Received:	12/18/02
Batch No.	: 02L117	Date Extracted:	12/20/02 20:08
Sample ID	: 818655-B3128	Date Analyzed:	12/20/02 20:08
Lab Samp ID	: L117-07	Dilution Factor:	.93
Lab File ID	: RLW468	Matrix	: SOIL
Prep Btch ID	: V006L48	% Moisture	: 6.5
Calib. Ref.:	RKW560	Instrument ID	: T-006

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5	2
1,1,2,2-TETRACHLOROETHANE	ND	5	2
1,1,2-TRICHLOROETHANE	ND	5	2
1,1-DICHLOROETHANE	ND	5	2
1,1-DICHLOROETHENE	ND	5	2
1,2-DICHLOROETHANE	ND	5	2
1,2-DICHLOROPROPANE	ND	5	2
2-BUTANONE (MEK)	ND	50	5
2-HEXANONE	ND	50	5
2-CHLOROETHYLVINYLETHER	ND	50	2
4-METHYL-2-PENTANONE (MIBK)	ND	50	5
ACETONE	ND	50	5
BENZENE	ND	5	2
BROMODICHLOROMETHANE	ND	5	2
BROMOFORM	ND	5	2
BROMOMETHANE	ND	5	3
CARBON DISULFIDE	ND	5	2
CARBON TETRACHLORIDE	ND	5	2
CHLOROBENZENE	ND	5	2
CHLOROETHANE	ND	5	3
CHLOROFORM	ND	5	2
CHLOROMETHANE	ND	5	5
CIS-1,2-DICHLOROETHENE	ND	5	2
CIS-1,3-DICHLOROPROPENE	ND	5	2
DIBROMOCHLOROMETHANE	ND	5	2
ETHYLBENZENE	ND	5	2
XYLENE,TOTAL	ND	5	3
METHYLENE CHLORIDE	2.2J	5	2
MTBE	ND	9.9	2
STYRENE	ND	5	2
TOLUENE	ND	5	2
TRANS-1,2-DICHLOROETHENE	ND	5	2
TRANS-1,3-DICHLOROPROPENE	ND	5	2
TRICHLOROETHENE	ND	5	2
TETRACHLOROETHENE	ND	5	2
VINYL ACETATE	ND	50	2
VINYL CHLORIDE	ND	5	2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	109	70-130
BROMOFLUOROBENZENE	85	70-130
TOLUENE-D8	98	70-130

Preservation Date: 12/18/02 18:00

SW 5035/8260B
VOLATILE ORGANICS BY GC/MS

Client	: SHAW E&I	Date Collected:	12/18/02
Project	: EL TORO, CTO 0024	Date Received:	12/18/02
Batch No.	: 02L117	Date Extracted:	12/20/02 20:44
Sample ID:	818655-B3129	Date Analyzed:	12/20/02 20:44
Lab Samp ID:	L117-08	Dilution Factor:	.93
Lab File ID:	RLW469	Matrix :	SOIL
Ext Btch ID:	V006L48	% Moisture :	3.1
Calib. Ref.:	RKW560	Instrument ID :	T-006

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	4.8	1.9
1,1,2,2-TETRACHLOROETHANE	ND	4.8	1.9
1,1,2-TRICHLOROETHANE	ND	4.8	1.9
1,1-DICHLOROETHANE	ND	4.8	1.9
1,1-DICHLOROETHENE	ND	4.8	1.9
1,2-DICHLOROETHANE	ND	4.8	1.9
1,2-DICHLOROPROPANE	ND	4.8	1.9
2-BUTANONE (MEK)	ND	48	4.8
2-HEXANONE	ND	48	4.8
2-CHLOROETHYLVINYLETHER	ND	48	1.9
4-METHYL-2-PENTANONE (MIBK)	ND	48	4.8
ACETONE	15J	48	4.8
BENZENE	ND	4.8	1.9
BROMODICHLOROMETHANE	ND	4.8	1.9
BROMOFORM	ND	4.8	1.9
BROMOMETHANE	ND	4.8	2.9
CARBON DISULFIDE	ND	4.8	1.9
CARBON TETRACHLORIDE	ND	4.8	1.9
CHLOROBENZENE	ND	4.8	1.9
CHLOROETHANE	ND	4.8	2.9
CHLOROFORM	ND	4.8	1.9
CHLOROMETHANE	ND	4.8	4.8
CIS-1,2-DICHLOROETHENE	ND	4.8	1.9
CIS-1,3-DICHLOROPROPENE	ND	4.8	1.9
DIBROMOCHLOROMETHANE	ND	4.8	1.9
ETHYLBENZENE	ND	4.8	1.9
XYLENE,TOTAL	ND	4.8	2.9
METHYLENE CHLORIDE	2.2J	4.8	1.9
MTBE	ND	9.6	1.9
STYRENE	ND	4.8	1.9
TOLUENE	ND	4.8	1.9
TRANS-1,2-DICHLOROETHENE	ND	4.8	1.9
TRANS-1,3-DICHLOROPROPENE	ND	4.8	1.9
TRICHLOROETHENE	ND	4.8	1.9
TETRACHLOROETHENE	ND	4.8	1.9
VINYL ACETATE	ND	48	1.9
VINYL CHLORIDE	ND	4.8	1.9

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	109	70-130
BROMOFLUOROBENZENE	85	70-130
TOLUENE-D8	98	70-130

Preservation Date: 12/18/02 18:00

SW 5035/8260B
VOLATILE ORGANICS BY GC/MS

Client	: SHAW E&I	Date Collected:	NA
Project	: EL TORO, CTO 0024	Date Received:	12/20/02
tch No.	: 02L117	Date Extracted:	12/20/02 15:55
mple ID:	MBLK1S	Date Analyzed:	12/20/02 15:55
Lab Samp ID:	VO06L48Q	Dilution Factor:	1
Lab File ID:	RLW461	Matrix :	SOIL
t Btch ID:	VO06L48	% Moisture :	NA
lib. Ref.:	RKW560	Instrument ID :	T-006

RAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5	2
1,2,2-TETRACHLOROETHANE	ND	5	2
1,2-TRICHLOROETHANE	ND	5	2
1-DICHLOROETHANE	ND	5	2
1,1-DICHLOROETHENE	ND	5	2
1,2-DICHLOROETHANE	ND	5	2
2-DICHLOROPROPANE	ND	5	2
BUTANONE (MEK)	ND	50	5
HEXANONE	ND	50	5
2-CHLOROETHYLVINYLETHER	ND	50	2
METHYL-2-PENTANONE (MIBK)	ND	50	5
ETONE	ND	50	5
BENZENE	ND	5	2
BROMODICHLOROMETHANE	ND	5	2
OMOFORM	ND	5	2
OMOMETHANE	ND	5	3
ARBON DISULFIDE	ND	5	2
CARBON TETRACHLORIDE	ND	5	2
LOROBENZENE	ND	5	2
LOROETHANE	ND	5	3
LOROFORM	ND	5	2
CHLOROMETHANE	ND	5	5
IS-1,2-DICHLOROETHENE	ND	5	2
S-1,3-DICHLOROPROPENE	ND	5	2
BROMOCHLOROMETHANE	ND	5	2
ETHYLBENZENE	ND	5	2
XYLENE,TOTAL	ND	5	3
THYLENE CHLORIDE	2.7J	5	2
BE	ND	10	2
STYRENE	ND	5	2
TOLUENE	ND	5	2
ANS-1,2-DICHLOROETHENE	ND	5	2
ANS-1,3-DICHLOROPROPENE	ND	5	2
TRICHLOROETHENE	ND	5	2
TETRACHLOROETHENE	ND	5	2
NYL ACETATE	ND	50	2
NYL CHLORIDE	ND	5	2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2-DICHLOROETHANE-D4	114	70-130
OMOFLUOROBENZENE	82	70-130
TOLUENE-D8	98	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
BATCH NO.: 02L117
METHOD: SW 5035/8260B

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	V006L48Q	V006L48L	V006L48C		
LAB FILE ID:	RLW461	RLW458	RLW459		
DATE EXTRACTED:	12/20/0215:55	12/20/0214:07	12/20/0214:43	DATE COLLECTED:	NA
DATE ANALYZED:	12/20/0215:55	12/20/0214:07	12/20/0214:43	DATE RECEIVED:	12/20/02
PREP. BATCH:	V006L48	V006L48	V006L48		
CALIB. REF:	RKW560	RKW560	RKW560		

ACCESSION:

PARAMETER	BLNK RSLT (ug/kg)	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	20	17.6	88	20	16.9	84	4	65-135	30
Benzene	ND	20	17.2	86	20	16.6	83	3	65-135	30
Chlorobenzene	ND	20	18.3	91	20	18.2	91	0	65-135	30
Toluene	ND	20	18.4	92	20	17.5	87	5	64-135	30
Trichloroethene	ND	20	17.5	87	20	17	85	2	61-135	30

SURROGATE PARAMETER	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	50	57.6	115	50	56	112	70-130
Bromofluorobenzene	50	41	82	50	41	82	70-130
Toluene-d8	50	48.1	96	50	48.2	96	70-130

SW 3550B/8270C
SEMI VOLATILE ORGANICS BY GC/MS

Client : SHAW E&I	Date Collected: 12/18/02
Project : EL TORO, CTO 0024	Date Received: 12/18/02
Batch No. : 02L117	Date Extracted: 12/19/02 13:00
Sample ID: 818655-B3123	Date Analyzed: 12/19/02 19:36
Lab Samp ID: L117-02	Dilution Factor: 1
Lab File ID: RLX171	Matrix : SOIL
Lab Btch ID: SVL015S	% Moisture : 5.0
Calib. Ref.: RJX007	Instrument ID : T-042

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,2,4-TRICHLOROBENZENE	ND	350	180
1,2-DICHLOROBENZENE	ND	350	180
1,3-DICHLOROBENZENE	ND	350	180
1,4-DICHLOROBENZENE	ND	350	180
2,4,5-TRICHLOROPHENOL	ND	870	180
2,4,6-TRICHLOROPHENOL	ND	350	180
2,4-DICHLOROPHENOL	ND	350	180
2,4-DIMETHYLPHENOL	ND	350	180
2,4-DINITROPHENOL	ND	870	180
2,4-DINITROTOLUENE	ND	350	180
2,6-DINITROTOLUENE	ND	350	180
2-CHLORONAPHTHALENE	ND	350	180
2-CHLOROPHENOL	ND	350	180
2-METHYLNAPHTHALENE	ND	350	180
2-METHYLPHENOL	ND	350	180
2-NITROANILINE	ND	870	180
2-NITROPHENOL	ND	350	180
3,3'-DICHLOROBENZIDINE	ND	350	180
3-NITROANILINE	ND	870	180
4,6-DINITRO-2-METHYLPHENOL	ND	870	180
4-BROMOPHENYL-PHENYL ETHER	ND	350	180
4-CHLORO-3-METHYLPHENOL	ND	350	180
4-CHLOROANILINE	ND	350	180
4-CHLOROPHENYL-PHENYL ETHER	ND	350	180
4-METHYLPHENOL (1)	ND	350	180
4-NITROANILINE	ND	870	180
4-NITROPHENOL	ND	870	180
ACENAPHTHENE	ND	350	180
ACENAPHTHYLENE	ND	350	180
ANTHRACENE	ND	350	180
BENZO(A)ANTHRACENE	ND	350	180
BENZO(B)FLUORANTHENE	ND	350	180
BENZO(K)FLUORANTHENE	ND	350	180
BENZO(G,H,I)PERYLENE	ND	350	180
BIS(2-CHLOROETHOXY)METHANE	ND	350	180
BIS(2-CHLOROISOPROPYL)ETHER	ND	350	180
BIS(2-ETHYLHEXYL)PHTHALATE	ND	350	180
BUTYLBENZYLPHTHALATE	ND	350	180
CHRYSENE	ND	350	180
DI-N-BUTYLPHTHALATE	ND	350	180
DI-N-OCTYLPHTHALATE	ND	350	180
DIBENZOFURAN	ND	350	180
DIETHYLPHTHALATE	ND	350	180
DIMETHYLPHTHALATE	ND	350	180
FLUORANTHENE	ND	350	180
FLUORENE	ND	350	180
HEXACHLOROBUTADIENE	ND	350	180
HEXACHLOROCYCLOPENTADIENE	ND	350	180
HEXACHLOROETHANE	ND	350	180
N-NITROSODIPHENYLAMINE (2)	ND	350	180
NAPHTHALENE	ND	350	180
NITROBENZENE	ND	210	180
PENTACHLOROPHENOL	ND	350	180
PHENANTHRENE	ND	350	180
PHENOL	ND	350	180
PYRENE	ND		

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	99	25-144
2-FLUOROBIPHENYL	81	34-135
2-FLUOROPHENOL	77	25-135
NITROBENZENE-D5	78	25-135
PHENOL-D5	84	25-135
TERPHENYL-D14	87	32-136

RL : Reporting Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine

SW 3550B/8270C
SEMI VOLATILE ORGANICS BY GC/MS

Client	: SHAW E&I	Date Collected:	12/18/02
Project	: EL TORO, CTO 0024	Date Received:	12/18/02
Batch No.	: 02L117	Date Extracted:	12/19/02 13:00
Sample ID:	818655-B3124	Date Analyzed:	12/19/02 21:13
Lab Samp ID:	L117-03	Dilution Factor:	1
Lab File ID:	RLX174	Matrix	: SOIL
Ext Btch ID:	SVL015S	% Moisture	: 5.2
Calib. Ref.:	RJX007	Instrument ID	: T-042

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,2,4-TRICHLOROBENZENE	ND	350	180
1,2-DICHLOROBENZENE	ND	350	180
1,3-DICHLOROBENZENE	ND	350	180
1,4-DICHLOROBENZENE	ND	350	180
2,4,5-TRICHLOROPHENOL	ND	880	180
2,4,6-TRICHLOROPHENOL	ND	350	180
2,4-DICHLOROPHENOL	ND	350	180
2,4-DIMETHYLPHENOL	ND	350	180
2,4-DINITROPHENOL	ND	880	180
2,4-DINITROTOLUENE	ND	350	180
2,6-DINITROTOLUENE	ND	350	180
2-CHLORONAPHTHALENE	ND	350	180
2-CHLOROPHENOL	ND	350	180
2-METHYLNAPHTHALENE	ND	350	180
2-METHYLPHENOL	ND	350	180
2-NITROANILINE	ND	880	180
2-NITROPHENOL	ND	350	180
3,3'-DICHLOROBENZIDINE	ND	350	180
3-NITROANILINE	ND	880	180
4,6-DINITRO-2-METHYLPHENOL	ND	880	180
4-BROMOPHENYL-PHENYL ETHER	ND	350	180
4-CHLORO-3-METHYLPHENOL	ND	350	180
4-CHLOROANILINE	ND	350	180
4-CHLOROPHENYL-PHENYL ETHER	ND	350	180
4-METHYLPHENOL (1)	ND	350	180
4-NITROANILINE	ND	880	180
4-NITROPHENOL	ND	880	180
ACENAPHTHENE	ND	350	180
ACENAPHTHYLENE	ND	350	180
ANTHRACENE	ND	350	180
BENZO(A)ANTHRACENE	ND	350	180
BENZO(B)FLUORANTHENE	ND	350	180
BENZO(K)FLUORANTHENE	ND	350	180
BENZO(G,H,I)PERYLENE	ND	350	180
BIS(2-CHLOROETHOXY)METHANE	ND	350	180
BIS(2-CHLOROISOPROPYL)ETHER	ND	350	180
BIS(2-ETHYLHEXYL)PHTHALATE	ND	350	180
BUTYLBENZYLPHTHALATE	ND	350	180
CHRYSENE	ND	350	180
DI-N-BUTYLPHTHALATE	ND	350	180
DI-N-OCTYLPHTHALATE	ND	350	180
DIBENZOFURAN	ND	350	180
DIETHYLPHTHALATE	ND	350	180
DIMETHYLPHTHALATE	ND	350	180
FLUORANTHENE	ND	350	180
FLUORENE	ND	350	180
HEXACHLOROBUTADIENE	ND	350	180
HEXACHLOROCYCLOPENTADIENE	ND	350	180
HEXACHLOROETHANE	ND	350	180
N-NITROSODIPHENYLAMINE (2)	ND	350	180
NAPHTHALENE	ND	350	180
NITROBENZENE	ND	350	180
PENTACHLOROPHENOL	ND	210	180
PHENANTHRENE	ND	350	180
PHENOL	ND	350	180
PYRENE	ND	350	180

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	92	25-144
2-FLUOROBIPHENYL	71	34-135
2-FLUOROPHENOL	68	25-135
NITROBENZENE-D5	68	25-135
PHENOL-D5	73	25-135
TERPHENYL-D14	75	32-136

RL: Reporting Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine

SW 3550B/8270C
SEMI VOLATILE ORGANICS BY GC/MS

ient	: SHAW E&I	Date Collected:	12/18/02
oject	: EL TORO, CTO 0024	Date Received:	12/18/02
atch No.	: 02L117	Date Extracted:	12/19/02 13:00
Sample ID:	818655-B3125	Date Analyzed:	12/19/02 21:45
Lab Samp ID:	L117-04	Dilution Factor:	1
ab File ID:	RLX175	Matrix :	SOIL
t Btch ID:	SVL015S	% Moisture :	6.3
lib. Ref.:	RJX007	Instrument ID :	T-042

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
2,4-TRICHLOROBENZENE	ND	350	180
2-DICHLOROBENZENE	ND	350	180
1,3-DICHLOROBENZENE	ND	350	180
1,4-DICHLOROBENZENE	ND	350	180
2,4,5-TRICHLOROPHENOL	ND	890	180
4,6-TRICHLOROPHENOL	ND	350	180
4-DICHLOROPHENOL	ND	350	180
4-DIMETHYLPHENOL	ND	350	180
2,4-DINITROPHENOL	ND	890	180
2,4-DINITROTOLUENE	ND	350	180
2,6-DINITROTOLUENE	ND	350	180
CHLORONAPHTHALENE	ND	350	180
CHLOROPHENOL	ND	350	180
METHYLNAPHTHALENE	ND	350	180
-METHYLPHENOL	ND	350	180
2-NITROANILINE	ND	890	180
2-NITROPHENOL	ND	350	180
3'-DICHLOROBENZIDINE	ND	350	180
NITROANILINE	ND	890	180
6-DINITRO-2-METHYLPHENOL	ND	890	180
BROMOPHENYL-PHENYL ETHER	ND	350	180
4-CHLORO-3-METHYLPHENOL	ND	350	180
4-CHLOROANILINE	ND	350	180
CHLOROPHENYL-PHENYL ETHER	ND	350	180
METHYLPHENOL (1)	ND	350	180
NITROANILINE	ND	890	180
NITROPHENOL	ND	890	180
ACENAPHTHENE	ND	350	180
ACENAPHTHYLENE	ND	350	180
ANTHRACENE	ND	350	180
NZO(A)ANTHRACENE	ND	350	180
NZO(B)FLUORANTHENE	ND	350	180
NZO(K)FLUORANTHENE	ND	350	180
BENZO(G,H,I)PERYLENE	ND	350	180
BIS(2-CHLOROETHOXY)METHANE	ND	350	180
BIS(2-CHLOROISOPROPYL)ETHER	ND	350	180
S(2-ETHYLHEXYL)PHTHALATE	ND	350	180
TYLBENZYLPHTHALATE	ND	350	180
RYSENE	ND	350	180
-N-BUTYLPHTHALATE	ND	350	180
DI-N-OCTYLPHTHALATE	ND	350	180
DIBENZOFURAN	ND	350	180
ETHYLPHTHALATE	ND	350	180
METHYLPHTHALATE	ND	350	180
UORANTHENE	ND	350	180
LUORENE	ND	350	180
HEXACHLOROBUTADIENE	ND	350	180
HEXACHLOROCYCLOPENTADIENE	ND	350	180
XACHLOROETHANE	ND	350	180
NITROSODIPHENYLAMINE (2)	ND	350	180
PHTHALENE	ND	350	180
TROBENZENE	ND	350	180
PENTACHLOROPHENOL	ND	210	180
PHENANTHRENE	ND	350	180
ENOL	ND	350	180
RENE	ND	350	180

RROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	106	25-144
FLUOROBIPHENYL	76	34-135
FLUOROPHENOL	72	25-135
TROBENZENE-D5	70	25-135
ENOL-D5	77	25-135
TERPHENYL-D14	87	32-136

: Reporting Limit
): Cannot be separated from 3-Methylphenol
): Cannot be separated from Diphenylamine

SW 3550B/8270C
SEMI VOLATILE ORGANICS BY GC/MS

Client : SHAW E&I	Date Collected: 12/18/02
Project : EL TORO, CTO 0024	Date Received: 12/18/02
Batch No. : 02L117	Date Extracted: 12/19/02 13:00
Sample ID: 818655-B3128	Date Analyzed: 12/19/02 23:21
Lab Samp ID: L117-07	Dilution Factor: 1
Lab File ID: RLX178	Matrix : SOIL
Ext Btch ID: SVL015S	% Moisture : 6.5
Calib. Ref.: RJX007	Instrument ID : T-042

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,2,4-TRICHLOROBENZENE	ND	350	180
1,2-DICHLOROBENZENE	ND	350	180
1,3-DICHLOROBENZENE	ND	350	180
1,4-DICHLOROBENZENE	ND	350	180
2,4,5-TRICHLOROPHENOL	ND	890	180
2,4,6-TRICHLOROPHENOL	ND	350	180
2,4-DICHLOROPHENOL	ND	350	180
2,4-DIMETHYLPHENOL	ND	350	180
2,4-DINITROPHENOL	ND	890	180
2,4-DINITROTOLUENE	ND	350	180
2,6-DINITROTOLUENE	ND	350	180
2-CHLORONAPHTHALENE	ND	350	180
2-CHLOROPHENOL	ND	350	180
2-METHYLNAPHTHALENE	ND	350	180
2-METHYLPHENOL	ND	350	180
2-NITROANILINE	ND	890	180
2-NITROPHENOL	ND	350	180
3,3'-DICHLOROBENZIDINE	ND	350	180
3-NITROANILINE	ND	890	180
4,6-DINITRO-2-METHYLPHENOL	ND	890	180
4-BROMOPHENYL-PHENYL ETHER	ND	350	180
4-CHLORO-3-METHYLPHENOL	ND	350	180
4-CHLOROANILINE	ND	350	180
4-CHLOROPHENYL-PHENYL ETHER	ND	350	180
4-METHYLPHENOL (1)	ND	350	180
4-NITROANILINE	ND	890	180
4-NITROPHENOL	ND	890	180
ACENAPHTHENE	ND	350	180
ACENAPHTHYLENE	ND	350	180
ANTHRACENE	ND	350	180
BENZO(A)ANTHRACENE	ND	350	180
BENZO(B)FLUORANTHENE	ND	350	180
BENZO(K)FLUORANTHENE	ND	350	180
BENZO(G,H,I)PERYLENE	ND	350	180
BIS(2-CHLOROETHOXY)METHANE	ND	350	180
BIS(2-CHLOROISOPROPYL)ETHER	ND	350	180
BIS(2-ETHYLHEXYL)PHTHALATE	ND	350	180
BUTYLBENZYLPHTHALATE	ND	350	180
CHRYSENE	ND	350	180
DI-N-BUTYLPHTHALATE	ND	350	180
DI-N-OCTYLPHTHALATE	ND	350	180
DIBENZOFURAN	ND	350	180
DIETHYLPHTHALATE	ND	350	180
DIMETHYLPHTHALATE	ND	350	180
FLUORANTHENE	ND	350	180
FLUORENE	ND	350	180
HEXACHLOROBUTADIENE	ND	350	180
HEXACHLOROCYCLOPENTADIENE	ND	350	180
HEXACHLOROETHANE	ND	350	180
N-NITROSODIPHENYLAMINE (2)	ND	350	180
NAPHTHALENE	ND	350	180
NITROBENZENE	ND	350	180
PENTACHLOROPHENOL	ND	210	180
PHENANTHRENE	ND	350	180
PHENOL	ND	350	180
PYRENE	ND	350	180

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	103	25-144
2-FLUOROBIPHENYL	80	34-135
2-FLUOROPHENOL	76	25-135
NITROBENZENE-D5	77	25-135
PHENOL-D5	82	25-135
TERPHENYL-D14	83	32-136

RL: Reporting Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine

SW 3550B/8270C
SEMI VOLATILE ORGANICS BY GC/MS

ient : SHAW E&I	Date Collected: 12/18/02
oject : EL TORO, CTO 0024	Date Received: 12/18/02
atch No. : 02L117	Date Extracted: 12/19/02 13:00
Sample ID: 818655-B3129	Date Analyzed: 12/19/02 23:54
Lab Samp ID: L117-08	Dilution Factor: 1
b File ID: RLX179	Matrix : SOIL
t Btch ID: SVL015S	% Moisture : 3.1
lib. Ref.: RJX007	Instrument ID : T-042

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
2,4-TRICHLOROBENZENE	ND	340	170
2-DICHLOROBENZENE	ND	340	170
1,3-DICHLOROBENZENE	ND	340	170
1,4-DICHLOROBENZENE	ND	340	170
2,4,5-TRICHLOROPHENOL	ND	860	170
4,6-TRICHLOROPHENOL	ND	340	170
4-DICHLOROPHENOL	ND	340	170
4-DIMETHYLPHENOL	ND	340	170
4,6-DINITROPHENOL	ND	860	170
2,4-DINITROTOLUENE	ND	340	170
2,6-DINITROTOLUENE	ND	340	170
CHLORONAPHTHALENE	ND	340	170
CHLOROPHENOL	ND	340	170
METHYLNAPHTHALENE	ND	340	170
METHYLPHENOL	ND	340	170
2-NITROANILINE	ND	860	170
2-NITROPHENOL	ND	340	170
3'-DICHLOROBENZIDINE	ND	340	170
NITROANILINE	ND	860	170
6-DINITRO-2-METHYLPHENOL	ND	860	170
BROMOPHENYL-PHENYL ETHER	ND	340	170
4-CHLORO-3-METHYLPHENOL	ND	340	170
4-CHLOROANILINE	ND	340	170
CHLOROPHENYL-PHENYL ETHER	ND	340	170
METHYLPHENOL (1)	ND	340	170
NITROANILINE	ND	860	170
NITROPHENOL	ND	860	170
ACENAPHTHENE	ND	340	170
ACENAPHTHYLENE	ND	340	170
ANTHRACENE	ND	340	170
NZO(A)ANTHRACENE	ND	340	170
NZO(B)FLUORANTHENE	ND	340	170
NZO(K)FLUORANTHENE	ND	340	170
BENZO(G,H,I)PERYLENE	ND	340	170
BIS(2-CHLOROETHOXY)METHANE	ND	340	170
BIS(2-CHLOROISOPROPYL)ETHER	ND	340	170
S(2-ETHYLHEXYL)PHTHALATE	ND	340	170
TYLBENZYLPHTHALATE	ND	340	170
RYSENE	ND	340	170
-N-BUTYLPHTHALATE	ND	340	170
DI-N-OCTYLPHTHALATE	ND	340	170
DIBENZOFURAN	ND	340	170
ETHYLPHTHALATE	ND	340	170
METHYLPHTHALATE	ND	340	170
ORANTHENE	ND	340	170
LUORENE	ND	340	170
HEXACHLOROBUTADIENE	ND	340	170
HEXACHLOROCYCLOPENTADIENE	ND	340	170
XACHLOROETHANE	ND	340	170
NITROSODIPHENYLAMINE (2)	ND	340	170
PHTHALENE	ND	340	170
TROBENZENE	ND	340	170
PENTACHLOROPHENOL	ND	210	170
PHENANTHRENE	ND	340	170
ENOL	ND	340	170
RENE	ND	340	170

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	93	25-144
2-FLUOROBIPHENYL	73	34-135
FLUOROPHENOL	68	25-135
TROBENZENE-D5	69	25-135
ENOL-D5	74	25-135
TERPHENYL-D14	83	32-136

: Reporting Limit
): Cannot be separated from 3-Methylphenol
): Cannot be separated from Diphenylamine

SW 3520C/8270C
SEMI VOLATILE ORGANICS BY GC/MS

Client : SHAW E&I	Date Collected: 12/18/02
Project : EL TORO, CTO 0024	Date Received: 12/18/02
Batch No. : 02L117	Date Extracted: 12/20/02 10:00
Sample ID: 818655-B3130	Date Analyzed: 12/23/02 20:02
Lab Samp ID: L117-09	Dilution Factor: 0.95
Lab File ID: RLZ216	Matrix : WATER
Ext Btch ID: SVL014W	% Moisture : NA
Calib. Ref.: RLZ136	Instrument ID : T-048

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,2,4-TRICHLOROBENZENE	ND	9.5	4.8
1,2-DICHLOROBENZENE	ND	9.5	4.8
1,3-DICHLOROBENZENE	ND	9.5	4.8
1,4-DICHLOROBENZENE	ND	9.5	4.8
2,4,5-TRICHLOROPHENOL	ND	24	4.8
2,4,6-TRICHLOROPHENOL	ND	9.5	4.8
2,4-DICHLOROPHENOL	ND	9.5	4.8
2,4-DIMETHYLPHENOL	ND	9.5	4.8
2,4-DINITROPHENOL	ND	24	9.5
2,4-DINITROTOLUENE	ND	9.5	4.8
2,6-DINITROTOLUENE	ND	9.5	4.8
2-CHLORONAPHTHALENE	ND	9.5	4.8
2-CHLOROPHENOL	ND	9.5	4.8
2-METHYLNAPHTHALENE	ND	9.5	4.8
2-METHYLPHENOL	ND	9.5	4.8
2-NITROANILINE	ND	24	9.5
2-NITROPHENOL	ND	9.5	4.8
3,3'-DICHLOROBENZIDINE	ND	9.5	4.8
3-NITROANILINE	ND	24	4.8
4,6-DINITRO-2-METHYLPHENOL	ND	24	9.5
4-BROMOPHENYL-PHENYL ETHER	ND	9.5	4.8
4-CHLORO-3-METHYLPHENOL	ND	9.5	4.8
4-CHLOROANILINE	ND	9.5	4.8
4-CHLOROPHENYL-PHENYL ETHER	ND	9.5	4.8
4-METHYLPHENOL (1)	ND	9.5	4.8
4-NITROANILINE	ND	24	4.8
4-NITROPHENOL	ND	24	4.8
ACENAPHTHENE	ND	9.5	4.8
ACENAPHTHYLENE	ND	9.5	4.8
ANTHRACENE	ND	9.5	4.8
BENZO(A)ANTHRACENE	ND	9.5	4.8
BENZO(A)PYRENE	ND	9.5	4.8
BENZO(B)FLUORANTHENE	ND	9.5	4.8
BENZO(K)FLUORANTHENE	ND	9.5	4.8
BENZO(G,H,I)PERYLENE	ND	9.5	4.8
BIS(2-CHLOROETHOXY)METHANE	ND	9.5	4.8
BIS(2-CHLOROETHYL)ETHER	ND	9.5	4.8
BIS(2-CHLOROISOPROPYL)ETHER	ND	9.5	4.8
BIS(2-ETHYLHEXYL)PHTHALATE	ND	19	9.5
BUTYLBENZYLPHTHALATE	ND	9.5	4.8
CHRYSENE	ND	9.5	4.8
DI-N-BUTYLPHTHALATE	ND	9.5	4.8
DI-N-OCTYLPHTHALATE	ND	9.5	4.8
DIBENZO(A,H)ANTHRACENE	ND	9.5	4.8
DIBENZOFURAN	ND	9.5	4.8
DIETHYLPHTHALATE	ND	9.5	4.8
DIMETHYLPHTHALATE	ND	9.5	4.8
FLUORANTHENE	ND	9.5	4.8
FLUORENE	ND	9.5	4.8
HEXACHLOROBENZENE	ND	9.5	4.8
HEXACHLOROBUTADIENE	ND	9.5	4.8
HEXACHLOROCYCLOPENTADIENE	ND	9.5	4.8
HEXACHLOROETHANE	ND	9.5	4.8
INDENO(1,2,3-CD)PYRENE	ND	9.5	4.8
N-NITROSO-DI-N-PROPYLAMINE	ND	9.5	4.8
N-NITROSODIPHENYLAMINE (2)	ND	9.5	4.8
NAPHTHALENE	ND	9.5	4.8
NITROBENZENE	ND	9.5	4.8
PENTACHLOROPHENOL	ND	9.5	9.5
PHENANTHRENE	ND	9.5	4.8
PHENOL	ND	9.5	4.8
PYRENE	ND	9.5	4.8

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	81	25-134
2-FLUOROBIPHENYL	62	43-125
2-FLUOROPHENOL	57	25-125
NITROBENZENE-D5	53	32-125
PHENOL-D5	60	25-125
TERPHENYL-D14	105	42-126

RL: Reporting Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine

SW 3550B/8270C
SEMI VOLATILE ORGANICS BY GC/MS

C ent : SHAW E&I	Date Collected: NA
F ject : EL TORO, CTO 0024	Date Received: NA
Batch No. : 02L117	Date Extracted: 12/19/02 13:00
Sample ID: MBLK1S	Date Analyzed: 12/19/02 17:59
Lab Samp ID: SVL015SB	Dilution Factor: 1
L) File ID: RLX168	Matrix : SOIL
E Btch ID: SVL015S	% Moisture : NA
C ib. Ref.: RJX007	Instrument ID : T-042

P AMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1 ,4-TRICHLOROBENZENE	ND	330	170
1 -DICHLOROBENZENE	ND	330	170
1,3-DICHLOROBENZENE	ND	330	170
1,4-DICHLOROBENZENE	ND	330	170
2 ,5-TRICHLOROPHENOL	ND	830	170
2 ,6-TRICHLOROPHENOL	ND	330	170
2 -DICHLOROPHENOL	ND	330	170
2 -DIMETHYLPHENOL	ND	330	170
2,4-DINITROPHENOL	ND	830	170
2,4-DINITROTOLUENE	ND	330	170
2,6-DINITROTOLUENE	ND	330	170
2 HLORONAPHTHALENE	ND	330	170
2 HLOROPHENOL	ND	330	170
2 ETHYLNAPHTHALENE	ND	330	170
2-METHYLPHENOL	ND	330	170
2-NITROANILINE	ND	830	170
2-NITROPHENOL	ND	330	170
3 -DICHLOROBENZIDINE	ND	330	170
3 ITROANILINE	ND	830	170
4 -DINITRO-2-METHYLPHENOL	ND	830	170
4-BROMOPHENYL-PHENYL ETHER	ND	330	170
4-CHLORO-3-METHYLPHENOL	ND	330	170
4 CHLOROANILINE	ND	330	170
4 HLOROPHENYL-PHENYL ETHER	ND	330	170
4 ETHYLPHENOL (1)	ND	330	170
4 ITROANILINE	ND	830	170
4 NITROPHENOL	ND	830	170
ACENAPHTHENE	ND	330	170
ACENAPHTHYLENE	ND	330	170
ANTHRACENE	ND	330	170
B ZO(A)ANTHRACENE	ND	330	170
B ZO(B)FLUORANTHENE	ND	330	170
B ZO(K)FLUORANTHENE	ND	330	170
BENZO(G,H,I)PERYLENE	ND	330	170
BIS(2-CHLOROETHOXY)METHANE	ND	330	170
BIS(2-CHLOROISOPROPYL)ETHER	ND	330	170
B (2-ETHYLHEXYL)PHTHALATE	ND	330	170
B YLBENZYLPHTHALATE	ND	330	170
C RYSENE	ND	330	170
DI-N-BUTYLPHTHALATE	ND	330	170
DI-N-OCTYLPHTHALATE	ND	330	170
DIBENZOFURAN	ND	330	170
D THYLPHTHALATE	ND	330	170
D ETHYLPHTHALATE	ND	330	170
F ORANTHENE	ND	330	170
FLUORENE	ND	330	170
HEXACHLOROBUTADIENE	ND	330	170
HEXACHLOROCYCLOPENTADIENE	ND	330	170
H XACHLOROETHANE	ND	330	170
N ITROSODIPHENYLAMINE (2)	ND	330	170
N PHTHALENE	ND	330	170
N ITROBENZENE	ND	200	170
PENTACHLOROPHENOL	ND	330	170
PHENANTHRENE	ND	330	170
P ENOL	ND	330	170
P RENE	ND		

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	103	25-144
2 FLUOROBIPHENYL	84	34-135
2 FLUOROPHENOL	77	25-135
N ITROBENZENE-D5	81	25-135
P ENOL-D5	83	25-135
TERPHENYL-D14	82	32-136

R : Reporting Limit
( ): Cannot be separated from 3-Methylphenol
( ): Cannot be separated from Diphenylamine

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
BATCH NO.: 02L117
METHOD: METHOD 3550A/8270B

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	SVL015SB	SVL015SL	SVL015SC		
LAB FILE ID:	RLX168	RLX169	RLX170		
DATE EXTRACTED:	12/19/0213:00	12/19/0213:00	12/19/0213:00	DATE COLLECTED:	NA
DATE ANALYZED:	12/19/0217:59	12/19/0218:31	12/19/0219:04	DATE RECEIVED:	NA
PREP. BATCH:	SVL015S	SVL015S	SVL015S		
CALIB. REF:	RJX007	RJX007	RJX007		

ACCESSION:

PARAMETER	BLNK RSLT (ug/kg)	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,2,4-Trichlorobenzene	ND	3330	2530	76	3330	2410	72	5	34-152	30
1,4-Dichlorobenzene	ND	3330	2570	77	3330	2530	76	2	25-135	30
2,4-Dinitrotoluene	ND	3330	2910	87	3330	2770	83	5	29-149	30
2-Chlorophenol	ND	5000	3930	79	5000	3950	79	0	31-135	30
4-Chloro-3-Methylphenol	ND	5000	4100	82	5000	3850	77	6	34-135	30
4-Nitrophenol	ND	5000	2730	55	5000	2600	52	5	25-141	30
Acenaphthene	ND	3330	3130	94	3330	2880	87	8	39-135	30
Pentachlorophenol	ND	5000	3870	77	5000	3550	71	9	38-146	30
Phenol	ND	5000	3740	75	5000	3660	73	2	25-135	30
Pyrene	ND	3330	2950	89	3330	2620	79	12	37-146	30

SURROGATE PARAMETER	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	QC LIMIT (%)
2,4,6-Tribromophenol	5000	5260	105	5000	5240	105	25-144
2-Fluorobiphenyl	3330	2790	84	3330	2700	81	34-135
2-Fluorophenol	5000	3750	75	5000	3970	79	25-135
Nitrobenzene-d5	3330	2580	78	3330	2620	79	25-135
Phenol-d5	5000	4090	82	5000	4180	84	25-135
Terphenyl-d14	3330	2940	88	3330	2710	81	32-136

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
BATCH NO.: 02L117
METHOD: METHOD 3550A/8270B

MATRIX:	SOIL			% MOISTURE:	5.0
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	818655-B3123				
LAB SAMP ID:	L117-02	L117-02M	L117-02S		
LAB FILE ID:	RLX171	RLX172	RLX173		
DATE EXTRACTED:	12/19/0213:00	12/19/0213:00	12/19/0213:00	DATE COLLECTED:	12/18/02
DATE ANALYZED:	12/19/0219:36	12/19/0220:08	12/19/0220:40	DATE RECEIVED:	12/18/02
EXP. BATCH:	SVL015S	SVL015S	SVL015S		
CALIB. REF:	RJX007	RJX007	RJX007		

ACCESSION:

PARAMETER	SMPL RSLT (ug/kg)	SPIKE AMT (ug/kg)	MS RSLT (ug/kg)	MS % REC	SPIKE AMT (ug/kg)	MSD RSLT (ug/kg)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,2,4-Trichlorobenzene	ND	3510	2440	70	3510	2370	68	3	34-152	30
1,4-Dichlorobenzene	ND	3510	2450	70	3510	2380	68	3	25-135	30
2,4-Dinitrotoluene	ND	3510	2670	76	3510	2680	77	0	29-149	30
2-Chlorophenol	ND	5260	3800	72	5260	3640	69	4	31-135	30
4-Chloro-3-Methylphenol	ND	5260	4090	78	5260	4020	76	2	34-135	30
4-Nitrophenol	ND	5260	2800	53	5260	2810	53	0	25-141	30
Acenaphthene	ND	3510	2890	82	3510	2900	83	1	39-135	30
Pentachlorophenol	ND	5260	4140	79	5260	3950	75	5	38-146	30
Phenol	ND	5260	3600	68	5260	3410	65	5	25-135	30
Pyrene	ND	3510	2890	82	3510	2840	81	2	37-146	30

SURROGATE PARAMETER	SPIKE AMT (ug/kg)	MS RSLT (ug/kg)	MS % REC	SPIKE AMT (ug/kg)	MSD RSLT (ug/kg)	MSD % REC	QC LIMIT (%)
2,4,6-Tribromophenol	5260	5350	102	5260	5330	101	25-144	
2-Fluorobiphenyl	3510	2680	76	3510	2590	74	34-135	
2-Fluorophenol	5260	3840	73	5260	3580	68	25-135	
Nitrobenzene-d5	3510	2490	71	3510	2500	71	25-135	
Phenol-d5	5260	4180	79	5260	3870	73	25-135	
Terphenyl-d14	3510	2900	83	3510	2870	82	32-136	

SW 3550B/8270C SIM
SEMI VOLATILE ORGANICS BY GC/MS/SIM

Client	: SHAW E&I	Date Collected:	12/18/02
Project	: EL TORO, CTO 0024	Date Received:	12/18/02
Batch No.	: 02L117	Date Extracted:	12/19/02 13:00
Sample ID:	818655-B3123	Date Analyzed:	12/20/02 17:28
Lab Samp ID:	L117-02	Dilution Factor:	1
Lab File ID:	RLZ196	Matrix :	SOIL
Ext Btch ID:	SVL015S	% Moisture :	5.0
Calib. Ref.:	RLZ008	Instrument ID :	T-048

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
BENZO(A)PYRENE	ND	35	11
BIS(2-CHLOROETHYL)ETHER	ND	35	16
DIBENZO(A,H)ANTHRACENE	ND	35	11
HEXACHLOROBENZENE	ND	79	11
INDENO(1,2,3-CD)PYRENE	ND	37	11
N-NITROSO-DI-N-PROPYLAMINE	ND	35	11

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
TERPHENYL-D14	103	32-136

RL: Reporting Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine

SW 3550B/8270C SIM
SEMI VOLATILE ORGANICS BY GC/MS/SIM

Client	: SHAW E&I	Date Collected:	12/18/02
Project	: EL TORO, CTO 0024	Date Received:	12/18/02
Batch No.	: 02L117	Date Extracted:	12/19/02 13:00
Sample ID	: 818655-B3124	Date Analyzed:	12/20/02 18:57
Lab Samp ID	: L117-03	Dilution Factor:	1
Lab File ID	: RLZ199	Matrix	: SOIL
Ext Btch ID	: SVL015S	% Moisture	: 5.2
Calib. Ref.	: RLZ008	Instrument ID	: T-048

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
BENZO(A)PYRENE	ND	35	11
BIS(2-CHLOROETHYL)ETHER	ND	35	16
DIBENZO(A,H)ANTHRACENE	ND	35	11
HEXACHLOROBENZENE	ND	79	11
INDENO(1,2,3-CD)PYRENE	ND	37	11
N-NITROSO-DI-N-PROPYLAMINE	ND	35	11

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
PHENYL-D14	91	32-136

RL: Reporting Limit
(: Cannot be separated from 3-Methylphenol
(: Cannot be separated from Diphenylamine

SW 3550B/8270C SIM
SEMI VOLATILE ORGANICS BY GC/MS/SIM

Client	: SHAW E&I	Date Collected:	12/18/02
Project	: EL TORO, CTO 0024	Date Received:	12/18/02
Batch No.	: 02L117	Date Extracted:	12/19/02 13:00
Sample ID:	818655-B3125	Date Analyzed:	12/20/02 19:27
Lab Samp ID:	L117-04	Dilution Factor:	1
Lab File ID:	RLZ200	Matrix :	SOIL
Ext Btch ID:	SVL015S	% Moisture :	6.3
Calib. Ref.:	RLZ008	Instrument ID :	T-048

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
BENZO(A)PYRENE	ND	35	11
BIS(2-CHLOROETHYL)ETHER	ND	35	16
DIBENZO(A,H)ANTHRACENE	ND	35	11
HEXACHLOROBENZENE	ND	80	11
INDENO(1,2,3-CD)PYRENE	ND	37	11
N-NITROSO-DI-N-PROPYLAMINE	ND	35	11

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
TERPHENYL-D14	114	32-136

RL: Reporting Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine

SW 3550B/8270C SIM
SEMI VOLATILE ORGANICS BY GC/MS/SIM

Client	: SHAW E&I	Date Collected:	12/18/02
Project	: EL TORO, CTO 0024	Date Received:	12/18/02
Batch No.	: 02L117	Date Extracted:	12/19/02 13:00
Sample ID:	818655-B3126	Date Analyzed:	12/20/02 19:57
Lab Samp ID:	L117-05	Dilution Factor:	1
Lab File ID:	RLZ201	Matrix :	SOIL
Ext Btch ID:	SVL015S	% Moisture :	3.9
Calib. Ref.:	RLZ008	Instrument ID :	T-048

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
BENZO(A)PYRENE	ND	34	10
BIS(2-CHLOROETHYL)ETHER	ND	34	16
DIBENZO(A,H)ANTHRACENE	ND	34	10
HEXACHLOROBENZENE	ND	78	10
INDENO(1,2,3-CD)PYRENE	ND	36	10
N-NITROSO-DI-N-PROPYLAMINE	ND	34	10

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
TERPHENYL-D14	84	32-136

RL: Reporting Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine

SW 3550B/8270C SIM
SEMI VOLATILE ORGANICS BY GC/MS/SIM

Client	: SHAW E&I	Date Collected:	12/18/02
Project	: EL TORO, CTO 0024	Date Received:	12/18/02
Batch No.	: 02L117	Date Extracted:	12/19/02 13:00
Sample ID:	818655-B3127	Date Analyzed:	12/20/02 20:27
Lab Samp ID:	L117-06	Dilution Factor:	1
Lab File ID:	RLZ202	Matrix :	SOIL
Ext Btch ID:	SVL015S	% Moisture :	17.9
Calib. Ref.:	RLZ008	Instrument ID :	T-048

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
BENZO(A)PYRENE	ND	40	12
BIS(2-CHLOROETHYL)ETHER	ND	40	18
DIBENZO(A,H)ANTHRACENE	ND	40	12
HEXACHLOROBENZENE	ND	91	12
INDENO(1,2,3-CD)PYRENE	ND	43	12
N-NITROSO-DI-N-PROPYLAMINE	ND	40	12

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
TERPHENYL-D14	104	32-136

RL: Reporting Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine

SW 3550B/8270C SIM
SEMI VOLATILE ORGANICS BY GC/MS/SIM

Client	: SHAW E&I	Date Collected:	12/18/02
Project	: EL TORO, CTO 0024	Date Received:	12/18/02
Batch No.	: 02L117	Date Extracted:	12/19/02 13:00
Sample ID	: 818655-B3128	Date Analyzed:	12/20/02 20:56
Lab Samp ID	: L117-07	Dilution Factor:	1
Lab File ID	: RLZ203	Matrix	: SOIL
Ext Btch ID	: SVL015S	% Moisture	: 6.5
Calib. Ref.	: RLZ008	Instrument ID	: T-048

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
BENZO(A)PYRENE	ND	35	11
BIS(2-CHLOROETHYL)ETHER	ND	35	16
DIBENZO(A,H)ANTHRACENE	ND	35	11
HEXACHLOROBENZENE	ND	80	11
INDENO(1,2,3-CD)PYRENE	ND	37	11
N-NITROSO-DI-N-PROPYLAMINE	ND	35	11

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
TERPHENYL-D14	100	32-136

RL: Reporting Limit
(): Cannot be separated from 3-Methylphenol
(): Cannot be separated from Diphenylamine

SW 3550B/8270C SIM
SEMI VOLATILE ORGANICS BY GC/MS/SIM

Client	: SHAW E&I	Date Collected:	12/18/02
Project	: EL TORO, CTO 0024	Date Received:	12/18/02
Batch No.	: 02L117	Date Extracted:	12/19/02 13:00
Sample ID:	818655-B3129	Date Analyzed:	12/20/02 21:26
Lab Samp ID:	L117-08	Dilution Factor:	1
Lab File ID:	RLZ204	Matrix :	SOIL
Ext Btch ID:	SVL015S	% Moisture :	3.1
Calib. Ref.:	RLZ008	Instrument ID :	T-048

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
BENZO(A)PYRENE	ND	34	10
BIS(2-CHLOROETHYL)ETHER	ND	34	15
DIBENZO(A,H)ANTHRACENE	ND	34	10
HEXACHLOROBENZENE	ND	77	10
INDENO(1,2,3-CD)PYRENE	ND	36	10
N-NITROSO-DI-N-PROPYLAMINE	ND	34	10

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
TERPHENYL-D14	107	32-136

RL: Reporting Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine

SW 35508/8270C SIM
SEMI VOLATILE ORGANICS BY GC/MS/SIM

C..ent : SHAW E&I	Date Collected: NA
Project : EL TORO, CTO 0024	Date Received: NA
Batch No.. : 02L117	Date Extracted: 12/19/02 13:00
: mple ID: MBLK1S	Date Analyzed: 12/20/02 16:00
;) Samp ID: SVL015SB	Dilution Factor: 1
Lab File ID: RLZ193	Matrix : SOIL
Ext Btch ID: SVL015S	% Moisture : NA
((ib.. Ref..: RLZ008	Instrument ID : T-048

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
! NZO(A)PYRENE	ND	33	10
BIS(2-CHLOROETHYL)ETHER	ND	33	15
DIBENZO(A,H)ANTHRACENE	ND	33	10
(⁻ (ACHLOROBENZENE	ND	75	10
:)ENO(1,2,3-CD)PYRENE	ND	35	10
(NITROSO-DI-N-PROPYLAMINE	ND	33	10

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
' :PHENYL-D14	100	32-136

RL: Reporting Limit
): Cannot be separated from 3-Methylphenol
): Cannot be separated from Diphenylamine

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
BATCH NO.: 02L117
METHOD: SW 3550B/8270C SIM

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	2	2		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	SVL015SB	SVL015SL	SVL015SC		
LAB FILE ID:	RLZ193	RLZ194	RLZ195		
DATE EXTRACTED:	12/19/0213:00	12/19/0213:00	12/19/0213:00	DATE COLLECTED:	NA
DATE ANALYZED:	12/20/0216:00	12/20/0216:29	12/20/0216:59	DATE RECEIVED:	NA
PREP. BATCH:	SVL015S	SVL015S	SVL015S		
CALIB. REF:	RLZ008	RLZ008	RLZ008		

ACCESSION:

PARAMETER	BLNK RSLT (ug/kg)	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
n-Nitroso-di-n-propylamine	ND	3330	2460	74	3330	2600	78	5	27-135	30

SURROGATE PARAMETER	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	QC LIMIT (%)
Terphenyl-d14	3330	3120	94	3330	3160	95	32-136

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

IENT: SHAW E&I
ROJECT: EL TORO, CTO 0024
BATCH NO.: 02L117
METHOD: SW 3550B/8270C SIM

MATRIX:	SOIL			% MOISTURE:	5.0
DILUTION FACTOR:	1	2	2		
MPLE ID:	818655-B3123				
B SAMP ID:	L117-02	L117-02M	L117-02S		
LAB FILE ID:	RLZ196	RLZ197	RLZ198		
DATE EXTRACTED:	12/19/0213:00	12/19/0213:00	12/19/0213:00	DATE COLLECTED:	12/18/02
DATE ANALYZED:	12/20/0217:28	12/20/0217:58	12/20/0218:28	DATE RECEIVED:	12/18/02
EP. BATCH:	SVL015S	SVL015S	SVL015S		
LIB. REF:	RLZ008	RLZ008	RLZ008		

ACCESSION:

PARAMETER	SMPL RSLT (ug/kg)	SPIKE AMT (ug/kg)	MS RSLT (ug/kg)	MS % REC	SPIKE AMT (ug/kg)	MSD RSLT (ug/kg)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
N-Nitroso-di-n-propylamine	ND	3510	2580	73	3510	2820	81	9	27-135	30

RROGATE PARAMETER	SPIKE AMT (ug/kg)	MS RSLT (ug/kg)	MS % REC	SPIKE AMT (ug/kg)	MSD RSLT (ug/kg)	MSD % REC	QC LIMIT (%)
Terphenyl-d14	3510	3300	94	3510	3730	106	32-136

METHOD 3050B/6010B
METALS BY ICP

Client : SHAW E&I	Date Collected: 12/18/02
Project : EL TORO, CTO 0024	Date Received: 12/18/02
SDG NO. : 02L117	Date Extracted: 12/20/02 14:35
Sample ID: 818655-B3123	Date Analyzed: 12/23/02 15:32
Lab Samp ID: L117-02	Dilution Factor: 1
Lab File ID: I07L021020	Matrix : SOIL
Ext Btch ID: IPL049S	% Moisture : 5.0
Calib. Ref.: I07L021014	Instrument ID : EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Aluminum	12600	52.6	4.72
Antimony	ND	5.26	2.21
Barium	112	1.05	.131
Beryllium	.439	.211	.124
Cadmium	ND	.526	.381
Calcium	5200	105	7.15
Chromium	8.46	2.11	.646
Cobalt	5.19	1.05	.727
Copper	5.58	2.11	.497
Iron	11700	21.1	1.61
Magnesium	4950	105	8.41
Manganese	199	2.11	.198
Molybdenum	ND	5.26	.777
Nickel	5.01	2.11	.579
Potassium	3380	105	75.3
Silver	ND	2.11	.661
Sodium	73.8J	105	7.38
Vanadium	28.7	2.11	.461
Zinc	32.3	1.05	.303

RL: Reporting Limit

METHOD 3050B/6010B
METALS BY ICP

Client	: SHAW E&I	Date Collected:	12/18/02
Project	: EL TORO, CTO 0024	Date Received:	12/18/02
SDG NO.	: 02L117	Date Extracted:	12/20/02 14:35
Sample ID:	818655-B3124	Date Analyzed:	12/23/02 15:43
Lab Samp ID:	L117-03	Dilution Factor:	1
Lab File ID:	I07L021022	Matrix :	SOIL
Ext Btch ID:	IPL049S	% Moisture :	5.2
Calib. Ref.:	I07L021014	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Aluminum	13500	52.7	4.73
Antimony	ND	5.27	2.22
Barium	102	1.05	.131
Beryllium	.424	.211	.124
Cadmium	ND	.527	.382
Calcium	5080	105	7.17
Chromium	8.96	2.11	.648
Cobalt	5.03	1.05	.729
Copper	6.09	2.11	.498
Iron	12200	21.1	1.61
Magnesium	5200	105	8.43
Manganese	212	2.11	.198
Molybdenum	ND	5.27	.778
Nickel	5.13	2.11	.58
Potassium	3690	105	75.5
Silver	ND	2.11	.662
Sodium	85.1J	105	7.39
Vanadium	29.5	2.11	.462
Zinc	36.4	1.05	.304

RL: Reporting Limit

METHOD 3050B/6010B
METALS BY ICP

Client : SHAW E&I	Date Collected: 12/18/02
Project : EL TORO, CTO 0024	Date Received: 12/18/02
SDG NO. : 02L117	Date Extracted: 12/20/02 14:35
Sample ID: 818655-B3125	Date Analyzed: 12/23/02 15:49
Lab Samp ID: L117-04	Dilution Factor: 1
Lab File ID: I07L021023	Matrix : SOIL
Ext Btch ID: IPL049S	% Moisture : 6.3
Calib. Ref.: I07L021014	Instrument ID : EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Aluminum	10400	53.4	4.78
Antimony	ND	5.34	2.24
Barium	99	1.07	.132
Beryllium	.323	.213	.126
Cadmium	ND	.534	.386
Calcium	4690	107	7.25
Chromium	7.13	2.13	.655
Cobalt	4.39	1.07	.737
Copper	5.21	2.13	.504
Iron	9650	21.3	1.63
Magnesium	4020	107	8.53
Manganese	182	2.13	.201
Molybdenum	ND	5.34	.788
Nickel	4.36	2.13	.587
Potassium	2840	107	76.4
Silver	ND	2.13	.67
Sodium	34.7J	107	7.48
Vanadium	23.9	2.13	.467
Zinc	33.3	1.07	.307

RL: Reporting Limit

METHOD 3050B/6010B
METALS BY ICP

Client	: SHAW E&I	Date Collected:	12/18/02
Project	: EL TORO, CTO 0024	Date Received:	12/18/02
SDG NO.	: 02L117	Date Extracted:	12/20/02 14:35
Sample ID:	818655-B3126	Date Analyzed:	12/23/02 15:54
Lab Samp ID:	L117-05	Dilution Factor:	1
Lab File ID:	I07L021024	Matrix :	SOIL
Ext Btch ID:	IPL049S	% Moisture :	3.9
Calib. Ref.:	I07L021014	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Aluminum	42900	52	4.66
Antimony	ND	5.2	2.19
Barium	199	1.04	.129
Beryllium	1.25	.208	.123
Cadmium	ND	.52	.377
Calcium	9870	104	7.07
Chromium	23.8	2.08	.639
Cobalt	13	1.04	.719
Copper	14.2	2.08	.491
Iron	31600	20.8	1.59
Magnesium	16100	104	8.32
Manganese	385	2.08	.196
Molybdenum	ND	5.2	.768
Nickel	12	2.08	.572
Potassium	9150	104	74.5
Silver	ND	2.08	.653
Sodium	233	104	7.29
Vanadium	75.7	2.08	.456
Zinc	84.2	1.04	.3

RL: Reporting Limit

METHOD 3050B/6010B
METALS BY ICP

Client	: SHAW E&I	Date Collected:	12/18/02
Project	: EL TORO, CTO 0024	Date Received:	12/18/02
SDG NO.	: 02L117	Date Extracted:	12/20/02 14:35
Sample ID:	818655-B3127	Date Analyzed:	12/23/02 15:59
Lab Samp ID:	L117-06	Dilution Factor:	1
Lab File ID:	I07L021025	Matrix :	SOIL
Ext Btch ID:	IPL049S	% Moisture :	17.9
Calib. Ref.:	I07L021014	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Aluminum	20000	60.9	5.46
Antimony	ND	6.09	2.56
Barium	148	1.22	.151
Beryllium	.6	.244	.144
Cadmium	ND	.609	.441
Calcium	4630	122	8.28
Chromium	12.6	2.44	.748
Cobalt	6.6	1.22	.842
Copper	9.57	2.44	.575
Iron	16100	24.4	1.86
Magnesium	7250	122	9.74
Manganese	274	2.44	.229
Molybdenum	ND	6.09	.899
Nickel	6.31	2.44	.67
Potassium	4520	122	87.2
Silver	ND	2.44	.765
Sodium	124	122	8.54
Vanadium	41.9	2.44	.533
Zinc	46	1.22	.351

RL: Reporting Limit

METHOD 3050B/6010B
METALS BY ICP

Client	: SHAW E&I	Date Collected:	12/18/02
Project	: EL TORO, CTO 0024	Date Received:	12/18/02
SDG NO.	: 02L117	Date Extracted:	12/20/02 14:35
Sample ID:	818655-B3128	Date Analyzed:	12/23/02 16:15
Lab Samp ID:	L117-07	Dilution Factor:	1
Lab File ID:	I07L021028	Matrix :	SOIL
Ext Btch ID:	IPL049S	% Moisture :	6.5
Calib. Ref.:	I07L021026	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Aluminum	12400	53.5	4.79
Antimony	ND	5.35	2.25
Barium	119	1.07	.133
Beryllium	.417	.214	.126
Cadmium	ND	.535	.387
Calcium	5900	107	7.27
Chromium	9.35	2.14	.657
Cobalt	5.06	1.07	.739
Copper	5.6	2.14	.505
Iron	12000	21.4	1.63
Magnesium	5190	107	8.55
Manganese	199	2 14	.201
Molybdenum	ND	5.35	.789
Nickel	5.11	2.14	.588
Potassium	3490	107	76.5
Silver	ND	2.14	.672
Sodium	80J	107	7.5
Vanadium	30.8	2.14	.468
Zinc	34.7	1.07	.308

RL: Reporting Limit

METHOD 3050B/6010B
METALS BY ICP

Client : SHAW E&I	Date Collected: 12/18/02
Project : EL TORO, CTO 0024	Date Received: 12/18/02
SDG NO. : 02L117	Date Extracted: 12/20/02 14:35
Sample ID: 818655-B3129	Date Analyzed: 12/23/02 16:21
Lab Samp ID: L117-08	Dilution Factor: 1
Lab File ID: I07L021029	Matrix : SOIL
Ext Btch ID: IPL049S	% Moisture : 3.1
Calib. Ref.: I07L021026	Instrument ID : EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Aluminum	10400	51.6	4.62
Antimony	ND	5.16	2.17
Barium	107	1.03	.128
Beryllium	.345	.206	.122
Cadmium	ND	.516	.374
Calcium	2780	103	7.01
Chromium	8.35	2.06	.634
Cobalt	5.11	1.03	.713
Copper	5.58	2.06	.487
Iron	10500	20.6	1.57
Magnesium	3760	103	8.25
Manganese	211	2.06	.194
Molybdenum	ND	5.16	.762
Nickel	5.06	2.06	.568
Potassium	3220	103	73.8
Silver	ND	2.06	.648
Sodium	71.1J	103	7.23
Vanadium	25.4	2.06	.452
Zinc	30.7	1.03	.297

RL: Reporting Limit

METHOD 3010A/6010B
METALS BY ICP

Client : SHAW E&I	Date Collected: 12/18/02
Project : EL TORO, CTO 0024	Date Received: 12/18/02
SDG NO. : 02L117	Date Extracted: 12/20/02 13:30
Sample ID: 818655-B3130	Date Analyzed: 12/21/02 00:31
Lab Samp ID: L117-09	Dilution Factor: 1
Lab File ID: I07L022044	Matrix : WATER
Ext Btch ID: IPL048W	% Moisture : NA
Calib. Ref.: I07L022038	Instrument ID : EMAXTI07

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
Aluminum	ND	500	61
Antimony	ND	500	40
Barium	ND	100	2
Beryllium	ND	10	1.0
Cadmium	ND	5	2
Calcium	56.2J	1000	32
Chromium	ND	50	6
Cobalt	ND	50	11
Copper	ND	50	5
Iron	ND	1000	25
Magnesium	ND	1000	54
Manganese	ND	20	3
Molybdenum	ND	100	7
Nickel	ND	150	10
Potassium	ND	5000	750
Silver	ND	50	11
Sodium	383J	1000	70
Vanadium	ND	100	5
Zinc	ND	20	5

RL: Reporting Limit

METHOD 3010A/6010B
METALS BY ICP

Client : SHAW E&I	Date Collected: NA
Project : EL TORO, CTO 0024	Date Received: 12/20/02
SDG NO. : 02L117	Date Extracted: 12/20/02 13:30
Sample ID: MBLK1W	Date Analyzed: 12/20/02 21:58
Lab Samp ID: IPL048WB	Dilution Factor: 1
Lab File ID: I07L022016	Matrix : WATER
Ext Btch ID: IPL048W	% Moisture : NA
Calib. Ref.: I07L022014	Instrument ID : EMAXTI07

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
Aluminum	ND	500	61
Antimony	ND	500	40
Barium	ND	100	2
Beryllium	ND	10	1.0
Cadmium	ND	5	2
Calcium	ND	1000	32
Chromium	ND	50	6
Cobalt	ND	50	11
Copper	ND	50	5
Iron	ND	1000	25
Magnesium	ND	1000	54
Manganese	ND	20	3
Molybdenum	ND	100	7
Nickel	ND	150	10
Potassium	ND	5000	750
Silver	ND	50	11
Sodium	ND	1000	70
Vanadium	ND	100	5
Zinc	ND	20	5

RL: Reporting Limit

METHOD 3050B/6010B
METALS BY ICP

Client : SHAW E&I	Date Collected: NA
Project : EL TORO, CTO 0024	Date Received: 12/20/02
SDG NO. : 02L117	Date Extracted: 12/20/02 14:35
Sample ID: MBLK1S	Date Analyzed: 12/23/02 15:06
Lab Samp ID: IPL049SB	Dilution Factor: 1
Lab File ID: I07L021016	Matrix : SOIL
Ext Btch ID: IPL049S	% Moisture : NA
Calib. Ref.: I07L021014	Instrument ID : EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Aluminum	ND	50	4.48
Antimony	ND	5	2.1
Barium	ND	1	.124
Beryllium	ND	.2	.118
Cadmium	ND	.5	.362
Calcium	ND	100	6.8
Chromium	ND	2	.614
Cobalt	ND	1	.691
Copper	ND	2	.472
Iron	ND	20	1.53
Magnesium	ND	100	7.99
Manganese	ND	2	.188
Molybdenum	ND	5	.738
Nickel	ND	2	.55
Potassium	ND	100	71.6
Silver	ND	2	.628
Sodium	ND	100	7.01
Vanadium	ND	2	.438
Zinc	ND	1	.288

RL: Reporting Limit

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
SDG NO.: 02L117
METHOD: METHOD 3010A/6010B

MATRIX:	WATER			% MOISTURE:	NA
DILTN FACTR:	1	1	1		
SAMPLE ID:	MBLK1W				
CONTROL NO.:	IPL048WB	IPL048WL	IPL048WC		
LAB FILE ID:	I07L022016	I07L022017	I07L022018		
DATIME EXTRCTD:	12/20/0213:30	12/20/0213:30	12/20/0213:30	DATE COLLECTED:	NA
DATIME ANALYZD:	12/20/0221:58	12/20/0222:03	12/20/0222:09	DATE RECEIVED:	12/20/02
PREP. BATCH:	IPL048W	IPL048W	IPL048W		
CALIB. REF:	I07L022014	I07L022014	I07L022014		

ACCESSION:

PARAMETER	BLNK RSLT ug/L	SPIKE AMT ug/L	BS RSLT ug/L	BS % REC	SPIKE AMT ug/L	BSD RSLT ug/L	BSD % REC	RPD %	QC LIMIT %	MAX RPD %
Aluminum	ND	10000	9870	99	10000	10100	101	2	80-120	15
Antimony	ND	5000	4800	96	5000	4890	98	2	80-120	15
Barium	ND	1000	930	93	1000	958	96	3	80-120	15
Beryllium	ND	1000	1010	101	1000	1030	103	2	80-120	15
Cadmium	ND	1000	983	98	1000	989	99	1	80-120	15
Calcium	ND	50000	49200	98	50000	49500	99	1	80-120	15
Chromium	ND	1000	1000	100	1000	1010	101	1	80-120	15
Cobalt	ND	1000	963	96	1000	964	96	0	80-120	15
Copper	ND	1000	985	99	1000	1010	101	3	80-120	15
Iron	ND	10000	9880	99	10000	10000	100	1	80-120	15
Magnesium	ND	50000	49200	98	50000	51100	102	4	80-120	15
Manganese	ND	1000	979	98	1000	990	99	1	80-120	15
Molybdenum	ND	1000	933	93	1000	946	95	1	80-120	15
Nickel	ND	1000	956	96	1000	957	96	0	80-120	15
Potassium	ND	50000	50000	100	50000	49000	98	2	80-120	15
Silver	ND	1000	999	100	1000	1010	101	1	80-120	15
Sodium	ND	50000	48800	98	50000	50400	101	3	80-120	15
Vanadium	ND	1000	990	99	1000	1010	101	2	80-120	15
Zinc	ND	1000	1000	100	1000	1010	101	1	80-120	15

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
JOB NO.: 02L117
METHOD: METHOD 3050B/6010B

MATRIX:	SOIL			% MOISTURE:	NA
DILTN FACTR:	1	1	1		
SAMPLE ID:	MBLK1S				
CONTROL NO.:	IPL049SB	IPL049SL	IPL049SC		
LAB FILE ID:	I07L021016	I07L021017	I07L021018		
DATIME EXTRCTD:	12/20/0214:35	12/20/0214:35	12/20/0214:35	DATE COLLECTED:	NA
DATIME ANALYZD:	12/23/0215:06	12/23/0215:12	12/23/0215:17	DATE RECEIVED:	12/20/02
PREP. BATCH:	IPL049S	IPL049S	IPL049S		
CALIB. REF:	I07L021014	I07L021014	I07L021014		

ACCESSION:

PARAMETER	BLNK RSLT mg/kg	SPIKE AMT mg/kg	BS RSLT mg/kg	BS % REC	SPIKE AMT mg/kg	BSD RSLT mg/kg	BSD % REC	RPD %	QC LIMIT %	MAX RPD %
Aluminum	ND	1000	882	88	1000	872	87	1	80-120	25
Antimony	ND	500	424	85	500	424	85	0	80-120	25
Barium	ND	100	87	87	100	85.5	86	2	80-120	25
Beryllium	ND	100	91.8	92	100	90.8	91	1	80-120	25
Cadmium	ND	100	84.7	85	100	84.8	85	0	80-120	25
Calcium	ND	5000	4300	86	5000	4310	86	0	80-120	25
Chromium	ND	100	88.8	89	100	88.7	89	0	80-120	25
Cobalt	ND	100	84	84	100	83.5	83	1	80-120	25
Copper	ND	100	89.8	90	100	88.5	89	1	80-120	25
Iron	ND	1000	860	86	1000	855	86	1	80-120	25
Magnesium	ND	5000	4340	87	5000	4290	86	1	80-120	25
Manganese	ND	100	86.7	87	100	86.3	86	0	80-120	25
Molybdenum	ND	100	84.3	84	100	83.2	83	1	80-120	25
Nickel	ND	100	83.7	84	100	83.4	83	0	80-120	25
Potassium	ND	5000	4400	88	5000	4400	88	0	80-120	25
Silver	ND	100	88.4	88	100	88	88	0	80-120	25
Sodium	ND	5000	4400	88	5000	4320	86	2	80-120	25
Vanadium	ND	100	88.5	88	100	88.2	88	0	80-120	25
Zinc	ND	100	85.2	85	100	85	85	0	80-120	25

EMAX QUALITY CONTROL DATA
ANALYTICAL SPIKE ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
SDG NO.: 02L117
METHOD: METHOD 3010A/6010B

MATRIX:	WATER		% MOISTURE:	NA
DILTN FACTR:	1	1		
SAMPLE ID:	41003502			
CONTROL NO.:	L113-03	L113-03A		
LAB FILE ID:	I07L022034	I07L022037		
DATIME EXTRCTD:	12/20/0213:30	12/20/0213:30	DATE COLLECTED:	12/16/02
DATIME ANALYZD:	12/20/0223:34	12/20/0223:53	DATE RECEIVED:	12/18/02
PREP. BATCH:	IPL048W	IPL048W		
CALIB. REF:	I07L022026	I07L022026		

ACCESSION:

PARAMETER	SMPL RSLT (ug/L)	SPIKE AMT (ug/L)	AS RSLT (ug/L)	AS % REC	QC LIMIT (%)
Aluminum	1870	10000	10900	91	75-125
Antimony	ND	5000	4630	93	75-125
Barium	21.9J	1000	890	87	75-125
Beryllium	ND	1000	974	97	75-125
Cadmium	ND	1000	962	96	75-125
Calcium	2920	50000	51700	97	75-125
Chromium	50.6	1000	1030	98	75-125
Cobalt	ND	1000	953	95	75-125
Copper	32.3J	1000	957	92	75-125
Iron	278000	10000	265000	-133*	75-125
Magnesium	520J	50000	47500	94	75-125
Manganese	1180	1000	2040	86	75-125
Molybdenum	36.3J	1000	947	91	75-125
Nickel	24.1J	1000	966	94	75-125
Potassium	ND	50000	46300	93	75-125
Silver	ND	1000	820	82	75-125
Sodium	140000	50000	174000	68*	75-125
Vanadium	ND	1000	963	96	75-125
Zinc	51.4	1000	1040	99	75-125

EMAX QUALITY CONTROL DATA
ANALYTICAL SPIKE ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
SDG NO.: 02L117
METHOD: METHOD 3050B/6010B

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MATRIX:	SOIL		% MOISTURE:	5.0
DILTN FACTR:	1	1		
SAMPLE ID:	818655-B3123			
CONTROL NO.:	L117-02	L117-02A		
LAB FILE ID:	I07L021020	I07L021019		
DATIME EXTRCTD:	12/20/0214:35	12/20/0214:35	DATE COLLECTED:	12/18/02
DATIME ANALYZD:	12/23/0215:32	12/23/0215:25	DATE RECEIVED:	12/18/02
PREP. BATCH:	IPL049S	IPL049S		
CALIB. REF:	I07L021014	I07L021014		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SPIKE AMT (mg/kg)	AS RSLT (mg/kg)	AS % REC	QC LIMIT (%)
Aluminum	12600	1050	13000	40*	75-125
Antimony	ND	526	430	82	75-125
Barium	112	105	196	80	75-125
Beryllium	.439	105	95.1	90	75-125
Cadmium	ND	105	87.4	83	75-125
Calcium	5200	5260	9320	78	75-125
Chromium	8.46	105	98.4	85	75-125
Cobalt	5.19	105	90.4	81	75-125
Copper	5.58	105	98.7	89	75-125
Iron	11700	1050	11900	17*	75-125
Magnesium	4950	5260	9260	82	75-125
Manganese	199	105	276	73*	75-125
Molybdenum	ND	105	85.2	81	75-125
Nickel	5.01	105	89.4	80	75-125
Potassium	3380	5260	7950	87	75-125
Silver	ND	105	79.6	76	75-125
Sodium	73.8J	5260	4650	87	75-125
Vanadium	28.7	105	118	85	75-125
Zinc	32.3	105	119	82	75-125

EMAX QUALITY CONTROL DATA
SERIAL DILUTION ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
BATCH NO.: 02L117
METHOD: METHOD 3010A/6010B

MATRIX:	WATER		% MOISTURE:	NA
DILUTION FACTOR:	1	5		
SAMPLE ID:	41003502	41003502DL		
EMAX SAMP ID:	L113-03	L113-03T		
LAB FILE ID:	I07L022034	I07L022036		
DATE EXTRACTED:	12/20/0213:30	12/20/0213:30	DATE COLLECTED:	12/16/02
DATE ANALYZED:	12/20/0223:34	12/20/0223:47	DATE RECEIVED:	12/18/02
PREP. BATCH:	IPL048W	IPL048W		
CALIB. REF:	I07L022026	I07L022026		

ACCESSION:

PARAMETER	SMPL RSLT (ug/L)	SERIAL DIL RSLT (ug/L)	DIF RSLT %	QC LIMIT (%)
Aluminum	1870	1740J	NA	10
Antimony	ND	ND	0	10
Barium	21.9J	21.5J	NA	10
Beryllium	ND	ND	0	10
Cadmium	ND	ND	0	10
Calcium	2920	2980J	NA	10
Chromium	50.6	53.3J	NA	10
Cobalt	ND	ND	0	10
Copper	32.3J	29.2J	NA	10
Iron	278000	286000	3	10
Magnesium	520J	579J	NA	10
Manganese	1180	1180	0	10
Molybdenum	36.3J	45.9J	NA	10
Nickel	24.1J	ND	NA	10
Potassium	ND	ND	0	10
Silver	ND	ND	0	10
Sodium	140000	137000	2	10
Vanadium	ND	ND	0	10
Zinc	51.4	85.4J	NA	10

EMAX QUALITY CONTROL DATA
SERIAL DILUTION ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
BATCH NO.: 02L117
METHOD: METHOD 3050B/6010B

MATRIX:	SOIL		% MOISTURE:	NA
DILUTION FACTOR:	1	5		
SAMPLE ID:	818655-B3123	818655-B3123DL		
EMAX SAMP ID:	L117-02	L117-02T		
LAB FILE ID:	I07L021020	I07L021021		
DATE EXTRACTED:	12/20/0214:35	12/20/0214:35	DATE COLLECTED:	12/18/02
DATE ANALYZED:	12/23/0215:32	12/23/0215:38	DATE RECEIVED:	12/18/02
PREP. BATCH:	IPL049S	IPL049S		
CALIB. REF:	I07L021014	I07L021014		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SERIAL DIL RSLT (mg/kg)	DIF RSLT %	QC LIMIT (%)
Aluminum	12600	12100	4	10
Antimony	ND	ND	0	10
Barium	112	107	4	10
Beryllium	.439	ND	NA	10
Cadmium	ND	ND	0	10
Calcium	5200	5110	2	10
Chromium	8.46	7.65J	NA	10
Cobalt	5.19	5.13J	NA	10
Copper	5.58	4.84J	NA	10
Iron	11700	11700	1	10
Magnesium	4950	4810	3	10
Manganese	199	195	2	10
Molybdenum	ND	ND	0	10
Nickel	5.01	7.66J	NA	10
Potassium	3380	3500	3	10
Silver	ND	ND	0	10
Sodium	73.8J	54.1J	NA	10
Vanadium	28.7	28	2	10
Zinc	32.3	33.8	5	10

METHOD 3050B/6010B
METALS BY ICP

Client : SHAW E&I	Date Collected: 12/18/02
Project : EL TORO, CTO 0024	Date Received: 12/18/02
SDG NO. : 02L117	Date Extracted: 12/20/02 14:35
Sample ID: 818655-B3123	Date Analyzed: 12/20/02 19:20
Lab Samp ID: L117-02	Dilution Factor: 1
Lab File ID: I31L020021	Matrix : SOIL
Ext Btch ID: IPL049S	% Moisture : 5.0
Calib. Ref.: I31L020015	Instrument ID : EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	2.58	1.05	.221
Lead	3.53	1.05	.183
Selenium	.302J	1.05	.3
Thallium	.603J	1.05	.321

RL: Reporting Limit

METHOD 3050B/6010B
METALS BY ICP

Client	: SHAW E&I	Date Collected:	12/18/02
Project	: EL TORO, CTO 0024	Date Received:	12/18/02
SDG NO.	: 02L117	Date Extracted:	12/20/02 14:35
Sample ID:	818655-B3124	Date Analyzed:	12/20/02 19:30
Lab Samp ID:	L117-03	Dilution Factor:	1
Lab File ID:	I31L020023	Matrix :	SOIL
Ext Btch ID:	IPL049S	% Moisture :	5.2
Calib. Ref.:	I31L020015	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	2.27	1.05	.222
Lead	4.1	1.05	.184
Selenium	ND	1.05	.301
Thallium	.645J	1.05	.322

RL: Reporting Limit

METHOD 3050B/6010B
METALS BY ICP

Client : SHAW E&I	Date Collected: 12/18/02
Project : EL TORO, CTO 0024	Date Received: 12/18/02
SDG NO. : 02L117	Date Extracted: 12/20/02 14:35
Sample ID: 818655-B3125	Date Analyzed: 12/20/02 19:35
Lab Samp ID: L117-04	Dilution Factor: 1
Lab File ID: I31L020024	Matrix : SOIL
Ext Btch ID: IPL049S	% Moisture : 6.3
Calib. Ref.: I31L020015	Instrument ID : EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	2.15	1.07	.224
Lead	4.26	1.07	.186
Selenium	ND	1.07	.304
Thallium	.524J	1.07	.326

RL: Reporting Limit

METHOD 3050B/6010B
METALS BY ICP

Client	: SHAW E&I	Date Collected:	12/18/02
Project	: EL TORO, CTO 0024	Date Received:	12/18/02
SDG NO.	: 02L117	Date Extracted:	12/20/02 14:35
Sample ID:	818655-B3126	Date Analyzed:	12/20/02 19:40
Lab Samp ID:	L117-05	Dilution Factor:	1
Lab File ID:	I31L020025	Matrix :	SOIL
Ext Btch ID:	IPL049S	% Moisture :	3.9
Calib. Ref.:	I31L020015	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	6.12	1.04	.219
Lead	7.62	1.04	.181
Selenium	.728J	1.04	.297
Thallium	1.58	1.04	.317

RL: Reporting Limit

METHOD 3050B/6010B
METALS BY ICP

Client : SHAW E&I	Date Collected: 12/18/02
Project : EL TORO, CTO 0024	Date Received: 12/18/02
SDG NO. : 02L117	Date Extracted: 12/20/02 14:35
Sample ID: 818655-B3127	Date Analyzed: 12/20/02 19:44
Lab Samp ID: L117-06	Dilution Factor: 1
Lab File ID: I31L020026	Matrix : SOIL
Ext Btch ID: IPL049S	% Moisture : 17.9
Calib. Ref.: I31L020015	Instrument ID : EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	3.25	1.22	.256
Lead	3.46	1.22	.212
Selenium	.351J	1.22	.347
Thallium	.45J	1.22	.371

RL: Reporting Limit

METHOD 3050B/6010B
METALS BY ICP

Client	: SHAW E&I	Date Collected:	12/18/02
Project	: EL TORO, CTO 0024	Date Received:	12/18/02
SDG NO.	: 02L117	Date Extracted:	12/20/02 14:35
Sample ID:	818655-B3128	Date Analyzed:	12/20/02 19:59
Lab Samp ID:	L117-07	Dilution Factor:	1
Lab File ID:	I31L020029	Matrix :	SOIL
Ext Btch ID:	IPL049S	% Moisture :	6.5
Calib. Ref.:	I31L020027	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	2	1.07	.225
Lead	2.59	1.07	.186
Selenium	.466J	1.07	.305
Thallium	.438J	1.07	.326

RL: Reporting Limit

METHOD 3050B/6010B
METALS BY ICP

Client	: SHAW E&I	Date Collected:	12/18/02
Project	: EL TORO, CTO 0024	Date Received:	12/18/02
SDG NO.	: 02L117	Date Extracted:	12/20/02 14:35
Sample ID:	818655-B3129	Date Analyzed:	12/20/02 20:04
Lab Samp ID:	L117-08	Dilution Factor:	1
Lab File ID:	I31L020030	Matrix :	SOIL
Ext Btch ID:	IPL049S	% Moisture :	3.1
Calib. Ref.:	I31L020027	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	1.7	1.03	.217
Lead	2.1	1.03	.18
Selenium	ND	1.03	.294
Thallium	.504J	1.03	.315

RL: Reporting Limit

METHOD 3010A/6010B
METALS BY ICP

lient : SHAW E&I	Date Collected: 12/18/02
rroject : EL TORO, CTO 0024	Date Received: 12/18/02
SDG NO. : 02L117	Date Extracted: 12/20/02 13:30
Sample ID: 818655-B3130	Date Analyzed: 12/30/02 16:32
ab Samp ID: L117-09	Dilution Factor: 1
Lab File ID: I31L028021	Matrix : WATER
Ext Btch ID: IPL048W	% Moisture : NA
Calib. Ref.: I31L028015	Instrument ID : EMAXTI31

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
Arsenic	ND	5	4
Lead	ND	5	2
Selenium	ND	5	5
hallium	ND	10	6

RL: Reporting Limit

METHOD 3010A/6010B
METALS BY ICP

Client : SHAW E&I	Date Collected: NA
Project : EL TORO, CTO 0024	Date Received: 12/20/02
SDG NO. : 02L117	Date Extracted: 12/20/02 13:30
Sample ID: MBLK1W	Date Analyzed: 12/30/02 16:10
Lab Samp ID: IPL048WB	Dilution Factor: 1
Lab File ID: I31L028017	Matrix : WATER
Ext Btch ID: IPL048W	% Moisture : NA
Calib. Ref.: I31L028015	Instrument ID : EMAXTI31

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
Arsenic	ND	5	4
Lead	ND	5	2
Selenium	7.15	5	5
Thallium	ND	10	6

RL: Reporting Limit

METHOD 3050B/6010B
METALS BY ICP

Client	: SHAW E&I	Date Collected:	NA
Project	: EL TORO, CTO 0024	Date Received:	12/20/02
SDG NO.	: 02L117	Date Extracted:	12/20/02 14:35
Sample ID:	MBLK1S	Date Analyzed:	12/20/02 18:59
Lab Samp ID:	IPL049SB	Dilution Factor:	1
Lab File ID:	I31L020017	Matrix :	SOIL
Ext Btch ID:	IPL049S	% Moisture :	NA
Calib. Ref.:	I31L020015	Instrument ID :	EMAXT131

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	.226J	1	.21
Lead	.207J	1	.174
Selenium	ND	1	.285
Thallium	ND	1	.305

RL: Reporting Limit

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
SDG NO.: 02L117
METHOD: METHOD 3010A/6010B

MATRIX:	WATER			% MOISTURE:	NA
DILTN FACTR:	1	1	1		
SAMPLE ID:	MBLK1W				
CONTROL NO.:	IPL048WB	IPL048WL	IPL048WC		
LAB FILE ID:	I31L028017	I31L028018	I31L028019		
DATIME EXTRCTD:	12/20/0213:30	12/20/0213:30	12/20/0213:30	DATE COLLECTED:	NA
DATIME ANALYZD:	12/30/0216:10	12/30/0216:15	12/30/0216:20	DATE RECEIVED:	12/20/02
PREP. BATCH:	IPL048W	IPL048W	IPL048W		
CALIB. REF:	I31L028015	I31L028015	I31L028015		

ACCESSION:

PARAMETER	BLNK RSLT ug/L	SPIKE AMT ug/L	BS RSLT ug/L	BS % REC	SPIKE AMT ug/L	BSD RSLT ug/L	BSD % REC	RPD %	QC LIMIT %	MAX RPD %
Arsenic	ND	1000	992	99	1000	960	96	3	80-120	15
Lead	ND	1000	898	90	1000	875	88	3	80-120	15
Selenium	7.15	1000	978	97	1000	955	95	2	80-120	15
Thallium	ND	1000	896	90	1000	872	87	3	80-120	15

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
SDG NO.: 02L117
METHOD: METHOD 3050B/6010B

MATRIX:	SOIL			% MOISTURE:	NA
DILTN FACTR:	1	1	1		
SAMPLE ID:	MBLK1S				
CONTROL NO.:	IPL049SB	IPL049SL	IPL049SC		
LAB FILE ID:	I31L020017	I31L020018	I31L020019		
DATIME EXTRCTD:	12/20/0214:35	12/20/0214:35	12/20/0214:35	DATE COLLECTED:	NA
DATIME ANALYZD:	12/20/0218:59	12/20/0219:04	12/20/0219:09	DATE RECEIVED:	12/20/02
PREP. BATCH:	IPL049S	IPL049S	IPL049S		
CALIB. REF:	I31L020015	I31L020015	I31L020015		

ACCESSION:

PARAMETER	BLNK RSLT mg/kg	SPIKE AMT mg/kg	BS RSLT mg/kg	BS % REC	SPIKE AMT mg/kg	BSD RSLT mg/kg	BSD % REC	RPD %	QC LIMIT %	MAX RPD %
Arsenic	.226J	100	90.8	91	100	90.5	90	0	80-120	25
Lead	.207J	100	85.6	85	100	84.4	84	1	80-120	25
Selenium	ND	100	92.9	93	100	90.7	91	2	80-120	25
Thallium	ND	100	82.7	83	100	83.1	83	0	80-120	25

EMAX QUALITY CONTROL DATA
ANALYTICAL SPIKE ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
SDG NO.: 02L117
METHOD: METHOD 3050B/6010B

MATRIX:	SOIL		% MOISTURE:	5.0
DILTN FACTR:	1	1		
SAMPLE ID:	818655-B3123			
CONTROL NO.:	L117-02	L117-02A		
LAB FILE ID:	I31L020021	I31L020020		
DATIME EXTRCTD:	12/20/0214:35	12/20/0214:35	DATE COLLECTED:	12/18/02
DATIME ANALYZD:	12/20/0219:20	12/20/0219:13	DATE RECEIVED:	12/18/02
PREP. BATCH:	IPL049S	IPL049S		
CALIB. REF:	I31L020015	I31L020015		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SPIKE AMT (mg/kg)	AS RSLT (mg/kg)	AS % REC	QC LIMIT (%)
Arsenic	2.58	105	95.4	88	75-125
Lead	3.53	105	89	81	75-125
Selenium	.302J	105	93.6	89	75-125
Thallium	.603J	105	85.4	81	75-125

EMAX QUALITY CONTROL DATA
ANALYTICAL SPIKE ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
SDG NO.: 02L117
METHOD: METHOD 3010A/6010B

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MATRIX:	WATER		% MOISTURE:	NA
DILTN FACTR:	1	1		
SAMPLE ID:	818655-B3130			
CONTROL NO.:	L117-09	L117-09A		
LAB FILE ID:	I31L028021	I31L028020		
DATIME EXTRCTD:	12/20/0213:30	12/20/0213:30	DATE COLLECTED:	12/18/02
DATIME ANALYZD:	12/30/0216:32	12/30/0216:25	DATE RECEIVED:	12/18/02
PREP. BATCH:	IPL048W	IPL048W		
CALIB. REF:	I31L028015	I31L028015		

ACCESSION:

PARAMETER	SMPL RSLT (ug/L)	SPIKE AMT (ug/L)	AS RSLT (ug/L)	AS % REC	QC LIMIT (%)
Arsenic	ND	1000	935	94	75-125
Lead	ND	1000	869	87	75-125
Selenium	ND	1000	942	94	75-125
Thallium	ND	1000	881	88	75-125

EMAX QUALITY CONTROL DATA
SERIAL DILUTION ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
BATCH NO.: 02L117
METHOD: METHOD 3050B/6010B

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MATRIX:	SOIL		% MOISTURE:	5.0
DILUTION FACTOR:	1	5		
SAMPLE ID:	818655-B3123	818655-B3123DL		
EMAX SAMP ID:	L117-02	L117-02T		
LAB FILE ID:	I31L020021	I31L020022		
DATE EXTRACTED:	12/20/0214:35	12/20/0214:35	DATE COLLECTED:	12/18/02
DATE ANALYZED:	12/20/0219:20	12/20/0219:25	DATE RECEIVED:	12/18/02
PREP. BATCH:	IPL049S	IPL049S		
CALIB. REF:	I31L020015	I31L020015		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SERIAL DIL RSLT (mg/kg)	DIF RSLT %	QC LIMIT (%)
Arsenic	2.58	3.08J	NA	10
Lead	3.53	3.15J	NA	10
Selenium	.302J	ND	NA	10
Thallium	.603J	ND	NA	10

EMAX QUALITY CONTROL DATA
SERIAL DILUTION ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
BATCH NO.: 02L117
METHOD: METHOD 3010A/6010B

MATRIX:	WATER		% MOISTURE:	NA
DILUTION FACTOR:	1	5		
SAMPLE ID:	818655-B3130	818655-B3130DL		
EMAX SAMP ID:	L117-09	L117-09T		
LAB FILE ID:	I31L028021	I31L028022		
DATE EXTRACTED:	12/20/0213:30	12/20/0213:30	DATE COLLECTED:	12/18/02
DATE ANALYZED:	12/30/0216:32	12/30/0216:36	DATE RECEIVED:	12/18/02
PREP. BATCH:	IPL048W	IPL048W		
CALIB. REF:	I31L028015	I31L028015		

ACCESSION:

PARAMETER	SMPL RSLT (ug/L)	SERIAL DIL RSLT (ug/L)	DIF RSLT %	QC LIMIT (%)
Arsenic	ND	ND	0	10
Lead	ND	ND	0	10
Selenium	ND	ND	0	10
Thallium	ND	ND	0	10

METHOD 7470A
MERCURY BY COLD VAPOR

Client : SHAW E&I
Project : EL TORO, CTO 0024
Batch No. : 02L117

Matrix : WATER
Instrument ID : TI047

SAMPLE ID	EMAX SAMPLE ID	RESULTS (ug/L)	DLF	MOIST	RL (ug/L)	MDL (ug/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	HGL035WB	ND	1	NA	.2	.1	12/23/0215:52	12/23/0211:45	M47L029010	M47L029008	HGL035W	NA	12/23/02
LCS1W	HGL035WL	4.79	1	NA	.2	.1	12/23/0216:22	12/23/0211:45	M47L029024	M47L029020	HGL035W	NA	12/23/02
LCD1W	HGL035WC	5	1	NA	.2	.1	12/23/0215:56	12/23/0211:45	M47L029012	M47L029008	HGL035W	NA	12/23/02
818655-B3130	L117-09	ND	1	NA	.2	.1	12/23/0216:20	12/23/0211:45	M47L029023	M47L029020	HGL035W	12/18/02	12/18/02

RL: Reporting Limit

METHOD 7471A
MERCURY BY COLD VAPOR

Client : SHAW E&I
Project EL TORO, CTO 0024
Batch No. - 02L117

Matrix : SOIL
Instrument ID : TI074

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	DLF	MOIST	RL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1S	HGL036SB	ND	1	NA	.1	.033	12/23/0214:26	12/23/0211:30	M74L006011	M74L006009	HGL036S	NA	12/23/02
LCS1S	HGL036SL	.87	1	NA	.1	.033	12/23/0214:28	12/23/0211:30	M74L006012	M74L006009	HGL036S	NA	12/23/02
LCD1S	HGL036SC	.86	1	NA	.1	.033	12/23/0214:30	12/23/0211:30	M74L006013	M74L006009	HGL036S	NA	12/23/02
818655-B3123AS	L117-02A	.389	1	5.0	.105	.0347	12/23/0214:32	12/23/0211:30	M74L006014	M74L006009	HGL036S	12/18/02	12/18/02
818655-B3123	L117-02	ND	1	5.0	.105	.0347	12/23/0214:35	12/23/0211:30	M74L006015	M74L006009	HGL036S	12/18/02	12/18/02
818655-B3123DL	L117-02T	ND	5	5.0	.526	.174	12/23/0214:37	12/23/0211:30	M74L006016	M74L006009	HGL036S	12/18/02	12/18/02
818655-B3124	L117-03	ND	1	5.2	.105	.0348	12/23/0214:39	12/23/0211:30	M74L006017	M74L006009	HGL036S	12/18/02	12/18/02
818655-B3125	L117-04	ND	1	6.3	.107	.0352	12/23/0214:42	12/23/0211:30	M74L006018	M74L006009	HGL036S	12/18/02	12/18/02
818655-B3126	L117-05	ND	1	3.9	.104	.0343	12/23/0214:44	12/23/0211:30	M74L006019	M74L006009	HGL036S	12/18/02	12/18/02
818655-B3127	L117-06	ND	1	17.9	.122	.0402	12/23/0214:46	12/23/0211:30	M74L006020	M74L006009	HGL036S	12/18/02	12/18/02
818655-B3128	L117-07	ND	1	6.5	.107	.0353	12/23/0214:52	12/23/0211:30	M74L006023	M74L006021	HGL036S	12/18/02	12/18/02
818655-B3129	L117-08	ND	1	3.1	.103	.0341	12/23/0214:54	12/23/0211:30	M74L006024	M74L006021	HGL036S	12/18/02	12/18/02

RL: Reporting Limit

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
SDG NO.: 02L117
METHOD: METHOD 7470A

MATRIX:	WATER			% MOISTURE:	NA
DILTN FACTR:	1	1	1		
SAMPLE ID:	MBLK1W				
CONTROL NO.:	HGL035WB	HGL035WL	HGL035WC		
LAB FILE ID:	M47L029010	M47L029024	M47L029012		
DATIME EXTRCTD:	12/23/0211:45	12/23/0211:45	12/23/0211:45	DATE COLLECTED:	NA
DATIME ANALYZD:	12/23/0215:52	12/23/0216:22	12/23/0215:56	DATE RECEIVED:	12/23/02
PREP. BATCH:	HGL035W	HGL035W	HGL035W		
CALIB. REF:	M47L029008	M47L029020	M47L029008		

ACCESSION:

PARAMETER	BLNK RSLT ug/L	SPIKE AMT ug/L	BS RSLT ug/L	BS % REC	SPIKE AMT ug/L	BSD RSLT ug/L	BSD % REC	RPD %	QC LIMIT %	MAX RPD %
Mercury	ND	5	4.79	96	5	5	100	4	77-120	15

7073

EMAX QUALITY CONTROL DATA
SERIAL DILUTION ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
BATCH NO.: 02L117
METHOD: METHOD 7470A

MATRIX:	WATER		% MOISTURE:	NA
DILUTION FACTOR:	1	5		
SAMPLE ID:	41003501	41003501DL		
EMAX SAMP ID:	L113-02	L113-02T		
LAB FILE ID:	M47L029014	M47L029015		
DATE EXTRACTED:	12/23/0211:45	12/23/0211:45	DATE COLLECTED:	12/16/02
DATE ANALYZED:	12/23/0216:00	12/23/0216:02	DATE RECEIVED:	12/18/02
PREP. BATCH:	HGL035W	HGL035W		
CALIB. REF:	M47L029008	M47L029008		

ACCESSION:

PARAMETER	SMPL RSLT (ug/L)	SERIAL DIL RSLT (ug/L)	DIF RSLT %	QC LIMIT (%)
Mercury	ND	ND	0	10

EMAX QUALITY CONTROL DATA
ANALYTICAL SPIKE ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
SDG NO.: 02L117
METHOD: METHOD 7470A

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MATRIX:	WATER		% MOISTURE:	NA
DILTN FACTR:	1	1		
SAMPLE ID:	41003501			
CONTROL NO.:	L113-02	L113-02A		
LAB FILE ID:	M47L029014	M47L029013		
DATIME EXTRCTD:	12/23/0211:45	12/23/0211:45	DATE COLLECTED:	12/16/02
DATIME ANALYZD:	12/23/0216:00	12/23/0215:58	DATE RECEIVED:	12/18/02
PREP. BATCH:	HGL035W	HGL035W		
CALIB. REF:	M47L029008	M47L029008		

ACCESSION:

PARAMETER	SMPL RSLT (ug/L)	SPIKE AMT (ug/L)	AS RSLT (ug/L)	AS % REC	QC LIMIT (%)
Mercury	ND	2	2.2	110	85-115

7075

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
SDG NO.: 02L117
METHOD: METHOD 7471A

MATRIX:	SOIL			% MOISTURE:	NA
DILTN FACTR:	1	1	1		
SAMPLE ID:	MBLK1S				
CONTROL NO..	HGL036SB	HGL036SL	HGL036SC		
LAB FILE ID:	M74L006011	M74L006012	M74L006013		
DATIME EXTRCTD:	12/23/0211:30	12/23/0211:30	12/23/0211:30	DATE COLLECTED:	NA
DATIME ANALYZD:	12/23/0214:26	12/23/0214:28	12/23/0214:30	DATE RECEIVED:	12/23/02
PREP. BATCH:	HGL036S	HGL036S	HGL036S		
CALIB. REF:	M74L006009	M74L006009	M74L006009		

ACCESSION:

PARAMETER	BLNK RSLT mg/kg	SPIKE AMT mg/kg	BS RSLT mg/kg	BS % REC	SPIKE AMT mg/kg	BSD RSLT mg/kg	BSD % REC	RPD %	QC LIMIT %	MAX RPD %
Mercury	ND	.833	.87	104	.833	.86	103	1	77-120	25

7076

EMAX QUALITY CONTROL DATA
SERIAL DILUTION ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
BATCH NO.: 02L117
METHOD: METHOD 7471A

MATRIX:	SOIL		% MOISTURE:	NA
DILUTION FACTOR:	1	5		
SAMPLE ID:	818655-B3123	818655-B3123DL		
EMAX SAMP ID:	L117-02	L117-02T		
LAB FILE ID:	M74L006015	M74L006016		
DATE EXTRACTED:	12/23/0211:30	12/23/0211:30	DATE COLLECTED:	12/18/02
DATE ANALYZED:	12/23/0214:35	12/23/0214:37	DATE RECEIVED:	12/18/02
PREP. BATCH:	HGL036S	HGL036S		
CALIB. REF:	M74L006009	M74L006009		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SERIAL DIL RSLT (mg/kg)	DIF RSLT %	QC LIMIT (%)
Mercury	ND	ND	0	10

7077

EMAX QUALITY CONTROL DATA
ANALYTICAL SPIKE ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
SDG NO.: 02L117
METHOD: METHOD 7471A

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MATRIX:	SOIL		% MOISTURE:	5.0
DILTN FACTR:	1	1		
SAMPLE ID:	818655-B3123			
CONTROL NO.:	L117-02	L117-02A		
LAB FILE ID:	M74L006015	M74L006014		
DATIME EXTRCTD:	12/23/0211:30	12/23/0211:30	DATE COLLECTED:	12/18/02
DATIME ANALYZD:	12/23/0214:35	12/23/0214:32	DATE RECEIVED:	12/18/02
PREP. BATCH:	HGL036S	HGL036S		
CALIB. REF:	M74L006009	M74L006009		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SPIKE AMT (mg/kg)	AS RSLT (mg/kg)	AS % REC	QC LIMIT (%)
Mercury	ND	.350	.389	111	85-115

7078

APPENDIX J
DV REPORT

The DV Group, Inc.

DATA VALIDATION REPORT

Project / Site Name:	MCAS El Toro, CTO #24
Project No.:	818655
Data Reviewer:	S. Obleas, The Data Validation Group, Inc.
Review Date:	January 16, 2003
Matrix:	7 Soils / 2 Waters
Parameters:	M8015 Gasoline and Diesel; Volatiles 8260B; Semivolatiles 8270C; Semivolatiles-SIM 8270C; Pesticides 8081A; Mercury 7470/7471A; Metals 6010B.
Validation Level:	EPA Level III / IV
Laboratory:	EMAX Analytical Lab Inc.
Sample Delivery Group (SDG) No.:	02L117
Sample Nos.:	818655-B3122, 818655-B3123, 818655-B3124, 818655-B3125, 818655-B3126, 818655-B3127, 818655-B3128, 818655-B3129, 818655-B3130
Collection Date(s):	December 18, 2002
Comments:	Field duplicates: 818655-B3125 / 818655-B3126 Trip Blank: 818655-B3122 Equipment rinsate: 818655-B3130

The data were qualified according to the U.S. Environmental Protection Agency (EPA) documents "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review" (1999) and "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review" (1994). In addition, the Data Validation Services Statement of Work for MCAS El Toro was used along with other EPA methods.

S R. Obleas, President

DATA VALIDATION REQUIREMENTS

Level IV or Full validation includes all parameters listed below Level III or Cursory validation parameters are indicated by an asterisk (*).

CLP Organic Parameters

* Holding times
  GC/MS instrument performance check
* Initial and continuing calibrations
* Blanks
* Surrogate recovery
* Matrix spike/matrix spike duplicate
* Laboratory control sample or blank spike
* Field duplicates
* Internal standard performance
  Target compound identification
  Tentatively identified compounds
  Compound quantitation
  Reported detection limits
  System performance
* Overall assessment of data for the SDG

CLP Inorganic Parameters

* Holding times
* Initial and continuing calibrations
* Blanks
* Matrix spike
* Laboratory control sample/blank spike
* Field duplicates
* Matrix duplicates
  ICP interference check sample
  GFAA quality control
* ICP serial dilution
  Sample result verification
  Analyte quantitation
  Reported detection limits
* Overall assessment of data for the SDG

Non-CLP Organic and Inorganic Parameters

* Method compliance
* Holding times
* Initial and continuing calibrations
* Blanks
* Matrix spike/matrix spike duplicate
* Laboratory control sample or blank spike
* Field duplicates
* Matrix duplicates
* Surrogate recovery
  Analyte quantitation
  Reported detection limits
* Overall assessment of data for the SDG

DATA VALIDATION QUALIFIERS

U Indicates the compound or analyte was analyzed for but no detected at or above the stated limit.

J Indicates an estimated value.

R Quality control indicates the data is not usable.

N Presumptive evidence of presence of the constituent

UJ Indicates the compound or analyte was analyzed for but not detected The sample detection limit is an estimated value.

A Indicates the finding is based upon technical validation criteria.

P Indicates the finding is related to a protocol/contractual deviation.

None Indicates the data was not significantly impacted by the finding, therefore, qualification was not required.

CURSORY DATA VALIDATION SUMMARY TABLE

Analysis	Holding Times	Surrogates	MS/MSD	LCS	Blanks	Calibration	Inter Stand
Method M8015 **Gasoline**	√	√	N/A	√	√	√	N/
Method M8015 **Diesel**	√	√	√	√	√	√	N/
Method 8260B **Volatiles**	√	√	N/A	√	**Pg. 4**	**Pg. 4**	√
Method 8270C **Semivolatiles**	√	√	√	√	√	**Pg. 5**	√
Method 8270C **Semivolatiles-SIM**	√	√	√	√	√	√	√
Method 8081A **Pesticides**	√	√	√	√	√	**Pg. 6**	N/
Method 7470A/7471A **Mercury**	√	N/A	√	√	√	√	N/
Method 6010B **Metals**	√	N/A	**Pg. 7**	√	**Pg. 6**	√	N/

Notes:

√ indicates that all quality control criteria were met for the parameter as specified in the prescribed methods and data validation guidelines.

N/A indicates the parameter is not applicable to an analysis.

If criteria were not met and the data were qualified, a page number is indicated where the qualification is detailed.

The data were evaluated for all validation criteria and were found to be in control except where noted. Any outliers are described in the text.

DATA ASSESSMENT

GASOLINE (Method M8015)

I. **Level III and IV criteria met.**

DIESEL (Method M8015)

I. **Level III and IV criteria met.**

VOLATILES (Method 8260B)

I. **Blank Contamination**

A. Due to common laboratory contamination, the following are considered nondetected (U).

- Acetone in samples 818655-B3123, 818655-B3124, 818655-B3125, 818655-B3126, 818655-B3127, and 818655-B3129.
- Methylene chloride in samples 818655-B3123, 818655-B3124, 818655-B3125, 818655-B3126, 818655-B3127, 818655-B3128, and 818655-B3129.

Acetone and Methylene chloride are considered common laboratory contaminants. Detected results less than 5x the reporting limit were qualified.

II. **Calibrations**

A. Due to initial calibration problems, the following nondetected results are qualified as estimated (UJ).

- Bromomethane in samples 818655-B3123 through 818655-B3129.
- Acetone in samples 818655-B3122 and 818655-B3130.

The following initial calibrations had relative standard deviation (%RSD) of >50%.

Calibration Date	Compound	%D
11/30/02	Bromomethane	57.14
12/16/02	Acetone	55.77

B. Due to continuing calibration problems, the following nondetected results are qualified as estimated (UJ).

- Vinyl acetate, 4-Methyl-2-pentanone, and Bromoform in samples 818655-B3123 through 818655-B3129

The following continuing calibrations had percent differences (%D) of >25%.

Calibration Date	Compound	%D
12/20/02 1218	Vinyl acetate	26
	4-Methyl-2-pentanone	28
	Bromoform	27

III. **Level IV criteria met.**

SEMIVOLATILES (Method 8270C)

I. **Calibrations**

A. Due to continuing calibration problems, the following nondetected results are qualified as estimated (UJ)

- Bis(2-chloroisopropyl)ether in samples 818655-B3123 through 818655-B3130

The following continuing calibrations had percent differences (%D) of >25%

Calibration Date	Compound	%D
12/19/02 1727	Bis(2-chloroisopropyl)ether	-50.8
12/23/02 1803	Bis(2-chloroisopropyl)ether	-27.6

II. **Level IV criteria met.**

SEMIVOLATILES-SIM (Method 8270C)

I. **Level III and IV criteria met.**

PESTICIDES (Method 8081A)

I. Calibrations

A. Due to continuing calibration problems, the following nondetected results are qualified as estimated (UJ).

- Methoxychlor in all samples

The following continuing calibrations had percent differences (%D) of >15%.

Calibration Date	Compound	%D
12/21/02 0541	Methoxychlor	20

II. Level IV criteria met.

MERCURY (Method 7470A/7471A)

I. Level III and IV criteria met.

METALS (Method 6010B)

I. Blank Contamination

A. Due to calibration and method blank contamination, the following results are considered nondetected (U).

- Calcium and Sodium in sample 818655-B3130.

The following metals were detected in the associated calibration and method blanks at the concentrations noted below.

Analyte	Blank ID	Concentration, units
Calcium	CCB4	127.7 ug/L
Sodium	CCB2	224.4 ug/L

Detected results less than 5x the maximum blank contamination were qualified.

II. Analytical Spike

A. Due to accuracy problems, the following detected results are qualified as estimated (J).

- Aluminum, Iron, and Manganese in samples 818655-B3123, 818655-B3124, 818655-B3125, 818655-B3126, 818655-B3127, 818655-B3128, and 818655-B3129.
- Sodium in sample 818655-B3130

The recoveries outside the QC limits are listed below

Sample ID	Analyte	%R	QC Limits
818655-B3123	Aluminum	40.0	75 - 125%
(soil)	Iron	17.0	75 - 125%
	Manganese	73.0	75 - 125%
L113-02 (water)	Sodium	68.0	75 - 125%

Spike recoveries less than 74% indicate that detects may be biased low and false nondetects may have been reported.

III. Field Duplicates

A. Field duplicate precision was performed with samples 818655-B3125 and 818655-B3126.

The following %RPDs were greater than 50% for soil matrix samples. Qualifications to the data are not made.

- 122% for Aluminum; 96% for Arsenic; 67% for Barium; 118% for Beryllium; 71% for Calcium; 108% for Chromium; 99% for Cobalt; 93% for Copper; 106% for Iron; 57% for Lead; 120% for Magnesium; 72% for Manganese; 93% for Nickel; 105% for Potassium; 200% for Selenium; 148% for Sodium; 100% for Thallium; 104% for Vanadium; and 87% for Zinc.

IV. Level IV criteria met.

MCAS El Toro, CTO 24
Gasoline – Data Qualification Summary – SDG 02L117

No Sample Data Qualified in this SDG.

MCAS El Toro, CTO 24
Gasoline – Laboratory Blank Data Qualification Summary – SDG 02L117

No Sample Data Qualified in this SDG.

MCAS El Toro, CTO 24
Diesel – Data Qualification Summary – SDG 02L117

No Sample Data Qualified in this SDG.

MCAS El Toro, CTO 24
Diesel – Laboratory Blank Data Qualification Summary – SDG 02L117

No Sample Data Qualified in this SDG.

MCAS El Toro, CTO 24
Volatiles – Data Qualification Summary – SDG 02L117

Initial calibration qualifications

Sample	Compound	Qualification	Protocol / Advisory
818655-B3122	Acetone	UJ	Protocol
818655-B3123	Bromomethane	UJ	Protocol
818655-B3124	Bromomethane	UJ	Protocol
818655-B3125	Bromomethane	UJ	Protocol
818655-B3126	Bromomethane	UJ	Protocol
818655-B3127	Bromomethane	UJ	Protocol
818655-B3128	Bromomethane	UJ	Protocol
818655-B3129	Bromomethane	UJ	Protocol
818655-B3130	Acetone	UJ	Protocol

Continuing calibration qualifications

Sample	Compound	Qualification	Protocol / Advisory
818655-B3123	Vinyl acetate	UJ	Protocol
	4-Methyl-2-pentanone	UJ	Protocol
	Bromoform	UJ	Protocol
818655-B3124	Vinyl acetate	UJ	Protocol
	4-Methyl-2-pentanone	UJ	Protocol
	Bromoform	UJ	Protocol
818655-B3125	Vinyl acetate	UJ	Protocol
	4-Methyl-2-pentanone	UJ	Protocol
	Bromoform	UJ	Protocol
818655-B3126	Vinyl acetate	UJ	Protocol
	4-Methyl-2-pentanone	UJ	Protocol
	Bromoform	UJ	Protocol
818655-B3127	Vinyl acetate	UJ	Protocol
	4-Methyl-2-pentanone	UJ	Protocol
	Bromoform	UJ	Protocol
818655-B3128	Vinyl acetate	UJ	Protocol
	4-Methyl-2-pentanone	UJ	Protocol
	Bromoform	UJ	Protocol
818655-B3129	Vinyl acetate	UJ	Protocol
	4-Methyl-2-pentanone	UJ	Protocol
	Bromoform	UJ	Protocol

MCAS El Toro, CTO 24
Volatiles – Laboratory Blank Data Qualification Summary – SDG 02L117

Common laboratory contamination qualifications

Compound	Associated Samples	Qualification	Protocol / Advisory
Acetone	818655-B3123	U	Advisory
	818655-B3124	U	Advisory
	818655-B3125	U	Advisory
	818655-B3126	U	Advisory
	818655-B3127	U	Advisory
	818655-B3129	U	Advisory
Methylene chloride	818655-B3123	U	Advisory
	818655-B3124	U	Advisory
	818655-B3125	U	Advisory
	818655-B3126	U	Advisory
	818655-B3127	U	Advisory
	818655-B3128	U	Advisory
	818655-B3129	U	Advisory

MCAS El Toro, CTO 24
Semivolatiles – Data Qualification Summary – SDG 02L117

Continuing calibration qualifications

Sample	Compound	Qualification	Protocol / Advisory
818655-B3123	Bis(2-chloroisopropyl)ether	UJ	Protocol
818655-B3124	Bis(2-chloroisopropyl)ether	UJ	Protocol
818655-B3125	Bis(2-chloroisopropyl)ether	UJ	Protocol
818655-B3126	Bis(2-chloroisopropyl)ether	UJ	Protocol
818655-B3127	Bis(2-chloroisopropyl)ether	UJ	Protocol
818655-B3128	Bis(2-chloroisopropyl)ether	UJ	Protocol
818655-B3129	Bis(2-chloroisopropyl)ether	UJ	Protocol
818655-B3130	Bis(2-chloroisopropyl)ether	UJ	Protocol

MCAS El Toro, CTO 24
Semivolatiles – Laboratory Blank Data Qualification Summary – SDG 02L117

No Sample Data Qualified in this SDG.

MCAS El Toro, CTO 24
Semivolatiles-SIM – Data Qualification Summary – SDG 02L117

No Sample Data Qualified in this SDG.

MCAS El Toro, CTO 24
Semivolatiles-SIM – Laboratory Blank Data Qualification Summary – SDG 02L117

No Sample Data Qualified in this SDG.

MCAS El Toro, CTO 24
Pesticides – Data Qualification Summary – SDG 02L117

Continuing calibration qualifications

Sample	Compound	Qualification	Protocol / Advisory
818655-B3123	Methoxychlor	UJ	Protocol
818655-B3124	Methoxychlor	UJ	Protocol
818655-B3125	Methoxychlor	UJ	Protocol
818655-B3126	Methoxychlor	UJ	Protocol
818655-B3127	Methoxychlor	UJ	Protocol
818655-B3128	Methoxychlor	UJ	Protocol
818655-B3129	Methoxychlor	UJ	Protocol
818655-B3130	Methoxychlor	UJ	Protocol

MCAS El Toro, CTO 24
Pesticides – Laboratory Blank Data Qualification Summary – SDG 02L117

No Sample Data Qualified in this SDG.

MCAS El Toro, CTO 24
Mercury – Data Qualification Summary – SDG 02L117

No Sample Data Qualified in this SDG.

MCAS El Toro, CTO 24
Mercury – Laboratory Blank Data Qualification Summary – SDG 02L117

No Sample Data Qualified in this SDG.

MCAS El Toro, CTO 24
Metals – Data Qualification Summary – SDG 02L117

Analytical spike qualifications

Sample	Compound	Qualification	Protocol / Advisory
818655-B3123	Aluminum	J	Protocol
	Iron	J	Protocol
	Manganese	J	Protocol
818655-B3124	Aluminum	J	Protocol
	Iron	J	Protocol
	Manganese	J	Protocol
818655-B3125	Aluminum	J	Protocol
	Iron	J	Protocol
	Manganese	J	Protocol
818655-B3126	Aluminum	J	Protocol
	Iron	J	Protocol
	Manganese	J	Protocol
818655-B3127	Aluminum	J	Protocol
	Iron	J	Protocol
	Manganese	J	Protocol
818655-B3128	Aluminum	J	Protocol
	Iron	J	Protocol
	Manganese	J	Protocol
818655-B3129	Aluminum	J	Protocol
	Iron	J	Protocol
	Manganese	J	Protocol
818655-B3130	Sodium	J	Protocol

MCAS El Toro, CTO 24
Metals – Laboratory Blank Data Qualification Summary – SDG 02L117

Laboratory Blank qualifications

Compound	Associated Samples	Qualification	Protocol / Advisory
Calcium	818655-B3130	U	Advisory
Sodium	818655-B3130	U	Advisory

FIELD DUPLICATE TABLE

Method	Analyte	Sample ID	Duplicate ID	Sample Value	Duplicate Value	RPD
TPH Gasoline	Results nondetected.	818655-B3125	818655-B3126			
TPH Gasoline	Results nondetected.	818655-B3125	818655-B3126			
Volatiles	Acetone	818655-B3125	818655-B3126	12	15	22%
	Methylene chloride			2.1	2.3	9%
Semivolatiles	Results nondetected.	818655-B3125	818655-B3126			
Semivolatiles-SIMs	Results nondetected.	818655-B3125	818655-B3126			
Pesticides	Results nondetected.	818655-B3125	818655-B3126			
Mercury	Results nondetected.	818655-B3125	818655-B3126			
Metals	Aluminum	818655-B3125	818655-B3126	10400	42900	122%
	Barium			99	199	67%
	Beryllium			0.323	1.25	118%
	Calcium			4690	9870	71%
	Chromium			7.13	23.8	108%
	Cobalt			4.39	13	99%
	Copper			5.21	14.2	93%
	Iron			9650	31600	106%
	Magnesium			4020	16100	120%
	Manganese			182	385	72%
	Nickel			4.36	12	93%
	Potassium			2840	9150	105%
	Sodium			34.700	233	148%
	Vanadium			23.9	75.7	104%
	Zinc			33.3	84.2	87%
	Arsenic			2.15	6.12	96.0%
	Lead			4.26	7.62	57%
	Selenium			0	0.728	200%
	Thallium			0.524	1.58	100%

OVERALL ASSESSMENT OF DATA

I. Method Compliance and Additional Comments

A All analyses were conducted within all specifications of the requested methods.

II. Usability

A. Due to common laboratory contamination in the Volatile analyses, the following were considered nondetected: Acetone for six samples; Methylene chloride for seven samples. Due to initial calibration problems, the following were qualified as estimated: Bromomethane for seven samples; Acetone for two samples. Due to continuing calibration problems, Vinyl acetate, 4-Methyl-2-pentanone, and Bromoform were qualified as estimated for seven samples.

B. Due to continuing calibration problems in the Semivolatile analyses, Bis(2-chloroisopropyl)ether was qualified as estimated for eight samples.

C. Due to continuing calibration problems in the Pesticide analysis, the following were qualified as estimated: Methoxychlor for eight samples.

D. Due to calibration blank contamination in the Metals analysis, the following were considered nondetected: Calcium and Sodium for one sample. Due to accuracy problems, Aluminum, Iron and Manganese were qualified as estimated for seven samples; Sodium for one sample.

E. The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable. Sample results that were found to be rejected (R) are unusable for all purposes. Sample results that were found to be estimated (J) are usable for limited purposes only. Based upon the cursory and full data validation all other results are considered valid and usable for all purposes. In general, the absence of rejected data and the small number of qualifiers added to the data indicate high usability