CLOSURE REPORT
Former Temporary Accumulation Area 605
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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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 (continued)

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 former Temporary Accumulation Area (TAA) 605, at the former Marine Corps Air Station (MCAS) El Toro (hereinafter referred to as the "Station"), California. Shaw Environmental, Inc. performed the work for the Southwest Division Naval Facilities Engineering Command (SWDIV) under EFA West Contract No. N62474-98-D-2076, Contract Task Order 0024.

Soil Sampling activities were conducted in accordance with the Navy, Station, and Department of Toxic Substance 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* 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 Station is located approximately 45 miles southeast of the city of Los Angeles in Orange County, California, 1 mile north of the intersection of Interstate 5 (Santa Ana) and Interstate 405 (San Diego) freeways. The Station covers approximately 4,738 acres. A Location Map for former TAA 605 is shown in Figure 1. Former TAA 605 is located in the northeast quadrant of the Station, northwest of Building 605, a former Maintenance Hangar.

The Station closed on 1 July 1999 in accordance with the Base Realignment and Closure Act of 1993 (BRAC III). Former TAA 605 was investigated as Solid Waste Management Unit (SWMU) 149 during the Resource Conservation and Recovery Act Facility Assessment (RFA). TAA 605 is approximately 12-feet by 12-feet, and consists of a concrete pad with a concrete berm, a sump, and an aluminum roof.

Former TAA 605 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.

The depth to groundwater in the vicinity of the former TAA 605 site is based on available water level data collected from the nearest groundwater-monitoring well MW398-12, located approximately 1500 feet southwest of former TAA 605. Based on this data, the depth to the groundwater at former TAA 605 is approximately 190 feet below ground surface (CDM, 2002).

Based on the screening level risk assessment of TAA 605, the net carcinogenic risk for a residential scenario is less than 10^{-6}. The summed non-cancer hazard index for soil under a potential future residential scenario is greater than 1.0; therefore, a target organ hazard index

calculation was conducted. The target organ evaluation using average concentrations for aluminum, arsenic, iron, manganese, and vanadium resulted in a HI for each of the target organs of less than 1.0. Therefore, former TAA 605 should be identified as "closed" in the next Base Realignment and Closure Business Plan Update.

1.2 Regulatory Background and Cleanup Goals

Closure activities at TAA 605 were completed in accordance with the appropriate Federal and State requirements. TAA 605 is characterized as "*hazardous waste accumulation areas*" 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 TAA 605 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 605 are based on the following:

Soil

- United States Environmental Protection Agency (EPA) Region IX Preliminary Remediation Goals (PRGs) dated November 1, 2002 for residential land use for organic contaminants
- 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 605 site. Background information regarding former TAA 605 was obtained from the following documents:

- *Final RCRA Facility Assessment Report, Marine Corps Air Station El Toro, California (Jacobs Engineering Group Inc., [JEG] 1993)*
- *Final Addendum RCRA Facility Assessment Report, Marine Corps Air Station El Toro, California (BNI, 1996a)*
- *Storm Water Pollution Prevention Plan (SWPPP) for Marine Corps Air Station, El Toro, El Toro, California (IEM, 1997)*
- *Final, Marine Corps Air Station, El Toro, Hazardous Material/Hazardous Waste Management Plan (SAIC, 1994)*
- *Marine Corps Air Station El Toro, El Toro, California, Final Environmental Baseline Survey Report (JEG, 1995)*
- *Base Realignment and Closure Business Plan for Marine Corps Air Station, El Toro, California (SWDIV, 2002).*

2.1 Environmental Program Records

<u>Resource Conservation and Recovery Act (RCRA) Facility Assessment (RFA)</u>

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 149 (also known as TAA 605) as an active temporary hazardous waste storage area, to the northwest of Building 605.

Per JEG's VSI Evaluation form, SWMU 149 (TAA 605) is described as a 12-ft by 12-ft concrete storage surface surrounded by a concrete berm with an aluminum roof. Some stains were observed on the concrete pad, and on the paved surface outside of the storage area. Drums of waste oil, and hydraulic fluid were stored on the pad during the site visit. Because the TAA was used as a HWSA in the past, SWMU 149 (TAA 605) was recommended for a sampling visit (JEG, 1993).

During a sampling visit in 1992, JEG advanced one 59-foot below ground surface angle soil boring (149A1) on the northeast side of SWMU 149 (TAA 605). Soil borings were drilled using a hollow-stem auger rig. A total of six soil samples, and one duplicate, were collected at 10-foot

intervals to 59 feet below ground surface from 149A1. No volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), or pesticides were detected above laboratory reporting limits. No metals were detected above United States Environmental Protection Agency (EPA) Region IX Residential PRGs.

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 149 (TAA 605).

During the RFA, JEG also collected soil samples from one 25-foot below ground surface soil boring location (151B1) at SWMU 151, the former oil/water separator 605C located southwest of former TAA 605. No analytes were detected above laboratory reporting limits from the soil boring with the exception of total petroleum hydrocarbons (TPH), which was detected at a concentration of 779 mg/kg at 10 feet below ground surface.

After review of the JEG RFA report, DTSC requested additional information about 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 on December 1994, former TAA 605 was observed to be a 10-foot by 10-foot, concrete pad with berm. Eight drums were observed on the concrete pad. Minor stains, similar to parking lot drips, were observed during the site visit (BNI, 1996). BNI did not recommend sampling for the TAA. Copies of the former TAA 605 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 605, located approximately 100 feet southeast of TAA 605, was a building of concern to the quality of storm water discharges. Best Management Practices recommended for Building 605 in the SWPPP included spill prevention, control, and countermeasures plans; construct berm or provide secondary containment; perform routine maintenance for oil/water separator, cover area with roof; provide drip pans to catch leaks from equipment; provide regular sweeping of floor/lot; and place spill kit in area. Building 605 was described as a Maintenance Hangar Space. The SWPPP also includes a spill history table, and this table does not identify historic spills at Building 605 (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 605 that may have been designated for storage of hazardous wastes. The Hazardous Material/Hazardous Waste Management Plan (HM/HWMP)(SAIC, 1994) identifies hazardous waste management activities at Building 605. TAA 605 was identified as Marine Fighter Attack Squadron 314 in the HM/HWMP. Extracts from the plan are presented in Appendix D.

Environmental Baseline Survey (EBS)

The 1995, JEG EBS describes former TAA 605 as SAA 605. The EBS indicates that former TAA 605 was active at the time the EBS was prepared in 1995. 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. Extracts from the EBS are presented in Appendix E.

Oil/Water Separator (OWS) 605C

OWS 605C, located southwest of TAA 605, was removed and then closed by the Orange County Health Care Agency in December 1999 (SWDIV, 2002).

MCAS, El Toro Plant Account Records

According to the MCAS, El Toro Plant Account Records, Building 605 was constructed in 1965, and is 162 feet by 112 feet in size. A copy of the record for Building 605 is provided in Appendix F.

2.2 Site Inspection

Former TAA 605 was inspected by Shaw Environmental, Inc. in January 2002. Former TAA 605 was observed to be an inactive TAA, consisting of a concrete pad with concrete berm, sump, and roof. 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 605. A photo log of former TAA 605 is included in Appendix G.

During a site visit at various TAA sites on February 12, 2003 representatives from SWDIV, Station, Shaw Environmental, Inc. and the DTSC visited former TAA 605 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 former TAA 605 to collect soil samples at depths of 18 and 36 inches below ground surface. One soil boring would be advanced next to the sump.

3.0 Field Activities

The following subsections describe the activities that were performed by Shaw Environmental, Inc. at former TAA 605. Field activities were conducted in accordance with the approved *Final Supplemental Work Plan* 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 605 included confirmation soil sampling and land surveying activities.

3.1 Confirmation Soil Sampling

As agreed during the February 12, 2003 site visit, seven confirmation soil samples, including a duplicate, were collected on March 28, 2003 from three hand-auger locations at former TAA 605. A Site Plan with the hand auger location is provided in Figure 2.

Soil samples were collected in standard stainless steel sleeves at two different depths: 18 and 36 inches below ground surface. 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 605, the hand-auger soil boring locations were 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. The land surveying data for former TAA 605 are presented as 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 605. 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* 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 605 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 605 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 605 focused on two aspects of the site: possible releases to 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 605.

The sample location was selected based on a site visit discussion on February 12, 2003. A total of seven-confirmation soil samples, including one duplicate (sample numbers 818655-3237 through 818655-3239 and 818655-3241 through 818655-3244) were collected at former TAA 605 from three soil borings (TAA605-SB-A, TAA605-SB-B, and TAA605-SB-C).

Each soil boring was advanced by hand augering in 1-foot depth interval to 18 and 36 inches below ground surface. Soil samples were collected by using a hammer-driven split core sampler that contained a stainless steel sleeve. Six 5-gram EnCore® tubes were collected from an end of the sleeve for VOC and TPH as gasoline analysis. The sleeve is then labeled and submitted for

additional analysis. Following the collection of the soil samples, the excess soil was placed back in the open boreholes.

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 or 1 per site.
- 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 818655-3240) and one trip blank (sample number 818655-3232) were collected on March 23, 2003.

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 deionized water for the final rinse.

4.2 Analytical Methods

Analytical methods were selected to encompass all the chemicals of potential concern at former TAA 605. The following methods were performed to characterize samples collected from former TAA 605:

- Volatile organic compounds (VOCs) by EPA Method 5035/8260B
- Semi-volatile organic compounds (SVOCs) by EPA Method 8270C
- Total petroleum hydrocarbons (TPH) as gasoline and diesel by CA LUFT 8015 Modified

- Pesticides EPA Method 8081A
- Metals by EPA Method 6010B/7000.

Additionally, the Selected Ion Monitoring (SIM) technique was used on the following seven 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
- Pentachlorophenol.

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 605. The analytical results for the confirmation soil samples at former

TAA 605 with comparison to the standard background concentrations and PRGs are presented in Table 1. QC sample analytical data for former TAA 605 are presented in Table 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 605.

Volatile Organic Compounds — VOCs were not detected in any confirmation soil samples above laboratory reporting limits with the exception of acetone, detected in one sample at a concentration of 20µg/kg.

Pesticides — Pesticide compounds were not detected above the laboratory reporting limits in any of the confirmation soil samples collected from former TAA 605.

Semi-Volatile Organic Compounds — No SVOCs were detected above the laboratory reporting limits in the confirmation soil samples collected from former TAA 605.

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 Shaw Environmental, Inc. 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 1: aluminum, antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, iron, magnesium, manganese, nickel, potassium, selenium, vanadium, and zinc. The reporting limits and positive results for several analytes exceeded the established background values. These results are flagged with a B in Table 1.

4.3.2 QC Sample Analytical Results

One trip blank was collected for former TAA 605 (818655-3232). The trip blank was analyzed for VOCs, and no analytes were reported above the reporting limits.

One equipment rinsate sample (818655-3240) was collected and analyzed for TPH, pesticides, SVOCs, VOCs, and metals. None of the analytes were detected above the laboratory reporting limits for the equipment rinsate sample.

4.4 Data Quality Assessment

Former TAA 605 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 1 and 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* (EPA, 1994). The DV Group, Inc. (DV), an independent data validation company, performed Level III 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, Closure of Various Temporary Accumulation Areas and RCRA Facility Assessment Sites, Marine Corps Air Station El Toro, California* and *Revised Addendum to the Draft Supplemental Work Plan, Marine Corps Air Station El Toro, California* (IT, 2002). 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 605 were usable and acceptable as qualified. Overall precision and accuracy were met. The analytical results and associated qualifiers are summarized in Tables 1 and 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 605. A screening level risk assessment for human health was conducted following the guidance provided in the EPA Region IX PRGs Memorandum dated November 1, 2002 (EPA, 2002) and *Revised Addendum to the Draft Supplemental Work Plan, Marine Corps Air Station El Toro, California* (IT, 2002).

The analytical results of Shaw Environmental, Inc. confirmation soil borings (TAA605SB-A through SB-C) and the RCRA Facility Assessment (RFA) angle boring (149A1) conducted at former TAA 605 were used to calculate risks.

5.1 Physical Characteristics

Based on the review of the RFA boring log (149A1), the subsurface lithology at former TAA 605 consists of primarily of silts, sands, and clays. These units appear typical of the channel and overbank deposits in comprising the Holocene deposits on the Tustin Plain. The depth to groundwater in the vicinity of the former TAA 605 site is based on available water level data collected from the nearest groundwater-monitoring well MW398-12, located approximately 1500 feet southwest of former TAA 605. The groundwater is present at a depth of approximately 190 feet below ground surface (CDM, 2002).

5.2 Exposure Assessment

Former TAA 605 was used as a temporary hazardous waste storage area for storage of hazardous waste. Areas surrounding TAA 605 are paved, with a tarmac surface on the southeast side and an asphalt surface on remaining sides of the TAA.

The Station officially closed on July 2, 1999 in accordance with the Base Closure and Realignment Act of 1993 (BRAC III). Former TAA 605 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 605, 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 605 is shown on Figure 3.

Under a residential land use scenario at former TAA 605, 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 4 presents the potential migration pathways at TAA 605.

For the purposes of this risk screening evaluation, the residential scenario is used as the worst-case scenario.

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 605, the only detected carcinogens in soil were arsenic, chromium and cobalt. The summed cancer risk for soil under the potential future residential scenario after subtracting background is less than 10-6 (Table 3).

Compounds that were detected at former TAA 605 that contribute to the non-cancer HI were 2-butanone, toluene, 2-methylnaphthalene, di-n-butylphthalate, aluminum, antimony, arsenic, barium, beryllium, cadmium, cobalt, copper, iron, manganese, nickel, selenium, vanadium, and zinc. The summed non-cancer hazard index for soil under the potential future residential scenario is 1.94 (Table 3). 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.

Target Organ Evaluation

Because initial screening for residential scenario resulted in an HI greater than 1.0, a target organ evaluation was conducted for the potential contributors. The only significant contributors are those chemicals with maximum concentrations that could affect the HI or those that contribute 0.1 or greater to the HI are aluminum, arsenic, iron, manganese, and vanadium as shown in Table 3.

The target organ hazard index using maximum values for central nervous system, respiratory tract, and reproductive system were each less than 1.0. Using maximum concentrations, the soft tissue resulted in an HI of 1.3. The contributors to soft tissue were arsenic, iron and vanadium. When using maximum concentrations to calculate HI for soft tissue, iron contributed to more than 75 percent of the risk however, iron is considered an essential nutrient to the human body. Results of the target organ evaluation using maximum concentrations are shown in Table 4.

Summary

The site-related incremental cancer risk and non-cancer hazard index at former TAA 605 are acceptable for the following reasons:

- The net carcinogenic risk is less than 10^{-6} for the residential scenario.

6.0 Conclusions and Recommendations

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

- Former TAA 605 consists of an approximately 12- by 12-foot concrete pad with berm, sump and aluminum roof. No cracks or stains were observed on the surface of the TAA.
- TAA 605 was investigated as SWMU 149 during the RFA.
- During a field RFA visit in April 1991, JEG identified SWMU 149 (also known as TAA 605) as a temporary hazardous waste storage area. Because the TAA was used as a HWSA in the past, SWMU 149 (TAA 605) was recommended for a sampling visit (JEG, 1993).
- JEG advanced one angle boring (149A1) on the northeast side of SWMU 149 (TAA 605). Soil boring 149A1 was drilled using a hollow-stem auger rig to a depth of 59 feet below ground surface. Because the concentrations of detected compounds were below RFA established cleanup goals for the site and/or below the contract required detection limit (CRDL), JEG recommended "No Further Action (NFA)" for SWMU 149 (TAA 605).
- In 1994, as part of the RFA, Bechtel National Inc. (BNI) visited former TAA 605, and observed a 10- by 10-foot concrete pad with berm. Drums were observed on the pad during the site visit in December 1994. Minor stains similar to parking lot drips were observed on the concrete pad. Based on observations during their site visit, BNI did not recommend sampling at the TAA.
- During a site visit at various TAA sites on February 12, 2003, representatives from SWDIV, Station, Shaw Environmental, Inc. and the DTSC visited former TAA 605. 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 would be advanced in close proximity to the TAA and soil samples would be collected at 18 and 36 inches below ground surface.
- On March 27 and 28, 2003, Shaw Environmental, Inc. collected a total of 7 confirmation soil samples, including one duplicate, from three hand auger boring locations (SB-A, SB-B, and SB-C), in close proximity to TAA 605.
- The only detected carcinogens in soil were arsenic, chromium and cobalt, which were evaluated to determine the risk associated with their presence for present or anticipated future land uses. None of the carcinogens were detected above established background levels for the station with the exception of cobalt, which was detected at a concentration of 10.3 mg/kg, while the established background level for the station is 6.98 mg/kg.

- Compounds that were detected at former TAA 605 that contribute to the non-cancer HI were 2-butanone, toluene, 2-methylnaphthalene, di-n-butylphthalate, aluminum, antimony, arsenic, barium, beryllium, cadmium, cobalt, copper, iron, manganese, nickel, selenium, vanadium, and zinc.
- The residential risk calculations for former TAA 605 resulted in a site-related net cancer risk less background risk of less than 10^{-6}.
- The target organ evaluation using maximum concentrations for aluminum, arsenic, iron, manganese, and vanadium resulted in a HI for each of the target organs of less than 1.0, with the exception of soft tissue that resulted in an HI of 1.3. Iron, which is considered an essential nutrient to the human body, contributed to more than 75 percent of the soft tissue HI

The objectives of this project are considered to be achieved, since former TAA 605 is no longer used for storage of hazardous waste. Confirmation soil sampling was conducted at former TAA 605 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 605 and the screening risk calculations, it is recommended that former TAA 605 (SWMU 149) should be identified as "closed" in the next Base Realignment Closure Business Plan update.

7.0 References

Bechtel National, Inc., 1996a, *Final Addendum RCRA Facility Assessment Report, Marine Corps Air Station El Toro, California*, May.

Bechtel National, Inc., 1996b, *Final Technical Memorandum Background and Reference Levels Remedial Investigations, Marine Corps Air Station El Toro, California*, October.

BNI, see Bechtel National, Inc.

Camp Dresser & McKee, Inc., Federal Programs Corporation, 2002, *Final Groundwater Monitoring Data Summary Report for Specified Petroleum Storage Sites at Former Marine Corps Air Station El Toro, California*, November.

CDM, see Camp Dresser & McKee, Inc.

City of Irvine, 2002, Great Park Land Use Plan, The Orange County Great Park, June.

EarthTech, 2002, *Draft Final Site Closure Report, Vadose Zone Remediation, IRP Site 24, Volatile Organic Compounds Source Area, Former Marine Corps Air Station, El Toro, California*, June.

Integrated Environmental Management (IEM), 1997, *Storm Water Pollution Prevention Plan (SWPPP) for Marine Corps Air Station, El Toro, El Toro, California*, July.

Jacobs Engineering Group (JEG), 1995, Marine Corps Air Station El Toro, El Toro, California, Final Environmental Baseline Survey Report. April.

Jacobs Engineering Group Inc., 1993, *Final RCRA Facility Assessment Report, Marine Corps Air Station El Toro, California*, July.

JEG, see Jacobs Engineering Group Inc.

OHM Remediation Services Corp., 1995, *Detailed Plan for RCRA Clean Closure of Building 673-T3 MCAS El Toro and Building 248 MCAS Tustin*, June.

OHM Remediation Services Corp., 1997a, *Final Supplemental Work Plan Closure of Various Temporary Accumulation Areas and RCRA Facility Assessment Sites, Marine Corps Air Station El Toro, Santa Ana, California*, March.

OHM Remediation Services Corp., 1997b, *Technical Memorandum Groundwater Monitoring Report, Petroleum Storage Facilities at Various Locations, Marine Corps Air Station El Toro, Santa Ana, California*, November.

OHM, see OHM Remediation Services Corp.

RCRA Part B Permit for MCAS El Toro, California, June 1992.

Science Applications International Corporation (SAIC), 1994, *Final, Marine Corps Air Station, El Toro, Hazardous Material/Hazardous Waste Management Plan*, August.

State of California, Water Resources Control Board, 1989, *Leaking Underground Fuel Tank Field Manual: Guidelines for Site Assessment, Cleanup, and Underground Storage Tank Closure*.

Southwest Division, Naval Facilities Engineering Command, 1997, *MCAS, El Toro Plant Account Records*, 1997.

Southwest Division, Naval Facilities Engineering Command, 2002, *Base Realignment and Closure Business Plan*, May.

Southwest Division, Naval Facilities Engineering Command, 2002, *Closure of Various Temporary Accumulation Areas and RCRA Facility Assessment Sites, Marine Corps Air Station, El Toro, Santa Ana, California*, January.

Southwest Division, Naval Facilities Engineering Command, 1994, *Marine Corps Air Station El Toro, El Toro, California, Installation Restoration Program, Remedial Investigation/Feasibility Study, Final Soil Gas Survey, Technical Memorandum, Sites 24 and 25*, October.

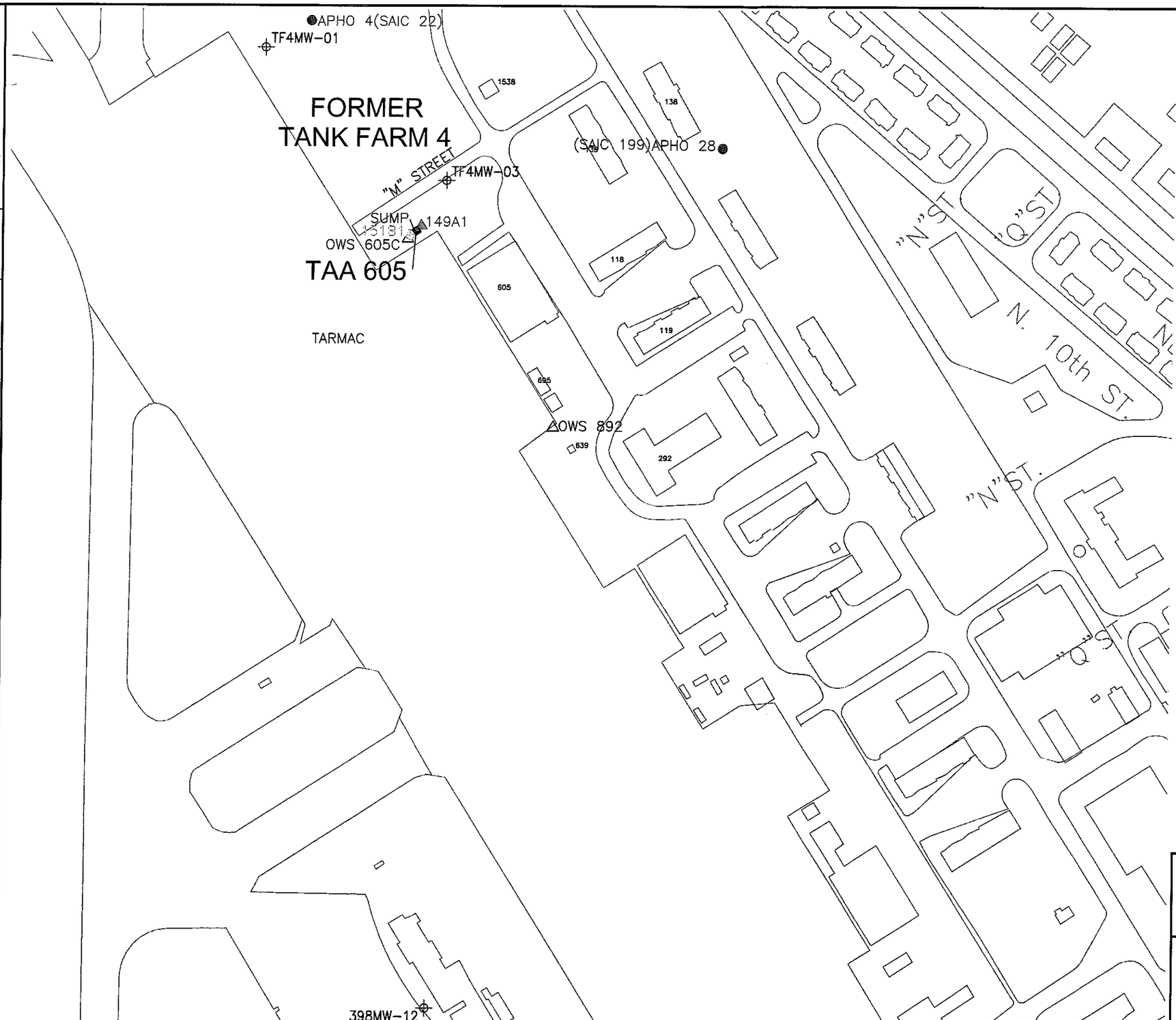
SWDIV, see Southwest Division, Naval Facilities Engineering Command.

U.S. Environmental Protection Agency, 1994, *National Functional Guidelines for Organic and Inorganic Data Review*, December.

U.S. Environmental Protection Agency, Integrated Risk Information System (IRIS) Substance List website (www.epa.gov/iris/subst/index.html)

U.S. Environmental Protection Agency, 2002, *Region IX Preliminary Remediation Goals (PRGs)*, 1 November.

Figures



LEGEND:

- RFA 25' DEEP BORING
- RFA 60' LONG, ANGLE BORING
- GROUNDWATER MONITORING WELL
- SAIC ANOMALY SITE
- OIL/WATER SEPARATOR

N

GRAPHIC SCALE

0 100 200 400

(IN FEET)

Shaw Environmental, Inc

EFA WEST
SOUTHWEST DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
CTO 24

FIGURE 1

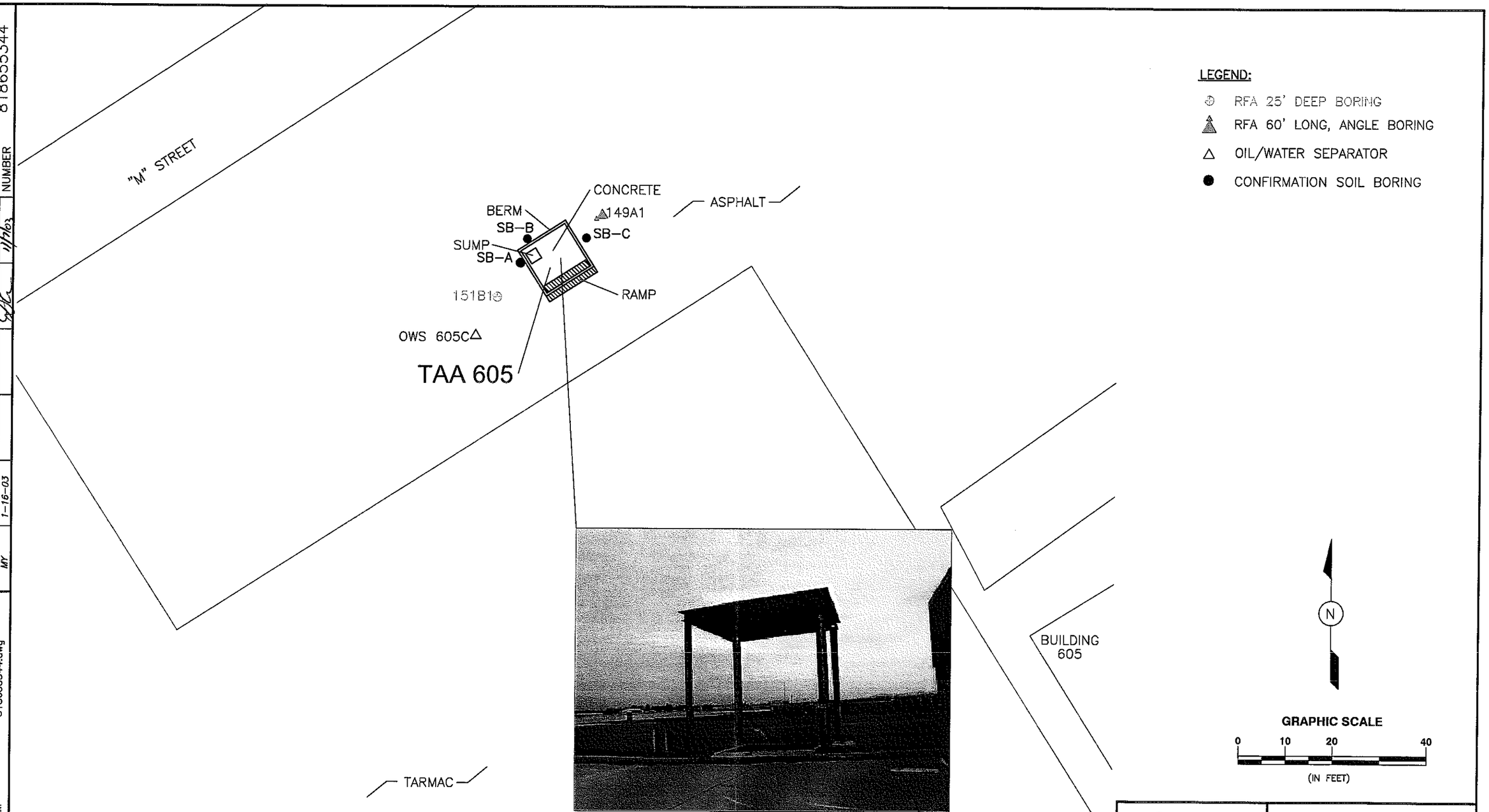
LOCATION MAP
TAA 605

MARINE CORPS AIR STATION
EL TORO, CALIFORNIA

DRAWING NUMBER	APPROVED BY	CHECKED BY	DRAWN BY
818655343			MY 1-16-03

818655343.dwg

5/28/2003 9:37 AM



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2194368.40	6113204.14		SB–B
2194368.63	6113216.76		SB–C

Shaw Environmental, Inc

EFA WEST
SOUTHWEST DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
CTO 24

FIGURE 2

SITE PLAN
FORMER TAA 605

MARINE CORPS AIR STATION
EL TORO, CALIFORNIA

DRAWING NUMBER 818655344

APPROVED BY

CHECKED BY

DRAWN BY MY 1-16-03

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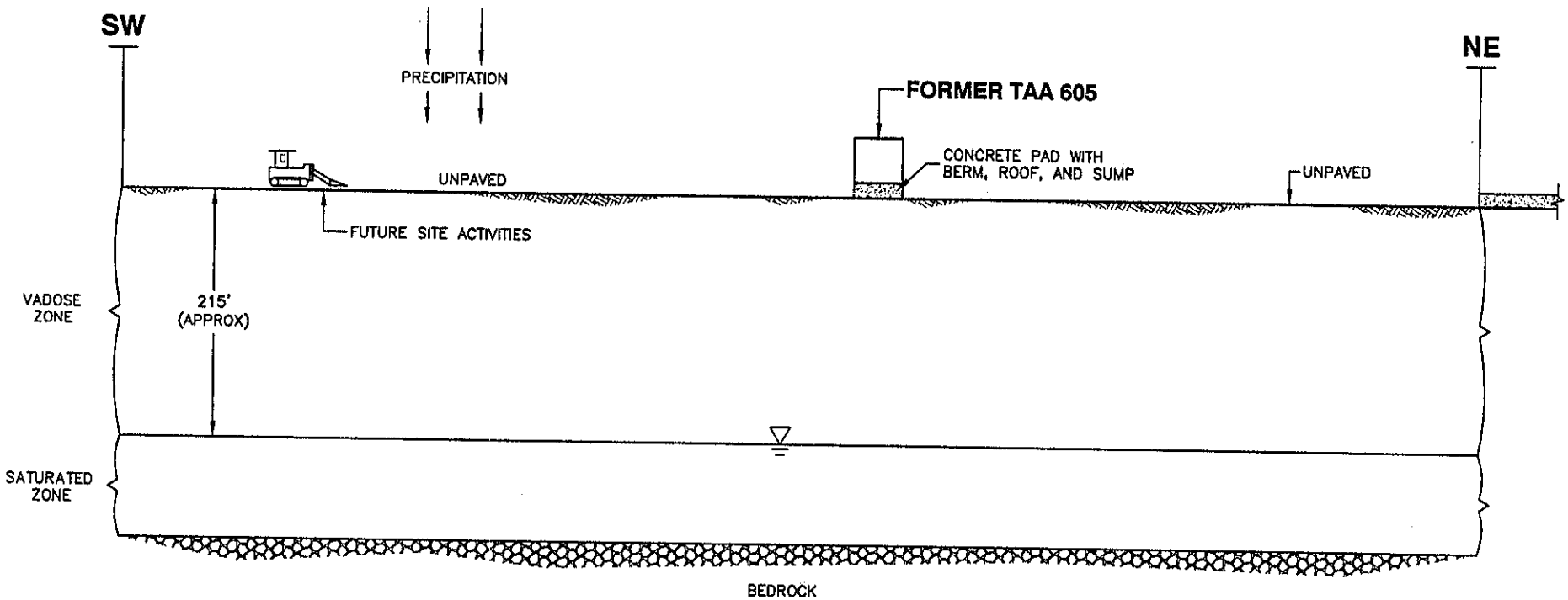
HDS	5/14/03				11/7/03		



EXPLANATION:

RECEPTORS:

WORKERS

PATHWAYS:

GROUNDWATER

PRECIPITATION

REFERENCE:
103M2088.DWG

Shaw Environmental, Inc.

EFA WEST
SOUTHWEST DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
CTO 24

FIGURE 3

CONCEPTUAL SITE MODEL
FORMER TAA 605

MARINE CORPS AIR STATION
EL TORO, CALIFORNIA

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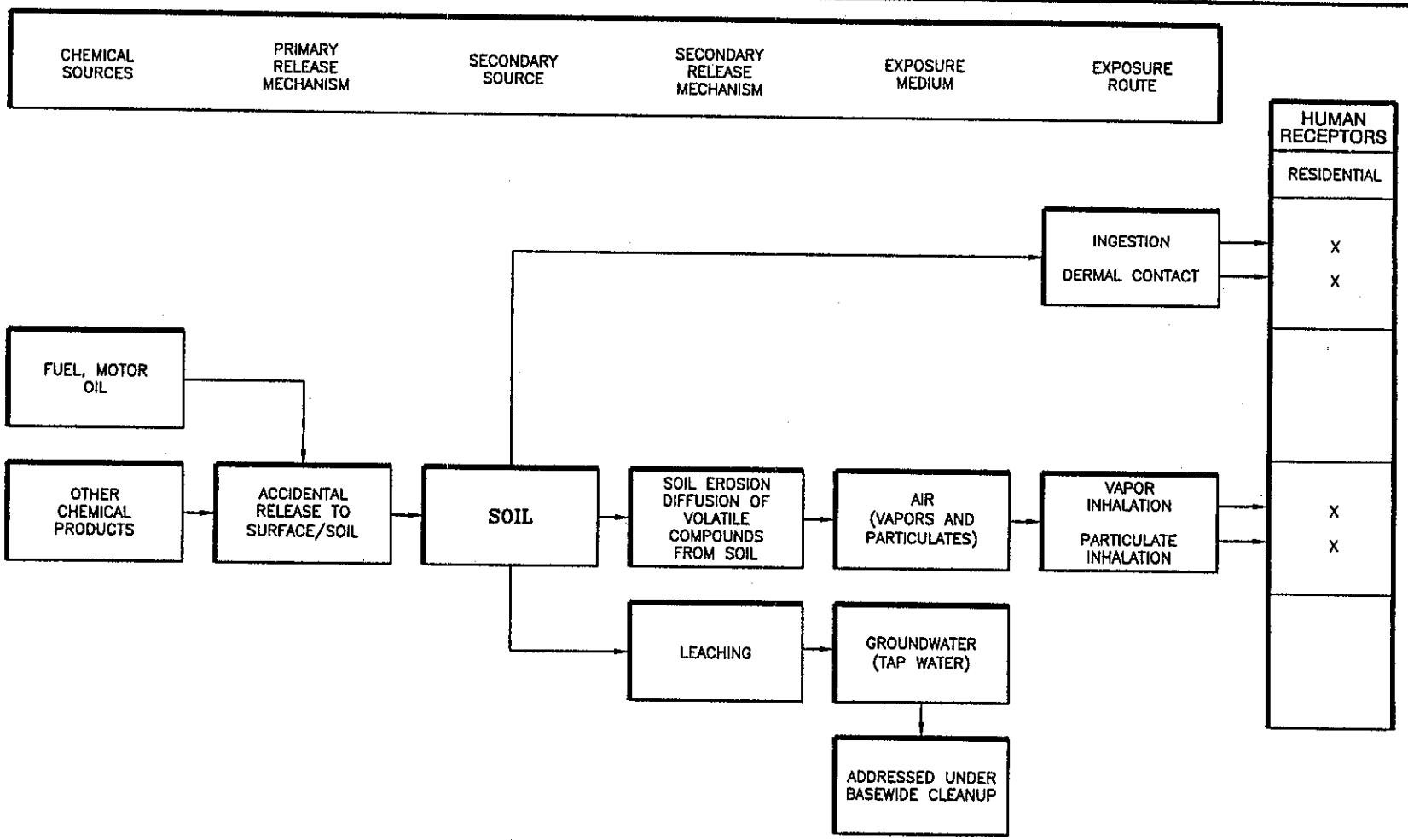

EXPLANATION:

X COMPLETE PATHWAY

REFERENCE:
103C2089.DXF

Shaw Environmental, Inc.

EFA WEST
SOUTHWEST DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
CTO 24

FIGURE 4
POTENTIAL MIGRATION PATHWAYS, EXPOSURE ROUTES AND RECEPTORS
FORMER TAA 605
MARINE CORPS AIR STATION
EL TORO, CALIFORNIA

Tables

Table 1
Summary of Analytical Results for Confirmation Soil Samples - Former TAA 605

Sample Identification					818655-3237	818655-3238	818655-3239	818655-3241	818655-3242 (Dup)	818655-3243	818655-3244
Location Code					TAA605-SB-A	TAA605-SB-A	TAA605-SB-B	TAA605-SB-B	TAA605-SB-B	TAA605-SB-C	TAA605-SB-C
Date Sampled					03/27/03	03/27/03	03/27/03	03/28/03	03/28/03	03/28/03	03/28/03
Depth (feet below ground surface)					1.5	3	1.5	3	3	1.5	3
	Unit	Background	Residential PRG	Industrial PRG							
TPH											
Diesel	mg/kg	NE	NE	NE	11 U	12 U	11 U	11 U	12 U	11 U	12 U
Gasoline	mg/kg	NE	NE	NE	10 U	11 U	10 U	10 U	9.9 U	10 U	12 U
PESTICIDES											
4,4'-DDD	mg/kg	0.0361	2.4	9.9	.0043 U	.0048 U	.0044 U	.0042 U	.0046 U	.0044 U	.0048 U
4,4'-DDE	mg/kg	0.145	1.7	7.0	.0043 U	.0048 U	.0044 U	.0042 U	.0046 U	.0044 U	.0048 U
4,4'-DDT	mg/kg	0.236	1.7	7.0	.0043 U	.0048 U	.0044 U	.0042 U	.0046 U	.0044 U	.0048 U
Aldrin	mg/kg	NE	0.029	0.10	.0021 U	.0024 U	.0022 U	.0021 U	.0023 U	.0022 U	.0024 U
Alpha-BHC	mg/kg	NE	0.090	0.36	.0021 U	.0024 U	.0022 U	.0021 U	.0023 U	.0022 U	.0024 U
Alpha-Chlordane	mg/kg	0.00224	NE	NE	.0021 U	.0024 U B	.0022 U	.0021 U	.0023 U B	.0022 U	.0024 U B
Beta-BHC	mg/kg	NE	0.32	1.3	.0021 U	.0024 U	.0022 U	.0021 U	.0023 U	.0022 U	.0024 U
Delta-BHC	mg/kg	NE	NE	NE	.0021 U	.0024 U	.0022 U	.0021 U	.0023 U	.0022 U	.0024 U
Dieldrin	mg/kg	0.0199	0.030	0.11	.0043 U	.0048 U	.0044 U	.0042 U	.0046 U	.0044 U	.0048 U
Endosulfan I	mg/kg	0.000179	370	3700	.0043 U B	.0048 U B	.0044 U B	.0042 U B	.0046 U B	.0044 U B	.0048 U B
Endosulfan II	mg/kg	0.00222	NE	NE	.0043 U B	.0048 U B	.0044 U B	.0042 U B	.0046 U B	.0044 U B	.0048 U B
Endosulfan Sulfate	mg/kg	0.0031	NE	NE	.0043 U B	.0048 U B	.0044 U B	.0042 U B	.0046 U B	.0044 U B	.0048 U B
Endrin	mg/kg	0.00222	18	185	.0032 U B	.0036 U B	.0033 U B	.0032 U B	.0035 U B	.0033 U B	.0036 U B
Endrin Aldehyde	mg/kg	0.00222	NE	NE	.0043 U B	.0048 U B	.0044 U B	.0042 U B	.0046 U B	.0044 U B	.0048 U B
Endrin Ketone	mg/kg	NE	NE	NE	.0032 U	.0036 U	.0033 U	.0032 U	.0035 U	.0033 U	.0036 U
Gamma-BHC	mg/kg	NE	0.44	1.74	.0021 U	.0024 U	.0022 U	.0021 U	.0023 U	.0022 U	.0024 U
Gamma-Chlordane	mg/kg	0.0027	NE	NE	.0021 U	.0024 U	.0022 U	.0021 U	.0023 U	.0022 U	.0024 U
Heptachlor	mg/kg	NE	0.11	0.38	.0021 U	.0024 U	.0022 U	.0021 U	.0023 U	.0022 U	.0024 U
Heptachlor Epoxide	mg/kg	NE	0.053	0.19	.0021 U	.0024 U	.0022 U	.0021 U	.0023 U	.0022 U	.0024 U
Methoxychlor	mg/kg	NE	300	3100	.021 U	.024 U	.022 U	.021 U	.023 U	.022 U	.024 U
Toxaphene	mg/kg	NE	0.44	1.6	.11 U	.12 U	.11 U	.11 U	.12 U	.11 U	.12 U
VOLATILES											
1,1,1-Trichloroethane	µg/kg	NE	1200000	1200000	5 U	5.3 U	5.4 U	4.8 U	4.8 U	5.2 U	6.5 U
1,1,2,2-Tetrachloroethane	µg/kg	NE	410	930	5 U	5.3 U	5.4 U	4.8 U	4.8 U	5.2 U	6.5 U
1,1,2-Trichloroethane	µg/kg	NE	730	1600	5 U	5.3 U	5.4 U	4.8 U	4.8 U	5.2 U	6.5 U
1,1-Dichloroethane	µg/kg	NE	510000 <2800>	1700000	5 U	5.3 U	5.4 U	4.8 U	4.8 U	5.2 U	6.5 U
1,1-Dichloroethene	µg/kg	NE	120000	410000	5 U	5.3 U	5.4 U	4.8 U	4.8 U	5.2 U	6.5 U
1,2-Dichloroethane	µg/kg	NE	280	600	5 U	5.3 U	5.4 U	4.8 U	4.8 U	5.2 U	6.5 U
1,2-Dichloropropane	µg/kg	NE	340	740	5 U	5.3 U	5.4 U	4.8 U	4.8 U	5.2 U	6.5 U
2-Butanone	µg/kg	NE	7300000	27000000	50 U	53 U	54 U	48 U	48 U	52 U	65 U

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Sample Identification					818655-3237	818655-3238	818655-3239	818655-3241	818655-3242 (Dup)	818655-3243	818655-3244
Location Code					TAA605-SB-A	TAA605-SB-A	TAA605-SB-B	TAA605-SB-B	TAA605-SB-B	TAA605-SB-C	TAA605-SB-C
Date Sampled					03/27/03	03/27/03	03/27/03	03/28/03	03/28/03	03/28/03	03/28/03
Depth (feet below ground surface)					1.5	3	1.5	3	3	1.5	3
	Unit	Background	Residential PRG	Industrial PRG							
2-Chloroethyl Vinyl Ether	µg/kg	NE	NE	NE	50 U	53 U	54 U	48 U	48 U	52 U	65 U
2-Hexanone	µg/kg	NE	NE	NE	50 U	53 U	54 U	48 U	48 U	52 U	65 U
4-Methyl-2-Pentanone	µg/kg	NE	790000	2800000	50 U	53 U	54 U	48 U	48 U	52 U	65 U
Acetone	µg/kg	NE	1600000	6000000	50 U	11 J	12 J	48 U	20 J	52 U	11 J
Benzene	µg/kg	NE	600	1300	5 U	5.3 U	5.4 U	4.8 U	4.8 U	5.2 U	6.5 U
Bromodichloromethane	µg/kg	NE	820	1800	5 U	5.3 U	5.4 U	4.8 U	4.8 U	5.2 U	6.5 U
Bromoform	µg/kg	NE	62000	220000	5 U	5.3 U	5.4 U	4.8 U	4.8 U	5.2 U	6.5 U
Bromomethane	µg/kg	NE	3900	13000	5 U	5.3 U	5.4 U	4.8 U	4.8 U	5.2 U	6.5 U
Carbon Disulfide	µg/kg	NE	360000	720000	5 U	5.3 U	5.4 U	4.8 U	4.8 U	5.2 U	6.5 U
Carbon Tetrachloride	µg/kg	NE	250	550	5 U	5.3 U	5.4 U	4.8 U	4.8 U	5.2 U	6.5 U
Chlorobenzene	µg/kg	NE	150000	530000	5 U	5.3 U	5.4 U	4.8 U	4.8 U	5.2 U	6.5 U
Chloroethane	µg/kg	NE	3000	6500	5 U	5.3 U	5.4 U	4.8 U	4.8 U	5.2 U	6.5 U
Chloroform	µg/kg	NE	3600 <940>	12000	5 U	5.3 U	5.4 U	4.8 U	4.8 U	5.2 U	6.5 U
Chloromethane	µg/kg	NE	1200	2600	5 U	5.3 U	5.4 U	4.8 U	4.8 U	5.2 U	6.5 U
Cis-1,2-Dichloroethene	µg/kg	NE	43000	150000	5 U	5.3 U	5.4 U	4.8 U	4.8 U	5.2 U	6.5 U
Cis-1,3-Dichloropropene	µg/kg	NE	780	1800	5 U	5.3 U	5.4 U	4.8 U	4.8 U	5.2 U	6.5 U
Dibromochloromethane	µg/kg	NE	1100	2600	5 U	5.3 U	5.4 U	4.8 U	4.8 U	5.2 U	6.5 U
Ethylbenzene	µg/kg	NE	8900	19000	5 U	5.3 U	5.4 U	4.8 U	4.8 U	5.2 U	6.5 U
Methyl Tert-Butyl Ether	µg/kg	NE	62000 <17000>	160000	10 U	11 U	11 U	9.7 U	9.6 U	10 U	13 U
Methylene Chloride	µg/kg	NE	9100	21000	5 U	5.3 U	5.4 U	4.8 U	4.8 U	5.2 U	6.5 U
Styrene	µg/kg	NE	1700000	1700000	5 U	5.3 U	5.4 U	4.8 U	4.8 U	5.2 U	6.5 U
Tetrachloroethene	µg/kg	NE	1500	3400	5 U	5.3 U	5.4 U	4.8 U	4.8 U	5.2 U	6.5 U
Toluene	µg/kg	NE	520000	520000	5 U	5.3 U	5.4 U	4.8 U	4.8 U	5.2 U	6.5 U
Trans-1,2-Dichloroethene	µg/kg	NE	69000	230000	5 U	5.3 U	5.4 U	4.8 U	4.8 U	5.2 U	6.5 U
Trans-1,3-Dichloropropene	µg/kg	NE	780	1800	5 U	5.3 U	5.4 U	4.8 U	4.8 U	5.2 U	6.5 U
Trichloroethene	µg/kg	NE	53	110	5 U	5.3 U	5.4 U	4.8 U	4.8 U	5.2 U	6.5 U
Vinyl Acetate	µg/kg	NE	420000	1400000	50 U	53 U	54 U	48 U	48 U	52 U	65 U
Vinyl Chloride	µg/kg	NE	79	NE	5 U	5.3 U	5.4 U	4.8 U	4.8 U	5.2 U	6.5 U
Xylene, (Total)	µg/kg	NE	270000	420000	5 U	5.3 U	5.4 U	4.8 U	4.8 U	5.2 U	6.5 U
SEMI-VOLATILES											
1,2,4-Trichlorobenzene	µg/kg	NE	650000	3000000	350 U	400 U	360 U	350 U	380 U	360 U	390 U
1,2-Dichlorobenzene	µg/kg	NE	370000	370000	350 U	400 U	360 U	350 U	380 U	360 U	390 U
1,3-Dichlorobenzene	µg/kg	NE	16000	63000	350 U	400 U	360 U	350 U	380 U	360 U	390 U
1,4-Dichlorobenzene	µg/kg	NE	3400	7900	350 U	400 U	360 U	350 U	380 U	360 U	390 U

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Date Sampled					03/27/03	03/27/03	03/27/03	03/28/03	03/28/03	03/28/03	03/28/03
Depth (feet below ground surface)					1.5	3	1.5	3	3	1.5	3
	Unit	Background	Residential PRG	Industrial PRG							
2,4,5-Trichlorophenol	µg/kg	NE	6100000	62000000	890 U	1000 U	910 U	880 U	960 U	910 U	990 U
2,4,6-Trichlorophenol	µg/kg	NE	6100 <6900>	62000	350 U	400 U	360 U	350 U	380 U	360 U	390 U
2,4-Dichlorophenol	µg/kg	NE	180000	1900000	350 U	400 U	360 U	350 U	380 U	360 U	390 U
2,4-Dimethylphenol	µg/kg	NE	1200000	12000000	350 U	400 U	360 U	350 U	380 U	360 U	390 U
2,4-Dinitrophenol	µg/kg	NE	120000	1200000	890 UJ	1000 UJ	910 UJ	880 UJ	960 UJ	910 UJ	990 UJ
2,4-Dinitrotoluene	µg/kg	NE	120000	1200000	350 U	400 U	360 U	350 U	380 U	360 U	390 U
2,6-Dinitrotoluene	µg/kg	NE	61000	620000	350 U	400 U	360 U	350 U	380 U	360 U	390 U
2-Chloronaphthalene	µg/kg	NE	4900000	23000000	350 U	400 U	360 U	350 U	380 U	360 U	390 U
2-Chlorophenol	µg/kg	NE	63000	240000	350 U	400 U	360 U	350 U	380 U	360 U	390 U
2-Methylnaphthalene	µg/kg	NE	NE	NE	350 U	400 U	360 U	350 U	380 U	360 U	390 U
2-Methylphenol	µg/kg	NE	3000000	31000000	350 U	400 U	360 U	350 U	380 U	360 U	390 U
2-Nitroaniline	µg/kg	NE	1700	18000	890 U	1000 U	910 U	880 U	960 U	910 U	990 U
2-Nitrophenol	µg/kg	NE	NE	NE	350 U	400 U	360 U	350 U	380 U	360 U	390 U
3,3'-Dichlorobenzidine	µg/kg	NE	1100	3800	350 U	400 U	360 U	350 U	380 U	360 U	390 U
3-Nitroaniline	µg/kg	NE	NE	NE	890 U	1000 U	910 U	880 U	960 U	910 U	990 U
4,6-Dinitro-2-Methylphenol	µg/kg	NE	NE	NE	890 U	1000 U	910 U	880 U	960 U	910 U	990 U
4-Bromophenyl Phenyl Ether	µg/kg	NE	NE	NE	350 U	400 U	360 U	350 U	380 U	360 U	390 U
4-Chloro-3-Methylphenol	µg/kg	NE	NE	NE	350 U	400 U	360 U	350 U	380 U	360 U	390 U
4-Chloroaniline	µg/kg	NE	240000	2500000	350 U	400 U	360 U	350 U	380 U	360 U	390 U
4-Chlorophenyl Phenyl Ether	µg/kg	NE	NE	NE	350 U	400 U	360 U	350 U	380 U	360 U	390 U
4-Methylphenol	µg/kg	NE	310000	3100000	350 U	400 U	360 U	350 U	380 U	360 U	390 U
4-Nitroaniline	µg/kg	NE	NE	NE	890 U	1000 U	910 U	880 U	960 U	910 U	990 U
4-Nitrophenol	µg/kg	NE	NE	NE	890 U	1000 U	910 U	880 U	960 U	910 U	990 U
Acenaphthene	µg/kg	NE	3700000	29000000	350 U	400 U	360 U	350 U	380 U	360 U	390 U
Acenaphthylene	µg/kg	NE	NE	NE	350 U	400 U	360 U	350 U	380 U	360 U	390 U
Anthracene	µg/kg	NE	22000000	100000000	350 U	400 U	360 U	350 U	380 U	360 U	390 U
Benzo(a)Anthracene	µg/kg	22	620	2100	350 U B	400 U B	360 U B	350 U B	380 U B	360 U B	390 U B
Benzo(a)Pyrene	µg/kg	27	62	210	35 U B	40 U B	36 U B	35 U B	38 U B	36 U B	39 U B
Benzo(b)Fluoranthene	µg/kg	28	620	2100	350 U B	400 U B	360 U B	350 U B	380 U B	360 U B	390 U B
Benzo(ghi)Perylene	µg/kg	29	NE	NE	350 U B	400 U B	360 U B	350 U B	380 U B	360 U B	390 U B
Benzo(k)Fluoranthene	µg/kg	24	6200 <380>	21000	350 U B	400 U B	360 U B	350 U B	380 U B	360 U B	390 U B
Bis(2-Chloroethoxy)Methane	µg/kg	NE	NE	NE	350 U	400 U	360 U	350 U	380 U	360 U	390 U
Bis(2-Chloroethyl)Ether	µg/kg	NE	210	550	35 U	40 U	36 U	35 U	38 U	36 U	39 U
Bis(2-Chloroisopropyl)Ether	µg/kg	NE	2900	7400	350 U	400 U	360 U	350 U	380 U	360 U	390 U

Table 1
Summary of Analytical Results for Confirmation Soil Samples - Former TAA 605

Sample Identification					818655-3237		818655-3238		818655-3239		818655-3241		818655-3242 (Dup)		818655-3243		818655-3244	
Location Code					TAA605-SB-A		TAA605-SB-A		TAA605-SB-B		TAA605-SB-B		TAA605-SB-B		TAA605-SB-C		TAA605-SB-C	
Date Sampled					03/27/03		03/27/03		03/27/03		03/28/03		03/28/03		03/28/03		03/28/03	
Depth (feet below ground surface)					1.5		3		1.5		3		3		1.5		3	
	Unit	Background	Residential PRG	Industrial PRG														
Bis(2-Ethylhexyl)Phthalate	µg/kg	NE	35000	120000	350 U		400 U		360 U		350 U		380 U		360 U		390 U	
Butyl Benzyl Phthalate	µg/kg	NE	12000000	100000000	350 U		400 U		360 U		350 U		380 U		360 U		390 U	
Chrysene	µg/kg	31	62000 <3900>	210000	350 U	B	400 U	B	360 U	B	350 U	B	380 U	B	360 U	B	390 U	B
Di-n-Butyl Phthalate	µg/kg	NE	6100000	62000000	350 U		400 U		360 U		350 U		380 U		360 U		390 U	
Di-n-Octyl Phthalate	µg/kg	NE	2400000	25000000	350 U		400 U		360 U		350 U		380 U		360 U		390 U	
Dibenzo(a,h)Anthracene	µg/kg	8	62	210	35 U	B	40 U	B	36 U	B	35 U	B	38 U	B	36 U	B	39 U	B
Dibenzofuran	µg/kg	NE	290000	3100000	350 U		400 U		360 U		350 U		380 U		360 U		390 U	
Diethyl Phthalate	µg/kg	NE	49000000	100000000	350 U		400 U		360 U		350 U		380 U		360 U		390 U	
Dimethyl Phthalate	µg/kg	NE	100000000	100000000	350 U		400 U		360 U		350 U		380 U		360 U		390 U	
Fluoranthene	µg/kg	45	2300000	22000000	350 U	B	400 U	B	360 U	B	350 U	B	380 U	B	360 U	B	390 U	B
Fluorene	µg/kg	NE	2700000	26000000	350 U		400 U		360 U		350 U		380 U		360 U		390 U	
Hexachlorobenzene	µg/kg	NE	300	1100	80 U		90 U		83 U		80 U		87 U		82 U		89 U	
Hexachlorobutadiene	µg/kg	NE	6200	22000	350 U		400 U		360 U		350 U		380 U		360 U		390 U	
Hexachlorocyclopentadiene	µg/kg	NE	370000	3700000	350 UJ		400 UJ		360 UJ		350 UJ		380 UJ		360 UJ		390 UJ	
Hexachloroethane	µg/kg	NE	35000	120000	350 U		400 U		360 U		350 U		380 U		360 U		390 U	
Indeno(1,2,3-cd)Pyrene	µg/kg	21	620	2100	38 U	B	42 U	B	39 U	B	37 U	B	40 U	B	38 U	B	42 U	B
N-Nitroso-di-n-Propylamine	µg/kg	NE	69	250	35 U		40 U		36 U		35 U		38 U		36 U		39 U	
N-Nitrosodiphenylamine	µg/kg	NE	99000	350000	350 U		400 U		360 U		350 U		380 U		360 U		390 U	
Naphthalene	µg/kg	NE	60000	190000	350 U		400 U		360 U		350 U		380 U		360 U		390 U	
Nitrobenzene	µg/kg	NE	20000	100000	350 U		400 U		360 U		350 U		380 U		360 U		390 U	
Pentachlorophenol	µg/kg	NE	3000	9000	210 U		240 U		220 U		210 U		230 U		220 U		240 U	
Phenanthrene	µg/kg	18	NE	NE	350 U	B	400 U	B	360 U	B	350 U	B	380 U	B	360 U	B	390 U	B
Phenol	µg/kg	NE	37000000	100000000	350 U		400 U		360 U		350 U		380 U		360 U		390 U	
Pyrene	µg/kg	41	2300000	29000000	350 U	B	400 U	B	360 U	B	350 U	B	380 U	B	360 U	B	390 U	B
METALS																		
Aluminum	mg/kg	14800	76000	100000	8310		20800	B	13100		6700		15500	B	11500		18100	B
Antimony	mg/kg	3.06	31	410	2.42 J		6.02 U	B	5.5 U	B	5.31 U	B	5.77 U	B	5.46 U	B	5.95 U	B
Arsenic	mg/kg	6.86	0.39	1.6	1.9	Y X	4.65	Y X	2.65	Y X	1.54	Y	2.89	Y X	2.24	Y X	4.31	Y X
Barium	mg/kg	173	5400	67000	70		188	B	107		93.5		120		101		185	B
Beryllium	mg/kg	0.669	150	1900	.286		.721	B	.48		.241		.502		.405		.632	
Cadmium	mg/kg	2.35	37 <1.7>	450	.536 U		.632		.55 U		.531 U		.577 U		.546 U		1.16	
Calcium	mg/kg	46000	NE	NE	7270		14700		5400		5730		7760		5630		12700	
Chromium	mg/kg	26.9	210	450	5.91		17.2		10.2		6.32		11.3		9.2		16.2	
Cobalt	mg/kg	6.98	900	1900	3.6		10.3	B	5.95		2.94		6.24		5.78		9.77	B

Table 1
Summary of Analytical Results for Confirmation Soil Samples - Former TAA 605

Sample Identification					818655-3237	818655-3238	818655-3239	818655-3241	818655-3242 (Dup)	818655-3243	818655-3244
Location Code					TAA605-SB-A	TAA605-SB-A	TAA605-SB-B	TAA605-SB-B	TAA605-SB-B	TAA605-SB-C	TAA605-SB-C
Date Sampled					03/27/03	03/27/03	03/27/03	03/28/03	03/28/03	03/28/03	03/28/03
Depth (feet below ground surface)					1.5	3	1.5	3	3	1.5	3
	Unit	Background	Residential PRG	Industrial PRG							
Copper	mg/kg	10.5	3100	41000	4.16	10.1	6.58	4.38	7.57	6.34	10.5 B
Iron	mg/kg	18400	23000	100000	8790	22900 B	14000	7460	15100	12800	20000 B
Lead	mg/kg	15.1	400 <150>	750	1.94 U	4.2 U	2.77 U	1.66 U	2.97 U	2.39 U	9.64 U
Magnesium	mg/kg	8370	NE	NE	3830	10600 B	5930	3400	7260	5640	8880 B
Manganese	mg/kg	291	1800	19000	170	332 B	220	174	222	214	294 B
Mercury	mg/kg	0.22	NE	NE	.107 U	.12 U	.11 U	.106 U	.115 U	.109 U	.119 U
Molybdenum	mg/kg	NE	390	5100	5.36 U	6.02 U	5.5 U	5.31 U	5.77 U	5.46 U	5.95 U
Nickel	mg/kg	15.3	1600	20000	3.69	10.2	5.77	4.87	6.16	5.17	9.51
Potassium	mg/kg	4890	NE	NE	2350	6710 B	4000	2040	4100	3750	5550 B
Selenium	mg/kg	0.32	390	5100	.418 J B	.938 J B	.685 J B	.661 J B	.879 J B	.568 J B	.623 J B
Silver	mg/kg	0.539	390	5100	2.15 U B	2.41 U B	2.2 U B	2.12 U B	2.31 U B	2.18 U B	2.38 U B
Sodium	mg/kg	405	NE	NE	117 U	247 U	180 U	116 U	197 U	184 U	260 U
Thallium	mg/kg	0.42	5.2	67.0	1.07 U B	1.16 U B	1.1 U B	1.06 U B	1.15 U B	1.09 U B	.534 U B
Vanadium	mg/kg	71.8	550	7200	20.7	59.1	32.3	19.4	35.8	29.6	52.7
Zinc	mg/kg	77.9	23000	100000	23.7	65.8	38.9	21.3	43	36	68.6

Table 1
Summary of Analytical Results for Confirmation Soil Samples - Former TAA 605

B	*- result exceeds background*
J	*- estimated value*
M	*- modified*
MCAS	*- Marine Corps Air Station*
mg/kg	*- milligrams per kilogram*
NE	*- not established*
NA	*- not analyzed*
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 2
Summary of Analytical Results for QC Samples - Former TAA 605

Sample Identification Location Code Date Sampled	Unit	818655-3240 Equipment Rinsate 03/27/03	818655-3232 Trip Blank 03/23/03
TPH			
Diesel	mg/L	.1 U	NA
Gasoline	mg/L	.1 U	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 U	NA
Toxaphene	µg/L	2.8 U	NA
VOLATILES			
1,1,1-Trichloroethane	µg/L	5 U	5 U
1,1,2,2-Tetrachloroethane	µg/L	5 U	5 U
1,1,2-Trichloroethane	µg/L	5 U	5 U
1,1-Dichloroethane	µg/L	5 U	5 U
1,1-Dichloroethene	µg/L	5 U	5 U
1,2-Dichloroethane	µg/L	5 U	5 U
1,2-Dichloropropane	µg/L	5 U	5 U
2-Butanone	µg/L	50 U	50 U
2-Chloroethyl Vinyl Ether	µg/L	50 U	50 U

Table 2
Summary of Analytical Results for QC Samples - Former TAA 605

Sample Identification **Location Code** **Date Sampled**		818655-3240 Equipment Rinsate 03/27/03	818655-3232 Trip Blank 03/23/03
	Unit		
2-Hexanone	µg/L	50 U	50 U
4-Methyl-2-Pentanone	µg/L	50 U	50 U
Acetone	µg/L	50 U	50 U
Benzene	µg/L	5 U	5 U
Bromodichloromethane	µg/L	5 U	5 U
Bromoform	µg/L	5 U	5 U
Bromomethane	µg/L	5 U	5 U
Carbon Disulfide	µg/L	5 U	5 U
Carbon Tetrachloride	µg/L	5 U	5 U
Chlorobenzene	µg/L	5 U	5 U
Chloroethane	µg/L	5 U	5 U
Chloroform	µg/L	5 U	5 U
Chloromethane	µg/L	5 U	5 U
Cis-1,2-Dichloroethene	µg/L	5 U	5 U
Cis-1,3-Dichloropropene	µg/L	5 U	5 U
Dibromochloromethane	µg/L	5 U	5 U
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 U
SEMI-VOLATILES			
1,2,4-Trichlorobenzene	µg/L	9.4 U	NA
1,2-Dichlorobenzene	µg/L	9.4 U	NA
1,3-Dichlorobenzene	µg/L	9.4 U	NA
1,4-Dichlorobenzene	µg/L	9.4 U	NA
2,4,5-Trichlorophenol	µg/L	24 U	NA
2,4,6-Trichlorophenol	µg/L	9.4 U	NA

Table 2
Summary of Analytical Results for QC Samples - Former TAA 605

Sample Identification **Location Code** **Date Sampled**		818655-3240 Equipment Rinsate 03/27/03	818655-3232 Trip Blank 03/23/03
	Unit		
2,4-Dichlorophenol	µg/L	9.4 U	NA
2,4-Dimethylphenol	µg/L	9.4 U	NA
2,4-Dinitrophenol	µg/L	24 UJ	NA
2,4-Dinitrotoluene	µg/L	9.4 U	NA
2,6-Dinitrotoluene	µg/L	9.4 U	NA
2-Chloronaphthalene	µg/L	9.4 U	NA
2-Chlorophenol	µg/L	9.4 U	NA
2-Methylnaphthalene	µg/L	9.4 U	NA
2-Methylphenol	µg/L	9.4 U	NA
2-Nitroaniline	µg/L	24 U	NA
2-Nitrophenol	µg/L	9.4 U	NA
3,3'-Dichlorobenzidine	µg/L	9.4 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	9.4 U	NA
4-Chloro-3-Methylphenol	µg/L	9.4 U	NA
4-Chloroaniline	µg/L	9.4 U	NA
4-Chlorophenyl Phenyl Ether	µg/L	9.4 U	NA
4-Methylphenol	µg/L	9.4 U	NA
4-Nitroaniline	µg/L	24 U	NA
4-Nitrophenol	µg/L	24 U	NA
Acenaphthene	µg/L	9.4 U	NA
Acenaphthylene	µg/L	9.4 U	NA
Anthracene	µg/L	9.4 U	NA
Benzo(a)Anthracene	µg/L	9.4 U	NA
Benzo(a)Pyrene	µg/L	9.4 U	NA
Benzo(b)Fluoranthene	µg/L	9.4 U	NA
Benzo(ghi)Perylene	µg/L	9.4 U	NA
Benzo(k)Fluoranthene	µg/L	9.4 U	NA
Bis(2-Chloroethoxy)Methane	µg/L	9.4 U	NA
Bis(2-Chloroethyl)Ether	µg/L	9.4 U	NA
Bis(2-Chloroisopropyl)Ether	µg/L	9.4 U	NA
Bis(2-Ethylhexyl)Phthalate	µg/L	19 U	NA
Butyl Benzyl Phthalate	µg/L	9.4 U	NA
Chrysene	µg/L	9.4 U	NA

Table 2
Summary of Analytical Results for QC Samples - Former TAA 605

Sample Identification **Location Code** **Date Sampled**		818655-3240 Equipment Rinsate 03/27/03	818655-3232 Trip Blank 03/23/03
	Unit		
Di-n-Butyl Phthalate	µg/L	9.4 U	NA
Di-n-Octyl Phthalate	µg/L	9.4 U	NA
Dibenzo(a,h)Anthracene	µg/L	9.4 U	NA
Dibenzofuran	µg/L	9.4 U	NA
Diethyl Phthalate	µg/L	9.4 U	NA
Dimethyl Phthalate	µg/L	9.4 U	NA
Fluoranthene	µg/L	9.4 U	NA
Fluorene	µg/L	9.4 U	NA
Hexachlorobenzene	µg/L	9.4 U	NA
Hexachlorobutadiene	µg/L	9.4 U	NA
Hexachlorocyclopentadiene	µg/L	9.4 UJ	NA
Hexachloroethane	µg/L	9.4 U	NA
Indeno(1,2,3-cd)Pyrene	µg/L	9.4 U	NA
N-Nitroso-di-n-Propylamine	µg/L	9.4 U	NA
N-Nitrosodiphenylamine	µg/L	9.4 U	NA
Naphthalene	µg/L	9.4 U	NA
Nitrobenzene	µg/L	9.4 U	NA
Pentachlorophenol	µg/L	9.4 U	NA
Phenanthrene	µg/L	9.4 U	NA
Phenol	µg/L	9.4 U	NA
Pyrene	µg/L	9.4 U	NA
METALS			
Aluminum	µg/L	500 U	NA
Antimony	µg/L	500 U	NA
Arsenic	µg/L	5 U	NA
Barium	µg/L	2.5 J	NA
Beryllium	µg/L	10 U	NA
Cadmium	µg/L	5 U	NA
Calcium	µg/L	83.3 J	NA
Chromium	µg/L	50 U	NA
Cobalt	µg/L	50 U	NA
Copper	µg/L	50 U	NA
Iron	µg/L	45.4 J	NA
Lead	µg/L	5.73 U	NA
Magnesium	µg/L	1000 U	NA

Table 2
Summary of Analytical Results for QC Samples - Former TAA 605

Sample Identification **Location Code** **Date Sampled**		818655-3240 Equipment Rinsate 03/27/03	818655-3232 Trip Blank 03/23/03
	Unit		
Manganese	µg/L	20 U	NA
Mercury	µg/L	.2 U	NA
Molybdenum	µg/L	100 U	NA
Nickel	µg/L	150 U	NA
Potassium	µg/L	5000 U	NA
Selenium	µg/L	5 U	NA
Silver	µg/L	50 U	NA
Sodium	µg/L	597 U	NA
Thallium	µg/L	7.16 J	NA
Vanadium	µg/L	100 U	NA
Zinc	µg/L	8.05 J	NA

Table 2
Summary of Analytical Results for QC Samples - Former TAA 605

J	- estimated value
M	- modified
MCAS	- Marine Corps Air Station
mg/L	- milligrams per liter
NE	- not established
NA	- not analyzed
TPH	- total petroleum hydrocarbons
U	- not detected at or above the stated reporting limit
UJ	- estimated reporting limit
µg/L	- micrograms per liter

Table 3
Residential Risk Screening Worksheet for Soil
Former TAA 605

Detected Chemical	Maximum TAA 605 Soil Concentration (mg/kg)	MCAS El Toro Background Concentration[a] (mg/kg)	CANCER			NON-CANCER		
			Residential PRG[b] (mg/kg)	TAA 605 Maximum Ratio[c]	MCAS El Toro Background Ratio[d]	Residential PRG[e] (mg/kg)	TAA 605 Maximum Ratio[f]	MCAS El Toro Background Ratio[f]
Volatiles								
Acetone	0.02	NE	NE	NE	NE	1.6E+03	1.25E-05	NE
2-Butanone	0.002	NE	NE	NE	NE	7.3E+03	2.74E-07	NE
Toluene	0.001	NE	NE	NE	NE	5.2E+02	1.92E-06	NE
Semi-Volatiles								
2-Methylnaphthalene	0.034	NE	NE	NE	NE	NE	NE	NE
Di-n-butylphthalate	0.061	NE	NE	NE	NE	6.1E+03	1.00E-05	NE
Metals								
Aluminum	20800	14800	NE	NE	NE	7.6E+04	2.74E-01	1.95E-01
Antimony	2.42	3.06	NE	NE	NE	3.1E+01	7.81E-02	9.87E-02
Arsenic	4.65	6.86	3.9E-01	1.19E+01	1.76E+01	2.2E+01	2.11E-01	3.12E-01
Barium	188	173	NE	NE	NE	5.4E+03	3.48E-02	3.20E-02
Beryllium	.721	0.669	NE	NE	NE	1.5E+02	4.81E-03	4.46E-03
Cadmium	1.16	2.35	NE	NE	NE	3.7E+01	3.14E-02	6.35E-02
Chromium	17.2	26.9	2.1E+02	8.19E-02	8.19E-02	NE	NE	NE
Cobalt	10.3	6.98	9.0E+02	1.14E-02	7.76E-03	1.4E+03	7.36E-03	4.99E-03
Copper	10.5	10.5	NE	NE	NE	3.1E+03	3.39E-03	3.39E-03
Iron	22900	18400	NE	NE	NE	2.3E+04	9.96E-01	8.00E-01
Manganese	332	291	NE	NE	NE	1.8E+03	1.84E-01	1.62E-01
Nickel	10.2	15.3	NE	NE	NE	1.6E+03	6.38E-03	9.56E-03
Selenium	0.938	0.32	NE	NE	NE	3.9E+02	2.41E-03	8.21E-04
Vanadium	59.1	71.8	NE	NE	NE	5.5E+02	1.07E-01	1.31E-01
Zinc	68.6	77.9	NE	NE	NE	2.3E+04	2.98E-03	3.39E-03
Subtotal sum of ratios				1.20E+01	1.77E+01		1.94E+00	1.82E+00
MCAS EL TORO BACKGROUND RISK RATIOS			**CANCER RISK**		**1.77E-05**	**NON-CANCER HAZARD INDEX**		**1.82**
TAA 605 SUMMED RISK			**CANCER RISK**	**1.20E-05**		**NON-CANCER HAZARD INDEX**	**1.94**	
TAA 605 RISK LESS BACKGROUND RISK (NET RISK)			**NET CANCER RISK**	**$<1 \times 10^{-6}$**				

Table 3
Residential Risk Screening Worksheet for Soil
Former TAA 605

[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.*

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 4

Hazard Index By Target Organ System Endpoint - Former TAA 605

Detected Chemical	Maximum TAA 605 Soil Concentration (mg/kg)	MCAS El Toro Background Concentration[a] (mg/kg)	Residential PRG[b] (mg/kg)	TAA 605 Maximum Ratio[c]	Target Organ[c] Hazard Index[d]			
					Soft Tissue	Central Nervous System	Respiratory Tract	Repro-ductive System
METAL CONTRIBUTORS								
Aluminum	20800	14800	76000	2.74E-01		2.74E-01	2.74E-01	
Arsenic	4.65	6.9	22	2.11E-01	2.11E-01			
Iron	22900	18400	23000	9.96E-01	9.96E-01			
Manganese	332	291	1800	1.84E-01		1.84E-01	1.84E-01	1.84E-01
Vanadium	59.1	71.8	550	1.07E-01	1.07E-01			
Subtotal sum of ratios				1.77E+00	1.31E+00	4.58E-01	4.58E-01	1.84E-01
			NON-CANCER HAZARD INDEX	**1.8**	**1.3**	**0.5**	**0.5**	**0.2**

Table 4

Hazard Index By Target Organ System Endpoint - Former TAA 605

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

[b] *Residential soil PRGs for non-cancer from the EPA Region 9, November 1, 2002 list.*

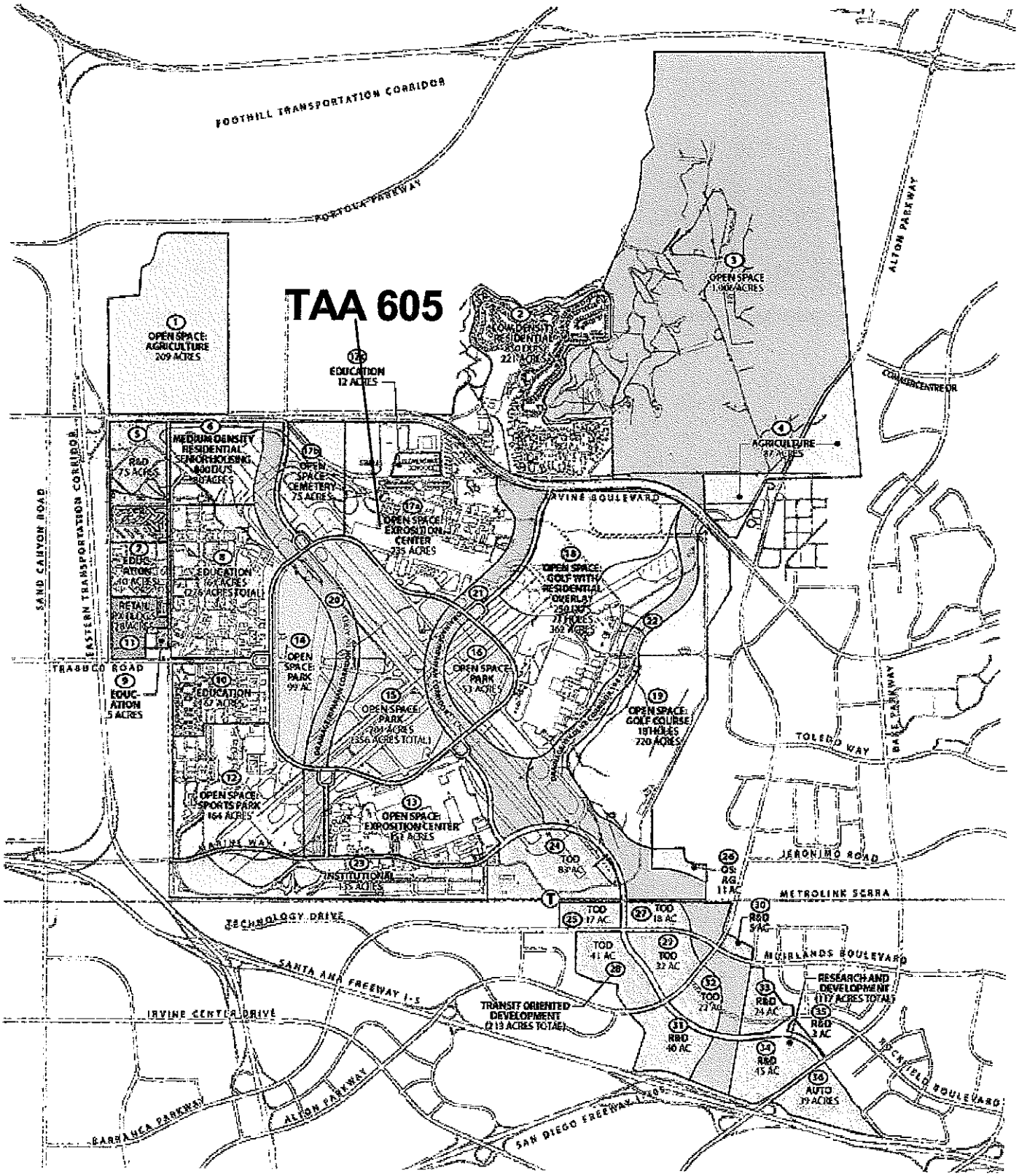
[c] *The primary target organs were identified from toxicity profiles available on the Risk Assessment Information System website or IRIS.*

[d] *The Ratio is determined by dividing the maximum concentration by the respective PRG.*

mg/kg - milligrams per kilogram

PRG - preliminary remediation goal

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

EXCERPTS

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.

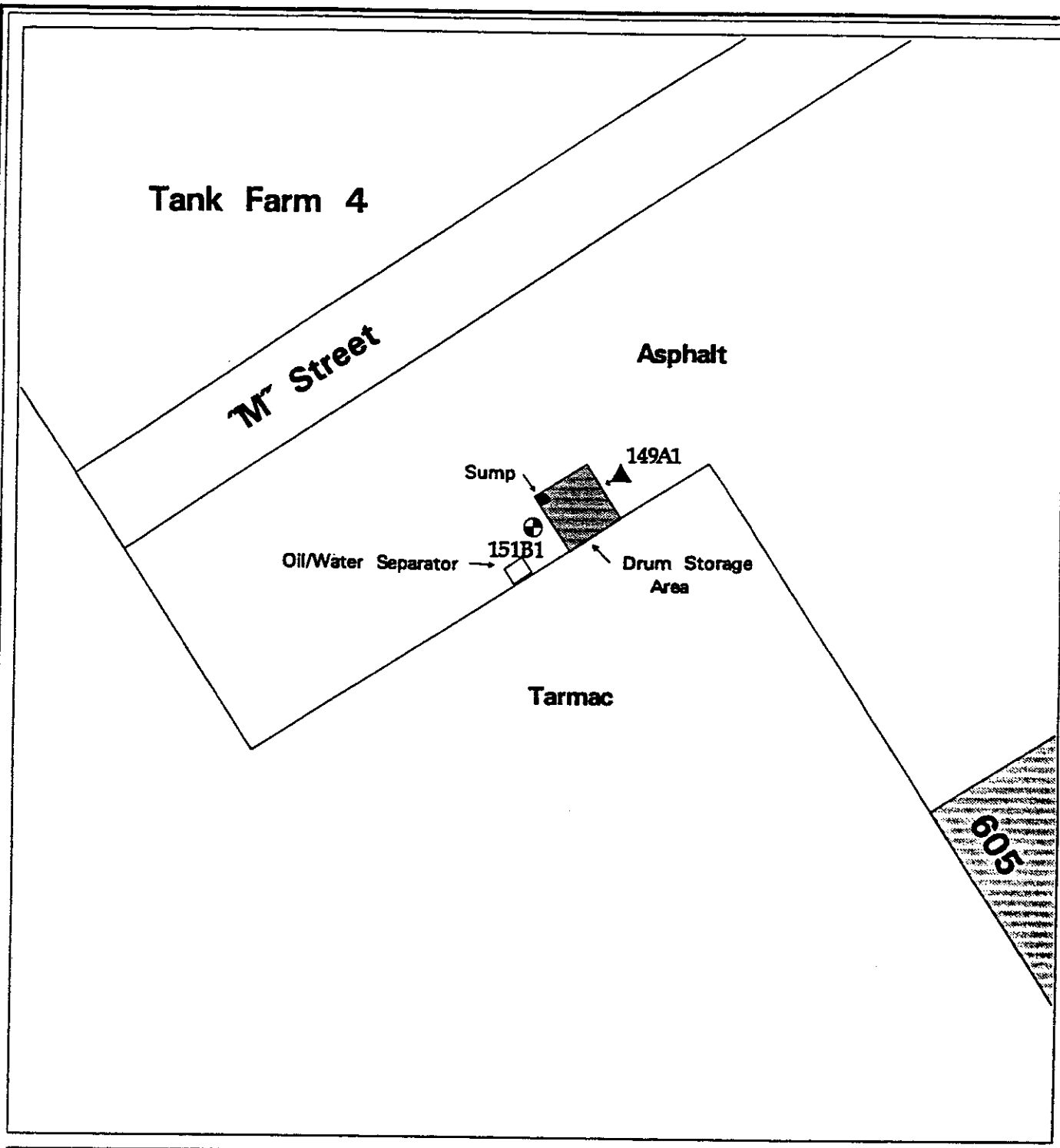


Figure 48 Sample Location Map

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:

149 - Drum Storage Area

151 - Oil/Water Separator

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						
149	Drum Storage Area (48)	A1	10	ND	ND	ND	Methylene Chloride-4 BJ * Acetone- 5 BJ * 2-Butanone-2 J	Bis(2-Ethylhexyl)phthalate-610 B *	ND	Antimony-ND	NFA	TPH/TFH < 100 ppm VOCs < CRDL SVOCs < ETM & PRG Pest/PCBs < CRDL Metals < ETM & PRG CRDL - Contract Required Detection Limit
			20	ND	ND	ND	Methylene Chloride-5 J * Acetone-2 BJ *	Bis(2-Ethylhexyl)phthalate-640 B * 2-Methylnaphthalene-34 J	ND	Antimony-ND		
			32	ND	ND	ND	Methylene Chloride-6 J * Acetone-2 BJ * 2-Butanone-1 J	Bis(2-Ethylhexyl)phthalate-520 B *	ND	Antimony-ND		
			32 (Duplicate)	ND	ND	ND	Methylene Chloride-1 BJ * Acetone-4 BJ * 2-Butanone-1 BJ *	Di-n-butylphthalate-47 J	ND	Antimony-ND		
			40	ND	ND	ND	Methylene Chloride-7 J * Acetone-4 BJ * Toluene-1 J 2-Butanone-1 J	Bis(2-Ethylhexyl)phthalate-3000 B	ND	Antimony-ND		
			50	ND	ND	ND	Acetone-5 BJ * 2-Butanone-2 BJ *	Bis(2-Ethylhexyl)phthalate-1600 B *	ND	Antimony-ND		
			60	ND	ND	ND	Methylene Chloride-3 BJ * Acetone-4 BJ *	Di-n-butylphthalate-61 J Bis(2-Ethylhexyl)phthalate-400 B *	ND	Antimony-6.0 B		

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						
151	Oil/Water Separator (48)	B1	5	ND	NA	NA	Methylene Chloride-7 BJ *	NA	NA	NA	Leak test/ inspection of separator.	Moderate petroleum hydrocarbon contamination at 10-foot depth. TPH/TFH < 1000 ppm VOCs < CRDL CRDL - Contract Required Detection Limit
			10	779	NA	NA	Methylene Chloride-8 BJ * Acetone-26 B *	NA	NA	NA		
			15	ND	NA	NA	Methylene Chloride-20 B * Acetone-48 B *	NA	NA	NA		
			20	ND	NA	NA	Methylene Chloride-6 BJ *	NA	NA	NA		
			25	ND	NA	NA	Methylene Chloride-26 B * Acetone-32 B *	NA	NA	NA		
			25 (Duplicate)	ND	NA	NA	Methylene Chloride-28 B * Acetone-45 B *	NA	NA	NA		

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)	TPH (mg/kg): Gasoline	TPH (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.	

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

VOLUME II
Appendix C through G

16 July 1993

PROJECT NUMBER	BORING NUMBER
LA070022 S0 10	149A-1 SHEET 1 OF 2

SOIL BORING LOG

PROJECT NAVY CLEAN RCRA FACILITY ASSESSMENT LOCATION MCAS-EL TORO

ELEVATION _____ DRILLING CONTRACTOR BEYLIK DRILLING, INC., LA HABRA, CALIFORNIA

DRILLING METHOD AND EQUIPMENT HSA, 3-1/4" ID, 6-1/2" OD, GUS PECH BRAT-22

WATER LEVELS _____ START 10/9/92 FINISH 10/12/92 LOGGER K. HUCKRIEDE

DEPTH BELOW SURFACE (FT)	SAMPLE INTERVAL	SAMPLE TYPE AND NUMBER	SAMPLE RECOVERY (FT)	STANDARD PENETRATION TEST RESULTS 6"-6"-6" (N)	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY SOIL STRUCTURE, MINERALOGY	COMMENTS: DEPTH OF CASING, DRILLING RATE DRILLING FLUID LOSS TESTS AND INSTRUMENTATION
					2" asphalt POORLY GRADED SAND (SP) brown, moist fine grained sand, muscovite present.	Start drilling at 10:30
5.0						
10.0	10.0					
	12.0	1-MC	1.6	10-12-24-27	POORLY GRADED SAND (SP) brown, moist dense, fine grained sand muscovite present	Headspace reading 8 ppm on OVA
15.0						
20.0	20.0					
	22.0	2-MC	1.8	28-30-44-20	POORLY GRADED SAND (SP), light brown, dry dense fine to medium grained	Headspace reading 5.5 ppm on OVA
25.0						
30.0	32.0					
	34.0	3-MC	1.7	30-50-40-45	POORLY GRADED SAND (SP), brown moist very dense; fine grained sand	Headspace reading 4 ppm on OVA
35.0	36.0	3A-MC	1.8	45-35-31-26	POORLY GRADED SAND WITH SILT (SP-SM), brown, moist, dense, fine to medium grains, micaceous.	Headspace reading similar to background on OVA.

PROJECT NUMBER	BORING NUMBER
LA070022 S0 10	149A-1 SHEET 2 OF 2

SOIL BORING LOG

PROJECT NAVY CLEAN RCRA FACILITY ASSESSMENT LOCATION MCAS-EL TORO

ELEVATION _____ DRILLING CONTRACTOR BEYLIK DRILLING, INC., LA HABRA, CALIFORNIA

DRILLING METHOD AND EQUIPMENT HSA, 3-1/4 ID, 6-1/2 OD, GUS PECH BRAT-22

WATER LEVELS _____ START 10/9/92 FINISH 10/12/92 LOGGER K. HUCKRIEDE

DEPTH BELOW SURFACE (FT)	SAMPLE INTERVAL	SAMPLE TYPE AND NUMBER	SAMPLE RECOVERY (FT)	STANDARD PENETRATION TEST RESULTS 6"-6"-6" (N)	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY SOIL STRUCTURE MINERALOGY	COMMENTS: DEPTH OF CASING, DRILLING RATE DRILLING FLUID LOSS TESTS AND INSTRUMENTATION
40.0	40.0					
	42.0	4-MC	1.6	13-20-25-30	Similar to 3-MC	Headspace reading similar to background on OVA.
45.0						
50.0	50.0					
	52.0	5-MC	1.4	13-45-75-75	SILTY SAND (SM), brown dry to moist very dense well graded.	Headspace reading similar to background on OVA
55.0	57.0					Driller notes hard drilling cuttings show 0.5 to 1 inch gravel.
	59.0	6-MC	1.6	21-50-55-65		Extremely difficult augering at 56.0 to 57.0 feet, auger refusal at 57 feet. Headspace reading 200 ppm on OVA at 58 feet.
60.0					Total Depth at 59.0 Feet	
65.0						
70.0						

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 #: **149** Accumulation Area (AA) #: **605**
Location (bldg): **Drum Storage Area/Bldg. 605**
Site Contact: **Leta Suarez** Ext: **2772**
Permission for Access? ~~Y~~ N If yes, explain:
Type of Wastes Observed: **None**

TYPE: (CIRCLE AS APPROPRIATE)

~~Locker~~ ~~Cabinet~~ ~~Pad~~ Concrete/~~Soil/Asphalt~~ floor
Berm ~~Fence~~ ~~Fence Type:~~ ~~Indoor~~
Pallets Drum(s) No. of Drums: **8** Outdoor

CONDITION:

Stain(s) ~~Odor(s)~~ ~~Crack(s)~~
Placards/Labels: Y ~~N~~ If Yes, list: **Absorbant with fuel & oil**
JP-5
Hazwaste Area #13

Observations: **Minor oil/fuel stain similar to parking lot drips; decontamination likely.**
Status: **Active as of 11-10-95.**

DIMENSIONS: (ESTIMATED SIZE OR AREA IN FT)

AA/SWMU: **10x10 ft.**
"Stain(s)": **one 2x3 ft.**
Any Restrictions To Access?: **None.**

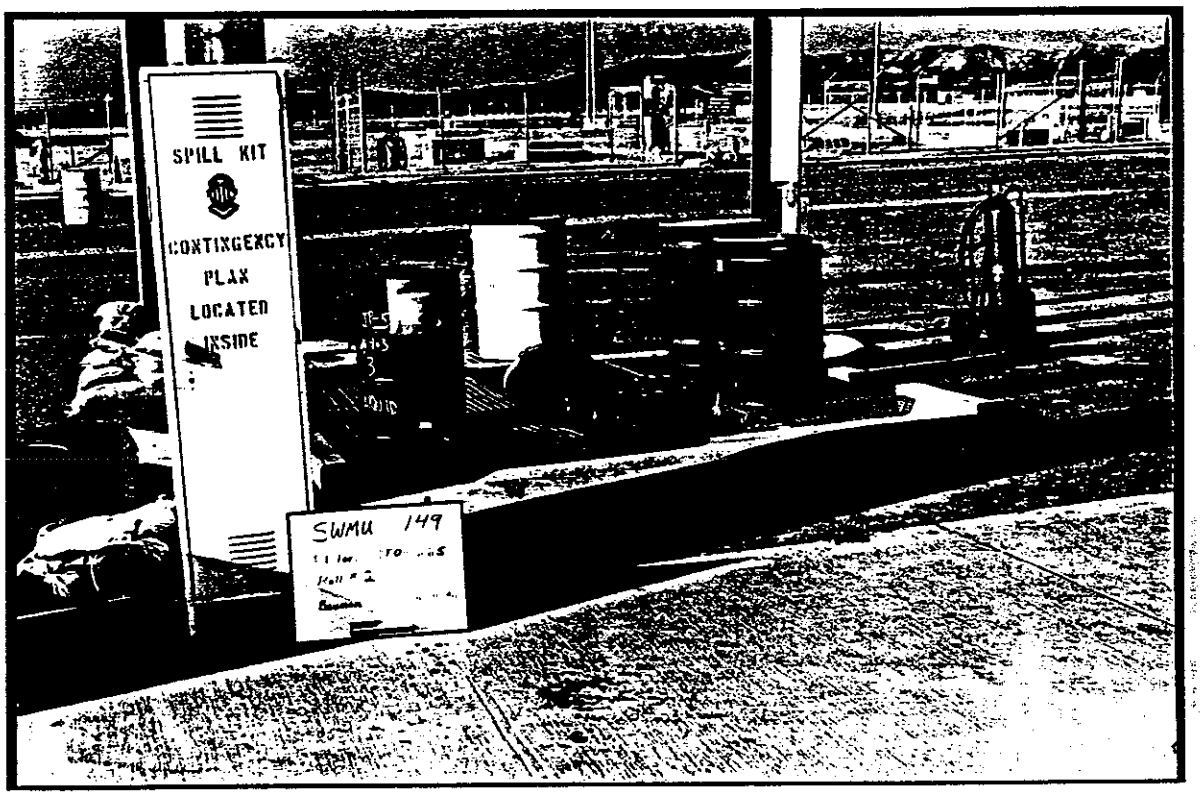
EVALUATION OF REMOVAL/DECONTAMINATION STRATEGY (CIRCLE AS APPROPRIATE)

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: 12-7-94/12:10
UPDATED: 11-10-95/09:46
SURVEILLANCE PERFORMED BY: Larry Bauman

PHOTO LOG



SWMU #: 149

PHOTO DATE: 12-14-94

Appendix C
Excerpts from SWPPP

STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

FOR

MARINE CORPS AIR STATION EL TORO
EL TORO, CALIFORNIA

EXCERPTS

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

VOLUME 1

DECEMBER, 1996
INTEGRATED ENVIRONMENTAL MANAGEMENT, INC.

Building 291 - NBC Storage - MAG-11

Materials stored included glass cleaner, alkali corrosive liquid (sodium hydroxide, ethylene, glycol monomethyl, ether) and chemical liquid decontamination kits (hydroethane), in minor quantities.

BMP recommendations include dry sweeping the area. Additional BMPs are not recommended at this time.

Building 605 - Maintenance Hangar Space - HMM-364

Industrial activities at this site include light maintenance of CH-47 aircraft. Potential pollutants included grease, JP-5, lubricating oil, hydraulic fluid, diesel fuel, waste oils and solvents. There is an oil/water separator (#605) located near Building 605 which receives drainage from the tarmac in front of the building. A valve at the storm drain exists which diverts flow to either the sewer system of storm drain system. A hazardous storage area with 55-gallon drums containing lubricating oil were stored outside Building 605. This storage area has a concrete secondary containment berm and a canopy. A spill kit and a SPCCP are located at the storage area. A spill cleanup kit is also present inside the building and personnel had been trained in spill cleanup and countermeasures techniques.

A hazardous/flammable materials storage locker is located outside near Building 605. It contains chemicals such as thinner, naphtha, hydraulic fluid, engine oil, lubricating oil, paints, polyurethane, enamel, aircraft soap, sealant, cleaner, and grease. A spill kit and SPCCP are located at this location. This building did not appear to pose a threat to storm water quality as long as chemicals are properly handled during transfer.

Existing BMPs include dry sweeping the hanger deck and using drip pans under aircraft. Hazardous materials temporarily stored in the hanger during working hours are also contained in drip pans. Recommended BMPs include performing routine maintenance of the oil/water separator in accordance with the manufacturer's specifications. No additional BMPs are recommended at this time.

TABLE 5-8
BASIN 7
SUMMARY OF BMPs

BLDG #	BASIN	BUILDING DESCRIPTION	TENANT	Concern Level	BMP STATUS	BMP #	BMP Description
		Building Field Lighting Vault					
399	07	Vortac Facility	Station/G-6	Limited			No Additional BMPs Recommended
605	07	Maint Hngr Space	HMM-364	Concern	Existing	04	Spill Prevention, Control, Countermeasures Plans
					Existing	06	Construct Berm or Provide Secondary Containment
					Rec	10	Perform Routine Maintenance for Oil/Water Separator
					Existing	17	Cover Area with Roof
					Existing	27	Provide Drip Pans to Catch Leaks from Equipment
					Existing	29	Provide Regular Sweeping of Floor/Lot
					Existing	36	Place Spill Kit in Area
606	07	Maint Hngr Space	HMM-163	Concern	Existing	04	Spill Prevention, Control, Countermeasures Plans
					Existing	27	Provide Drip Pans to Catch Leaks from Equipment
					Rec	29	Provide Regular Sweeping of Floor/Lot
					Existing	36	Place Spill Kit in Area
637	07	Exchange Gas Station	MWR-Ret	Previous			No Additional BMPs Recommended
639	07	Electrical Power Plant Building	Installation	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

EXCERPTS

Prepared for:

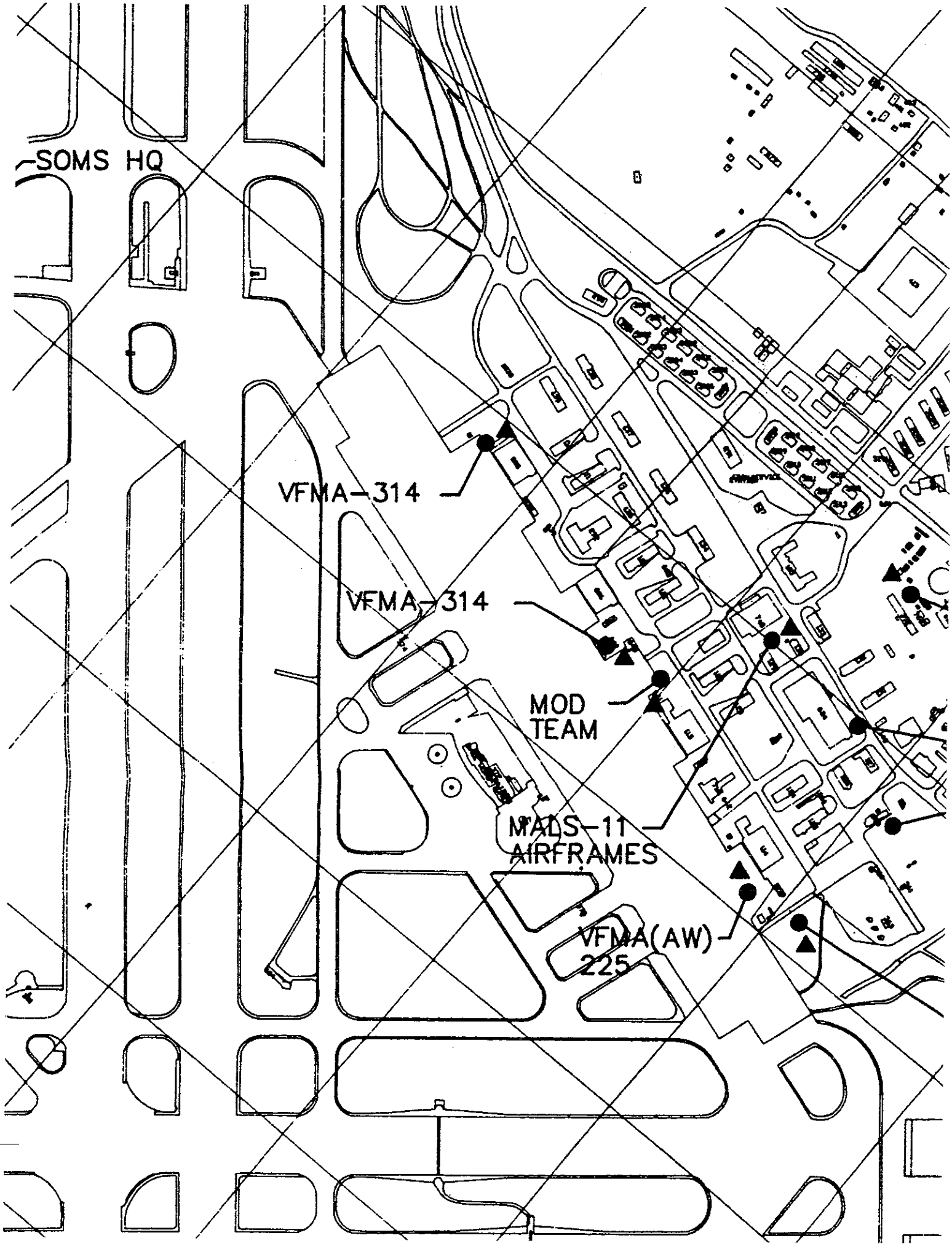
Southwest Division Naval Facilities Engineering Command
1220 Pacific Highway
San Diego, CA 92132-5190

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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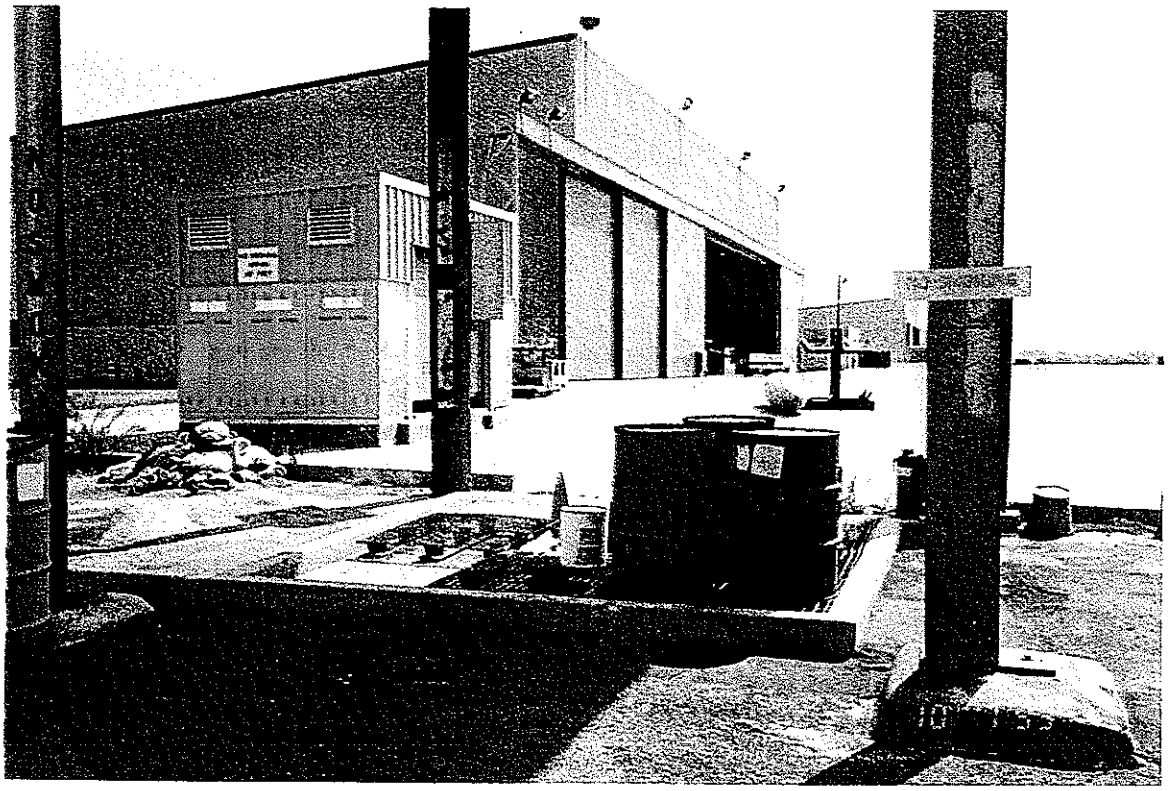
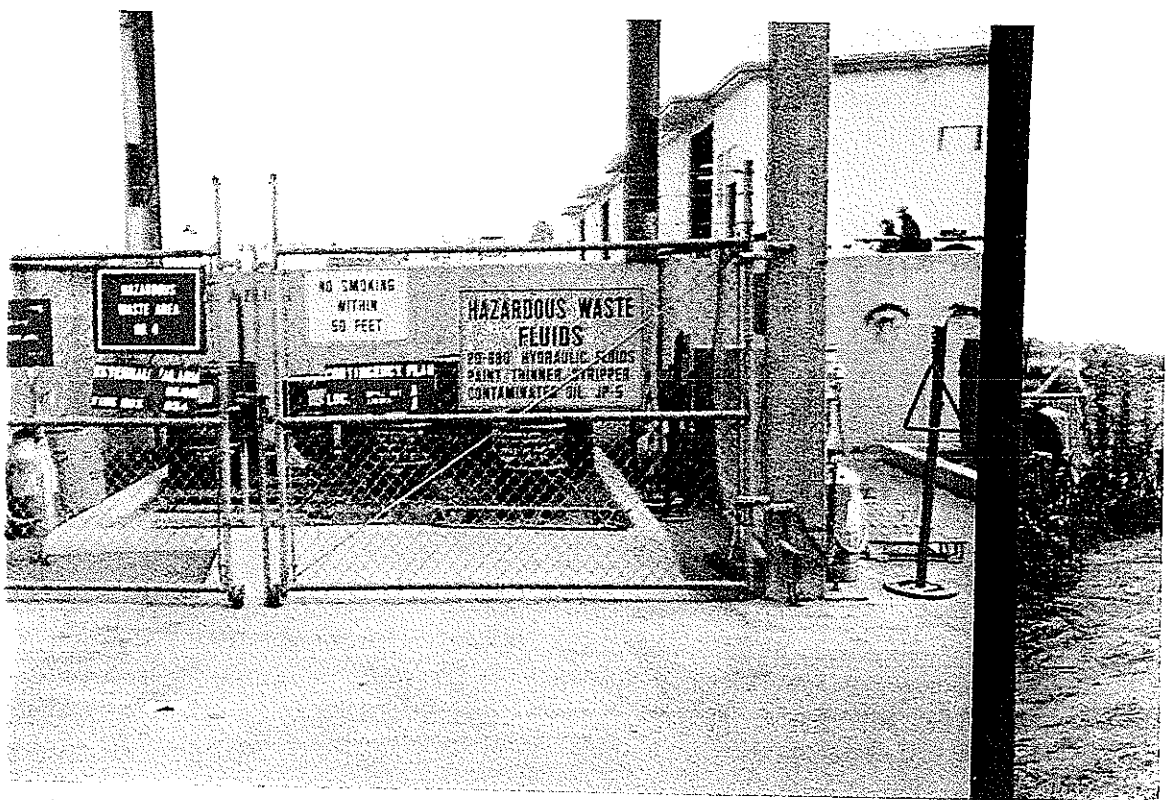
VFMA-314
MOD
TEAM
MALS-11
AIRFRAMES
VFMA(AW)
225



Marine Fighter Attack Squadron 314 (VFMA 314) Bldg 605



Marine Aviation Logistics Squadron 11 (MALS 11), Power Plant Bldg 634

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

EXCERPTS

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

THROUGH:
CONTRACT #N68711-89-D-9256
CTO #284
DOCUMENT CONTROL NO.
CLE-C01-017-284-S2-9004

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

In association with:
International Technology Corporation
CH2M HILL

M. W. 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 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.

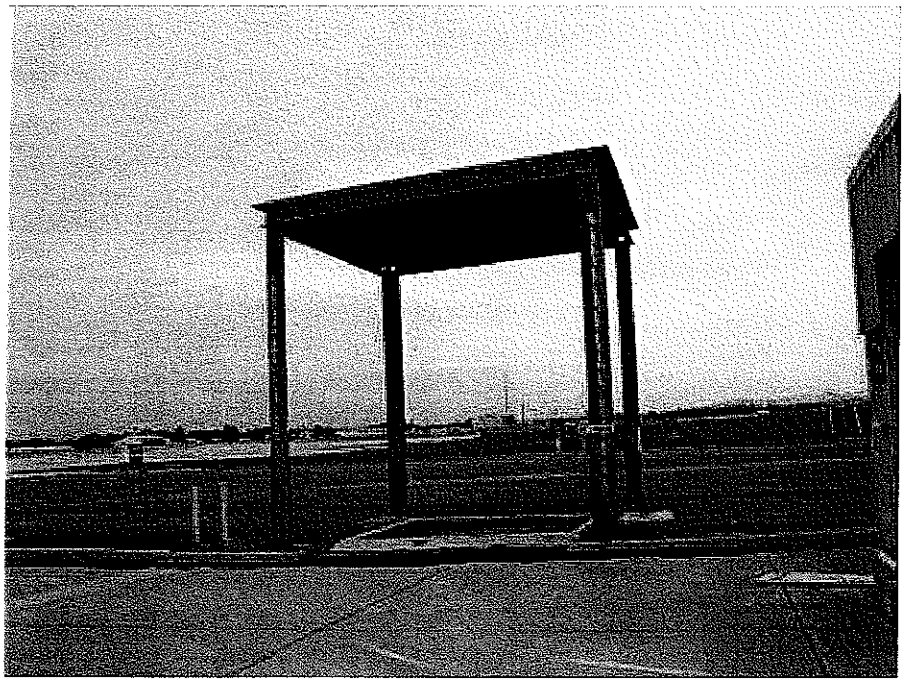
Source: Department of Defense, BRAC Cleanup Plan (BCP) Guidebook.

Appendix F
MCAS, El Toro Plant Account Records

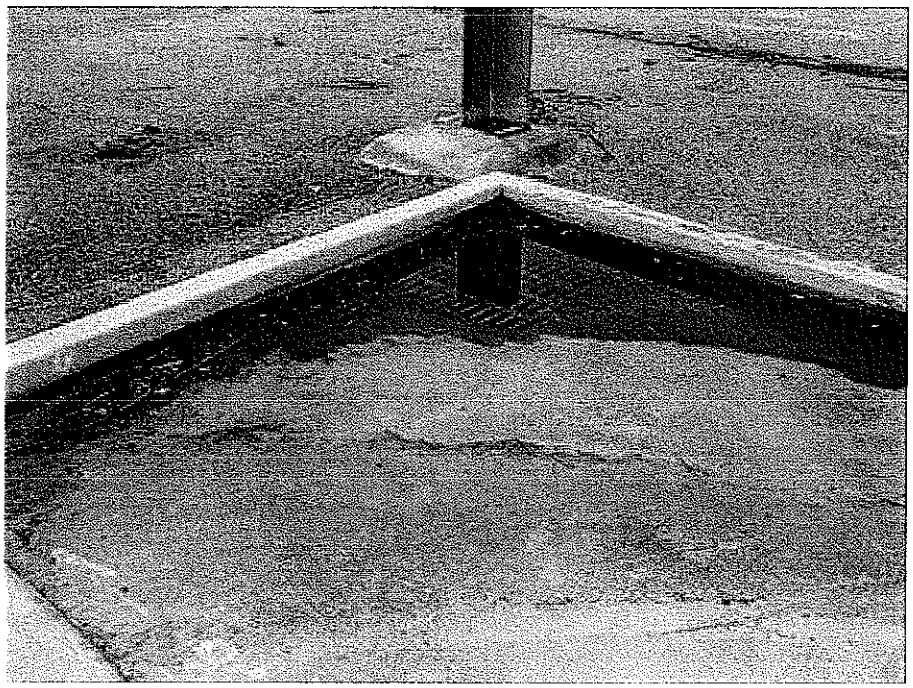
FACILITY NUMBER	PRIMARY USE	FACILITY NAME	ACQUISITION NAME	ACQUISITION DATE	AREA UNIT MEASURE	TOTAL AREA	LENGTH	WIDTH	HEIGHT	GOVERNMENT COST	CURRENT PLANT VALUE	YEAR BUILT	YEAR IMPROVED
1	61010	SQDN HQ-TELEPHONE CENTER	NOY5421	19430301	SF	15,768	208	107	22	$92,096	$1,151,426	1943	1988
2	21105	NOSE HANGAR	NOY5421	19430601	SF	10,370	85	122	27	$60,039	$580,354	1943	1989
3	14140	COMM MNT SHOP	NOY5421	19430101	SF	1,560	39	40	14	$7,808	$106,204	1943	1977
4	14140	ELEC/COMM MAINT SHOP	NOY5421	19430101	SF	1,560	40	39	14	$33,964	$137,722	1943	1990
5	21451	AUTO/ORGANIZATIONAL SHOP	NOY5421	19430101	SF	10,370	85	122	27	$53,015	$551,077	1943	1983
6	73020	PROVOST MARSHAL OFFICE	NOY5421	19430301	SF	9,226	156	91	44	$267,076	$2,416,721	1943	1990
7	44112	STRG/OUT OF STORES MARCOR	NOY5421	19430301	SF	10,370	85	122	27	$97,190	$1,167,438	1943	1985
8	44112	STORAGE	NOY5421	19430301	SF	1,560	40	39	14	$7,036	$95,704	1943	1980
9	44112	STORAGE	NOY5421	19421201	SF	1,560	39	40	14	$16,310	$118,701	1942	1982
10	74075	COMM/ELEC SHOP	NOY5421	19430301	SF	10,370	122	85	27	$50,672	$519,208	1943	1983
11	61072	SQUADRON HEADQUARTERS	NOY5421	19430301	SF	3,960	108	80	11	$21,999	$299,230	1943	1977
12	61072	GROUP HQ	NOY5421	19430301	SF	3,960	108	80	11	$23,229	$303,563	1943	1985
13	61072	GROUP HQ	NOY5421	19430301	SF	3,960	108	80	11	$23,669	$306,486	1943	1986
14	61072	SQDRN HD	NOY5421	19430301	SF	3,960	108	80	11	$22,887	$306,425	1943	1984
15	21710	STOREHOUSE/ELECTRONICS MAINT	NOY5421	19430301	SF	6,240	160	39	13	$23,428	$312,107	1943	1990
16	44112	STORAGE GROUP	NOY5421	19430301	SF	6,240	160	39	13	$17,692	$240,647	1943	1977
17	21710	ELEC MAINT SHOP	NOY5421	19430301	SF	6,240	160	39	13	$26,018	$305,882	1943	1981
19	61072	ADMIN OFF	NOY5421	19431101	SF	6,240	160	39	13	$20,464	$272,593	1943	1981
20	21871	STRG/OUT OF STORES MARCOR	NOY5421	19430301	SF	6,240	160	39	13	$16,105	$219,060	1943	1977
21	44135	STORAGE	NOY5421	19430301	SF	640	32	20	13	$4,372	$60,522	1943	
22	21710	ELECNX/COMMS MAINT SHOP	NOY5421	19430601	SF	6,240	160	39	13	$34,386	$281,323	1943	1984
23	44112	STORAGE	NOY5421	19431001	SF	6,240	160	39	13	$25,404	$236,267	1943	1989
25	21820	CARPENTRY SHOP	NOY5421	19430301	SF	6,240	160	39	13	$55,404	$258,359	1943	1984
26	21820	STORAGE OUT OF STORES	NOY5421	19430601	SF	6,240	160	39	13	$14,665	$199,473	1943	
27	61077	PMO ADMIN STORAGE	NOY5421	19430301	SF	6,240	160	39	13	$30,583	$246,383	1943	1986
28	21820	COMMUNICATION SHOP	NOY5421	19430101	SF	6,240	160	39	13	$20,206	$240,818	1943	1979
29	61010	STORAGE	NOY5421	19431201	SF	6,240	160	39	13	$66,492	$536,110	1943	1990
31	21820	AUTO MAINT FAC	NOY5421	19430301	SF	6,240	160	39	13	$33,092	$228,853	1943	1986
32	72411	BOQ W/O MESS	NOY5421	19430201	SF	7,740	144	30	22	$55,386	$558,495	1943	1986
33	72411	BOQ W/O MESS	NOY5421	19430201	SF	7,740	144	30	22	$60,725	$570,751	1943	1988
34	72411	OFFICERS BARRACKS	NOY5421	19430201	SF	7,740	144	30	22	$55,426	$558,549	1943	1986
35	72411	UOPH W/O MESS	NOY5421	19430201	SF	7,740	144	30	22	$44,185	$545,005	1943	1990
36	61010	ADMIN OFFICE	NOY5421	19430201	SF	9,390	132	108	14	$69,708	$948,168	1943	
46	61010	ADMIN OFFICE	NOY5421	19430301	SF	2,280	114	20	11	$20,537	$266,135	1943	1985
47	21820	ENGINE MAINTENANCE SHOP	NOY5421	19430301	SF	2,980	69	31	26	$55,374	$759,079	1943	1985
48	61072	FIIU HEADQUARTERS	NOY5421	19430201	SF	5,148	132	39	14	$42,074	$401,692	1943	1986
49	44112	TRAINING BLDG/RESERVES		19430601	SF	21,956	165	168	27	$95,913	$1,025,869	1943	1983
50	17110	RESERVE TRAINING BLDG	NOY5421	19430601	SF	6,240	160	39	13	$20,766	$260,215	1943	1979
51	21451	RESERVE TRAINING BLDG	NOY5421	19430601	SF	6,240	160	39	15	$25,095	$344,328	1943	1977
52	44112	STOREHOUSE	NOY5421	19430601	SF	4,224	100	66	21	$19,727	$268,327	1943	
53	17110	GROUND SAFETY	NOY5421	19430601	SF	4,036	109	39	37	$18,881	$250,559	1943	1990
54	61040	LAW CENTER	NOY5421	19430301	SF	11,374	170	120	11	$298,101	$2,773,006	1943	1990
56	61072	TRNG/ELEC COMM/GRD SAFETY	NOY5421	19430301	SF	11,528	168	99	14	$133,343	$1,160,364	1943	1990
57	74089	BATHHOUSE	NOY5421	19430301	SF	9,310	111	70	17	$121,087	$1,549,313	1943	1988
58	61010	JOINT RECEPTION CENTER	NOY5421	19430301	SF	30,610	202	144	21	$422,673	$2,189,283	1943	1990
59	61010	ADMINISTRATIVE OFFICES	NOY5421	19430601	SF	5,696	140	46	10	$82,106	$1,116,806	1943	
60	61072	RESERVE SUPPORT UNIT	NOY5421	19431001	SF	5,376	168	32	9	$162,641	$511,066	1943	1988
156	84140	WATER PRESSURE TANK	NOY5421	19430101	SY	0	54	0	0	$7,000	$96,047	1943	
174	84140	STORAGE TANK GRND POT	NOY5421	19430115	SY	0	0	0	16	$50,100	$693,534	1943	
175	84140	STORAGE TANK GRND POT	NOY5421	19430115	SY	0	0	0	16	$50,100	$693,534	1943	
FT176	12430	AVGAS STORAGE TANK	NOY5421	19430601	SY	0	0	24	8	$5,420	$75,029	1943	

	87215	MISC FENCING /NAMAR HSG/	INF239	19550115	SY	0	0	0	0	$1,826	$11,279	1955	
	87110	STORM SEWER STATION HOUSING	NOY13828	19470115	SY	0	0	0	0	$36,393	$291,013	1947	1992
	85220	SIDEWALK /BITUMINOUS/	NOY13828	19470115	SY	6,223	12872	4	0	$14,532	$125,237	1947	
	85220	SIDEWALK /CONCRETE/	NOY13828	19470115	SY	500	0	0	0	$2,726	$23,493	1947	
	85220	SIDEWALK /CONCRETE/	FPHACAL4898N	19450115	SY	6,309	18540	3	0	$26,129	$311,118	1945	
	85220	SIDEWALK /CONCRETE/	N32	19540615	SY	20,834	53958	3	0	$25,469	$163,333	1954	
449	72111	ENLISTED BARRACKS	NBY7440	19591101	SF	29,109	253	72	31	$1,808,358	$3,826,761	1959	1988
450	72111	ENLISTED BARRACKS	NBY7440	19591101	SF	29,109	253	72	31	$1,814,394	$3,837,263	1959	1988
451	72111	BARRACKS	NBY7440	19591101	SF	29,109	253	72	31	$1,809,252	$3,830,048	1959	1988
452	72111	BARRACKS	NBY7440	19591101	SF	29,109	253	72	31	$1,803,334	$3,822,361	1959	1988
446	84440	WATER TANK 25000 GAL	NBY11724	19591201	SY	0	18	0	12	$28,323	$153,426	1959	
448	84440	WATER TANK 25000 GALLON	NBY11724	19591201	SY	0	18	0	12	$28,323	$153,426	1959	
459	84440	STORAGE TANK GRND NONPOT	NBY10014	19591101	SY	0	0	0	33	$63,856	$316,819	1959	1985
721	13460	OPTICAL LANDING SYSTEM	NBY10014	19591101	SY	0	0	0	0	$80,433	$435,706	1959	1978
	11642	BLAST PROTECTION	NBY10014	19591101	SY	28,808	0	0	0	$15,431	$83,034	1959	
457	61071	GROUP HEADQUARTERS	NBY7439	19600101	SF	25,000	200	150	13	$509,979	$1,948,035	1960	1990
461	21105	HANGAR/SQUADRON/	NBY7439	19600101	SF	35,362	241	144	36	$2,431,025	$4,182,205	1960	1987
462	21105	HANGAR/SQUADRON/	NBY7439	19600301	SF	36,136	258	144	36	$3,176,386	$5,190,439	1960	1987
463	21105	HANGAR/SQUADRON	NBY7439	19600101	SF	15,519	123	121	36	$453,993	$1,680,771	1960	1986
453	21107	MAINT SQUADRON HEADQUARTERS	NBY7439	19600101	SF	5,040	90	56	11	$96,549	$505,820	1960	
454	21107	MAINT SQUADRON HEADQUARTERS	NBY7439	19600101	SF	5,040	90	56	11	$103,052	$539,334	1960	1988
455	17135	OPERATIONAL TRAINER FACILITY	NBY7439	19600101	SF	9,040	90	56	11	$1,033,299	$1,626,191	1960	1990
456	44111	WAREHOUSE	NBY7439	19600101	SF	70,163	320	200	20	$594,762	$2,884,823	1960	1993
458	44130	FLAMMABLE STOREHOUSE	NBY7439	19600101	SF	2,000	50	40	13	$61,219	$191,395	1960	1986
600	44112	STOREHOUSE/SQDN/		19610401	SF	4,108	100	41	16	$9,747	$51,016	1961	
711	21188	AIRCRAFT POWER CHECK FAC	NBY30316	19610101	SY	0	223	90	0	$51,775	$267,780	1961	1978
	13635	34L CARRIER DECK LTG.		19610101	SY	0	0	0	0	$4,103	$21,545	1961	
601	73075	RECREATION RESTROOMS	SS1	19620201	SF	92	14	6	8	$3,773	$19,359	1962	
599	14187	LIQUID OXYGEN TRANSFER	NBY24700	19600801	SF	884	34	26	9	$75,556	$221,640	1960	1984
	89021	COMPR AIR DIST	NBY36852	19630701		0	0	0	0	$549,112	$734,403	1962	1988
	11110	RUNWAY/3-21	NOY5421	19630501	SY	112,000	4032	250	0	$884,272	$12,133,096	1943	
	11110	RUNWAY/7R25L	NOY5421	19630501	SY	216,696	8280	250	0	$1,329,789	$18,246,035	1943	
	11110	RUNWAY/7L25R	NOY5421	19630501	SY	216,696	8280	250	0	$1,281,289	$17,580,566	1943	
	11110	RUNWAY/34R16L	NOY5421	19630501	SY	275,113	11080	250	0	$2,175,147	$30,110,560	1943	1986
	11110	RUNWAY/34L16R	NOY5421	19630501	SY	309,507	12000	250	0	$1,062,756	$14,582,075	1943	
	87135	RETAINING WALL/WHERRY HSG	NBY43587	19640501	SY	0	2513	0	0	$20,098	$97,576	1964	
1798	74079	RIDING STABLE-PEN SHELTER (1		19631101	SF	2,700	245	20	10	$5,287	$26,424	1963	
A	71144	MAG-16 GROUP COMMANDER	NA	19640501	SF	3,227	75	65	10	$13,250	$183,420	1943	
B	71143	COMMANDING OFFICER QTRS	NA	19640501	SF	2,564	74	62	10	$9,450	$130,816	1943	
	13471	RADIO FREQ/WEATHER TV SYSTEM	NBY43586	19640601	SY	0	0	0	0	$54,250	$263,872	1964	
602	21145	VAN MAINTENANCE SHOP		19640801	SF	4,800	80	60	25	$9,672	$29,585	1964	1985
	13636	SIMULATED CARRIER DECK LTG	NBY57674	19641101	SY	0	0	0	0	$32,170	$156,475	1964	
	87120	CONCRETE GUTTER	NBY61442	19650901	SY	0	0	0	0	$2,438	$11,554	1965	
607	73075	GOLF COURSE RESTROOMS		19651101	SF	92	14	7	8	$1,386	$6,574	1965	
	11340	AIRCRAFT ACCESS APRON	NOY86722	19561201	SY	31,948	0	0	0	$927,291	$3,523,313	1956	1990
	13650	TAXIWAY LIGHTING	NOY86722	19651201	SY	0	0	0	0	$1,045,804	$5,541,662	1951	1990
615	74084	HANDBALL COURTS/4-WALL	NBY61440	19660301	SF	1,743	42	42	20	$31,046	$142,191	1966	
	87210	PERIMETER FENCING		19661001	SY	0	0	0	0	$225,526	$1,352,438	1943	1990
	87215	INTERIOR MISC FENCING		19661001	SY	0	0	0	0	$1,082,758	$2,880,659	1943	1991
605	21105	MAINTENANCE HANGAR	NBY53532	19670201	SF	23,598	162	112	40	$516,892	$2,226,546	1965	1990
606	21105	MAINTENANCE HANGAR	NBY53532	19670201	SF	23,598	162	112	40	$522,427	$2,235,796	1965	1988
616	61010	PW VEH DISPATCH OFFICE	NBY70029	19670201	SF	792	36	22	8	$19,199	$77,975	1966	1989
114	21105	AIRCRAFT MAINTENANCE HANGAR	NBY57700	19660701	SF	25,232	246	112	40	$647,550	$2,742,496	1966	1985

Appendix G
Photolog



View of TAA 605.

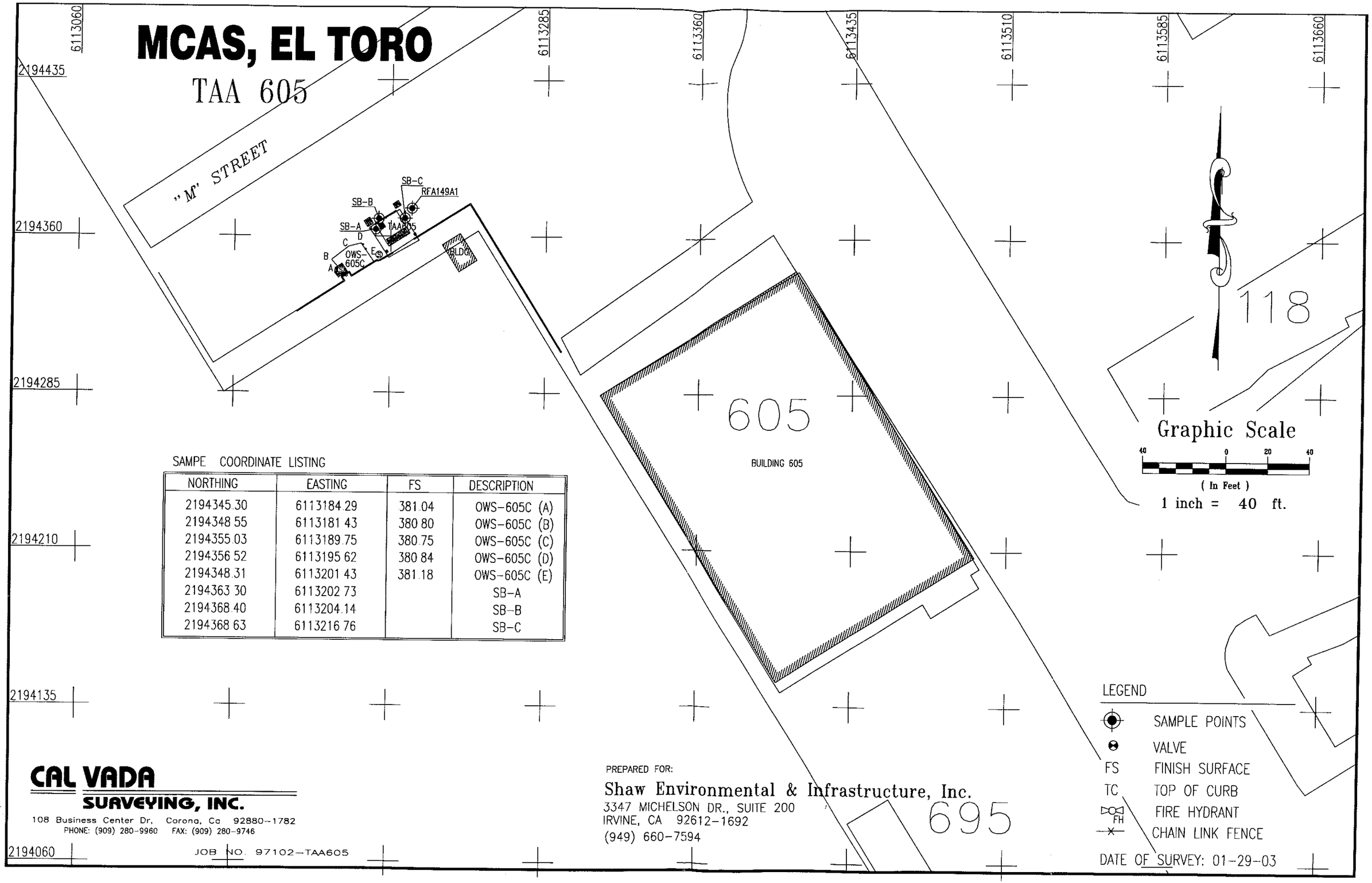


TAA 605 concrete surface, and sump.

Appendix H
Land Survey Data

MCAS, EL TORO

TAA 605



SAMPE COORDINATE LISTING

NORTHING	EASTING	FS	DESCRIPTION
2194345.30	6113184.29	381.04	OWS-605C (A)
2194348.55	6113181.43	380.80	OWS-605C (B)
2194355.03	6113189.75	380.75	OWS-605C (C)
2194356.52	6113195.62	380.84	OWS-605C (D)
2194348.31	6113201.43	381.18	OWS-605C (E)
2194363.30	6113202.73		SB-A
2194368.40	6113204.14		SB-B
2194368.63	6113216.76		SB-C

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

JOB NO. 97102-TAA605

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

Appendix I
Analytical Report

the i group

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

CHAIN-OF-CUSTODY RECORD

PROJECT DATA MANAGER'S COPY

A 15875

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: 03-C154	LABORATORY CONTACT: Ye Mynt	MAIL REPORT (COMPANY NAME): Shaw E&I
PROJECT NAME: MCAS El Toro	PROJECT LOCATION: El Toro, CA	PROJECT NUMBER: 818655	LABORATORY PHONE: 310-618-8889	LABORATORY FAX: 310-618-0818	RECIPIENT NAME: DuWayne Ishida
PROJECT CONTACT: Lynn Jefferson	PROJECT PHONE NUMBER: 949-660-7537	PROJECT FAX: 949-475-5433	LABORATORY ADDRESS: 1835 W. 205th St.		ADDRESS: 3347 Michelson Dr. #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 Rawal	PROJECT MANAGER'S PHONE: 949-660-7576	PROJECT MANAGER'S FAX: 949-474-8309			

Item	Sample Identifier	Matrix	Date 2003	Time	Preserved	# of Cont.	QC Level	T.A.T.	VOC-8260	TPH-8015	TPH-Diesel	SVOC-8270	SVOC-8270	Pesticide-8081	Metals-6010	Comments
1	818655-3232	W	03/27	1030	HCl	2	C	5 DAY	X							
2	818655-3233	S	3/27	1010	4°C	1			X	X	X	X	X	X	X	Sandy Soil, No Fn Cones.
3	818655-3234		3/27	1030		7			X	X	X	X	X	X	X	
4	818655-3235			1110					X	X	X	X	X	X	X	
5	818655-3236			1130			D		X	X	X	X	X	X	X	
6	818655-3237			1350			C		X	X	X	X	X	X	X	
7	818655-3238			1410					X	X	X	X	X	X	X	
8	818655-3239			1435					X	X	X	X	X	X	X	
9	818655-3240	W		1520		8			X	X	X	X		X	X	
10	818655-								PR	03/28/03						

SAMPLES COLLECTED BY: P Reeves

COURIER AND AIR BILL NUMBER: Emax Carrier

COOLER TEMPERATURE UPON RECEIPT:

RELINQUISHED BY	RECEIVED BY	DATE	TIME	SAMPLE'S CONDITION UPON RECEIPT
[signature] 03/28/03 1145 PR	[signature]	3-28-03	1145	

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	X
2) TAA 606 - SB-B @ 18"	X		X	
3) TAA 606 SB-B @ 36"	X		X	
4) TAA 606 SB-C @ 18"	X		X	
5) TAA 606 SB-C @ 36"	X		X	
6) TAA 605 SB-A @ 18"	X		X	
7) TAA 605 SB-A @ 36"	X		X	
8) TAA 605 SB-B @ 18"	X		X	
9) EQUIPMENT RINSATE FOR 03/27/03 SAMPLING	X		X	X
10)				

Comments

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

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 15702

FORM 0019 REV. 9-99

03-C154

IT'S LAB COORDINATOR: Lynn Jefferson	LAB COORDINATOR'S PHONE: 949-660-7537	LAB COORDINATOR'S FAX: 949-475-5433	LABORATORY SERVICE ID: 03-~~C1147~~	LABORATORY CONTACT: Ye Myint	MAIL REPORT (COMPANY NAME): Shaw E&I
PROJECT NAME: MCAS El Toro	PROJECT LOCATION: El Toro, CA	PROJECT NUMBER: 818655	LABORATORY PHONE: 310-618-8889	LABORATORY FAX: 310-618-0818	RECIPIENT NAME: Dwayne Ishida
PROJECT CONTACT: Lynn Jefferson	PROJECT PHONE NUMBER: 949-660-7537	PROJECT FAX: 949-475-5433	LABORATORY ADDRESS: 1835 W. 205th St.		ADDRESS: 3347 Michelson Dr. #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 Rawal	PROJECT MANAGER'S PHONE: 949-660-7576	PROJECT MANAGER'S FAX: 949-474-8309			

Item	Sample Identifier	Matrix	2003 Date	Time	Preserved	# of Cont.	QC Level	T.A.T.	VOC-8260	TPH-Gas	TPH-Diesel	SVOC-8270	SVOC-8270	Pesticide-8081	Metals-6010	Comments
1	818655-3241	S	3/28	0850	4°C	7	3	5 day	X	X	X	X	X	X	X	
2	818655-3242	S	3/28	0900	↓	7	3	↓	X	X	X	X	X	X	X	
3	818655-3243	S	3/28	0925	↓	7	4	↓	X	X	X	X	X	X	X	
4	818655-3244	S	3/28	0935	↓	7	3	↓	X	X	X	X	X	X	X	
5	818655-3245	W	3/28	1045	4°C	9	3	5 day	X	X	X	X	~~X~~	X	X	Hold
6	818655-															
7	818655-															
8	818655-						P8	03	28/03							
9	818655-															
10	818655-															

SAMPLES COLLECTED BY: P Reges

COURIER AND AIR BILL NUMBER: (-MAX CARRIER

COOLER TEMPERATURE UPON RECEIPT:

RELINQUISHED BY	RECEIVED BY	DATE	TIME	SAMPLE'S CONDITION UPON RECEIPT
[illegible signature] 03/28/03 1145 ~~1200~~	Phil Holden	3-28-03	11.45	

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) ~~TAA605~~ SB-B @ 36"	X			
2) ~~TAA605~~ SB-B TAA @ 36" (Dup)	X			X
3) TAA605-SB-C @ 18"	X			
4) TAA605-SB-C @ 36"	X			
5) Equipment Rinsate	X			X
6)				
7)				
8)				
9)				
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: 04-04-2003
EMAX Batch No.: 03C154

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 03/28/03. The data reported include :

Sample ID	Control #	Col Date	Matrix	Analysis
818655-3232	C154-01	03/28/03	WATER	VOLATILE ORGANICS BY GC/MS
818655-3233	C154-02	03/27/03	SOIL	TPH DIESEL
				SEMIVOLATILE ORGANICS SIM
				SEMIVOLATILE ORGANICS BY GCMS
				MERCURY
				METALS TAL BY ICP
				PESTICIDES ORGANOCHLORINE
				TPH GASOLINE
				VOLATILE ORGANICS BY GC/MS
818655-3234	C154-03	03/27/03	SOIL	TPH DIESEL
				SEMIVOLATILE ORGANICS SIM
				SEMIVOLATILE ORGANICS BY GCMS
				MERCURY
				METALS TAL BY ICP
				PESTICIDES ORGANOCHLORINE
				TPH GASOLINE
				VOLATILE ORGANICS BY GC/MS
818655-3235	C154-04	03/27/03	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
818655-3236	C154-05	03/27/03	SOIL	TPH DIESEL
				SEMIVOLATILE ORGANICS SIM
				SEMIVOLATILE ORGANICS BY GCMS
				MERCURY
				METALS TAL BY ICP
				PESTICIDES ORGANOCHLORINE
				TPH GASOLINE
				VOLATILE ORGANICS BY GC/MS
818655-3237	C154-06	03/27/03	SOIL	TPH DIESEL
				SEMIVOLATILE ORGANICS SIM
				SEMIVOLATILE ORGANICS BY GCMS
				MERCURY
				METALS TAL BY ICP
				PESTICIDES ORGANOCHLORINE
				TPH GASOLINE
				VOLATILE ORGANICS BY GC/MS
818655-3238	C154-07	03/27/03	SOIL	TPH DIESEL
				SEMIVOLATILE ORGANICS SIM
				SEMIVOLATILE ORGANICS BY GCMS
				MERCURY
				METALS TAL BY ICP
				PESTICIDES ORGANOCHLORINE
				TPH GASOLINE
				VOLATILE ORGANICS BY GC/MS
818655-3239	C154-08	03/27/03	SOIL	TPH DIESEL
				SEMIVOLATILE ORGANICS SIM
				SEMIVOLATILE ORGANICS BY GCMS
				MERCURY
				METALS TAL BY ICP
				PESTICIDES ORGANOCHLORINE
				TPH GASOLINE
				VOLATILE ORGANICS BY GC/MS
818655-3240	C154-09	03/27/03	WATER	VOLATILE ORGANICS BY GC/MS
				TPH GASOLINE
				TPH DIESEL

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
				SEMIVOLATILE ORGANICS BY GCMS
				PESTICIDES ORGANOCHLORINE
				METALS TAL BY ICP
				MERCURY
818655-3241	C154-10	03/28/03	SOIL	TPH DIESEL
				SEMIVOLATILE ORGANICS SIM
				SEMIVOLATILE ORGANICS BY GCMS
				MERCURY
				METALS TAL BY ICP
				PESTICIDES ORGANOCHLORINE
				TPH GASOLINE
				VOLATILE ORGANICS BY GC/MS
818655-3242	C154-11	03/28/03	SOIL	TPH DIESEL
				SEMIVOLATILE ORGANICS SIM
				SEMIVOLATILE ORGANICS BY GCMS
				MERCURY
				METALS TAL BY ICP
				PESTICIDES ORGANOCHLORINE
				TPH GASOLINE
				VOLATILE ORGANICS BY GC/MS
818655-3243	C154-12	03/28/03	SOIL	TPH DIESEL
				SEMIVOLATILE ORGANICS SIM
				SEMIVOLATILE ORGANICS BY GCMS
				MERCURY
				METALS TAL BY ICP
				PESTICIDES ORGANOCHLORINE
				TPH GASOLINE
				VOLATILE ORGANICS BY GC/MS
818655-3244	C154-13	03/28/03	SOIL	TPH DIESEL
				SEMIVOLATILE ORGANICS SIM
				SEMIVOLATILE ORGANICS BY GCMS
				MERCURY
				METALS TAL BY ICP
				PESTICIDES ORGANOCHLORINE
				TPH GASOLINE
				VOLATILE ORGANICS BY GC/MS
818655-3245	C154-14	03/28/03	WATER	HOLD

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

CA LUFT/M8015
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client : SHAW E&I
Project : EL TORO, CTO 0024
Batch No. : 03C154

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	DSC010SB	ND	105	96	1	NA	10	4	03/31/0313:43	03/31/0312:30	TC31003A	TC31002A	DSC010S	NA	03/31/03
LCS1S	DSC010SL	482	119	100	1	NA	10	4	03/31/0314:24	03/31/0312:30	TC31004A	TC31002A	DSC010S	NA	03/31/03
818655-3233	C154-02	ND	105	97	1	11.4	11	4.5	03/31/0315:05	03/31/0312:30	TC31005A	TC31002A	DSC010S	03/27/03	03/28/03
818655-3234	C154-03	ND	107	100	1	10.2	11	4.5	03/31/0315:47	03/31/0312:30	TC31006A	TC31002A	DSC010S	03/27/03	03/28/03
818655-3235	C154-04	ND	106	100	1	21.3	13	5.1	03/31/0316:28	03/31/0312:30	TC31007A	TC31002A	DSC010S	03/27/03	03/28/03
818655-3236	C154-05	ND	109	102	1	4.0	10	4.2	03/31/0317:09	03/31/0312:30	TC31008A	TC31002A	DSC010S	03/27/03	03/28/03
818655-3237	C154-06	ND	107	100	1	6.8	11	4.3	03/31/0317:51	03/31/0312:30	TC31009A	TC31002A	DSC010S	03/27/03	03/28/03
818655-3238	C154-07	ND	106	101	1	17.0	12	4.8	03/31/0318:32	03/31/0312:30	TC31010A	TC31002A	DSC010S	03/27/03	03/28/03
818655-3239	C154-08	ND	109	101	1	9.1	11	4.4	03/31/0319:13	03/31/0312:30	TC31011A	TC31002A	DSC010S	03/27/03	03/28/03
818655-3241	C154-10	ND	106	102	1	5.8	11	4.2	03/31/0319:54	03/31/0312:30	TC31012A	TC31002A	DSC010S	03/28/03	03/28/03
818655-3242	C154-11	ND	108	102	1	13.3	12	4.6	03/31/0321:17	03/31/0312:30	TC31014A	TC31013A	DSC010S	03/28/03	03/28/03
818655-3243	C154-12	ND	111	106	1	8.4	11	4.4	03/31/0321:58	03/31/0312:30	TC31015A	TC31013A	DSC010S	03/28/03	03/28/03
818655-3244	C154-13	ND	108	102	1	15.9	12	4.8	03/31/0322:40	03/31/0312:30	TC31016A	TC31013A	DSC010S	03/28/03	03/28/03
818655-3244MS	C154-13M	581	124	108	1	15.9	11.9	4.76	03/31/0323:21	03/31/0312:30	TC31017A	TC31013A	DSC010S	03/28/03	03/28/03
818655-3244MSD	C154-13S	594	122	108	1	15.9	11.9	4.76	04/01/0300:02	03/31/0312:30	TC31018A	TC31013A	DSC010S	03/28/03	03/28/03

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. : 03C154

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	DSC011WB	ND	90	102	1	NA	.1	.1	04/01/0312:55	04/01/0311:30	TD01003A	TD01002A	DSC011W	NA	04/01/03
LCS1W	DSC011WL	4.88	110	106	1	NA	.1	.1	04/01/0313:37	04/01/0311:30	TD01004A	TD01002A	DSC011W	NA	04/01/03
LCD1W	DSC011WC	4.77	103	105	1	NA	.1	.1	04/01/0314:18	04/01/0311:30	TD01005A	TD01002A	DSC011W	NA	04/01/03
818655-3240	C154-09	ND	89	108	1	NA	.1	.1	04/01/0316:22	04/01/0311:30	TD01008A	TD01002A	DSC011W	03/27/03	03/28/03

RL : Reporting Limit
SURR1 : Bromobenzene
SURR2 : Hexacosane

Parameter	H-C Range
Diesel	C10-C38

5004

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
BATCH NO.: 03C154
METHOD: METHOD 3520C/M8015

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	DSC011WB	DSC011WL	DSC011WC		
LAB FILE ID:	TD01003A	TD01004A	TD01005A		
DATE EXTRACTED:	04/01/0311:30	04/01/0311:30	04/01/0311:30	DATE COLLECTED:	NA
DATE ANALYZED:	04/01/0312:55	04/01/0313:37	04/01/0314:18	DATE RECEIVED:	04/01/03
PREP. BATCH:	DSC011W	DSC011W	DSC011W		
CALIB. REF:	TD01002A	TD01002A	TD01002A		

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	4.88	98	5	4.77	95	2	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	1.1	110	1	1.03	103	50-150
Hexacosane	.25	.266	106	.25	.262	105	40-160

EMAX QUALITY CONTROL DATA
LCS ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
BATCH NO.: 03C154
METHOD: CA LUFT/M8015

MATRIX:	SOIL		% MOISTURE:	NA
DILUTION FACTOR:	1	1		
SAMPLE ID:	MBLK1S			
LAB SAMP ID:	DSC010SB	DSC010SL		
LAB FILE ID:	TC31003A	TC31004A		
DATE EXTRACTED:	03/31/0312:30	03/31/0312:30	DATE COLLECTED:	NA
DATE ANALYZED:	03/31/0313:43	03/31/0314:24	DATE RECEIVED:	03/31/03
PREP. BATCH:	DSC010S	DSC010S		
CALIB. REF:	TC31002A	TC31002A		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	QC LIMIT (%)
Diesel	ND	500	482	96	65-135

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	QC LIMIT (%)
Bromobenzene	100	119	119	50-150
Hexacosane	25	24.9	100	30-160

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
BATCH NO.: 03C154
METHOD: CA LUFT/M8015

MATRIX:	SOIL			% MOISTURE:	15.9
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	818655-3244				
LAB SAMP ID:	C154-13	C154-13M	C154-13S		
LAB FILE ID:	TC31016A	TC31017A	TC31018A		
DATE EXTRACTED:	03/31/0312:30	03/31/0312:30	03/31/0312:30	DATE COLLECTED:	03/28/03
DATE ANALYZED:	03/31/0322:40	03/31/0323:21	04/01/0300:02	DATE RECEIVED:	03/28/03
PREP. BATCH:	DSC010S	DSC010S	DSC010S		
CALIB. REF:	TC31013A	TC31013A	TC31013A		

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 (%)
Diesel	ND	595	581	98	595	594	100	2	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 (%)
Bromobenzene	119	148	124	119	145	122	45-165
Hexacosane	29.7	32.1	108	29.7	32	108	27-176

METHOD 5035/M8015
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client : SHAW E&I
Project : EL TORO, CTO 0024
Batch No. : 03C154

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	VM39C24B	ND	88	1	NA	10	.524	03/28/0321:57	03/28/0321:57	EC28017A	EC28013A	VM39C24	NA	03/28/03
LCS1S	VM39C24L	31.9	122	1	NA	10	.524	03/28/0322:31	03/28/0322:31	EC28018A	EC28013A	VM39C24	NA	03/28/03
LCD1S	VM39C24C	28.3	88	1	NA	10	.524	03/28/0323:05	03/28/0323:05	EC28019A	EC28013A	VM39C24	NA	03/28/03
818655-3233	C154-02	ND	88	1	11.4	11	.59	03/29/0300:47	03/29/0300:47	EC28022A	EC28013A	VM39C24	03/27/03	03/28/03
818655-3234	C154-03	ND	88	0.81	10.2	9	.47	03/29/0301:21	03/29/0301:21	EC28023A	EC28013A	VM39C24	03/27/03	03/28/03
818655-3235	C154-04	ND	76	0.89	21.3	11	.59	03/29/0301:55	03/29/0301:55	EC28024A	EC28013A	VM39C24	03/27/03	03/28/03
818655-3236	C154-05	ND	85	0.82	4.0	8.5	.45	03/29/0303:37	03/29/0303:37	EC28027A	EC28013A	VM39C24	03/27/03	03/28/03
818655-3237	C154-06	ND	90	0.96	6.8	10	.54	03/29/0304:11	03/29/0304:11	EC28028A	EC28013A	VM39C24	03/27/03	03/28/03
818655-3238	C154-07	ND	82	0.88	17.0	11	.56	03/29/0304:45	03/29/0304:45	EC28029A	EC28013A	VM39C24	03/27/03	03/28/03
818655-3239	C154-08	ND	85	0.91	9.1	10	.52	03/29/0307:01	03/29/0307:01	EC28033A	EC28030A	VM39C24	03/27/03	03/28/03
818655-3241	C154-10	ND	86	0.96	5.8	10	.53	03/29/0307:35	03/29/0307:35	EC28034A	EC28030A	VM39C24	03/28/03	03/28/03
818655-3242	C154-11	ND	84	0.86	13.3	9.9	.52	03/29/0308:09	03/29/0308:09	EC28035A	EC28030A	VM39C24	03/28/03	03/28/03
818655-3243	C154-12	ND	85	0.96	8.4	10	.55	03/29/0311:33	03/29/0311:33	EC28041A	EC28030A	VM39C24	03/28/03	03/28/03
818655-3244	C154-13	ND	87	1.02	15.9	12	.64	03/29/0312:07	03/29/0312:07	EC28042A	EC28030A	VM39C24	03/28/03	03/28/03

RL : Reporting Limit
Methanol Extraction: 03/28/03 17:30 (VM39C24)

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

Client : SHAW E&I
Project : EL TORO, CTO 0024
Batch No. : 03C154

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	VA39C23B	ND	87	1	NA	.1	.005	03/28/0313:58	03/28/0313:58	EC28003A	EC28002A	VA39C23	NA	03/28/03
LCS1W	VA39C23L	.474	99	1	NA	.1	.005	03/28/0314:33	03/28/0314:33	EC28004A	EC28002A	VA39C23	NA	03/28/03
LCD1W	VA39C23C	.485	100	1	NA	.1	.005	03/28/0315:07	03/28/0315:07	EC28005A	EC28002A	VA39C23	NA	03/28/03
818655-3240	C154-09	ND	92	1	NA	.1	.005	03/28/0318:32	03/28/0318:32	EC28011A	EC28002A	VA39C23	03/27/03	03/28/03

RL : Reporting Limit

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
BATCH NO.: 03C154
METHOD: METHOD 5030B/M8015

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	VA39C23B	VA39C23L	VA39C23C		
LAB FILE ID:	EC28003A	EC28004A	EC28005A		
DATE EXTRACTED:	03/28/0313:58	03/28/0314:33	03/28/0315:07	DATE COLLECTED:	NA
DATE ANALYZED:	03/28/0313:58	03/28/0314:33	03/28/0315:07	DATE RECEIVED:	03/28/03
PREP. BATCH:	VA39C23	VA39C23	VA39C23		
CALIB. REF:	EC28002A	EC28002A	EC28002A		

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 RP (%)
Gasoline	ND	.55	.474	86	.55	.485	88	2	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	.04	.0396	99	.04	.0401	100	63-154

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
BATCH NO.: 03C154
METHOD: METHOD 5035/M8015

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	VM39C24B	VM39C24L	VM39C24C		
LAB FILE ID:	EC28017A	EC28018A	EC28019A		
DATE EXTRACTED:	03/28/0321:57	03/28/0322:31	03/28/0323:05	DATE COLLECTED:	NA
DATE ANALYZED:	03/28/0321:57	03/28/0322:31	03/28/0323:05	DATE RECEIVED:	03/28/03
PREP. BATCH:	VM39C24	VM39C24	VM39C24		
CALIB. REF:	EC28013A	EC28013A	EC28013A		

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 (%)
Gasoline	ND	27.5	31.9	116	27.5	28.3	103	12	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 (%)
Bromofluorobenzene	2	2.43	122	2	1.76	88	63-154

SW3550B/8081A
PESTICIDES

Client : SHAW E&I	Date Collected: 03/27/03
Project : EL TORO, CTO 0024	Date Received: 03/28/03
Batch No. : 03C154	Date Extracted: 03/31/03 14:30
Sample ID: 818655-3237	Date Analyzed: 04/01/03 21:35
Lab Samp ID: C154-06	Dilution Factor: 1
Lab File ID: WD01013A	Matrix : SOIL
Ext Btch ID: CPC015S	% Moisture : 6.8
Calib. Ref.: WD01003A	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	.00054 | .00054
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	.00054 | .00054
ENDRIN	ND | (ND)	.0032	.0011 | .0011
4,4'-DDD	ND | (ND)	.0043	.0011 | .0011
ENDOSULFAN II	ND | (ND)	.0043	.00054 | .00054
4,4'-DDT	ND | (ND)	.0043	.0011 | .0011
ENDRIN ALDEHYDE	ND | (ND)	.0043	.00054 | .00054
ENDOSULFAN SULFATE	ND | (ND)	.0043	.00054 | .00054
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	68 | (69)	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:	03/27/03
Project	: EL TORO, CTO 0024	Date Received:	03/28/03
Batch No.	: 03C154	Date Extracted:	03/31/03 14:30
Sample ID:	818655-3238	Date Analyzed:	04/01/03 22:00
Lab Samp ID:	C154-07	Dilution Factor:	1
Lab File ID:	WD01014A	Matrix :	SOIL
Ext Btch ID:	CPC015S	% Moisture :	17.0
Calib. Ref.:	WD01003A	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	.0006 | .0006
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)	.0048	.0012 | .0012
4,4'-DDE	ND | (ND)	.0048	.0012 | .0012
DIELDRIN	ND | (ND)	.0048	.0006 | .0006
ENDRIN	ND | (ND)	.0036	.0012 | .0012
4,4'-DDD	ND | (ND)	.0048	.0012 | .0012
ENDOSULFAN II	ND | (ND)	.0048	.0006 | .0006
4,4'-DDT	ND | (ND)	.0048	.0012 | .0012
ENDRIN ALDEHYDE	ND | (ND)	.0048	.0006 | .0006
ENDOSULFAN SULFATE	ND | (ND)	.0048	.0006 | .0006
ENDRIN KETONE	ND | (ND)	.0036	.0012 | .0012
METHOXYCHLOR	ND | (ND)	.024	.0048 | .0048
TOXAPHENE	ND | (ND)	.12	.0096 | .0096

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
TETRACHLORO-M-XYLENE	69 | (70)	35-135
DECACHLOROBIPHENYL	77 | (76)	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:	03/27/03
Project	: EL TORO, CTO 0024	Date Received:	03/28/03
tch No.	: 03C154	Date Extracted:	03/31/03 14:30
mple ID:	818655-3239	Date Analyzed:	04/01/03 22:26
Lab Samp ID:	C154-08	Dilution Factor:	1
Lab File ID:	WD01015A	Matrix :	SOIL
Ext Btch ID:	CPC015S	% Moisture :	9.1
Calib. Ref.:	WD01003A	Instrument ID :	GCT016

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
ALPHA-BHC	ND | (ND)	.0022	.00022 | .00022
GAMMA-BHC (LINDANE)	ND | (ND)	.0022	.00022 | .00022
BETA-BHC	ND | (ND)	.0022	.00022 | .00022
HEPTACHLOR	ND | (ND)	.0022	.0011 | .0011
DELTA-BHC	ND | (ND)	.0022	.00022 | .00022
ALDRIN	ND | (ND)	.0022	.00055 | .00055
HEPTACHLOR EPOXIDE	ND | (ND)	.0022	.00022 | .00022
GAMMA-CHLORDANE	ND | (ND)	.0022	.00022 | .00022
ALPHA-CHLORDANE	ND | (ND)	.0022	.00022 | .00022
ENDOSULFAN I	ND | (ND)	.0044	.0011 | .0011
4,4'-DDE	ND | (ND)	.0044	.0011 | .0011
DIELDRIN	ND | (ND)	.0044	.00055 | .00055
ENDRIN	ND | (ND)	.0033	.0011 | .0011
4,4'-DDD	ND | (ND)	.0044	.0011 | .0011
ENDOSULFAN II	ND | (ND)	.0044	.00055 | .00055
4,4'-DDT	ND | (ND)	.0044	.0011 | .0011
ENDRIN ALDEHYDE	ND | (ND)	.0044	.00055 | .00055
ENDOSULFAN SULFATE	ND | (ND)	.0044	.00055 | .00055
ENDRIN KETONE	ND | (ND)	.0033	.0011 | .0011
THOXYCHLOR	ND | (ND)	.022	.0044 | .0044
OXAPHENE	ND | (ND)	.11	.0088 | .0088

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
TETRACHLORO-M-XYLENE	83 | (82)	35-135
DECACHLOROBIPHENYL	78 | (79)	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:	03/28/03
Project	: EL TORO, CTO 0024	Date Received:	03/28/03
Batch No.	: 03C154	Date Extracted:	03/31/03 14:30
Sample ID:	818655-3241	Date Analyzed:	04/01/03 22:51
Lab Samp ID:	C154-10	Dilution Factor:	1
Lab File ID:	WD01016A	Matrix :	SOIL
Ext Btch ID:	CPC015S	% Moisture :	5.8
Calib. Ref.:	WD01003A	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	.0085 | .0085

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
TETRACHLORO-M-XYLENE	72 | (72)	35-135
DECACHLOROBIPHENYL	78 | (79)	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:	03/28/03
Project	: EL TORO, CTO 0024	Date Received:	03/28/03
Batch No.	: 03C154	Date Extracted:	03/31/03 14:30
Sample ID:	818655-3242	Date Analyzed:	04/01/03 23:17
Lab Samp ID:	C154-11	Dilution Factor:	1
Lab File ID:	WD01017A	Matrix :	SOIL
Ext Btch ID:	CPC015S	% Moisture :	13.3
Calib. Ref.:	WD01003A	Instrument ID :	GCT016

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
ALPHA-BHC	ND | (ND)	.0023	.00023 | .00023
GAMMA-BHC (LINDANE)	ND | (ND)	.0023	.00023 | .00023
BETA-BHC	ND | (ND)	.0023	.00023 | .00023
HEPTACHLOR	ND | (ND)	.0023	.0012 | .0012
DELTA-BHC	ND | (ND)	.0023	.00023 | .00023
ALDRIN	ND | (ND)	.0023	.00058 | .00058
HEPTACHLOR EPOXIDE	ND | (ND)	.0023	.00023 | .00023
GAMMA-CHLORDANE	ND | (ND)	.0023	.00023 | .00023
ALPHA-CHLORDANE	ND | (ND)	.0023	.00023 | .00023
ENDOSULFAN I	ND | (ND)	.0046	.0012 | .0012
4,4'-DDE	ND | (ND)	.0046	.0012 | .0012
DIELDRIN	ND | (ND)	.0046	.00058 | .00058
ENDRIN	ND | (ND)	.0035	.0012 | .0012
4,4'-DDD	ND | (ND)	.0046	.0012 | .0012
ENDOSULFAN II	ND | (ND)	.0046	.00058 | .00058
4,4'-DDT	ND | (ND)	.0046	.0012 | .0012
ENDRIN ALDEHYDE	ND | (ND)	.0046	.00058 | .00058
ENDOSULFAN SULFATE	ND | (ND)	.0046	.00058 | .00058
ENDRIN KETONE	ND | (ND)	.0035	.0012 | .0012
METHOXYCHLOR	ND | (ND)	.023	.0046 | .0046
TOXAPHENE	ND | (ND)	.12	.0092 | .0092

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
TETRACHLORO-M-XYLENE	82 | (80)	35-135
DECACHLOROBIPHENYL	83 | (82)	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:	03/28/03
Project	: EL TORO, CTO 0024	Date Received:	03/28/03
Batch No.	: 03C154	Date Extracted:	03/31/03 14:30
Sample ID:	818655-3243	Date Analyzed:	04/01/03 23:42
Lab Samp ID:	C154-12	Dilution Factor:	1
Lab File ID:	WD01018A	Matrix :	SOIL
Ext Btch ID:	CPC015S	% Moisture :	8.4
Calib. Ref.:	WD01003A	Instrument ID :	GCT016

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
ALPHA-BHC	ND | (ND)	.0022	.00022 | .00022
GAMMA-BHC (LINDANE)	ND | (ND)	.0022	.00022 | .00022
BETA-BHC	ND | (ND)	.0022	.00022 | .00022
HEPTACHLOR	ND | (ND)	.0022	.0011 | .0011
DELTA-BHC	ND | (ND)	.0022	.00022 | .00022
ALDRIN	ND | (ND)	.0022	.00055 | .00055
HEPTACHLOR EPOXIDE	ND | (ND)	.0022	.00022 | .00022
GAMMA-CHLORDANE	ND | (ND)	.0022	.00022 | .00022
ALPHA-CHLORDANE	ND | (ND)	.0022	.00022 | .00022
ENDOSULFAN I	ND | (ND)	.0044	.0011 | .0011
4,4'-DDE	ND | (ND)	.0044	.0011 | .0011
DIELDRIN	ND | (ND)	.0044	.00055 | .00055
ENDRIN	ND | (ND)	.0033	.0011 | .0011
4,4'-DDD	ND | (ND)	.0044	.0011 | .0011
ENDOSULFAN II	ND | (ND)	.0044	.00055 | .00055
4,4'-DDT	ND | (ND)	.0044	.0011 | .0011
ENDRIN ALDEHYDE	ND | (ND)	.0044	.00055 | .00055
ENDOSULFAN SULFATE	ND | (ND)	.0044	.00055 | .00055
ENDRIN KETONE	ND | (ND)	.0033	.0011 | .0011
METHOXYCHLOR	ND | (ND)	.022	.0044 | .0044
TOXAPHENE	ND | (ND)	.11	.0087 | .0087

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
TETRACHLORO-M-XYLENE	84 | (84)	35-135
DECACHLOROBIPHENYL	80 | (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: 03/28/03
Project : EL TORO, CTO 0024	Date Received: 03/28/03
Batch No. : 03C154	Date Extracted: 03/31/03 14:30
Sample ID: 818655-3244	Date Analyzed: 04/02/03 00:07
Lab Samp ID: C154-13	Dilution Factor: 1
Lab File ID: WD01019A	Matrix : SOIL
Ext Btch ID: CPC015S	% Moisture : 15.9
Calib. Ref.: WD01003A	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	.00059 | .00059
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)	.0048	.0012 | .0012
4,4'-DDE	ND | (ND)	.0048	.0012 | .0012
DIELDRIN	ND | (ND)	.0048	.00059 | .00059
ENDRIN	ND | (ND)	.0036	.0012 | .0012
4,4'-DDD	ND | (ND)	.0048	.0012 | .0012
ENDOSULFAN II	ND | (ND)	.0048	.00059 | .00059
4,4'-DDT	ND | (ND)	.0048	.0012 | .0012
ENDRIN ALDEHYDE	ND | (ND)	.0048	.00059 | .00059
ENDOSULFAN SULFATE	ND | (ND)	.0048	.00059 | .00059
ENDRIN KETONE	ND | (ND)	.0036	.0012 | .0012
METHOXYCHLOR	ND | (ND)	.024	.0048 | .0048
TOXAPHENE	ND | (ND)	.12	.0095 | .0095

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
TETRACHLORO-M-XYLENE	77 | (77)	35-135
DECACHLOROBIPHENYL	82 | (80)	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:	03/27/03
Project	: EL TORO, CTO 0024	Date Received:	03/28/03
Batch No.	: 03C154	Date Extracted:	04/01/03 11:30
Sample ID:	818655-3240	Date Analyzed:	04/02/03 12:49
Lab Samp ID:	C154-09	Dilution Factor:	.94
Lab File ID:	WD01049A	Matrix :	WATER
Ext Btch ID:	CPC016W	% Moisture :	NA
Calib. Ref.:	WD01029A	Instrument ID :	GCT016

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ALPHA-BHC	ND | (ND)	.094	.0094 | .0094
GAMMA-BHC (LINDANE)	ND | (ND)	.094	.0094 | .0094
BETA-BHC	ND | (ND)	.094	.0094 | .0094
HEPTACHLOR	ND | (ND)	.094	.0094 | .0094
DELTA-BHC	ND | (ND)	.094	.0094 | .0094
ALDRIN	ND | (ND)	.094	.0094 | .0094
HEPTACHLOR EPOXIDE	ND | (ND)	.094	.0094 | .0094
GAMMA-CHLORDANE	ND | (ND)	.094	.0094 | .0094
ALPHA-CHLORDANE	ND | (ND)	.094	.0094 | .0094
ENDOSULFAN I	ND | (ND)	.094	.028 | .028
4,4'-DDE	ND | (ND)	.19	.028 | .028
DIELDRIN	ND | (ND)	.19	.094 | .094
ENDRIN	ND | (ND)	.094	.0094 | .0094
4,4'-DDD	ND | (ND)	.19	.028 | .028
ENDOSULFAN II	ND | (ND)	.19	.0094 | .0094
4,4'-DDT	ND | (ND)	.19	.019 | .019
ENDRIN ALDEHYDE	ND | (ND)	.19	.0094 | .0094
ENDOSULFAN SULFATE	ND | (ND)	.19	.0094 | .0094
ENDRIN KETONE	ND | (ND)	.094	.0094 | .0094
METHOXYCHLOR	ND | (ND)	.94	.094 | .094
TOXAPHENE	ND | (ND)	2.8	1.2 | 1.2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
TETRACHLORO-M-XYLENE	84 | (82)	45-125
DECACHLOROBIPHENYL	96 | (91)	34-133

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:	04/01/03
Batch No.	: 03C154	Date Extracted:	04/01/03 11:30
Sample ID:	M8LK1W	Date Analyzed:	04/02/03 01:24
Lab Samp ID:	CPC016WB	Dilution Factor:	1
Lab File ID:	WD01022A	Matrix :	WATER
Ext Btch ID:	CPC016W	% Moisture :	NA
Calib. Ref.:	WD01003A	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	81|(81)	45-125
DECACHLOROBIPHENYL	92|(89)	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/LCD ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
BATCH NO.: 03C154
METHOD: SW3520C/8081A

MATRIX: WATER
% MOISTURE: NA

DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	CPC016WB	CPC016WL	CPC016WC		
LAB FILE ID:	WD01022A	WD01023A	WD01024A		
DATE EXTRACTED:	04/01/0311:30	04/01/0311:30	04/01/0311:30	DATE COLLECTED:	NA
DATE ANALYZED:	04/02/0301:24	04/02/0301:49	04/02/0302:14	DATE RECEIVED:	04/01/03
PREP. BATCH:	CPC016W	CPC016W	CPC016W		
CALIB. REF:	WD01003A	WD01003A	WD01003A		

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	.222 (.204)	111 (102)	.2	.152 (.124)	(76) 62*	37* (49*)	75-125	30
gamma-BHC (Lindane)	ND (ND)	.2	.222 (.212)	111 (106)	.2	.143 (.14)	72* (70*)	43* (41*)	73-125	30
beta-BHC	ND (ND)	.2	.237 (.221)	118 (110)	.2	.186 (.177)	93 (88)	24 (22)	51-125	30
Heptachlor	ND (ND)	.2	.244 (.23)	122 (115)	.2	.159 (.191)	79 (96)	42* (19)	45-128	30
delta-BHC	ND (ND)	.2	.241 (.199)	120 (100)	.2	.186 (.163)	93 (82)	26 (20)	75-126	30
Aldrin	ND (ND)	.2	.223 (.198)	112 (99)	.2	.148 (.159)	74 (79)	40* (22)	47-125	30
Heptachlor Epoxide	ND (ND)	.2	.224 (.208)	112 (104)	.2	.193 (.163)	96 (82)	15 (24)	53-134	30
gamma-Chlordane	ND (ND)	.2	.234 (.212)	117 (106)	.2	.182 (.165)	91 (82)	25 (25)	41-125	30
alpha-Chlordane	ND (ND)	.2	.228 (.209)	114 (104)	.2	.178 (.167)	89 (84)	25 (22)	41-125	30
Endosulfan I	ND (ND)	.2	.302 (.236)	151* (118)	.2	.209 (.182)	104 (91)	36* (26)	49-143	30
4,4'-DDE	ND (ND)	.4	.393 (.468)	98 (117)	.4	.357 (.385)	89 (96)	10 (19)	45-139	30
Dieldrin	ND (ND)	.4	.433 (.424)	108 (106)	.4	.356 (.347)	89 (87)	20 (20)	42-132	30
Endrin	ND (ND)	.4	.465 (.428)	116 (107)	.4	.375 (.347)	94 (87)	21 (21)	43-134	30
4,4'-DDD	ND (ND)	.4	.507 (.473)	127 (118)	.4	.454 (.425)	114 (106)	11 (11)	48-136	30
Endosulfan II	ND (ND)	.4	.485 (.455)	121 (114)	.4	.437 (.406)	109 (101)	10 (11)	75-159	30
4,4'-DDT	ND (ND)	.4	.449 (.45)	112 (112)	.4	.403 (.402)	101 (100)	11 (11)	34-143	30
Endrin Aldehyde	ND (ND)	.4	.553 (.499)	138 (125)	.4	.509 (.456)	127 (114)	8 (9)	75-150	30
Endosulfan Sulfate	ND (ND)	.4	.565 (.481)	141* (120)	.4	.52 (.447)	130 (112)	8 (7)	46-141	30
Endrin Ketone	ND (ND)	.4	.516 (.502)	129 (125)	.4	.486 (.471)	122 (118)	6 (6)	75-150	30
Methoxychlor	ND (ND)	2	2.6 (2.39)	130 (120)	2	2.41 (2.23)	121 (112)	8 (7)	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	.403 (.374)	101 (93)	.4	.237 (.241)	59 (60)	45-125
Decachlorobiphenyl	.8	.963 (.811)	120 (101)	.8	.903 (.77)	115 (96)	34-133

5087

SW3550B/8081A
PESTICIDES

Client	: SHAW E&I	Date Collected:	NA
Project	: EL TORO, CTO 0024	Date Received:	03/31/03
Batch No.	: 03C154	Date Extracted:	03/31/03 14:30
Sample ID:	MBLK1S	Date Analyzed:	04/01/03 19:03
Lab Samp ID:	CPC015SB	Dilution Factor:	1
Lab File ID:	WD01007A	Matrix :	SOIL
Ext Btch ID:	CPC015S	% Moisture :	NA
Calib. Ref.:	WD01003A	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	79 | (81)	35-135
DECACHLOROBIPHENYL	79 | (81)	25-143

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.: 03C154
METHOD: SW3550B/8081A

MATRIX: SOIL % MOISTURE: NA
DILUTION FACTOR: 1 1
SAMPLE ID: MBLK1S
LAB SAMP ID: CPC015SB CPC015SL
LAB FILE ID: WD01007A WD01008A
DATE EXTRACTED: 03/31/0314:30 03/31/0314:30 DATE COLLECTED: NA
DATE ANALYZED: 04/01/0319:03 04/01/0319:28 DATE RECEIVED: 03/31/03
PREP. BATCH: CPC015S CPC015S
CALIB. REF: WD01003A WD01003A

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	QC LIMIT (%)
alpha-BHC	ND | (ND)	.00667	.00671 | (.00637)	101 | (96)	65-135
gamma-BHC (Lindane)	ND | (ND)	.00667	.00668 | (.0066)	100 | (99)	63-130
beta-BHC	ND | (ND)	.00667	.00708 | (.00688)	106 | (103)	41-133
Heptachlor	ND | (ND)	.00667	.00711 | (.00728)	107 | (109)	35-138
delta-BHC	ND | (ND)	.00667	.00684 | (.00619)	103 | (93)	65-136
Aldrin	ND | (ND)	.00667	.00684 | (.00656)	103 | (98)	37-126
Heptachlor Epoxide	ND | (ND)	.00667	.00673 | (.00659)	101 | (99)	43-144
gamma-Chlordane	ND | (ND)	.00667	.0071 | (.00678)	106 | (102)	31-133
alpha-Chlordane	ND | (ND)	.00667	.007 | (.00682)	105 | (102)	31-135
Endosulfan I	ND | (ND)	.00667	.00875 | (.00726)	131 | (109)	39-153
4,4'-DDE	ND | (ND)	.0133	.0112 | (.0145)	84 | (109)	35-149
Dieldrin	ND | (ND)	.0133	.0133 | (.0134)	100 | (101)	32-142
Endrin	ND | (ND)	.0133	.014 | (.0132)	105 | (99)	33-144
4,4'-DDD	ND | (ND)	.0133	.0145 | (.0146)	109 | (110)	38-146
Endosulfan II	ND | (ND)	.0133	.0151 | (.0144)	113 | (108)	65-169
4,4'-DDT	ND | (ND)	.0133	.013 | (.0141)	98 | (106)	25-153
Endrin Aldehyde	ND | (ND)	.0133	.0166 | (.0155)	125 | (116)	65-160
Endosulfan Sulfate	ND | (ND)	.0133	.0159 | (.0151)	119 | (113)	36-151
Endrin Ketone	ND | (ND)	.0133	.0159 | (.0158)	119 | (119)	65-160
Methoxychlor	ND | (ND)	.0667	.0708 | (.0717)	106 | (108)	63-152

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	QC LIMIT (%)
Tetrachloro-m-xylene	.0133	.0116 | (.0118)	87 | (88)	35-135
Decachlorobiphenyl	.0266	.0282 | (.0258)	106 | (96)	25-143

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
BATCH NO.: 03C154
METHOD: SW3550B/8081A

MATRIX:	SOIL			% MOISTURE:	15.9
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	818655-3244				
LAB SAMP ID:	C154-13	C154-13M	C154-13S		
LAB FILE ID:	WD01019A	WD01020A	WD01021A		
DATE EXTRACTED:	03/31/0314:30	03/31/0314:30	03/31/0314:30	DATE COLLECTED:	03/28/03
DATE ANALYZED:	04/02/0300:07	04/02/0300:33	04/02/0300:58	DATE RECEIVED:	03/28/03
PREP. BATCH:	CPC015S	CPC015S	CPC015S		
CALIB. REF:	WD01003A	WD01003A	WD01003A		

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)	.00793	.00624 (.00569)	79 (72)	.00793	.00679 (.00641)	86 (81)	8 (12)	65-135	50
gamma-BHC (Lindane)	ND (ND)	.00793	.00676 (.00649)	85 (82)	.00793	.0072 (.00682)	91 (86)	6 (5)	63-130	50
beta-BHC	ND (ND)	.00793	.00844 (.00786)	106 (99)	.00793	.00901 (.00846)	114 (107)	7 (7)	41-133	50
Heptachlor	ND (ND)	.00793	.00693 (.00722)	87 (91)	.00793	.00765 (.00745)	96 (94)	10 (3)	35-138	50
delta-BHC	ND (ND)	.00793	.00778 (.00686)	98 (86)	.00793	.00859 (.00784)	108 (99)	10 (13)	65-136	50
Aldrin	ND (ND)	.00793	.00687 (.00616)	87 (78)	.00793	.00757 (.00692)	95 (87)	10 (12)	37-126	50
Heptachlor Epoxide	ND (ND)	.00793	.00719 (.00677)	91 (85)	.00793	.00789 (.00728)	99 (92)	9 (7)	43-144	50
gamma-Chlordane	ND (ND)	.00793	.00817 (.00713)	103 (90)	.00793	.00855 (.00767)	108 (97)	5 (7)	31-133	50
alpha-Chlordane	ND (ND)	.00793	.00764 (.00695)	96 (88)	.00793	.00825 (.00762)	104 (96)	8 (9)	31-135	50
Endosulfan I	ND (ND)	.00793	.00973 (.00772)	123 (97)	.00793	.0109 (.00802)	137 (101)	11 (4)	39-153	50
4,4'-DDE	ND (ND)	.0159	.0131 (.0157)	83 (99)	.0159	.0139 (.0166)	88 (105)	6 (6)	35-149	50
Dieldrin	ND (ND)	.0159	.0142 (.0139)	90 (88)	.0159	.0153 (.015)	97 (95)	7 (8)	32-142	50
Endrin	ND (ND)	.0159	.0159 (.0146)	100 (92)	.0159	.0173 (.0158)	109 (100)	8 (8)	33-144	50
4,4'-DDD	ND (ND)	.0159	.0166 (.0156)	105 (98)	.0159	.018 (.0167)	114 (105)	8 (7)	38-146	50
Endosulfan II	ND (ND)	.0159	.016 (.0153)	101 (97)	.0159	.0172 (.0164)	109 (103)	7 (7)	65-169	50
4,4'-DDT	ND (ND)	.0159	.0152 (.0154)	96 (97)	.0159	.0164 (.0164)	103 (103)	8 (6)	25-153	50
Endrin Aldehyde	ND (ND)	.0159	.0181 (.0162)	114 (102)	.0159	.0189 (.0172)	119 (109)	4 (6)	65-160	50
Endosulfan Sulfate	ND (ND)	.0159	.0183 (.0165)	115 (104)	.0159	.0196 (.0175)	124 (110)	7 (6)	36-151	50
Endrin Ketone	ND (ND)	.0159	.0172 (.0167)	109 (105)	.0159	.0183 (.0178)	115 (112)	6 (6)	65-160	50
Methoxychlor	ND (ND)	.0793	.0872 (.083)	110 (105)	.0793	.0926 (.0886)	117 (112)	6 (7)	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	.0159	.0101 (.01)	64 (63)	.0159	.0116 (.0114)	73 (72)	35-135
Decachlorobiphenyl	.0318	.0319 (.0277)	100 (87)	.0318	.0337 (.0288)	106 (91)	25-143

5090

SW 5035/8260B
VOLATILE ORGANICS BY GC/MS

Client	: SHAW E&I	Date Collected:	03/27/03
Project	: EL TORO, CTO 0024	Date Received:	03/28/03
Batch No.	: 03C154	Date Extracted:	04/02/03 00:58
Sample ID:	818655-3237	Date Analyzed:	04/02/03 00:58
Lab Samp ID:	C154-06	Dilution Factor:	.93
Lab File ID:	RDW040	Matrix :	SOIL
Ext Btch ID:	VO06D04	% Moisture :	6.8
Calib. Ref.:	RCW400	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	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	92	70-130
BROMOFLUOROBENZENE	102	70-130
TOLUENE-D8	107	70-130

Preservation Date: 03/28/03 17:30

SW 5035/8260B
VOLATILE ORGANICS BY GC/MS

Client	: SHAW E&I	Date Collected:	03/27/03
Project	: EL TORO, CTO 0024	Date Received:	03/28/03
Batch No.	: 03C154	Date Extracted:	04/02/03 01:35
Sample ID:	818655-3238	Date Analyzed:	04/02/03 01:35
Lab Samp ID:	C154-07	Dilution Factor:	.88
Lab File ID:	RDW041	Matrix :	SOIL
Ext Btch ID:	V006D04	% Moisture :	17.0
Calib. Ref.:	RCW400	Instrument ID :	T-006

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.3	2.1
1,1,2,2-TETRACHLOROETHANE	ND	5.3	2.1
1,1,2-TRICHLOROETHANE	ND	5.3	2.1
1,1-DICHLOROETHANE	ND	5.3	2.1
1,1-DICHLOROETHENE	ND	5.3	2.1
1,2-DICHLOROETHANE	ND	5.3	2.1
1,2-DICHLOROPROPANE	ND	5.3	2.1
2-BUTANONE (MEK)	ND	53	5.3
2-HEXANONE	ND	53	5.3
2-CHLOROETHYLVINYLETHER	ND	53	2.1
4-METHYL-2-PENTANONE (MIBK)	ND	53	5.3
ACETONE	11J	53	5.3
BENZENE	ND	5.3	2.1
BROMODICHLOROMETHANE	ND	5.3	2.1
BROMOFORM	ND	5.3	2.1
BROMOMETHANE	ND	5.3	3.2
CARBON DISULFIDE	ND	5.3	2.1
CARBON TETRACHLORIDE	ND	5.3	2.1
CHLOROBENZENE	ND	5.3	2.1
CHLOROETHANE	ND	5.3	3.2
CHLOROFORM	ND	5.3	2.1
CHLOROMETHANE	ND	5.3	5.3
CIS-1,2-DICHLOROETHENE	ND	5.3	2.1
CIS-1,3-DICHLOROPROPENE	ND	5.3	2.1
DIBROMOCHLOROMETHANE	ND	5.3	2.1
ETHYLBENZENE	ND	5.3	2.1
XYLENE,TOTAL	ND	5.3	3.2
METHYLENE CHLORIDE	ND	5.3	2.1
MTBE	ND	11	2.1
STYRENE	ND	5.3	2.1
TOLUENE	ND	5.3	2.1
TRANS-1,2-DICHLOROETHENE	ND	5.3	2.1
TRANS-1,3-DICHLOROPROPENE	ND	5.3	2.1
TRICHLOROETHENE	ND	5.3	2.1
TETRACHLOROETHENE	ND	5.3	2.1
VINYL ACETATE	ND	53	2.1
VINYL CHLORIDE	ND	5.3	2.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	96	70-130
BROMOFLUOROBENZENE	97	70-130
TOLUENE-D8	117	70-130

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SW 5035/8260B
VOLATILE ORGANICS BY GC/MS

Client	: SHAW E&I	Date Collected:	03/27/03
Project	: EL TORO, CTO 0024	Date Received:	03/28/03
Batch No.	: 03C154	Date Extracted:	04/02/03 02:12
Sample ID:	818655-3239	Date Analyzed:	04/02/03 02:12
Lab Samp ID:	C154-08	Dilution Factor:	.98
Lab File ID:	RDW042	Matrix :	SOIL
Ext Btch ID:	V006D04	% Moisture :	9.1
Calib. Ref.:	RCW400	Instrument ID :	T-006

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.4	2.2
1,1,2,2-TETRACHLOROETHANE	ND	5.4	2.2
1,1,2-TRICHLOROETHANE	ND	5.4	2.2
1,1-DICHLOROETHANE	ND	5.4	2.2
1,1-DICHLOROETHENE	ND	5.4	2.2
1,2-DICHLOROETHANE	ND	5.4	2.2
1,2-DICHLOROPROPANE	ND	5.4	2.2
2-BUTANONE (MEK)	ND	54	5.4
2-HEXANONE	ND	54	5.4
2-CHLOROETHYLVINYLETHER	ND	54	2.2
4-METHYL-2-PENTANONE (MIBK)	ND	54	5.4
ACETONE	12J	54	5.4
BENZENE	ND	5.4	2.2
BROMODICHLOROMETHANE	ND	5.4	2.2
BROMOFORM	ND	5.4	2.2
BROMOMETHANE	ND	5.4	3.2
CARBON DISULFIDE	ND	5.4	2.2
CARBON TETRACHLORIDE	ND	5.4	2.2
CHLOROBENZENE	ND	5.4	2.2
CHLOROETHANE	ND	5.4	3.2
CHLOROFORM	ND	5.4	2.2
CHLOROMETHANE	ND	5.4	5.4
CIS-1,2-DICHLOROETHENE	ND	5.4	2.2
CIS-1,3-DICHLOROPROPENE	ND	5.4	2.2
DIBROMOCHLOROMETHANE	ND	5.4	2.2
ETHYLBENZENE	ND	5.4	2.2
XYLENE,TOTAL	ND	5.4	3.2
METHYLENE CHLORIDE	ND	5.4	2.2
MTBE	ND	11	2.2
STYRENE	ND	5.4	2.2
TOLUENE	ND	5.4	2.2
TRANS-1,2-DICHLOROETHENE	ND	5.4	2.2
TRANS-1,3-DICHLOROPROPENE	ND	5.4	2.2
TRICHLOROETHENE	ND	5.4	2.2
TETRACHLOROETHENE	ND	5.4	2.2
VINYL ACETATE	ND	54	2.2
VINYL CHLORIDE	ND	5.4	2.2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	95	70-130
BROMOFLUOROBENZENE	104	70-130
TOLUENE-D8	114	70-130

Preservation Date: 03/28/03 17:30

SW 5035/8260B
VOLATILE ORGANICS BY GC/MS

Client : SHAW E&I	Date Collected: 03/28/03
Project : EL TORO, CTO 0024	Date Received: 03/28/03
Batch No. : 03C154	Date Extracted: 04/02/03 11:23
Sample ID: 818655-3241	Date Analyzed: 04/02/03 11:23
Lab Samp ID: C154-10	Dilution Factor: .91
Lab File ID: RDW054	Matrix : SOIL
Ext Btch ID: V006D06	% Moisture : 5.8
Calib. Ref.: RCW400	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	ND	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	ND	4.8	1.9
MTBE	ND	9.7	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	93	70-130
BROMOFLUOROBENZENE	105	70-130
TOLUENE-D8	108	70-130

Preservation Date: 03/28/03 17:30

SW 5035/8260B
VOLATILE ORGANICS BY GC/MS

Client	: SHAW E&I	Date Collected:	03/28/03
Project	: EL TORO, CTO 0024	Date Received:	03/28/03
Batch No.	: 03C154	Date Extracted:	04/02/03 12:00
Sample ID:	818655-3242	Date Analyzed:	04/02/03 12:00
Lab Samp ID:	C154-11	Dilution Factor:	.83
Lab File ID:	RDW055	Matrix :	SOIL
Ext Btch ID:	V006D06	% Moisture :	13.3
Calib. Ref.:	RCW400	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	20J	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	ND	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	99	70-130
BROMOFLUOROBENZENE	104	70-130
TOLUENE-D8	111	70-130

Preservation Date: 03/28/03 17:30

SW 5035/8260B
VOLATILE ORGANICS BY GC/MS

Client	: SHAW E&I	Date Collected:	03/28/03
Project	: EL TORO, CTO 0024	Date Received:	03/28/03
Batch No.	: 03C154	Date Extracted:	04/02/03 12:37
Sample ID:	818655-3243	Date Analyzed:	04/02/03 12:37
Lab Samp ID:	C154-12	Dilution Factor:	.96
Lab File ID:	RDW056	Matrix :	SOIL
Ext Btch ID:	V006D06	% Moisture :	8.4
Calib. Ref.:	RCW400	Instrument ID :	T-006

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.2	2.1
1,1,2,2-TETRACHLOROETHANE	ND	5.2	2.1
1,1,2-TRICHLOROETHANE	ND	5.2	2.1
1,1-DICHLOROETHANE	ND	5.2	2.1
1,1-DICHLOROETHENE	ND	5.2	2.1
1,2-DICHLOROETHANE	ND	5.2	2.1
1,2-DICHLOROPROPANE	ND	5.2	2.1
2-BUTANONE (MEK)	ND	52	5.2
2-HEXANONE	ND	52	5.2
2-CHLOROETHYLVINYLETHER	ND	52	2.1
4-METHYL-2-PENTANONE (MIBK)	ND	52	5.2
ACETONE	ND	52	5.2
BENZENE	ND	5.2	2.1
BROMODICHLOROMETHANE	ND	5.2	2.1
BROMOFORM	ND	5.2	2.1
BROMOMETHANE	ND	5.2	3.1
CARBON DISULFIDE	ND	5.2	2.1
CARBON TETRACHLORIDE	ND	5.2	2.1
CHLOROBENZENE	ND	5.2	2.1
CHLOROETHANE	ND	5.2	3.1
CHLOROFORM	ND	5.2	2.1
CHLOROMETHANE	ND	5.2	5.2
CIS-1,2-DICHLOROETHENE	ND	5.2	2.1
CIS-1,3-DICHLOROPROPENE	ND	5.2	2.1
DIBROMOCHLOROMETHANE	ND	5.2	2.1
ETHYLBENZENE	ND	5.2	2.1
XYLENE,TOTAL	ND	5.2	3.1
METHYLENE CHLORIDE	ND	5.2	2.1
MTBE	ND	10	2.1
STYRENE	ND	5.2	2.1
TOLUENE	ND	5.2	2.1
TRANS-1,2-DICHLOROETHENE	ND	5.2	2.1
TRANS-1,3-DICHLOROPROPENE	ND	5.2	2.1
TRICHLOROETHENE	ND	5.2	2.1
TETRACHLOROETHENE	ND	5.2	2.1
VINYL ACETATE	ND	52	2.1
VINYL CHLORIDE	ND	5.2	2.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	93	70-130
BROMOFLUOROBENZENE	102	70-130
TOLUENE-D8	107	70-130

Preservation Date: 03/28/03 17:30

SW 5035/8260B
VOLATILE ORGANICS BY GC/MS

Client : SHAW E&I	Date Collected: 03/28/03
Project : EL TORO, CTO 0024	Date Received: 03/28/03
Batch No. : 03C154	Date Extracted: 04/02/03 13:14
Sample ID: 818655-3244	Date Analyzed: 04/02/03 13:14
Lab Samp ID: C154-13	Dilution Factor: 1.1
Lab File ID: RDW057	Matrix : SOIL
Ext Btch ID: V006D06	% Moisture : 15.9
Calib. Ref.: RCW400	Instrument ID : T-006

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	6.5	2.6
1,1,2,2-TETRACHLOROETHANE	ND	6.5	2.6
1,1,2-TRICHLOROETHANE	ND	6.5	2.6
1,1-DICHLOROETHANE	ND	6.5	2.6
1,1-DICHLOROETHENE	ND	6.5	2.6
1,2-DICHLOROETHANE	ND	6.5	2.6
1,2-DICHLOROPROPANE	ND	6.5	2.6
2-BUTANONE (MEK)	ND	65	6.5
2-HEXANONE	ND	65	6.5
2-CHLOROETHYLVINYLETHER	ND	65	2.6
4-METHYL-2-PENTANONE (MIBK)	ND	65	6.5
ACETONE	11J	65	6.5
BENZENE	ND	6.5	2.6
BROMODICHLOROMETHANE	ND	6.5	2.6
BROMOFORM	ND	6.5	2.6
BROMOMETHANE	ND	6.5	3.9
CARBON DISULFIDE	ND	6.5	2.6
CARBON TETRACHLORIDE	ND	6.5	2.6
CHLOROBENZENE	ND	6.5	2.6
CHLOROETHANE	ND	6.5	3.9
CHLOROFORM	ND	6.5	2.6
CHLOROMETHANE	ND	6.5	6.5
CIS-1,2-DICHLOROETHENE	ND	6.5	2.6
CIS-1,3-DICHLOROPROPENE	ND	6.5	2.6
DIBROMOCHLOROMETHANE	ND	6.5	2.6
ETHYLBENZENE	ND	6.5	2.6
XYLENE,TOTAL	ND	6.5	3.9
METHYLENE CHLORIDE	ND	6.5	2.6
MTBE	ND	13	2.6
STYRENE	ND	6.5	2.6
TOLUENE	ND	6.5	2.6
TRANS-1,2-DICHLOROETHENE	ND	6.5	2.6
TRANS-1,3-DICHLOROPROPENE	ND	6.5	2.6
TRICHLOROETHENE	ND	6.5	2.6
TETRACHLOROETHENE	ND	6.5	2.6
VINYL ACETATE	ND	65	2.6
VINYL CHLORIDE	ND	6.5	2.6

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	96	70-130
BROMOFLUOROBENZENE	103	70-130
TOLUENE-D8	114	70-130

Preservation Date: 03/28/03 17:30

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

Client : SHAW E&I	Date Collected: 03/28/03
Project : EL TORO, CTO 0024	Date Received: 03/28/03
Batch No. : 03C154	Date Extracted: 04/01/03 06:24
Sample ID: 818655-3232	Date Analyzed: 04/01/03 06:24
Lab Samp ID: C154-01	Dilution Factor: 1
Lab File ID: RDW011	Matrix : WATER
Ext Btch ID: V006D02	% Moisture : NA
Calib. Ref.: RCW400	Instrument ID : T-006

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	93	86-118
BROMOFLUOROBENZENE	96	86-115
TOLUENE-D8	106	88-110

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

Client	: SHAW E&I	Date Collected:	03/27/03
Project	: EL TORO, CTO 0024	Date Received:	03/28/03
Batch No.	: 03C154	Date Extracted:	04/01/03 07:01
Sample ID:	818655-3240	Date Analyzed:	04/01/03 07:01
Lab Samp ID:	C154-09	Dilution Factor:	1
Lab File ID:	RDW012	Matrix :	WATER
Ext Btch ID:	V006D02	% Moisture :	NA
Calib. Ref.:	RCW400	Instrument ID :	T-006

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	93	86-118
BROMOFLUOROBENZENE	93	86-115
TOLUENE-D8	108	88-110

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

Client	: SHAW E&I	Date Collected:	NA
Project	: EL TORO, CTO 0024	Date Received:	04/01/03
Batch No.	: 03C154	Date Extracted:	04/01/03 04:35
Sample ID:	MBLK1W	Date Analyzed:	04/01/03 04:35
Lab Samp ID:	V006D02Q	Dilution Factor:	1
Lab File ID:	RDW008	Matrix :	WATER
Ext Btch ID:	V006D02	% Moisture :	NA
Calib. Ref.:	RCW400	Instrument ID :	T-006

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	93	86-118
BROMOFLUOROBENZENE	93	86-115
TOLUENE-D8	106	88-110

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
BATCH NO.: 03C154
METHOD: SW 5030B/8260B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	V006D02Q	V006D02L	V006D02C		
LAB FILE ID:	RDW008	RDW005	RDW006		
DATE EXTRACTED:	04/01/0304:35	04/01/0302:44	04/01/0303:21	DATE COLLECTED:	NA
DATE ANALYZED:	04/01/0304:35	04/01/0302:44	04/01/0303:21	DATE RECEIVED:	04/01/03
PREP. BATCH:	V006D02	V006D02	V006D02		
CALIB. REF:	RCW400	RCW400	RCW400		

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	20	21.7	108	20	20	100	8	75-125	20
Benzene	ND	20	19.6	98	20	19.5	97	1	75-125	20
Chlorobenzene	ND	20	19.3	96	20	19.2	96	0	75-125	20
Toluene	ND	20	19.8	99	20	19.5	97	2	74-125	20
Trichloroethene	ND	20	22.3	111	20	21.9	110	1	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	50	45.6	91	50	45.9	92	86-118
Bromofluorobenzene	50	47.3	95	50	47.1	94	86-115
Toluene-d8	50	52.7	105	50	53.3	107	88-110

SW 5035/8260B
VOLATILE ORGANICS BY GC/MS

Client : SHAW E&I	Date Collected: NA
Project : EL TORO, CTO 0024	Date Received: 04/01/03
Batch No. : 03C154	Date Extracted: 04/01/03 18:13
Sample ID: MBLK1S	Date Analyzed: 04/01/03 18:13
Lab Samp ID: V006D04Q	Dilution Factor: 1
Lab File ID: RDW029	Matrix : SOIL
Ext Btch ID: V006D04	% Moisture : NA
Calib. Ref.: RCW400	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	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	99	70-130
BROMOFLUOROBENZENE	94	70-130
TOLUENE-D8	108	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
BATCH NO.: 03C154
METHOD: SW 5035/8260B

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	V006D04Q	V006D04L	V006D04C		
LAB FILE ID:	RDW029	RDW026	RDW027		
DATE EXTRACTED:	04/01/0318:13	04/01/0316:23	04/01/0317:00	DATE COLLECTED:	NA
DATE ANALYZED:	04/01/0318:13	04/01/0316:23	04/01/0317:00	DATE RECEIVED:	04/01/03
PREP. BATCH:	V006D04	V006D04	V006D04		
CALIB. REF:	RCW400	RCW400	RCW400		

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	20.9	105	20	20.1	100	4	65-135	30
Benzene	ND	20	19.2	96	20	19.3	97	1	65-135	30
Chlorobenzene	ND	20	19.8	99	20	19.2	96	3	65-135	30
Toluene	ND	20	20.5	102	20	20.1	100	2	64-135	30
Trichloroethene	ND	20	22.2	111	20	21.6	108	3	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	48.4	97	50	46.7	93	70-130
Bromofluorobenzene	50	51	102	50	46.6	93	70-130
Toluene-d8	50	53.4	107	50	52.7	105	70-130

SW 5035/8260B
VOLATILE ORGANICS BY GC/MS

Client	: SHAW E&I	Date Collected:	NA
Project	: EL TORO, CTO 0024	Date Received:	04/02/03
Batch No.	: 03C154	Date Extracted:	04/02/03 10:10
Sample ID:	MBLK2S	Date Analyzed:	04/02/03 10:10
Lab Samp ID:	V006D06Q	Dilution Factor:	1
Lab File ID:	RDW052	Matrix :	SOIL
Ext Btch ID:	V006D06	% Moisture :	NA
Calib. Ref.:	RCW400	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	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	89	70-130
BROMOFLUOROBENZENE	100	70-130
TOLUENE-D8	119	70-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
BATCH NO.: 03C154
METHOD: SW 5035/8260B

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2S				
LAB SAMP ID:	V006D06Q	V006D06L	V006D06C		
LAB FILE ID:	RDW052	RDW049	RDW050		
DATE EXTRACTED:	04/02/0310:10	04/02/0308:19	04/02/0308:57	DATE COLLECTED:	NA
DATE ANALYZED:	04/02/0310:10	04/02/0308:19	04/02/0308:57	DATE RECEIVED:	04/02/03
PREP. BATCH:	V006D06	V006D06	V006D06		
CALIB. REF:	RCW400	RCW400	RCW400		

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	22.5	113	20	22.7	114	1	65-135	30
Benzene	ND	20	23.2	116	20	21.6	108	7	65-135	30
Chlorobenzene	ND	20	22	110	20	21.4	107	3	65-135	30
Toluene	ND	20	23.1	115	20	23	115	0	64-135	30
Trichloroethene	ND	20	25.5	127	20	24.5	123	4	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	44.6	89	50	46.5	93	70-130
Bromofluorobenzene	50	48.8	98	50	51.2	102	70-130
Toluene-d8	50	58.4	117	50	57.1	114	70-130

SW 5035/8260B
VOLATILE ORGANICS BY GC/MS

Client	: SHAW E&I	Date Collected:	NA
Project	: EL TORO, CTO 0024	Date Received:	04/02/03
Batch No.	: 03C154	Date Extracted:	04/02/03 10:47
Sample ID:	MBLK3S	Date Analyzed:	04/02/03 10:47
Lab Samp ID:	VPC006SB	Dilution Factor:	1.0
Lab File ID:	RDW053	Matrix :	SOIL
Ext Btch ID:	V006D06	% Moisture :	NA
Calib. Ref.:	RCW400	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	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	91	70-130
BROMOFLUOROBENZENE	96	70-130
TOLUENE-D8	110	70-130

Preservation Date: 03/28/03 17:30

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

Client	: SHAW E&I	Date Collected:	03/27/03
Project	: EL TORO, CTO 0024	Date Received:	03/28/03
Batch No.	: 03C154	Date Extracted:	03/31/03 13:30
Sample ID:	818655-3237	Date Analyzed:	04/01/03 20:21
Lab Samp ID:	C154-06	Dilution Factor:	1
Lab File ID:	RDX017	Matrix	: SOIL
Ext Btch ID:	SVC036S	% Moisture	: 6.8
Calib. Ref.:	RCX007	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	49	25-144
2-FLUOROBIPHENYL	55	34-135
2-FLUOROPHENOL	54	25-135
NITROBENZENE-D5	57	25-135
PHENOL-D5	56	25-135
TERPHENYL-D14	72	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:	03/27/03
Project	: EL TORO, CTO 0024	Date Received:	03/28/03
Batch No.	: 03C154	Date Extracted:	03/31/03 13:30
Sample ID:	818655-3238	Date Analyzed:	04/01/03 20:54
Lab Samp ID:	C154-07	Dilution Factor:	1
Lab File ID:	RDX018	Matrix	: SOIL
Ext Btch ID:	SVC036S	% Moisture	: 17.0
Calib. Ref.:	RCX007	Instrument ID	: T-042

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,2,4-TRICHLOROBENZENE	ND	400	200
1,2-DICHLOROBENZENE	ND	400	200
1,3-DICHLOROBENZENE	ND	400	200
1,4-DICHLOROBENZENE	ND	400	200
2,4,5-TRICHLOROPHENOL	ND	1000	200
2,4,6-TRICHLOROPHENOL	ND	400	200
2,4-DICHLOROPHENOL	ND	400	200
2,4-DIMETHYLPHENOL	ND	400	200
2,4-DINITROPHENOL	ND	1000	200
2,4-DINITROTOLUENE	ND	400	200
2,6-DINITROTOLUENE	ND	400	200
2-CHLORONAPHTHALENE	ND	400	200
2-CHLOROPHENOL	ND	400	200
2-METHYLNAPHTHALENE	ND	400	200
2-METHYLPHENOL	ND	400	200
2-NITROANILINE	ND	1000	200
2-NITROPHENOL	ND	400	200
3,3'-DICHLOROBENZIDINE	ND	400	200
3-NITROANILINE	ND	1000	200
4,6-DINITRO-2-METHYLPHENOL	ND	1000	200
4-BROMOPHENYL-PHENYL ETHER	ND	400	200
4-CHLORO-3-METHYLPHENOL	ND	400	200
4-CHLOROANILINE	ND	400	200
4-CHLOROPHENYL-PHENYL ETHER	ND	400	200
4-METHYLPHENOL (1)	ND	400	200
4-NITROANILINE	ND	1000	200
4-NITROPHENOL	ND	1000	200
ACENAPHTHENE	ND	400	200
ACENAPHTHYLENE	ND	400	200
ANTHRACENE	ND	400	200
BENZO(A)ANTHRACENE	ND	400	200
BENZO(B)FLUORANTHENE	ND	400	200
BENZO(K)FLUORANTHENE	ND	400	200
BENZO(G,H,I)PERYLENE	ND	400	200
BIS(2-CHLOROETHOXY)METHANE	ND	400	200
BIS(2-CHLOROISOPROPYL)ETHER	ND	400	200
BIS(2-ETHYLHEXYL)PHTHALATE	ND	400	200
BUTYLBENZYLPHTHALATE	ND	400	200
CHRYSENE	ND	400	200
DI-N-BUTYLPHTHALATE	ND	400	200
DI-N-OCTYLPHTHALATE	ND	400	200
DIBENZOFURAN	ND	400	200
DIETHYLPHTHALATE	ND	400	200
DIMETHYLPHTHALATE	ND	400	200
FLUORANTHENE	ND	400	200
FLUORENE	ND	400	200
HEXACHLOROBUTADIENE	ND	400	200
HEXACHLOROCYCLOPENTADIENE	ND	400	200
HEXACHLOROETHANE	ND	400	200
N-NITROSODIPHENYLAMINE (2)	ND	400	200
NAPHTHALENE	ND	400	200
NITROBENZENE	ND	400	200
PENTACHLOROPHENOL	ND	240	200
PHENANTHRENE	ND	400	200
PHENOL	ND	400	200
PYRENE	ND	400	200

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	49	25-144
2-FLUOROBIPHENYL	54	34-135
2-FLUOROPHENOL	50	25-135
NITROBENZENE-D5	57	25-135
PHENOL-D5	53	25-135
TERPHENYL-D14	67	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:	03/27/03
Project	: EL TORO, CTO 0024	Date Received:	03/28/03
Batch No.	: 03C154	Date Extracted:	03/31/03 13:30
Sample ID:	818655-3239	Date Analyzed:	04/01/03 21:28
Lab Samp ID:	C154-08	Dilution Factor:	1
Lab File ID:	RDX019	Matrix :	SOIL
Ext Btch ID:	SVC036S	% Moisture :	9.1
Calib. Ref.:	RCX007	Instrument ID :	T-042

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,2,4-TRICHLOROBENZENE	ND	360	180
1,2-DICHLOROBENZENE	ND	360	180
1,3-DICHLOROBENZENE	ND	360	180
1,4-DICHLOROBENZENE	ND	360	180
2,4,5-TRICHLOROPHENOL	ND	910	180
2,4,6-TRICHLOROPHENOL	ND	360	180
2,4-DICHLOROPHENOL	ND	360	180
2,4-DIMETHYLPHENOL	ND	360	180
2,4-DINITROPHENOL	ND	910	180
2,4-DINITROTOLUENE	ND	360	180
2,6-DINITROTOLUENE	ND	360	180
2-CHLORONAPHTHALENE	ND	360	180
2-CHLOROPHENOL	ND	360	180
2-METHYLNAPHTHALENE	ND	360	180
2-METHYLPHENOL	ND	360	180
2-NITROANILINE	ND	910	180
2-NITROPHENOL	ND	360	180
3,3'-DICHLOROBENZIDINE	ND	360	180
3-NITROANILINE	ND	910	180
4,6-DINITRO-2-METHYLPHENOL	ND	910	180
4-BROMOPHENYL-PHENYL ETHER	ND	360	180
4-CHLORO-3-METHYLPHENOL	ND	360	180
4-CHLOROANILINE	ND	360	180
4-CHLOROPHENYL-PHENYL ETHER	ND	360	180
4-METHYLPHENOL (1)	ND	360	180
4-NITROANILINE	ND	910	180
4-NITROPHENOL	ND	910	180
ACENAPHTHENE	ND	360	180
ACENAPHTHYLENE	ND	360	180
ANTHRACENE	ND	360	180
BENZO(A)ANTHRACENE	ND	360	180
BENZO(B)FLUORANTHENE	ND	360	180
BENZO(K)FLUORANTHENE	ND	360	180
BENZO(G,H,I)PERYLENE	ND	360	180
BIS(2-CHLOROETHOXY)METHANE	ND	360	180
BIS(2-CHLOROISOPROPYL)ETHER	ND	360	180
BIS(2-ETHYLHEXYL)PHTHALATE	ND	360	180
BUTYLBENZYLPHTHALATE	ND	360	180
CHRYSENE	ND	360	180
DI-N-BUTYLPHTHALATE	ND	360	180
DI-N-OCTYLPHTHALATE	ND	360	180
DIBENZOFURAN	ND	360	180
DIETHYLPHTHALATE	ND	360	180
DIMETHYLPHTHALATE	ND	360	180
FLUORANTHENE	ND	360	180
FLUORENE	ND	360	180
HEXACHLOROBUTADIENE	ND	360	180
HEXACHLOROCYCLOPENTADIENE	ND	360	180
HEXACHLOROETHANE	ND	360	180
N-NITROSODIPHENYLAMINE (2)	ND	360	180
NAPHTHALENE	ND	360	180
NITROBENZENE	ND	360	180
PENTACHLOROPHENOL	ND	220	180
PHENANTHRENE	ND	360	180
PHENOL	ND	360	180
PYRENE	ND	360	180

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	70	25-144
2-FLUOROBIPHENYL	70	34-135
2-FLUOROPHENOL	67	25-135
NITROBENZENE-D5	78	25-135
PHENOL-D5	70	25-135
TERPHENYL-D14	73	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:	03/28/03
Project	: EL TORO, CTO 0024	Date Received:	03/28/03
Batch No.	: 03C154	Date Extracted:	03/31/03 13:30
Sample ID:	818655-3241	Date Analyzed:	04/01/03 22:36
Lab Samp ID:	C154-10	Dilution Factor:	1
Lab File ID:	RDX021	Matrix	: SOIL
Ext Btch ID:	SVC036S	% Moisture	: 5.8
Calib. Ref.:	RCX007	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	49	25-144
2-FLUOROBIPHENYL	54	34-135
2-FLUOROPHENOL	55	25-135
NITROBENZENE-D5	57	25-135
PHENOL-D5	55	25-135
TERPHENYL-D14	71	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:	03/28/03
Project	: EL TORO, CTO 0024	Date Received:	03/28/03
Batch No.	: 03C154	Date Extracted:	03/31/03 13:30
Sample ID:	818655-3242	Date Analyzed:	04/01/03 23:10
Lab Samp ID:	C154-11	Dilution Factor:	1
Lab File ID:	RDX022	Matrix :	SOIL
Ext Btch ID:	SVC036S	% Moisture :	13.3
Calib. Ref.:	RCX007	Instrument ID :	T-042

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,2,4-TRICHLOROBENZENE	ND	380	190
1,2-DICHLOROBENZENE	ND	380	190
1,3-DICHLOROBENZENE	ND	380	190
1,4-DICHLOROBENZENE	ND	380	190
2,4,5-TRICHLOROPHENOL	ND	960	190
2,4,6-TRICHLOROPHENOL	ND	380	190
2,4-DICHLOROPHENOL	ND	380	190
2,4-DIMETHYLPHENOL	ND	380	190
2,4-DINITROPHENOL	ND	960	190
2,4-DINITROTOLUENE	ND	380	190
2,6-DINITROTOLUENE	ND	380	190
2-CHLORONAPHTHALENE	ND	380	190
2-CHLOROPHENOL	ND	380	190
2-METHYLNAPHTHALENE	ND	380	190
2-METHYLPHENOL	ND	380	190
2-NITROANILINE	ND	960	190
2-NITROPHENOL	ND	380	190
3,3'-DICHLOROBENZIDINE	ND	380	190
3-NITROANILINE	ND	960	190
4,6-DINITRO-2-METHYLPHENOL	ND	960	190
4-BROMOPHENYL-PHENYL ETHER	ND	380	190
4-CHLORO-3-METHYLPHENOL	ND	380	190
4-CHLOROANILINE	ND	380	190
4-CHLOROPHENYL-PHENYL ETHER	ND	380	190
4-METHYLPHENOL (1)	ND	380	190
4-NITROANILINE	ND	960	190
4-NITROPHENOL	ND	960	190
ACENAPHTHENE	ND	380	190
ACENAPHTHYLENE	ND	380	190
ANTHRACENE	ND	380	190
BENZO(A)ANTHRACENE	ND	380	190
BENZO(B)FLUORANTHENE	ND	380	190
BENZO(K)FLUORANTHENE	ND	380	190
BENZO(G,H,I)PERYLENE	ND	380	190
BIS(2-CHLOROETHOXY)METHANE	ND	380	190
BIS(2-CHLOROISOPROPYL)ETHER	ND	380	190
BIS(2-ETHYLHEXYL)PHTHALATE	ND	380	190
BUTYLBENZYLPHTHALATE	ND	380	190
CHRYSENE	ND	380	190
DI-N-BUTYLPHTHALATE	ND	380	190
DI-N-OCTYLPHTHALATE	ND	380	190
DIBENZOFURAN	ND	380	190
DIETHYLPHTHALATE	ND	380	190
DIMETHYLPHTHALATE	ND	380	190
FLUORANTHENE	ND	380	190
FLUORENE	ND	380	190
HEXACHLOROBUTADIENE	ND	380	190
HEXACHLOROCYCLOPENTADIENE	ND	380	190
HEXACHLOROETHANE	ND	380	190
N-NITROSODIPHENYLAMINE (2)	ND	380	190
NAPHTHALENE	ND	380	190
NITROBENZENE	ND	380	190
PENTACHLOROPHENOL	ND	230	190
PHENANTHRENE	ND	380	190
PHENOL	ND	380	190
PYRENE	ND	380	190

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	69	25-144
2-FLUOROBIPHENYL	76	34-135
2-FLUOROPHENOL	74	25-135
NITROBENZENE-D5	84	25-135
PHENOL-D5	77	25-135
TERPHENYL-D14	78	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:	03/28/03
Project	: EL TORO, CTO 0024	Date Received:	03/28/03
Batch No.	: 03C154	Date Extracted:	03/31/03 13:30
Sample ID:	818655-3243	Date Analyzed:	04/02/03 12:19
Lab Samp ID:	C154-12	Dilution Factor:	1
Lab File ID:	RDX033	Matrix	: SOIL
Ext Btch ID:	SVC036S	% Moisture	: 8.4
Calib. Ref.:	RCX007	Instrument ID	: T-042

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,2,4-TRICHLOROBENZENE	ND	360	180
1,2-DICHLOROBENZENE	ND	360	180
1,3-DICHLOROBENZENE	ND	360	180
1,4-DICHLOROBENZENE	ND	360	180
2,4,5-TRICHLOROPHENOL	ND	910	180
2,4,6-TRICHLOROPHENOL	ND	360	180
2,4-DICHLOROPHENOL	ND	360	180
2,4-DIMETHYLPHENOL	ND	360	180
2,4-DINITROPHENOL	ND	910	180
2,4-DINITROTOLUENE	ND	360	180
2,6-DINITROTOLUENE	ND	360	180
2-CHLORONAPHTHALENE	ND	360	180
2-CHLOROPHENOL	ND	360	180
2-METHYLNAPHTHALENE	ND	360	180
2-METHYLPHENOL	ND	360	180
2-NITROANILINE	ND	910	180
2-NITROPHENOL	ND	360	180
3,3'-DICHLOROBENZIDINE	ND	360	180
3-NITROANILINE	ND	910	180
4,6-DINITRO-2-METHYLPHENOL	ND	910	180
4-BROMOPHENYL-PHENYL ETHER	ND	360	180
4-CHLORO-3-METHYLPHENOL	ND	360	180
4-CHLOROANILINE	ND	360	180
4-CHLOROPHENYL-PHENYL ETHER	ND	360	180
4-METHYLPHENOL (1)	ND	360	180
4-NITROANILINE	ND	910	180
4-NITROPHENOL	ND	910	180
ACENAPHTHENE	ND	360	180
ACENAPHTHYLENE	ND	360	180
ANTHRACENE	ND	360	180
BENZO(A)ANTHRACENE	ND	360	180
BENZO(B)FLUORANTHENE	ND	360	180
BENZO(K)FLUORANTHENE	ND	360	180
BENZO(G,H,I)PERYLENE	ND	360	180
BIS(2-CHLOROETHOXY)METHANE	ND	360	180
BIS(2-CHLOROISOPROPYL)ETHER	ND	360	180
BIS(2-ETHYLHEXYL)PHTHALATE	ND	360	180
BUTYLBENZYLPHTHALATE	ND	360	180
CHRYSENE	ND	360	180
DI-N-BUTYLPHTHALATE	ND	360	180
DI-N-OCTYLPHTHALATE	ND	360	180
DIBENZOFURAN	ND	360	180
DIETHYLPHTHALATE	ND	360	180
DIMETHYLPHTHALATE	ND	360	180
FLUORANTHENE	ND	360	180
FLUORENE	ND	360	180
HEXACHLOROBUTADIENE	ND	360	180
HEXACHLOROCYCLOPENTADIENE	ND	360	180
HEXACHLOROETHANE	ND	360	180
N-NITROSODIPHENYLAMINE (2)	ND	360	180
NAPHTHALENE	ND	360	180
NITROBENZENE	ND	360	180
PENTACHLOROPHENOL	ND	220	180
PHENANTHRENE	ND	360	180
PHENOL	ND	360	180
PYRENE	ND	360	180

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	70	25-144
2-FLUOROBIPHENYL	76	34-135
2-FLUOROPHENOL	70	25-135
NITROBENZENE-D5	85	25-135
PHENOL-D5	74	25-135
TERPHENYL-D14	78	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:	03/28/03
Project	: EL TORO, CTO 0024	Date Received:	03/28/03
Batch No.	: 03C154	Date Extracted:	03/31/03 13:30
Sample ID:	818655-3244	Date Analyzed:	04/01/03 17:31
Lab Samp ID:	C154-13	Dilution Factor:	1
Lab File ID:	RDX012	Matrix	: SOIL
Ext Btch ID:	SVC036S	% Moisture	: 15.9
Calib. Ref.:	RCX007	Instrument ID	: T-042

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,2,4-TRICHLOROBENZENE	ND	390	200
1,2-DICHLOROBENZENE	ND	390	200
1,3-DICHLOROBENZENE	ND	390	200
1,4-DICHLOROBENZENE	ND	390	200
2,4,5-TRICHLOROPHENOL	ND	990	200
2,4,6-TRICHLOROPHENOL	ND	390	200
2,4-DICHLOROPHENOL	ND	390	200
2,4-DIMETHYLPHENOL	ND	390	200
2,4-DINITROPHENOL	ND	990	200
2,4-DINITROTOLUENE	ND	390	200
2,6-DINITROTOLUENE	ND	390	200
2-CHLORONAPHTHALENE	ND	390	200
2-CHLOROPHENOL	ND	390	200
2-METHYLNAPHTHALENE	ND	390	200
2-METHYLPHENOL	ND	390	200
2-NITROANILINE	ND	990	200
2-NITROPHENOL	ND	390	200
3,3'-DICHLOROBENZIDINE	ND	390	200
3-NITROANILINE	ND	990	200
4,6-DINITRO-2-METHYLPHENOL	ND	990	200
4-BROMOPHENYL-PHENYL ETHER	ND	390	200
4-CHLORO-3-METHYLPHENOL	ND	390	200
4-CHLOROANILINE	ND	390	200
4-CHLOROPHENYL-PHENYL ETHER	ND	390	200
4-METHYLPHENOL (1)	ND	390	200
4-NITROANILINE	ND	990	200
4-NITROPHENOL	ND	990	200
ACENAPHTHENE	ND	390	200
ACENAPHTHYLENE	ND	390	200
ANTHRACENE	ND	390	200
BENZO(A)ANTHRACENE	ND	390	200
BENZO(B)FLUORANTHENE	ND	390	200
BENZO(K)FLUORANTHENE	ND	390	200
BENZO(G,H,I)PERYLENE	ND	390	200
BIS(2-CHLOROETHOXY)METHANE	ND	390	200
BIS(2-CHLOROISOPROPYL)ETHER	ND	390	200
BIS(2-ETHYLHEXYL)PHTHALATE	ND	390	200
BUTYLBENZYLPHTHALATE	ND	390	200
CHRYSENE	ND	390	200
DI-N-BUTYLPHTHALATE	ND	390	200
DI-N-OCTYLPHTHALATE	ND	390	200
DIBENZOFURAN	ND	390	200
DIETHYLPHTHALATE	ND	390	200
DIMETHYLPHTHALATE	ND	390	200
FLUORANTHENE	ND	390	200
FLUORENE	ND	390	200
HEXACHLOROBUTADIENE	ND	390	200
HEXACHLOROCYCLOPENTADIENE	ND	390	200
HEXACHLOROETHANE	ND	390	200
N-NITROSODIPHENYLAMINE (2)	ND	390	200
NAPHTHALENE	ND	390	200
NITROBENZENE	ND	390	200
PENTACHLOROPHENOL	ND	240	200
PHENANTHRENE	ND	390	200
PHENOL	ND	390	200
PYRENE	ND	390	200

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	73	25-144
2-FLUOROBIPHENYL	71	34-135
2-FLUOROPHENOL	65	25-135
NITROBENZENE-D5	77	25-135
PHENOL-D5	71	25-135
TERPHENYL-D14	77	32-136

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

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

Client	: SHAW E&I	Date Collected:	03/27/03
Project	: EL TORO, CTO 0024	Date Received:	03/28/03
Batch No.	: 03C154	Date Extracted:	04/02/03 12:15
Sample ID:	818655-3240	Date Analyzed:	04/02/03 20:47
Lab Samp ID:	C154-09	Dilution Factor:	.94
Lab File ID:	RDX048	Matrix	: WATER
Ext Btch ID:	SVC037W	% Moisture	: NA
Calib. Ref.:	RCX007	Instrument ID	: T-042

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,2,4-TRICHLOROBENZENE	ND	9.4	4.7
1,2-DICHLOROBENZENE	ND	9.4	4.7
1,3-DICHLOROBENZENE	ND	9.4	4.7
1,4-DICHLOROBENZENE	ND	9.4	4.7
2,4,5-TRICHLOROPHENOL	ND	24	4.7
2,4,6-TRICHLOROPHENOL	ND	9.4	4.7
2,4-DICHLOROPHENOL	ND	9.4	4.7
2,4-DIMETHYLPHENOL	ND	9.4	4.7
2,4-DINITROPHENOL	ND	24	9.4
2,4-DINITROTOLUENE	ND	9.4	4.7
2,6-DINITROTOLUENE	ND	9.4	4.7
2-CHLORONAPHTHALENE	ND	9.4	4.7
2-CHLOROPHENOL	ND	9.4	4.7
2-METHYLNAPHTHALENE	ND	9.4	4.7
2-METHYLPHENOL	ND	9.4	4.7
2-NITROANILINE	ND	24	9.4
2-NITROPHENOL	ND	9.4	4.7
3,3'-DICHLOROBENZIDINE	ND	9.4	4.7
3-NITROANILINE	ND	24	4.7
4,6-DINITRO-2-METHYLPHENOL	ND	24	9.4
4-BROMOPHENYL-PHENYL ETHER	ND	9.4	4.7
4-CHLORO-3-METHYLPHENOL	ND	9.4	4.7
4-CHLOROANILINE	ND	9.4	4.7
4-CHLOROPHENYL-PHENYL ETHER	ND	9.4	4.7
4-METHYLPHENOL (1)	ND	9.4	4.7
4-NITROANILINE	ND	24	4.7
4-NITROPHENOL	ND	24	4.7
ACENAPHTHENE	ND	9.4	4.7
ACENAPHTHYLENE	ND	9.4	4.7
ANTHRACENE	ND	9.4	4.7
BENZO(A)ANTHRACENE	ND	9.4	4.7
BENZO(A)PYRENE	ND	9.4	4.7
BENZO(B)FLUORANTHENE	ND	9.4	4.7
BENZO(K)FLUORANTHENE	ND	9.4	4.7
BENZO(G,H,I)PERYLENE	ND	9.4	4.7
BIS(2-CHLOROETHOXY)METHANE	ND	9.4	4.7
BIS(2-CHLOROETHYL)ETHER	ND	9.4	4.7
BIS(2-CHLOROISOPROPYL)ETHER	ND	9.4	4.7
BIS(2-ETHYLHEXYL)PHTHALATE	ND	19	9.4
BUTYLBENZYLPHTHALATE	ND	9.4	4.7
CHRYSENE	ND	9.4	4.7
DI-N-BUTYLPHTHALATE	ND	9.4	4.7
DI-N-OCTYLPHTHALATE	ND	9.4	4.7
DIBENZO(A,H)ANTHRACENE	ND	9.4	4.7
DIBENZOFURAN	ND	9.4	4.7
DIETHYLPHTHALATE	ND	9.4	4.7
DIMETHYLPHTHALATE	ND	9.4	4.7
FLUORANTHENE	ND	9.4	4.7
FLUORENE	ND	9.4	4.7
HEXACHLOROBENZENE	ND	9.4	4.7
HEXACHLOROBUTADIENE	ND	9.4	4.7
HEXACHLOROCYCLOPENTADIENE	ND	9.4	4.7
HEXACHLOROETHANE	ND	9.4	4.7
INDENO(1,2,3-CD)PYRENE	ND	9.4	4.7
N-NITROSO-DI-N-PROPYLAMINE	ND	9.4	4.7
N-NITROSODIPHENYLAMINE (2)	ND	9.4	4.7
NAPHTHALENE	ND	9.4	4.7
NITROBENZENE	ND	9.4	4.7
PENTACHLOROPHENOL	ND	9.4	4.7
PHENANTHRENE	ND	9.4	9.4
PHENOL	ND	9.4	4.7
PYRENE	ND	9.4	4.7

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	82	25-134
2-FLUOROBIPHENYL	77	43-125
2-FLUOROPHENOL	69	25-125
NITROBENZENE-D5	85	32-125
PHENOL-D5	73	25-125
TERPHENYL-D14	102	42-126

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

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

Client	: SHAW E&I	Date Collected:	NA
Project	: EL TORO, CTO 0024	Date Received:	NA
Batch No.	: 03C154	Date Extracted:	04/02/03 12:15
Sample ID:	MBLK1W	Date Analyzed:	04/02/03 18:31
Lab Samp ID:	SVC037WB	Dilution Factor:	1
Lab File ID:	RDX044	Matrix :	WATER
Ext Btch ID:	SVC037W	% Moisture :	NA
Calib. Ref.:	RCX007	Instrument ID :	T-042

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
1,2,4-TRICHLOROBENZENE	ND	10	5
1,2-DICHLOROBENZENE	ND	10	5
1,3-DICHLOROBENZENE	ND	10	5
1,4-DICHLOROBENZENE	ND	10	5
2,4,5-TRICHLOROPHENOL	ND	25	5
2,4,6-TRICHLOROPHENOL	ND	10	5
2,4-DICHLOROPHENOL	ND	10	5
2,4-DIMETHYLPHENOL	ND	10	5
2,4-DINITROPHENOL	ND	25	10
2,4-DINITROTOLUENE	ND	10	5
2,6-DINITROTOLUENE	ND	10	5
2-CHLORONAPHTHALENE	ND	10	5
2-CHLOROPHENOL	ND	10	5
2-METHYLNAPHTHALENE	ND	10	5
2-METHYLPHENOL	ND	10	5
2-NITROANILINE	ND	25	10
2-NITROPHENOL	ND	10	5
3,3'-DICHLOROBENZIDINE	ND	10	5
3-NITROANILINE	ND	25	5
4,6-DINITRO-2-METHYLPHENOL	ND	25	10
4-BROMOPHENYL-PHENYL ETHER	ND	10	5
4-CHLORO-3-METHYLPHENOL	ND	10	5
4-CHLOROANILINE	ND	10	5
4-CHLOROPHENYL-PHENYL ETHER	ND	10	5
4-METHYLPHENOL (1)	ND	10	5
4-NITROANILINE	ND	25	5
4-NITROPHENOL	ND	25	5
ACENAPHTHENE	ND	10	5
ACENAPHTHYLENE	ND	10	5
ANTHRACENE	ND	10	5
BENZO(A)ANTHRACENE	ND	10	5
BENZO(A)PYRENE	ND	10	5
BENZO(B)FLUORANTHENE	ND	10	5
BENZO(K)FLUORANTHENE	ND	10	5
BENZO(G,H,I)PERYLENE	ND	10	5
BIS(2-CHLOROETHOXY)METHANE	ND	10	5
BIS(2-CHLOROETHYL)ETHER	ND	10	5
BIS(2-CHLOROISOPROPYL)ETHER	ND	10	5
BIS(2-ETHYLHEXYL)PHTHALATE	ND	20	10
BUTYLBENZYLPHTHALATE	ND	10	5
CHRYSENE	ND	10	5
DI-N-BUTYLPHTHALATE	ND	10	5
DI-N-OCTYLPHTHALATE	ND	10	5
DIBENZO(A,H)ANTHRACENE	ND	10	5
DIBENZOFURAN	ND	10	5
DIETHYLPHTHALATE	ND	10	5
DIMETHYLPHTHALATE	ND	10	5
FLUORANTHENE	ND	10	5
FLUORENE	ND	10	5
HEXACHLOROBENZENE	ND	10	5
HEXACHLOROBUTADIENE	ND	10	5
HEXACHLOROCYCLOPENTADIENE	ND	10	5
HEXACHLOROETHANE	ND	10	5
INDENO(1,2,3-CD)PYRENE	ND	10	5
N-NITROSO-DI-N-PROPYLAMINE	ND	10	5
N-NITROSODIPHENYLAMINE (2)	ND	10	5
NAPHTHALENE	ND	10	5
NITROBENZENE	ND	10	5
PENTACHLOROPHENOL	ND	10	10
PHENANTHRENE	ND	10	5
PHENOL	ND	10	5
PYRENE	ND	10	5

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	75	25-134
2-FLUOROBIPHENYL	68	43-125
2-FLUOROPHENOL	59	25-125
NITROBENZENE-D5	74	32-125
PHENOL-D5	65	25-125
TERPHENYL-D14	92	42-126

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

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
BATCH NO.: 03C154
METHOD: METHOD 3520C/8270B

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	SVC037WB	SVC037WL	SVC037WC		
LAB FILE ID:	RDX044	RDX045	RDX046		
DATE EXTRACTED:	04/02/0312:15	04/02/0312:15	04/02/0312:15	DATE COLLECTED:	NA
DATE ANALYZED:	04/02/0318:31	04/02/0319:05	04/02/0319:39	DATE RECEIVED:	NA
PREP. BATCH:	SVC037W	SVC037W	SVC037W		
CALIB. REF:	RCX007	RCX007	RCX007		

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 RI (%)
1,2,4-Trichlorobenzene	ND	80	43	54	80	48.1	60	11	44-142	2(
1,4-Dichlorobenzene	ND	80	34.9	44	80	38.8	49	11	30-125	2(
2,4-Dinitrotoluene	ND	80	73	91	80	77.1	96	5	39-139	2(
2-Chlorophenol	ND	80	48.3	60	80	54.6	68	12	41-125	2(
4-Chloro-3-Methylphenol	ND	80	56.6	71	80	61.9	77	9	44-125	2(
4-Nitrophenol	ND	80	84.5	106	80	87.3	109	3	25-131	2(
Acenaphthene	ND	80	57.5	72	80	61.1	76	6	49-125	2(
N-Nitroso-di-n-propylamine	ND	80	58.6	73	80	65	81	10	37-125	2(
Pentachlorophenol	ND	80	64.7	81	80	68	85	5	28-136	2(
Phenol	ND	80	49.3	62	80	54.5	68	10	25-125	2(
Pyrene	ND	80	67.2	84	80	68.6	86	2	47-136	2(

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
2,4,6-Tribromophenol	150	130	87	150	137	92	25-134
2-Fluorobiphenyl	100	77.2	77	100	85.6	86	43-125
2-Fluorophenol	150	99.3	66	150	113	75	25-125
Nitrobenzene-d5	100	84.1	84	100	94.7	95	32-125
Phenol-d5	150	110	74	150	122	81	25-125
Terphenyl-d14	100	97.2	97	100	98.2	98	42-126

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

Client	: SHAW E&I	Date Collected:	NA
Project	: EL TORO, CTO 0024	Date Received:	NA
Batch No.	: 03C154	Date Extracted:	03/31/03 13:30
Sample ID:	MBLK1S	Date Analyzed:	04/01/03 15:15
Lab Samp ID:	SVC036SB	Dilution Factor:	1
Lab File ID:	RDX008	Matrix :	SOIL
Ext Btch ID:	SVC036S	% Moisture :	NA
Calib. Ref.:	RCX007	Instrument ID :	T-042

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,2,4-TRICHLOROBENZENE	ND	330	170
1,2-DICHLOROBENZENE	ND	330	170
1,3-DICHLOROBENZENE	ND	330	170
1,4-DICHLOROBENZENE	ND	330	170
2,4,5-TRICHLOROPHENOL	ND	830	170
2,4,6-TRICHLOROPHENOL	ND	330	170
2,4-DICHLOROPHENOL	ND	330	170
2,4-DIMETHYLPHENOL	ND	330	170
2,4-DINITROPHENOL	ND	830	170
2,4-DINITROTOLUENE	ND	330	170
2,6-DINITROTOLUENE	ND	330	170
2-CHLORONAPHTHALENE	ND	330	170
2-CHLOROPHENOL	ND	330	170
2-METHYLNAPHTHALENE	ND	330	170
2-METHYLPHENOL	ND	330	170
2-NITROANILINE	ND	830	170
2-NITROPHENOL	ND	330	170
3,3'-DICHLOROBENZIDINE	ND	330	170
3-NITROANILINE	ND	830	170
4,6-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-CHLOROPHENYL-PHENYL ETHER	ND	330	170
4-METHYLPHENOL (1)	ND	330	170
4-NITROANILINE	ND	830	170
4-NITROPHENOL	ND	830	170
ACENAPHTHENE	ND	330	170
ACENAPHTHYLENE	ND	330	170
ANTHRACENE	ND	330	170
BENZO(A)ANTHRACENE	ND	330	170
BENZO(B)FLUORANTHENE	ND	330	170
BENZO(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
BIS(2-ETHYLHEXYL)PHTHALATE	ND	330	170
BUTYLBENZYLPHTHALATE	ND	330	170
CHRYSENE	ND	330	170
DI-N-BUTYLPHTHALATE	ND	330	170
DI-N-OCTYLPHTHALATE	ND	330	170
DIBENZOFURAN	ND	330	170
DIETHYLPHTHALATE	ND	330	170
DIMETHYLPHTHALATE	ND	330	170
FLUORANTHENE	ND	330	170
FLUORENE	ND	330	170
HEXACHLOROBUTADIENE	ND	330	170
HEXACHLOROCYCLOPENTADIENE	ND	330	170
HEXACHLOROETHANE	ND	330	170
N-NITROSODIPHENYLAMINE (2)	ND	330	170
NAPHTHALENE	ND	330	170
NITROBENZENE	ND	330	170
PENTACHLOROPHENOL	ND	200	170
PHENANTHRENE	ND	330	170
PHENOL	ND	330	170
PYRENE	ND	330	170

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	64	25-144
2-FLUOROBIPHENYL	76	34-135
2-FLUOROPHENOL	67	25-135
NITROBENZENE-D5	82	25-135
PHENOL-D5	72	25-135
TERPHENYL-D14	82	32-136

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

EMAX QUALITY CONTROL DATA
LCS ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
BATCH NO.: 03C154
METHOD: METHOD 3550B/8270B

MATRIX:	SOIL		% MOISTURE:	NA
DILUTION FACTOR:	1	1		
SAMPLE ID:	MBLK1S			
LAB SAMP ID:	SVC036SB	SVC036SL		
LAB FILE ID:	RDX008	RDX009		
DATE EXTRACTED:	03/31/0313:30	03/31/0313:30	DATE COLLECTED:	NA
DATE ANALYZED:	04/01/0315:15	04/01/0315:49	DATE RECEIVED:	NA
PREP. BATCH:	SVC036S	SVC036S		
CALIB. REF:	RCX007	RCX007		

ACCESSION:

PARAMETER	BLNK RSLT (ug/kg)	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	QC LIMIT (%)
1,2,4-Trichlorobenzene	ND	3330	2280	69	34-152
1,4-Dichlorobenzene	ND	3330	2160	65	25-135
2,4-Dinitrotoluene	ND	3330	2240	67	29-149
2-Chlorophenol	ND	5000	3060	61	31-135
4-Chloro-3-Methylphenol	ND	5000	3160	63	34-135
4-Nitrophenol	ND	5000	2840	57	25-141
Acenaphthene	ND	3330	2200	66	39-135
Pentachlorophenol	ND	5000	2800	56	38-146
Phenol	ND	5000	3050	61	25-135
Pyrene	ND	3330	2220	67	37-146

SURROGATE PARAMETER	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	QC LIMIT (%)
2,4,6-Tribromophenol	5000	3000	60	25-144
2-Fluorobiphenyl	3330	2230	67	34-135
2-Fluorophenol	5000	3090	62	25-135
Nitrobenzene-d5	3330	2380	71	25-135
Phenol-d5	5000	3190	64	25-135
Terphenyl-d14	3330	2290	69	32-136

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
BATCH NO.: 03C154
METHOD: METHOD 3550B/8270B

MATRIX:	SOIL			% MOISTURE:	15.9
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	818655-3244				
LAB SAMP ID:	C154-13	C154-13M	C154-13S		
LAB FILE ID:	RDX012	RDX010	RDX011		
DATE EXTRACTED:	03/31/0313:30	03/31/0313:30	03/31/0313:30	DATE COLLECTED:	03/28/03
DATE ANALYZED:	04/01/0317:31	04/01/0316:23	04/01/0316:57	DATE RECEIVED:	03/28/03
PREP. BATCH:	SVC036S	SVC036S	SVC036S		
CALIB. REF:	RCX007	RCX007	RCX007		

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	3960	2590	65	3960	2620	66	1	34-152	30
1,4-Dichlorobenzene	ND	3960	2500	63	3960	2470	62	1	25-135	30
2,4-Dinitrotoluene	ND	3960	2530	64	3960	2630	66	4	29-149	30
2-Chlorophenol	ND	5950	3650	61	5950	3610	61	1	31-135	30
4-Chloro-3-Methylphenol	ND	5950	3850	65	5950	3900	66	1	34-135	30
4-Nitrophenol	ND	5950	3950	66	5950	3680	62	7	25-141	30
Acenaphthene	ND	3960	2600	66	3960	2590	65	0	39-135	30
Pentachlorophenol	ND	5950	3570	60	5950	3610	61	1	38-146	30
Phenol	ND	5950	3690	62	5950	3710	62	1	25-135	30
Pyrene	ND	3960	2500	63	3960	2470	62	1	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	5950	3640	61	5950	3620	61	25-144
2-Fluorobiphenyl	3960	2490	63	3960	2520	64	34-135
2-Fluorophenol	5950	3440	58	5950	3560	60	25-135
Nitrobenzene-d5	3960	2710	68	3960	2800	71	25-135
Phenol-d5	5950	3770	63	5950	3840	65	25-135
Terphenyl-d14	3960	2530	64	3960	2520	64	32-136

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

Client	: SHAW E&I	Date Collected:	03/27/03
Project	: EL TORO, CTO 0024	Date Received:	03/28/03
atch No.	: 03C154	Date Extracted:	03/31/03 13:30
ample ID:	818655-3237	Date Analyzed:	04/01/03 21:12
Lab Samp ID:	C154-06	Dilution Factor:	1
Lab File ID:	RDZ018	Matrix :	SOIL
Ext Btch ID:	SVC036S	% Moisture :	6.8
Calib. Ref.:	RBZ127	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	38	11
N-NITROSO-DI-N-PROPYLAMINE	ND	35	11

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
TERPHENYL-D14	77	32-136

RL: Reporting Limit

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

Client	: SHAW E&I	Date Collected:	03/27/03
Project	: EL TORO, CTO 0024	Date Received:	03/28/03
Batch No.	: 03C154	Date Extracted:	03/31/03 13:30
Sample ID:	818655-3238	Date Analyzed:	04/01/03 21:42
Lab Samp ID:	C154-07	Dilution Factor:	1
Lab File ID:	RDZ019	Matrix :	SOIL
Ext Btch ID:	SVC036S	% Moisture :	17.0
Calib. Ref.:	RBZ127	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	90	12
INDENO(1,2,3-CD)PYRENE	ND	42	12
N-NITROSO-DI-N-PROPYLAMINE	ND	40	12

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
TERPHENYL-D14	71	32-136

RL: Reporting Limit

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

Client	: SHAW E&I	Date Collected:	03/27/03
Project	: EL TORO, CTO 0024	Date Received:	03/28/03
Batch No.	: 03C154	Date Extracted:	03/31/03 13:30
Sample ID:	818655-3239	Date Analyzed:	04/01/03 22:12
Lab Samp ID:	C154-08	Dilution Factor:	1
Lab File ID:	RDZ020	Matrix :	SOIL
Ext Btch ID:	SVC036S	% Moisture :	9.1
Calib. Ref.:	RBZ127	Instrument ID :	T-048

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
BENZO(A)PYRENE	ND	36	11
BIS(2-CHLOROETHYL)ETHER	ND	36	17
DIBENZO(A,H)ANTHRACENE	ND	36	11
HEXACHLOROBENZENE	ND	83	11
INDENO(1,2,3-CD)PYRENE	ND	39	11
N-NITROSO-DI-N-PROPYLAMINE	ND	36	11

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
TERPHENYL-D14	77	32-136

RL: Reporting Limit

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

Client	: SHAW E&I	Date Collected:	03/28/03
Project	: EL TORO, CTO 0024	Date Received:	03/28/03
Batch No.	: 03C154	Date Extracted:	03/31/03 13:30
Sample ID:	818655-3241	Date Analyzed:	04/01/03 22:42
Lab Samp ID:	C154-10	Dilution Factor:	1
Lab File ID:	RDZ021	Matrix :	SOIL
Ext Btch ID:	SVC036S	% Moisture :	5.8
Calib. Ref.:	RBZ127	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	63	32-136

RL: Reporting Limit

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

Client	: SHAW E&I	Date Collected:	03/28/03
Project	: EL TORO, CTO 0024	Date Received:	03/28/03
Batch No.	: 03C154	Date Extracted:	03/31/03 13:30
Sample ID:	818655-3242	Date Analyzed:	04/01/03 23:12
Lab Samp ID:	C154-11	Dilution Factor:	1
Lab File ID:	RDZ022	Matrix :	SOIL
Ext Btch ID:	SVC036S	% Moisture :	13.3
Calib. Ref.:	RBZ127	Instrument ID :	T-048

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
BENZO(A)PYRENE	ND	38	12
BIS(2-CHLOROETHYL)ETHER	ND	38	17
DIBENZO(A,H)ANTHRACENE	ND	38	12
HEXACHLOROBENZENE	ND	87	12
INDENO(1,2,3-CD)PYRENE	ND	40	12
N-NITROSO-DI-N-PROPYLAMINE	ND	38	12

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
TERPHENYL-D14	69	32-136

RL: Reporting Limit

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

Client	: SHAW E&I	Date Collected:	03/28/03
Project	: EL TORO, CTO 0024	Date Received:	03/28/03
Batch No.	: 03C154	Date Extracted:	03/31/03 13:30
Sample ID:	818655-3243	Date Analyzed:	04/01/03 23:42
Lab Samp ID:	C154-12	Dilution Factor:	1
Lab File ID:	RDZ023	Matrix :	SOIL
Ext Btch ID:	SVC036S	% Moisture :	8.4
Calib. Ref.:	RBZ127	Instrument ID :	T-048

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
BENZO(A)PYRENE	ND	36	11
BIS(2-CHLOROETHYL)ETHER	ND	36	16
DIBENZO(A,H)ANTHRACENE	ND	36	11
HEXACHLOROBENZENE	ND	82	11
INDENO(1,2,3-CD)PYRENE	ND	38	11
N-NITROSO-DI-N-PROPYLAMINE	ND	36	11

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
TERPHENYL-D14	80	32-136

RL: Reporting Limit

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

Client : SHAW E&I	Date Collected: 03/28/03
Project : EL TORO, CTO 0024	Date Received: 03/28/03
Batch No. : 03C154	Date Extracted: 03/31/03 13:30
Sample ID: 818655-3244	Date Analyzed: 04/02/03 00:11
Lab Samp ID: C154-13	Dilution Factor: 1
Lab File ID: RDZ024	Matrix : SOIL
Ext Btch ID: SVC036S	% Moisture : 15.9
Calib. Ref.: RBZ127	Instrument ID : T-048

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
BENZO(A)PYRENE	ND	39	12
BIS(2-CHLOROETHYL)ETHER	ND	39	18
DIBENZO(A,H)ANTHRACENE	ND	39	12
HEXACHLOROBENZENE	ND	89	12
INDENO(1,2,3-CD)PYRENE	ND	42	12
N-NITROSO-DI-N-PROPYLAMINE	ND	39	12

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
TERPHENYL-D14	80	32-136

RL: Reporting Limit

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

Client	: SHAW E&I	Date Collected:	NA
Project	: EL TORO, CTO 0024	Date Received:	NA
Batch No.	: 03C154	Date Extracted:	03/31/03 13:30
Sample ID:	MBLK1S	Date Analyzed:	04/01/03 18:13
Lab Samp ID:	SVC036SB	Dilution Factor:	1
Lab File ID:	RDZ012	Matrix :	SOIL
Ext Btch ID:	SVC036S	% Moisture :	NA
Calib. Ref.:	RBZ127	Instrument ID :	T-048

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
BENZO(A)PYRENE	ND	33	10
BIS(2-CHLOROETHYL)ETHER	ND	33	15
DIBENZO(A,H)ANTHRACENE	ND	33	10
HEXACHLOROBENZENE	ND	75	10
INDENO(1,2,3-CD)PYRENE	ND	35	10
N-NITROSO-DI-N-PROPYLAMINE	ND	33	10

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
TERPHENYL-D14	80	32-136

RL: Reporting Limit

EMAX QUALITY CONTROL DATA
LCS ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
BATCH NO.: 03C154
METHOD: SW 3550B/8270C SIM

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MATRIX:	SOIL		% MOISTURE:	NA
DILUTION FACTOR:	1	2		
SAMPLE ID:	MBLK1S			
LAB SAMP ID:	SVC036SB	SVC036SL		
LAB FILE ID:	RDZ012	RDZ013		
DATE EXTRACTED:	03/31/0313:30	03/31/0313:30	DATE COLLECTED:	NA
DATE ANALYZED:	04/01/0318:13	04/01/0318:43	DATE RECEIVED:	NA
PREP. BATCH:	SVC036S	SVC036S		
CALIB. REF:	RBZ127	RBZ127		

ACCESSION:

PARAMETER	BLNK RSLT (ug/kg)	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	QC LIMIT (%)
n-Nitroso-di-n-propylamine	ND	2670	2200	83	27-135

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SURROGATE PARAMETER	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	QC LIMIT (%)
Terphenyl-d14	3330	2490	75	32-136

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
BATCH NO.: 03C154
METHOD: SW 3550B/8270C SIM

MATRIX:	SOIL			% MOISTURE:	15.9
DILUTION FACTOR:	1	2	2		
SAMPLE ID:	818655-3244				
LAB SAMP ID:	C154-13	C154-13M	C154-13S		
LAB FILE ID:	RDZ024	RDZ025	RDZ033		
DATE EXTRACTED:	03/31/0313:30	03/31/0313:30	03/31/0313:30	DATE COLLECTED:	03/28/03
DATE ANALYZED:	04/02/0300:11	04/02/0300:41	04/02/0313:41	DATE RECEIVED:	03/28/03
PREP. BATCH:	SVC036S	SVC036S	SVC036S		
CALIB. REF:	RBZ127	RBZ127	RBZ127		

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	3170	2460	78	3170	2750	87	11	27-135	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 (%)
Terphenyl-d14	3960	2420	61	3960	2600	66	32-136

METHOD 3050B/6010B
METALS BY ICP

Client	: SHAW E&I	Date Collected:	03/27/03
Project	: EL TORO, CTO 0024	Date Received:	03/28/03
SDG NO.	: 03C154	Date Extracted:	03/31/03 17:45
Sample ID:	818655-3237	Date Analyzed:	04/02/03 20:02
Lab Samp ID:	C154-06	Dilution Factor:	1
Lab File ID:	I07D005035	Matrix :	SOIL
Ext Btch ID:	IPC055S	% Moisture :	6.8
Calib. Ref.:	I07D005025	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Aluminum	8310	53.6	4.81
Antimony	2.42J	5.36	2.26
Barium	70	1.07	.133
Beryllium	.286	.215	.127
Cadmium	ND	.536	.388
Calcium	7270	107	7.29
Chromium	5.91	2.15	.659
Cobalt	3.6	1.07	.741
Copper	4.16	2.15	.506
Iron	8790	21.5	1.64
Magnesium	3830	107	8.58
Manganese	170	2.15	.202
Molybdenum	ND	5.36	.792
Nickel	3.69	2.15	.59
Potassium	2350	107	76.8
Silver	ND	2.15	.674
Sodium	117	107	7.52
Vanadium	20.7	2.15	.47
Zinc	23.7	1.07	.309

RL: Reporting Limit

METHOD 3050B/6010B
METALS BY TRACE ICP

Client	: SHAW E&I	Date Collected:	03/27/03
Project	: EL TORO, CTO 0024	Date Received:	03/28/03
SDG NO.	: 03C154	Date Extracted:	03/31/03 17:45
Sample ID:	818655-3237	Date Analyzed:	04/02/03 19:53
Lab Samp ID:	C154-06	Dilution Factor:	1
Lab File ID:	I31D004035	Matrix :	SOIL
Ext Btch ID:	IPC055S	% Moisture :	6.8
Calib. Ref.:	I31D004025	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	1.9	1.07	.225
Lead	1.94	1.07	.187
Selenium	.418J	1.07	.306
Thallium	ND	1.07	.327

RL: Reporting Limit

METHOD 3050B/6010B
METALS BY ICP

Client	: SHAW E&I	Date Collected:	03/27/03
Project	: EL TORO, CTO 0024	Date Received:	03/28/03
SDG NO.	: 03C154	Date Extracted:	03/31/03 17:45
Sample ID:	818655-3238	Date Analyzed:	04/02/03 20:07
Lab Samp ID:	C154-07	Dilution Factor:	1
Lab File ID:	I07D005036	Matrix :	SOIL
Ext Btch ID:	IPC055S	% Moisture :	17.0
Calib. Ref.:	I07D005025	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Aluminum	20800	60.2	5.4
Antimony	ND	6.02	2.53
Barium	188	1.2	.149
Beryllium	.721	.241	.142
Cadmium	.632	.602	.436
Calcium	14700	120	8.19
Chromium	17.2	2.41	.74
Cobalt	10.3	1.2	.833
Copper	10.1	2.41	.569
Iron	22900	24.1	1.84
Magnesium	10600	120	9.63
Manganese	332	2.41	.227
Molybdenum	ND	6.02	.889
Nickel	10.2	2.41	.663
Potassium	6710	120	86.2
Silver	ND	2.41	.757
Sodium	247	120	8.44
Vanadium	59.1	2.41	.528
Zinc	65.8	1.2	.347

RL: Reporting Limit

METHOD 3050B/6010B
METALS BY TRACE ICP

Client	: SHAW E&I	Date Collected:	03/27/03
Project	: EL TORO, CTO 0024	Date Received:	03/28/03
SDG NO.	: 03C154	Date Extracted:	03/31/03 17:45
Sample ID:	818655-3238	Date Analyzed:	04/02/03 19:58
Lab Samp ID:	C154-07	Dilution Factor:	1
Lab File ID:	I31D004036	Matrix :	SOIL
Ext Btch ID:	IPC055S	% Moisture :	17.0
Calib. Ref.:	I31D004025	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	4.65	1.2	.253
Lead	4.2	1.2	.21
Selenium	.938J	1.2	.343
Thallium	1.16J	1.2	.367

RL: Reporting Limit

METHOD 3050B/6010B
METALS BY ICP

Client	: SHAW E&I	Date Collected:	03/27/03
Project	: EL TORO, CTO 0024	Date Received:	03/28/03
SDG NO.	: 03C154	Date Extracted:	03/31/03 17:45
Sample ID:	818655-3239	Date Analyzed:	04/02/03 20:23
Lab Samp ID:	C154-08	Dilution Factor:	1
Lab File ID:	I07D005039	Matrix :	SOIL
Ext Btch ID:	IPC055S	% Moisture :	9.1
Calib. Ref.:	I07D005037	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Aluminum	13100	55	4.93
Antimony	ND	5.5	2.31
Barium	107	1.1	.136
Beryllium	.48	.22	.13
Cadmium	ND	.55	.398
Calcium	5400	110	7.48
Chromium	10.2	2.2	.675
Cobalt	5.95	1.1	.76
Copper	6.58	2.2	.519
Iron	14000	22	1.68
Magnesium	5930	110	8.79
Manganese	220	2.2	.207
Molybdenum	ND	5.5	.812
Nickel	5.77	2.2	.605
Potassium	4000	110	78.7
Silver	ND	2.2	.691
Sodium	180	110	7.71
Vanadium	32.3	2.2	.482
Zinc	38.9	1.1	.317

RL: Reporting Limit

METHOD 3050B/6010B
METALS BY TRACE ICP

Client	: SHAW E&I	Date Collected:	03/27/03
Project	: EL TORO, CTO 0024	Date Received:	03/28/03
SDG NO.	: 03C154	Date Extracted:	03/31/03 17:45
Sample ID:	818655-3239	Date Analyzed:	04/02/03 20:14
Lab Samp ID:	C154-08	Dilution Factor:	1
Lab File ID:	I31D004039	Matrix :	SOIL
Ext Btch ID:	IPC055S	% Moisture :	9.1
Calib. Ref.:	I31D004037	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	2.65	1.1	.231
Lead	2.77	1.1	.191
Selenium	.685J	1.1	.314
Thallium	ND	1.1	.336

RL: Reporting Limit

METHOD 3050B/6010B
METALS BY ICP

Client	: SHAW E&I	Date Collected:	03/28/03
Project	: EL TORO, CTO 0024	Date Received:	03/28/03
SDG NO.	: 03C154	Date Extracted:	03/31/03 17:45
Sample ID:	818655-3241	Date Analyzed:	04/02/03 20:28
Lab Samp ID:	C154-10	Dilution Factor:	1
Lab File ID:	I07D005040	Matrix :	SOIL
Ext Btch ID:	IPC055S	% Moisture :	5.8
Calib. Ref.:	I07D005037	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Aluminum	6700	53.1	4.76
Antimony	ND	5.31	2.23
Barium	93.5	1.06	.132
Beryllium	.241	.212	.125
Cadmium	ND	.531	.384
Calcium	5730	106	7.21
Chromium	6.32	2.12	.652
Cobalt	2.94	1.06	.734
Copper	4.38	2.12	.501
Iron	7460	21.2	1.62
Magnesium	3400	106	8.49
Manganese	174	2.12	.2
Molybdenum	ND	5.31	.783
Nickel	4.87	2.12	.584
Potassium	2040	106	76
Silver	ND	2.12	.667
Sodium	116	106	7.44
Vanadium	19.4	2.12	.465
Zinc	21.3	1.06	.306

RL: Reporting Limit

METHOD 3050B/6010B
METALS BY TRACE ICP

Client	: SHAW E&I	Date Collected:	03/28/03
Project	: EL TORO, CTO 0024	Date Received:	03/28/03
SDG NO.	: 03C154	Date Extracted:	03/31/03 17:45
Sample ID:	818655-3241	Date Analyzed:	04/02/03 20:19
Lab Samp ID:	C154-10	Dilution Factor:	1
Lab File ID:	I31D004040	Matrix :	SOIL
Ext Btch ID:	IPC055S	% Moisture :	5.8
Calib. Ref.:	I31D004037	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	1.54	1.06	.223
Lead	1.66	1.06	.185
Selenium	.661J	1.06	.303
Thallium	ND	1.06	.324

RL: Reporting Limit

METHOD 3050B/6010B
METALS BY ICP

Client	: SHAW E&I	Date Collected:	03/28/03
Project	: EL TORO, CTO 0024	Date Received:	03/28/03
SDG NO.	: 03C154	Date Extracted:	03/31/03 17:45
Sample ID:	818655-3242	Date Analyzed:	04/02/03 20:34
Lab Samp ID:	C154-11	Dilution Factor:	1
Lab File ID:	I07D005041	Matrix :	SOIL
Ext Btch ID:	IPC055S	% Moisture :	13.3
Calib. Ref.:	I07D005037	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Aluminum	15500	57.7	5.17
Antimony	ND	5.77	2.43
Barium	120	1.15	.143
Beryllium	.502	.231	.136
Cadmium	ND	.577	.418
Calcium	7760	115	7.84
Chromium	11.3	2.31	.708
Cobalt	6.24	1.15	.797
Copper	7.57	2.31	.544
Iron	15100	23.1	1.76
Magnesium	7260	115	9.22
Manganese	222	2.31	.217
Molybdenum	ND	5.77	.851
Nickel	6.16	2.31	.634
Potassium	4100	115	82.5
Silver	ND	2.31	.724
Sodium	197	115	8.08
Vanadium	35.8	2.31	.505
Zinc	43	1.15	.332

RL: Reporting Limit

METHOD 3050B/6010B
METALS BY TRACE ICP

Client	: SHAW E&I	Date Collected:	03/28/03
Project	: EL TORO, CTO 0024	Date Received:	03/28/03
SDG NO.	: 03C154	Date Extracted:	03/31/03 17:45
Sample ID:	818655-3242	Date Analyzed:	04/02/03 20:24
Lab Samp ID:	C154-11	Dilution Factor:	1
Lab File ID:	I31D004041	Matrix :	SOIL
Ext Btch ID:	IPC055S	% Moisture :	13.3
Calib. Ref.:	I31D004037	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	2.89	1.15	.242
Lead	2.97	1.15	.201
Selenium	.879J	1.15	.329
Thallium	ND	1.15	.352

RL: Reporting Limit

METHOD 3050B/6010B
METALS BY ICP

Client	: SHAW E&I	Date Collected:	03/28/03
Project	: EL TORO, CTO 0024	Date Received:	03/28/03
SDG NO.	: 03C154	Date Extracted:	03/31/03 17:45
Sample ID:	818655-3243	Date Analyzed:	04/02/03 20:39
Lab Samp ID:	C154-12	Dilution Factor:	1
Lab File ID:	I07D005042	Matrix :	SOIL
Ext Btch ID:	IPC055S	% Moisture :	8.4
Calib. Ref.:	I07D005037	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Aluminum	11500	54.6	4.89
Antimony	ND	5.46	2.3
Barium	101	1.09	.135
Beryllium	.405	.218	.129
Cadmium	ND	.546	.395
Calcium	5630	109	7.42
Chromium	9.2	2.18	.67
Cobalt	5.78	1.09	.754
Copper	6.34	2.18	.515
Iron	12800	21.8	1.67
Magnesium	5640	109	8.73
Manganese	214	2.18	.205
Molybdenum	ND	5.46	.806
Nickel	5.17	2.18	.6
Potassium	3750	109	78.1
Silver	ND	2.18	.686
Sodium	184	109	7.65
Vanadium	29.6	2.18	.478
Zinc	36	1.09	.314

RL: Reporting Limit

METHOD 3050B/6010B
METALS BY TRACE ICP

Client	: SHAW E&I	Date Collected:	03/28/03
Project	: EL TORO, CTO 0024	Date Received:	03/28/03
SDG NO.	: 03C154	Date Extracted:	03/31/03 17:45
Sample ID:	818655-3243	Date Analyzed:	04/02/03 20:29
Lab Samp ID:	C154-12	Dilution Factor:	1
Lab File ID:	I31D004042	Matrix :	SOIL
Ext Btch ID:	IPC055S	% Moisture :	8.4
Calib. Ref.:	I31D004037	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	2.24	1.09	.229
Lead	2.39	1.09	.19
Selenium	.568J	1.09	.311
Thallium	ND	1.09	.333

RL: Reporting Limit

METHOD 3050B/6010B
METALS BY ICP

Client	: SHAW E&I	Date Collected:	03/28/03
Project	: EL TORO, CTO 0024	Date Received:	03/28/03
SDG NO.	: 03C154	Date Extracted:	03/31/03 17:45
Sample ID:	818655-3244	Date Analyzed:	04/02/03 20:44
Lab Samp ID:	C154-13	Dilution Factor:	1
Lab File ID:	I07D005043	Matrix :	SOIL
Ext Btch ID:	IPC055S	% Moisture :	15.9
Calib. Ref.:	I07D005037	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Aluminum	18100	59.5	5.33
Antimony	ND	5.95	2.5
Barium	185	1.19	.147
Beryllium	.632	.238	.14
Cadmium	1.16	.595	.43
Calcium	12700	119	8.08
Chromium	16.2	2.38	.73
Cobalt	9.77	1.19	.822
Copper	10.5	2.38	.561
Iron	20000	23.8	1.81
Magnesium	8880	119	9.5
Manganese	294	2.38	.224
Molybdenum	ND	5.95	.878
Nickel	9.51	2.38	.654
Potassium	5550	119	85.1
Silver	ND	2.38	.747
Sodium	260	119	8.33
Vanadium	52.7	2.38	.521
Zinc	68.6	1.19	.342

RL: Reporting Limit

METHOD 3050B/6010B
METALS BY TRACE ICP

Client	: SHAW E&I	Date Collected:	03/28/03
Project	: EL TORO, CTO 0024	Date Received:	03/28/03
SDG NO.	: 03C154	Date Extracted:	03/31/03 17:45
Sample ID:	818655-3244	Date Analyzed:	04/02/03 20:34
Lab Samp ID:	C154-13	Dilution Factor:	1
Lab File ID:	I31D004043	Matrix :	SOIL
Ext Btch ID:	IPC055S	% Moisture :	15.9
Calib. Ref.:	I31D004037	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	4.31	1.19	.25
Lead	9.64	1.19	.207
Selenium	.623J	1.19	.339
Thallium	.534J	1.19	.363

RL: Reporting Limit

METHOD 3010A/6010B
METALS BY ICP

Client	: SHAW E&I	Date Collected:	03/27/03
Project	: EL TORO, CTO 0024	Date Received:	03/28/03
SDG NO.	: 03C154	Date Extracted:	03/31/03 16:55
Sample ID:	818655-3240	Date Analyzed:	04/02/03 18:38
Lab Samp ID:	C154-09	Dilution Factor:	1
Lab File ID:	I07D005020	Matrix :	WATER
Ext Btch ID:	IPC054W	% Moisture :	NA
Calib. Ref.:	I07D005014	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
Aluminum	ND	500	61
Antimony	ND	500	40
Barium	2.5J	100	2
Beryllium	ND	10	1.0
Cadmium	ND	5	2
Calcium	83.3J	1000	32
Chromium	ND	50	6
Cobalt	ND	50	11
Copper	ND	50	5
Iron	45.4J	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	597J	1000	70
Vanadium	ND	100	5
Zinc	8.05J	20	5

RL: Reporting Limit

METHOD 3010A/6010B
METALS BY TRACE ICP

Client	: SHAW E&I	Date Collected:	03/27/03
Project	: EL TORO, CTO 0024	Date Received:	03/28/03
SDG NO.	: 03C154	Date Extracted:	03/31/03 16:55
Sample ID:	818655-3240	Date Analyzed:	04/02/03 18:34
Lab Samp ID:	C154-09	Dilution Factor:	1
Lab File ID:	I31D004020	Matrix :	WATER
Ext Btch ID:	IPC054W	% Moisture :	NA
Calib. Ref.:	I31D004014	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
Arsenic	ND	5	4
Lead	5.73	5	2
Selenium	ND	5	5
Thallium	7.16J	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:	03/31/03
SDG NO.	: 03C154	Date Extracted:	03/31/03 16:55
Sample ID:	MBLK1W	Date Analyzed:	04/02/03 18:14
Lab Samp ID:	IPC054WB	Dilution Factor:	1
Lab File ID:	I07D005016	Matrix :	WATER
Ext Btch ID:	IPC054W	% Moisture :	NA
Calib. Ref.:	I07D005014	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	597J	1000	70
Vanadium	ND	100	5
Zinc	ND	20	5

RL: Reporting Limit

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
SDG NO.: 03C154
METHOD: METHOD 3010A/6010B

MATRIX:	WATER			% MOISTURE:	NA
DILTN FACTR:	1	1	1		
SAMPLE ID:	MBLK1W				
CONTROL NO.:	IPC054WB	IPC054WL	IPC054WC		
LAB FILE ID:	I07D005016	I07D005017	I07D005018		
DATIME EXTRCTD:	03/31/0316:55	03/31/0316:55	03/31/0316:55	DATE COLLECTED:	NA
DATIME ANALYZD:	04/02/0318:14	04/02/0318:20	04/02/0318:25	DATE RECEIVED:	03/31/03
PREP. BATCH:	IPC054W	IPC054W	IPC054W		
CALIB. REF:	I07D005014	I07D005014	I07D005014		

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	10100	101	10000	10000	100	1	80-120	15
Antimony	ND	5000	4860	97	5000	4850	97	0	80-120	15
Barium	ND	1000	960	96	1000	953	95	1	80-120	15
Beryllium	ND	1000	1030	103	1000	1020	102	1	80-120	15
Cadmium	ND	1000	1010	101	1000	1000	100	1	80-120	15
Calcium	ND	50000	51600	103	50000	51200	102	1	80-120	15
Chromium	ND	1000	1030	103	1000	1020	102	1	80-120	15
Cobalt	ND	1000	994	99	1000	991	99	0	80-120	15
Copper	ND	1000	1000	100	1000	995	99	1	80-120	15
Iron	ND	10000	10200	102	10000	10100	101	1	80-120	15
Magnesium	ND	50000	52700	105	50000	51500	103	2	80-120	15
Manganese	ND	1000	1000	100	1000	997	100	1	80-120	15
Molybdenum	ND	1000	968	97	1000	952	95	2	80-120	15
Nickel	ND	1000	968	97	1000	956	96	1	80-120	15
Potassium	ND	50000	51500	103	50000	52100	104	1	80-120	
Silver	ND	1000	1010	101	1000	1000	100	1	80-120	
Sodium	597J	50000	51200	101	50000	51000	101	0	80-120	15
Vanadium	ND	1000	1010	101	1000	998	100	1	80-120	15
Zinc	ND	1000	1040	104	1000	1030	103	0	80-120	15

METHOD 3010A/6010B
METALS BY TRACE ICP

Client : SHAW E&I	Date Collected: NA
Project : EL TORO, CTO 0024	Date Received: 03/31/03
SDG NO. : 03C154	Date Extracted: 03/31/03 16:55
Sample ID: MBLK1W	Date Analyzed: 04/02/03 18:11
Lab Samp ID: IPC054WB	Dilution Factor: 1
Lab File ID: I31D004016	Matrix : WATER
Ext Btch ID: IPC054W	% Moisture : NA
Calib. Ref.: I31D004014	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
Thallium	ND	10	6

RL: Reporting Limit

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
SDG NO.: 03C154
METHOD: METHOD 3010A/6010B

MATRIX:	WATER			% MOISTURE:	NA
DILTN FACTR:	1	1	1		
SAMPLE ID:	MBLK1W				
CONTROL NO.:	IPC054WB	IPC054WL	IPC054WC		
LAB FILE ID:	I31D004016	I31D004017	I31D004018		
DATIME EXTRCTD:	03/31/0316:55	03/31/0316:55	03/31/0316:55	DATE COLLECTED:	NA
DATIME ANALYZD:	04/02/0318:11	04/02/0318:16	04/02/0318:21	DATE RECEIVED:	03/31/03
PREP. BATCH:	IPC054W	IPC054W	IPC054W		
CALIB. REF:	I31D004014	I31D004014	I31D004014		

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	1030	103	1000	1030	103	1	80-120	15
Lead	ND	1000	992	99	1000	990	99	0	80-120	15
Selenium	ND	1000	1040	104	1000	1040	104	1	80-120	15
Thallium	ND	1000	1020	102	1000	1020	102	0	80-120	15

METHOD 3050B/6010B
METALS BY ICP

Client	: SHAW E&I	Date Collected:	NA
Project	: EL TORO, CTO 0024	Date Received:	03/31/03
SDG NO.	: 03C154	Date Extracted:	03/31/03 17:45
Sample ID:	MBLK1S	Date Analyzed:	04/02/03 18:51
Lab Samp ID:	IPC055SB	Dilution Factor:	1
Lab File ID:	I07D005022	Matrix :	SOIL
Ext Btch ID:	IPC055S	% Moisture :	NA
Calib. Ref.:	I07D005014	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Aluminum	ND	50	4.48
Antimony	ND	5	2.1
Barium	.138J	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.: 03C154
METHOD: METHOD 3050B/6010B

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MATRIX:	SOIL			% MOISTURE:	NA
DILTN FACTR:	1	1	1		
SAMPLE ID:	MBLANK				
CONTROL NO.:	IPC055SB	IPC055SL	IPC055SC		
LAB FILE ID:	I07D005022	I07D005023	I07D005024		
DATIME EXTRCTD:	03/31/0317:45	03/31/0317:45	03/31/0317:45	DATE COLLECTED:	NA
DATIME ANALYZD:	04/02/0318:51	04/02/0318:56	04/02/0319:01	DATE RECEIVED:	03/31/03
PREP. BATCH:	IPC055S	IPC055S	IPC055S		
CALIB. REF:	I07D005014	I07D005014	I07D005014		

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	970	97	1000	972	97	0	80-120	25
Antimony	ND	500	459	92	500	461	92	0	80-120	25
Barium	.138J	100	92.9	93	100	93.1	93	0	80-120	25
Beryllium	ND	100	98.1	98	100	98.4	98	0	80-120	25
Cadmium	ND	100	95.7	96	100	95.8	96	0	80-120	25
Calcium	ND	5000	4910	98	5000	4930	99	0	80-120	25
Chromium	ND	100	98.5	99	100	98.6	99	0	80-120	25
Cobalt	ND	100	94.7	95	100	94.3	94	0	80-120	25
Copper	ND	100	96.3	96	100	96.4	96	0	80-120	25
Iron	ND	1000	971	97	1000	975	97	0	80-120	25
Magnesium	ND	5000	4940	99	5000	5010	100	2	80-120	25
Manganese	ND	100	96.2	96	100	96.2	96	0	80-120	25
Molybdenum	ND	100	90.6	91	100	90.7	91	0	80-120	25
Nickel	ND	100	91.1	91	100	91.1	91	0	80-120	25
Potassium	ND	5000	5010	100	5000	4950	99	1	80-120	7
Silver	ND	100	97	97	100	97	97	0	80-120	[illegible]
Sodium	ND	5000	4910	98	5000	4930	99	0	80-120	25
Vanadium	ND	100	96.7	97	100	96.8	97	0	80-120	25
Zinc	ND	100	98	98	100	98.5	99	0	80-120	25

METHOD 3050B/6010B
METALS BY TRACE ICP

Client	: SHAW E&I	Date Collected:	NA
Project	: EL TORO, CTO 0024	Date Received:	03/31/03
SDG NO.	: 03C154	Date Extracted:	03/31/03 17:45
Sample ID:	MBLK1S	Date Analyzed:	04/02/03 18:46
Lab Samp ID:	IPC055SB	Dilution Factor:	1
Lab File ID:	I31D004022	Matrix :	SOIL
Ext Btch ID:	IPC055S	% Moisture :	NA
Calib. Ref.:	I31D004014	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	ND	1	.21
Lead	.205J	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.: 03C154
METHOD: METHOD 3050B/6010B

MATRIX:	SOIL			% MOISTURE:	NA
DILTN FACTR:	1	1	1		
SAMPLE ID:	MBLK1S				
CONTROL NO.:	IPC055SB	IPC055SL	IPC055SC		
LAB FILE ID:	I31D004022	I31D004023	I31D004024		
DATIME EXTRCTD:	03/31/0317:45	03/31/0317:45	03/31/0317:45	DATE COLLECTED:	NA
DATIME ANALYZD:	04/02/0318:46	04/02/0318:51	04/02/0318:56	DATE RECEIVED:	03/31/03
PREP. BATCH:	IPC055S	IPC055S	IPC055S		
CALIB. REF:	I31D004014	I31D004014	I31D004014		

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	ND	100	94.9	95	100	95.4	95	1	80-120	25
Lead	.205J	100	92	92	100	92.5	92	1	80-120	25
Selenium	ND	100	90.8	91	100	91.6	92	1	80-120	25
Thallium	ND	100	96.5	97	100	96.6	97	0	80-120	25

EMAX QUALITY CONTROL DATA
SERIAL DILUTION ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
BATCH NO.: 03C154
METHOD: METHOD 3010A/6010B

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 5
SAMPLE ID: 818655-3240 818655-3240DL
EMAX SAMP ID: C154-09 C154-09T
LAB FILE ID: I07D005020 I07D005021
DATE EXTRACTED: 03/31/0316:55 03/31/0316:55 DATE COLLECTED: 03/27/03
DATE ANALYZED: 04/02/0318:38 04/02/0318:43 DATE RECEIVED: 03/28/03
PREP. BATCH: IPC054W IPC054W
CALIB. REF: I07D005014 I07D005014

ACCESSION:

PARAMETER	SMPL RSLT (ug/L)	SERIAL DIL RSLT (ug/L)	DIF RSLT %	QC LIMIT (%)
Aluminum	ND	ND	0	10
Antimony	ND	ND	0	10
Barium	2.5J	ND	NA	10
Beryllium	ND	ND	0	10
Cadmium	ND	ND	0	10
Calcium	83.3J	ND	NA	10
Chromium	ND	ND	0	10
Cobalt	ND	ND	0	10
Copper	ND	ND	0	10
Iron	45.4J	ND	NA	10
Magnesium	ND	ND	0	10
Manganese	ND	ND	0	10
Molybdenum	ND	ND	0	10
Nickel	ND	ND	0	10
Potassium	ND	5500J	NA	10
Silver	ND	ND	0	10
Sodium	597J	2900J	NA	10
Vanadium	ND	ND	0	10
Zinc	8.05J	ND	NA	10

EMAX QUALITY CONTROL DATA
SERIAL DILUTION ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
BATCH NO.: 03C154
METHOD: METHOD 3010A/6010B

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MATRIX:	WATER		% MOISTURE:	NA
DILUTION FACTOR:	1	5		
SAMPLE ID:	818655-3240	818655-3240DL		
EMAX SAMP ID:	C154-09	C154-09T		
LAB FILE ID:	I31D004020	I31D004021		
DATE EXTRACTED:	03/31/0316:55	03/31/0316:55	DATE COLLECTED:	03/27/03
DATE ANALYZED:	04/02/0318:34	04/02/0318:39	DATE RECEIVED:	03/28/03
PREP. BATCH:	IPC054W	IPC054W		
CALIB. REF:	I31D004014	I31D004014		

ACCESSION:

PARAMETER	SMPL RSLT (ug/L)	SERIAL DIL RSLT (ug/L)	DIF RSLT %	QC LIMIT (%)
Arsenic	ND	ND	0	10
Lead	5.73	11.4J	NA	10
Selenium	ND	ND	0	10
Thallium	7.16J	ND	NA	10

EMAX QUALITY CONTROL DATA
SERIAL DILUTION ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
BATCH NO.: 03C154
METHOD: METHOD 3050B/6010B

MATRIX:	SOIL		% MOISTURE:	11.4
DILUTION FACTOR:	1	5		
SAMPLE ID:	818655-3233	818655-3233DL		
EMAX SAMP ID:	C154-02	C154-02T		
LAB FILE ID:	I07D005030	I07D005031		
DATE EXTRACTED:	03/31/0317:45	03/31/0317:45	DATE COLLECTED:	03/27/03
DATE ANALYZED:	04/02/0319:35	04/02/0319:41	DATE RECEIVED:	03/28/03
PREP. BATCH:	IPC055S	IPC055S		
CALIB. REF:	I07D005025	I07D005025		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SERIAL DIL RSLT (mg/kg)	DIF RSLT %	QC LIMIT (%)
Aluminum	12100	11400	5	10
Antimony	4.23J	ND	NA	10
Barium	122	116	6	10
Beryllium	.43	ND	NA	10
Cadmium	ND	ND	0	10
Calcium	8530	8240	3	10
Chromium	9.82	8.38J	NA	10
Cobalt	6.08	4.75J	NA	10
Copper	6.62	6.71J	NA	10
Iron	14200	13800	3	10
Magnesium	6330	6070	4	10
Manganese	240	231	4	10
Molybdenum	ND	ND	0	10
Nickel	5.42	10.3J	NA	10
Potassium	4090	4980	22*	10
Silver	ND	ND	0	10
Sodium	220	501J	NA	10
Vanadium	33.2	31.4	5	10
Zinc	40.3	40.1	0	10

EMAX QUALITY CONTROL DATA
SERIAL DILUTION ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
BATCH NO.: 03C154
METHOD: METHOD 3050B/6010B

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MATRIX:	SOIL		% MOISTURE:	11.4
DILUTION FACTOR:	1	5		
SAMPLE ID:	818655-3233	818655-3233DL		
EMAX SAMP ID:	C154-02	C154-02T		
LAB FILE ID:	I31D004030	I31D004031		
DATE EXTRACTED:	03/31/0317:45	03/31/0317:45	DATE COLLECTED:	03/27/03
DATE ANALYZED:	04/02/0319:28	04/02/0319:33	DATE RECEIVED:	03/28/03
PREP. BATCH:	IPC055S	IPC055S		
CALIB. REF:	I31D004025	I31D004025		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SERIAL DIL RSLT (mg/kg)	DIF RSLT %	QC LIMIT (%)
Arsenic	2.99	3.62J	NA	10
Lead	2.96	3.21J	NA	10
Selenium	.469J	3.44J	NA	10
Thallium	ND	ND	0	10

EMAX QUALITY CONTROL DATA
ANALYTICAL SPIKE ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
SDG NO.: 03C154
METHOD: METHOD 3010A/6010B

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MATRIX:	WATER		% MOISTURE:	NA
DILTN FACTR:	1	1		
SAMPLE ID:	818655-3240			
CONTROL NO.:	C154-09	C154-09A		
LAB FILE ID:	I07D005020	I07D005019		
DATIME EXTRCTD:	03/31/0316:55	03/31/0316:55	DATE COLLECTED:	03/27/03
DATIME ANALYZD:	04/02/0318:38	04/02/0318:30	DATE RECEIVED:	03/28/03
PREP. BATCH:	IPC054W	IPC054W		
CALIB. REF:	I07D005014	I07D005014		

ACCESSION:

PARAMETER	SMPL RSLT (ug/L)	SPIKE AMT (ug/L)	AS RSLT (ug/L)	AS % REC	QC LIMIT (%)
Aluminum	ND	10000	9730	97	75-125
Antimony	ND	5000	4520	90	75-125
Barium	2.5J	1000	927	92	75-125
Beryllium	ND	1000	994	99	75-125
Cadmium	ND	1000	980	98	75-125
Calcium	83.3J	50000	48700	97	75-125
Chromium	ND	1000	995	100	75-125
Cobalt	ND	1000	944	94	75-125
Copper	ND	1000	970	97	75-125
Iron	45.4J	10000	9810	98	75-125
Magnesium	ND	50000	48500	97	75-125
Manganese	ND	1000	969	97	75-125
Molybdenum	ND	1000	924	92	75-125
Nickel	ND	1000	964	96	75-125
Potassium	ND	50000	49800	100	75-125
Silver	ND	1000	907	91	75-125
Sodium	597J	50000	48300	95	75-125
Vanadium	ND	1000	973	97	75-125
Zinc	8.05J	1000	1000	99	75-125

EMAX QUALITY CONTROL DATA
ANALYTICAL SPIKE ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
SDG NO.: 03C154
METHOD: METHOD 3010A/6010B

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MATRIX:	WATER		% MOISTURE:	NA
DILTN FACTR:	1	1		
SAMPLE ID:	818655-3240			
CONTROL NO.:	C154-09	C154-09A		
LAB FILE ID:	I31D004020	I31D004019		
DATIME EXTRCTD:	03/31/0316:55	03/31/0316:55	DATE COLLECTED:	03/27/03
DATIME ANALYZD:	04/02/0318:34	04/02/0318:26	DATE RECEIVED:	03/28/03
PREP. BATCH:	IPC054W	IPC054W		
CALIB. REF:	I31D004014	I31D004014		

ACCESSION:

PARAMETER	SMPL RSLT (ug/L)	SPIKE AMT (ug/L)	AS RSLT (ug/L)	AS % REC	QC LIMIT (%)
Arsenic	ND	1000	1030	103	75-125
Lead	5.73	1000	999	99	75-125
Selenium	ND	1000	1070	107	75-125
Thallium	7.16J	1000	1040	103	75-125

EMAX QUALITY CONTROL DATA
ANALYTICAL SPIKE ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
SDG NO.: 03C154
METHOD: METHOD 3050B/6010B

MATRIX:	SOIL		% MOISTURE:	11.4
DILTN FACTR:	1	1		
SAMPLE ID:	818655-3233			
CONTROL NO.:	C154-02	C154-02A		
LAB FILE ID:	I07D005030	I07D005027		
DATIME EXTRCTD:	03/31/0317:45	03/31/0317:45	DATE COLLECTED:	03/27/03
DATIME ANALYZD:	04/02/0319:35	04/02/0319:17	DATE RECEIVED:	03/28/03
PREP. BATCH:	IPC055S	IPC055S		
CALIB. REF:	I07D005025	I07D005025		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SPIKE AMT (mg/kg)	AS RSLT (mg/kg)	AS % REC	QC LIMIT (%)
Aluminum	12100	1130	12600	49*	75-125
Antimony	4.23J	564	491	86	75-125
Barium	122	113	218	84	75-125
Beryllium	.43	113	107	95	75-125
Cadmium	ND	113	104	92	75-125
Calcium	8530	5640	13300	85	75-125
Chromium	9.82	113	115	93	75-125
Cobalt	6.08	113	106	89	75-125
Copper	6.62	113	111	92	75-125
Iron	14200	1130	14500	33*	75-125
Magnesium	6330	5640	11400	89	75-125
Manganese	240	113	333	82	75-125
Molybdenum	ND	113	99.9	89	75-125
Nickel	5.42	113	106	89	75-125
Potassium	4090	5640	9260	92	75-125
Silver	ND	113	96.2	85	75-125
Sodium	220	5640	5400	92	75-125
Vanadium	33.2	113	136	91	75-125
Zinc	40.3	113	143	91	75-125

EMAX QUALITY CONTROL DATA
ANALYTICAL SPIKE ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
SDG NO.: 03C154
METHOD: METHOD 3050B/6010B

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MATRIX:	SOIL		% MOISTURE:	11.4
DILTN FACTR:	1	1		
SAMPLE ID:	818655-3233			
CONTROL NO.:	C154-02	C154-02A		
LAB FILE ID:	I31D004030	I31D004027		
DATIME EXTRCTD:	03/31/0317:45	03/31/0317:45	DATE COLLECTED:	03/27/03
DATIME ANALYZD:	04/02/0319:28	04/02/0319:11	DATE RECEIVED:	03/28/03
PREP. BATCH:	IPC055S	IPC055S		
CALIB. REF:	I31D004025	I31D004025		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SPIKE AMT (mg/kg)	AS RSLT (mg/kg)	AS % REC	QC LIMIT (%)
Arsenic	2.99	113	106	91	75-125
Lead	2.96	113	101	87	75-125
Selenium	.469J	113	99.6	88	75-125
Thallium	ND	113	105	93	75-125

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
SDG NO.: 03C154
METHOD: METHOD 3050B/6010B

MATRIX:	SOIL			% MOISTURE:	11.4
DILTN FACTR:	1	1	1		
SAMPLE ID:	818655-3233				
CONTROL NO.:	C154-02	C154-02M	C154-02S		
LAB FILE ID:	I07D005030	I07D005028	I07D005029		
DATIME EXTRCTD:	03/31/0317:45	03/31/0317:45	03/31/0317:45	DATE COLLECTED:	03/27/03
DATIME ANALYZD:	04/02/0319:35	04/02/0319:23	04/02/0319:28	DATE RECEIVED:	03/28/03
PREP. BATCH:	IPC055S	IPC055S	IPC055S		
CALIB. REF:	I07D005025	I07D005025	I07D005025		

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 %
Aluminum	12100	1130	15900	337*	1130	15900	344*	0	80-120	25
Antimony	4.23J	564	344	60*	564	344	60*	0	80-120	25
Barium	122	113	251	114	113	253	116	1	80-120	25
Beryllium	.43	113	109	96	113	110	97	0	80-120	25
Cadmium	ND	113	106	94	113	106	94	1	80-120	25
Calcium	8530	5640	15300	120	5640	15400	122*	1	80-120	25
Chromium	9.82	113	119	97	113	120	97	0	80-120	25
Cobalt	6.08	113	110	92	113	111	93	0	80-120	25
Copper	6.62	113	115	96	113	116	97	1	80-120	25
Iron	14200	1130	16100	169*	1130	16100	171*	0	80-120	25
Magnesium	6330	5640	12700	113	5640	12900	117	2	80-120	25
Manganese	240	113	357	103	113	358	104	0	80-120	25
Molybdenum	ND	113	96.3	85	113	98	87	2	80-120	25
Nickel	5.42	113	106	89	113	107	90	2	80-120	25
Potassium	4090	5640	10200	108	5640	10200	108	0	80-120	25
Silver	ND	113	107	94	113	107	95	0	80-120	25
Sodium	220	5640	5720	97	5640	5770	98	1	80-120	25
Vanadium	33.2	113	141	96	113	142	97	1	80-120	25
Zinc	40.3	113	155	101	113	155	102	0	80-120	25

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
SDG NO.: 03C154
METHOD: METHOD 3050B/6010B

MATRIX:	SOIL			% MOISTURE:	11.4
DILTN FACTR:	1	1	1		
SAMPLE ID:	818655-3233				
CONTROL NO.:	C154-02	C154-02M	C154-02S		
LAB FILE ID:	I31D004030	I31D004028	I31D004029		
DATIME EXTRCTD:	03/31/0317:45	03/31/0317:45	03/31/0317:45	DATE COLLECTED:	03/27/03
DATIME ANALYZD:	04/02/0319:28	04/02/0319:16	04/02/0319:21	DATE RECEIVED:	03/28/03
PREP. BATCH:	IPC055S	IPC055S	IPC055S		
CALIB. REF:	I31D004025	I31D004025	I31D004025		

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 %
Arsenic	2.99	113	106	91	113	106	91	0	80-120	25
Lead	2.96	113	102	88	113	103	88	1	80-120	25
Selenium	.469J	113	99.4	88	113	99.1	87	0	80-120	25
Thallium	ND	113	107	94	113	106	94	1	80-120	25

METHOD 7471A
MERCURY BY COLD VAPOR

Client : SHAW E&I
Project : EL TORO, CTO 0024
Batch No. : 03C154

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	HGD002SB	ND	1	NA	.1	.033	04/02/0311:00	04/01/0317:40	M74D003011	M74D003009	HGD002S	NA	04/01/03
LCS1S	HGD002SL	.902	1	NA	.1	.033	04/02/0311:02	04/01/0317:40	M74D003012	M74D003009	HGD002S	NA	04/01/03
LCD1S	HGD002SC	.915	1	NA	.1	.033	04/02/0311:04	04/01/0317:40	M74D003013	M74D003009	HGD002S	NA	04/01/03
818655-3233	C154-02	ND	1	11.4	.113	.0372	04/02/0311:36	04/01/0317:40	M74D003027	M74D003021	HGD002S	03/27/03	03/28/03
818655-3234	C154-03	ND	1	10.2	.111	.0367	04/02/0311:38	04/01/0317:40	M74D003028	M74D003021	HGD002S	03/27/03	03/28/03
818655-3235	C154-04	ND	1	21.3	.127	.0419	04/02/0311:40	04/01/0317:40	M74D003029	M74D003021	HGD002S	03/27/03	03/28/03
818655-3236	C154-05	ND	1	4.0	.104	.0344	04/02/0311:42	04/01/0317:40	M74D003030	M74D003021	HGD002S	03/27/03	03/28/03
818655-3237	C154-06	ND	1	6.8	.107	.0354	04/02/0311:45	04/01/0317:40	M74D003031	M74D003021	HGD002S	03/27/03	03/28/03
818655-3238	C154-07	ND	1	17.0	.12	.0398	04/02/0311:47	04/01/0317:40	M74D003032	M74D003021	HGD002S	03/27/03	03/28/03
818655-3239	C154-08	ND	1	9.1	.11	.0363	04/02/0311:53	04/01/0317:40	M74D003035	M74D003033	HGD002S	03/27/03	03/28/03
818655-3241	C154-10	ND	1	5.8	.106	.035	04/02/0311:56	04/01/0317:40	M74D003036	M74D003033	HGD002S	03/28/03	03/28/03
818655-3242	C154-11	ND	1	13.3	.115	.0381	04/02/0311:58	04/01/0317:40	M74D003037	M74D003033	HGD002S	03/28/03	03/28/03
818655-3243	C154-12	ND	1	8.4	.109	.036	04/02/0312:00	04/01/0317:40	M74D003038	M74D003033	HGD002S	03/28/03	03/28/03
818655-3244	C154-13	ND	1	15.9	.119	.0392	04/02/0312:02	04/01/0317:40	M74D003039	M74D003033	HGD002S	03/28/03	03/28/03

RL: Reporting Limit

METHOD 7470A
MERCURY BY COLD VAPOR

Client : SHAW E&I
Project : EL TORO, CTO 0024
Batch No. : 03C154

Matrix : WATER
Instrument ID : TI074

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	HGD001WB	ND	1	NA	.2	.1	04/01/0316:10	04/01/0314:15	M74D002011	M74D002009	HGD001W	NA	04/01/03
LCS1W	HGD001WL	5	1	NA	.2	.1	04/01/0316:12	04/01/0314:15	M74D002012	M74D002009	HGD001W	NA	04/01/03
LCD1W	HGD001WC	4.86	1	NA	.2	.1	04/01/0316:14	04/01/0314:15	M74D002013	M74D002009	HGD001W	NA	04/01/03
818655-3240	C154-09	ND	1	NA	.2	.1	04/01/0316:51	04/01/0314:15	M74D002030	M74D002021	HGD001W	03/27/03	03/28/03

RL: Reporting Limit

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
SDG NO.: 03C154
METHOD: METHOD 7470A

MATRIX:	WATER			% MOISTURE:	NA
DILTN FACTR:	1	1	1		
SAMPLE ID:	MBLK1W				
CONTROL NO.:	HGD001WB	HGD001WL	HGD001WC		
LAB FILE ID:	M74D002011	M74D002012	M74D002013		
DATIME EXTRCTD:	04/01/0314:15	04/01/0314:15	04/01/0314:15	DATE COLLECTED:	NA
DATIME ANALYZD:	04/01/0316:10	04/01/0316:12	04/01/0316:14	DATE RECEIVED:	04/01/03
PREP. BATCH:	HGD001W	HGD001W	HGD001W		
CALIB. REF:	M74D002009	M74D002009	M74D002009		

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	5	100	5	4.86	97	3	77-120	15

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
SDG NO.: 03C154
METHOD: METHOD 7471A

MATRIX:	SOIL			% MOISTURE:	NA
DILTN FACTR:	1	1	1		
SAMPLE ID:	MBLK1S				
CONTROL NO.:	HGD002SB	HGD002SL	HGD002SC		
LAB FILE ID:	M74D003011	M74D003012	M74D003013		
DATIME EXTRCTD:	04/01/0317:40	04/01/0317:40	04/01/0317:40	DATE COLLECTED:	NA
DATIME ANALYZD:	04/02/0311:00	04/02/0311:02	04/02/0311:04	DATE RECEIVED:	04/01/03
PREP. BATCH:	HGD002S	HGD002S	HGD002S		
CALIB. REF:	M74D003009	M74D003009	M74D003009		

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	.902	108	.833	.915	110	1	77-120	25

7177

EMAX QUALITY CONTROL DATA
SERIAL DILUTION ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
BATCH NO.: 03C154
METHOD: METHOD 7470A

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MATRIX:	WATER		% MOISTURE:	NA
DILUTION FACTOR:	1	5		
SAMPLE ID:	SW3	SW3DL		
EMAX SAMP ID:	C147-10	C147-10T		
LAB FILE ID:	M74D002015	M74D002016		
DATE EXTRACTED:	04/01/0314:15	04/01/0314:15	DATE COLLECTED:	03/27/03
DATE ANALYZED:	04/01/0316:18	04/01/0316:21	DATE RECEIVED:	03/28/03
PREP. BATCH:	HGD001W	HGD001W		
CALIB. REF:	M74D002009	M74D002009		

ACCESSION:

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

7178

EMAX QUALITY CONTROL DATA
SERIAL DILUTION ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
BATCH NO.: 03C154
METHOD: METHOD 7471A

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MATRIX:	SOIL		% MOISTURE:	NA
DILUTION FACTOR:	1	5		
SAMPLE ID:	818655-3250	818655-3250DL		
EMAX SAMP ID:	C158-05	C158-05T		
LAB FILE ID:	M74D003015	M74D003016		
DATE EXTRACTED:	04/01/0317:40	04/01/0317:40	DATE COLLECTED:	03/31/03
DATE ANALYZED:	04/02/0311:09	04/02/0311:11	DATE RECEIVED:	03/31/03
PREP. BATCH:	HGD002S	HGD002S		
CALIB. REF:	M74D003009	M74D003009		

ACCESSION:

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

7179

EMAX QUALITY CONTROL DATA
ANALYTICAL SPIKE ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
SDG NO.: 03C154
METHOD: METHOD 7470A

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MATRIX:	WATER		% MOISTURE:	NA
DILTN FACTR:	1	1		
SAMPLE ID:	SW3			
CONTROL NO.:	C147-10	C147-10A		
LAB FILE ID:	M74D002015	M74D002014		
DATIME EXTRCTD:	04/01/0314:15	04/01/0314:15	DATE COLLECTED:	03/27/03
DATIME ANALYZD:	04/01/0316:18	04/01/0316:16	DATE RECEIVED:	03/28/03
PREP. BATCH:	HGD001W	HGD001W		
CALIB. REF:	M74D002009	M74D002009		

ACCESSION:

PARAMETER	SMPL RSLT (ug/L)	SPIKE AMT (ug/L)	AS RSLT (ug/L)	AS % REC	QC LIMIT (%)
Mercury	ND	2	1.98	99	85-115

7180

EMAX QUALITY CONTROL DATA
ANALYTICAL SPIKE ANALYSIS

CLIENT: SHAW E&I
PROJECT: EL TORO, CTO 0024
SDG NO.: 03C154
METHOD: METHOD 7471A

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MATRIX:	SOIL		% MOISTURE:	16.7
DILTN FACTR:	1	1		
SAMPLE ID:	818655-3250			
CONTROL NO.:	C158-05	C158-05A		
LAB FILE ID:	M74D003015	M74D003017		
DATIME EXTRCTD:	04/01/0317:40	04/01/0317:40	DATE COLLECTED:	03/31/03
DATIME ANALYZD:	04/02/0311:09	04/02/0311:14	DATE RECEIVED:	03/31/03
PREP. BATCH:	HGD002S	HGD002S		
CALIB. REF:	M74D003009	M74D003009		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SPIKE AMT (mg/kg)	AS RSLT (mg/kg)	AS % REC	QC LIMIT (%)
Mercury	ND	.399	.458	115	85-115

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:	April 21, 2003
Matrix:	11 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.:	03-C154
Sample Nos.:	818655-3232, 818655-3233, 818655-3234, 818655-3235, 818655-3236, 818655-3237, 818655-3238, 818655-3239, 818655-3240, 818655-3241, 818655-3242, 818655-3243, 818655-3244
Collection Date(s):	March 27 & 28, 2003
Comments:	Field duplicates: 818655-3241 / 818655-3242 Trip Blank: 818655-3232. Equipment rinsate: 818655-3240.

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

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	Internal Standards	Field Duplicates	Other
Method M8015 **Gasoline**	√	√	N/A	√	√	√	N/A	√	√
Method M8015 **Diesel**	√	√	√	√	√	√	N/A	√	√
Method 8260B **Volatiles**	√	√	N/A	√	√	**Pg. 6**	√	√	√
Method 8270C **Semivolatiles**	√	√	√	√	√	**Pg. 7**	√	√	√
Method 8270C **Semivolatiles-SIM**	√	√	√	√	√	√	√	√	√
Method 8081A **Pesticides**	√	√	√	√	√	√	N/A	√	√
Method 7470A/7471A **Mercury**	√	N/A	√	√	√	√	N/A	√	√
Method 6010B **Metals**	√	N/A	**Pg. 10,11**	√	**Pg. 10**	√	N/A	**Pg. 11**	**Pg. 11**

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.

FULL DATA VALIDATION SUMMARY TABLE
Samples 818655-3236 and 818655-3243

Analysis	GC/MS Tuning	Target Compound List Identification	Compound or Analyte Quantification	Reported Detection Limits	Tentatively Identified Compounds	System Performance	Interference Check Sample	Graphite Furnace Quality Control
Method M8015 **Gasoline**	N/A	N/A	√	√	N/A	√	N/A	N/A
Method M8015 **Diesel / Motor oil**	N/A	N/A	√	√	N/A	√	N/A	N/A
Method 8260B **Volatiles**	√	√	√	√	N/A	√	N/A	N/A
Method 8270C **Semivolatiles**	√	√	√	√	N/A	√	N/A	N/A
Method 8270C **Semivolatiles-SIM**	√	√	√	√	N/A	√	N/A	N/A
Method 8081A **Pesticides**	N/A	N/A	√	√	N/A	√	N/A	N/A
Method 7470 **Mercury**	N/A	N/A	√	√	N/A	√	N/A	N/A
Method 6010B **Metals**	N/A	N/A	√	√	N/A	√	√	√

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 found are described below.

DATA ASSESSMENT

GASOLINE (Method M8015)

I. **Level III criteria met.**

Level IV Validation Criteria for Samples 818655-3236 and 818655-3243

II. **Compound Quantitation and Reported Detection Limits**

A. Sample results were recalculated, with the proper dilution factors, weights, volumes, and percent moisture used to calculate the sample results. The samples were correctly quantitated. The reported detection limits were consistent with the contract required report limits and reflect any dilutions, weights, volumes, and percent moisture.

III. **System Performance**

A. The samples were evaluated for baseline shifts, extraneous peaks, loss of resolution, and peak tailing. No system degradation was noted.

DIESEL (Method M8015)

I. **Level III criteria met.**

Level IV Validation Criteria for Samples 818655-3236 and 818655-3243

II. **Compound Quantitation and Reported Detection Limits**

A. Sample results were recalculated, with the proper dilution factors, weights, volumes, and percent moisture used to calculate the sample results. The samples were correctly quantitated. The reported detection limits were consistent with the contract required report limits and reflect any dilutions, weights, volumes, and percent moisture.

III. **System Performance**

A. The samples were evaluated for baseline shifts, extraneous peaks, loss of resolution, and peak tailing. No system degradation was noted.

VOLATILES (Method 8260B)

I. Calibrations

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

- Carbon tetrachloride and 2-Chloroethylvinyl ether in all samples.
- Acetone, MTBE, Vinyl acetate, 2-Butanone, 4-Methyl-2-pentanone, 2-Hexanone, and Tetrachloroethene in samples 818655-3241, 818655-3242, 818655-3243, and 818655-3244

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

Calibration Date	Compound	%D
4/01/03 0130	Carbon tetrachloride	-36
	2-Chloroethylvinyl ether	30
4/01/03 1507	Carbon tetrachloride	-49
	2-Chloroethylvinyl ether	42
4/02/03 0706	Acetone	39
	MTBE	28
	Vinyl acetate	27
	2-Butanone	37
	Carbon tetrachloride	-58
	2-Chloroethylvinyl ether	29
	4-Methyl-2-pentanone	32
	Tetrachloroethene	-26

Level IV Validation Criteria for Samples 818655-3236 and 818655-3243

II. GC/MS Tuning

A. The ion abundance criteria were met for the bromofluorobenzene (BFB) GC/MS performance check. The samples were analyzed within 12 hours of the associated performance check.

III. Target Compound List (TCL) Identification

A. The relative retention times, mass spectra, and peak identifications of the samples were evaluated. Target compound identification was considered to be correct.

IV. Compound Quantitation and Reported Detection Limits

A. Sample results were recalculated with the proper dilution factors, weights, volumes, and percent moisture used to calculate the sample results. The samples were correctly quantitated. The reported detection limits were consistent with the contract required report limits and reflect any dilutions, weights, volumes, and percent moisture.

V. Tentatively Identified Compounds (TICs)

A. TICs were not performed.

VI. System Performance

A. The samples were evaluated for reconstructed ion chromatogram (RIC) baseline shifts, extraneous peaks, loss of resolution, and peak tailing. No system degradation was noted.

SEMIVOLATILES (Method 8270C)

I. Calibrations

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

- Hexachlorocyclopentadiene, 2,6-Dinitrotoluene, 2,4-Dinitrophenol, 2,4-Dinitrotoluene, and 4,6-Dinitro-2-methylphenol in all samples

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

Calibration Date	Compound	%D
4/01/03 1225	Hexachlorocyclopentadiene	-29.8
	2,6-Dinitrotoluene	-29.2
	2,4-Dinitrophenol	-41.0
	2,4-Dinitrotoluene	-28.7
	4,6-Dinitro-2-methylphenol	-43.9
4/02/03 1146	Hexachlorocyclopentadiene	-29.4
	2,6-Dinitrotoluene	-28.4
	2,4-Dinitrophenol	-34.7
	2,4-Dinitrotoluene	-28.1
	4,6-Dinitro-2-methylphenol	-29.3

Level IV Validation Criteria for Samples 818655-3236 and 818655-3243

II. GC/MS Tuning

A. The ion abundance criteria were met for the (DFTPP) GC/MS performance check. The samples were analyzed within 12 hours of the associated performance check.

III. Target Compound List (TCL) Identification

A. The relative retention times, mass spectra, and peak identifications of the samples were evaluated. Target compound identification was considered to be correct.

IV. **Compound Quantitation and Reported Detection Limits**

A Sample results were recalculated with the proper dilution factors, weights, volumes, and percent moisture used to calculate the sample results. The samples were correctly quantitated. The reported detection limits were consistent with the contract required report limits and reflect any dilutions, weights, volumes, and percent moisture

V. **Tentatively Identified Compounds (TICs)**

A. TICs were not performed.

VI. **System Performance**

A. The samples were evaluated for reconstructed ion chromatogram (RIC) baseline shifts, extraneous peaks, loss of resolution, and peak tailing. No system degradation was noted.

SEMIVOLATILES-SIM (Method 8270C)

I. **Level III criteria met.**

Level IV Validation Criteria for Samples 818655-3236 and 818655-3243

II. **GC/MS Tuning**

A. The ion abundance criteria were met for the (DFTPP) GC/MS performance check. The samples were analyzed within 12 hours of the associated performance check.

III. **Target Compound List (TCL) Identification**

A. The relative retention times, mass spectra, and peak identifications of the samples were evaluated. Target compound identification was considered to be correct

IV. **Compound Quantitation and Reported Detection Limits**

A. Sample results were recalculated with the proper dilution factors, weights, volumes, and percent moisture used to calculate the sample results. The samples were correctly quantitated. The reported detection limits were consistent with the contract required report limits and reflect any dilutions, weights, volumes, and percent moisture

V. **Tentatively Identified Compounds (TICs)**

A. TICs were not performed.

VI. **System Performance**

A. The samples were evaluated for reconstructed ion chromatogram (RIC) baseline shifts, extraneous peaks, loss of resolution, and peak tailing. No system degradation was noted.

PESTICIDES (Method 8081A)

I. Level III criteria met.

Level IV Validation Criteria for Samples 818655-3236 and 818655-3243

II. Compound Quantitation and Reported Detection Limits

A Sample results were recalculated, with the proper dilution factors, weights, volumes, and percent moisture used to calculate the sample results. The samples were correctly quantitated. The reported detection limits were consistent with the contract required report limits and reflect any dilutions, weights, volumes, and percent moisture.

III. System Performance

A. The samples were evaluated for baseline shifts, extraneous peaks, loss of resolution, and peak tailing. No system degradation was noted.

MERCURY (Method 7470A/7471A)

I. Level III criteria met.

Level IV Validation Criteria for Samples 818655-3236 and 818655-3243

II. Analyte Quantitation and Reported Detection Limits

A. Sample results were recalculated, with the proper dilution factors, weights, volumes, and percent moisture used to calculate the sample results. The samples were found to be correctly quantitated. The reported detection limits were consistent with the contract required report limits and reflect any dilutions, weights, volumes, and percent moisture.

III. Graphite Furnace Atomic Absorption (GFAA) Analysis

A. Not performed.

IV. ICP Interference Check Sample

A. Not performed.

METALS (Method 6010B)

I. Blank Contamination

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

- Lead and Sodium in all samples.

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

Analyte	Blank ID	Concentration, units
Lead	CCB3	2.74 mg/Kg, 27.4 ug/L
Sodium	CCB4	75.1 mg/Kg, 751 ug/L

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

B. Due to equipment rinsate blank contamination, the following results are considered nondetected (U).

- Thallium in samples 818655-3238 and 818655-3244.

The following analytes were detected in the associated equipment rinsate blanks at the concentrations noted below.

Analyte	Blank ID	Concentration
Thallium	818655-3240	1.43 mg/Kg

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 and Iron in samples 818655-3233, 818655-3234, 818655-3235, 818655-3236, 818655-3237, 818655-3238, 818655-3239, 818655-3241, 818655-3242, 818655-3243 and 818655-3244.

The recoveries outside the QC limits are listed below.

Sample ID	Analyte	%R	QC Limits
818655-3233	Aluminum	49.0	75 - 125%
	Iron	33.0	75 - 125%

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

III. Matrix Spike (MS)

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

- Antimony in samples 818655-3233, 818655-3234, 818655-3235, 818655-3236, 818655-3237, 818655-3238, 818655-3239, 818655-3241, 818655-3242, 818655-3243 and 818655-3244.

The recoveries outside the QC limits are listed below:

Sample ID	Analyte	MS%R, MSD%R	QC Limits
818655-3233	Antimony	60, 60	75 - 125%

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

IV. ICP Serial Dilution

A. Due to ICP serial dilution problems, the following detected and nondetected results are qualified as estimated (J).

- Potassium in samples 818655-3233, 818655-3234, 818655-3235, 818655-3236, 818655-3237, 818655-3238, 818655-3239, 818655-3241, 818655-3242, 818655-3243, and 818655-3244.

The percent difference between the original sample result and the serial dilution result was outside the QC limits of 10% for analyte concentrations greater than 10x the IDL as shown below.

Sample ID	Analyte	Original Concentration	10x IDL	%D
818655-3233	Potassium	4090	716	22

V. Field Duplicate

A. The following RPD was obtained for the field duplicate samples 818655-3241 / 818655-3242:

- 79% for Aluminum; 61% for Arsenic; 70% for Beryllium; 57% for Chromium; 72% for Cobalt; 53% for Copper; 68% for Iron; 57% for Lead; 72% for Magnesium; 67% for Potassium; 52% for Sodium; 59% for Thallium; and 67% for Zinc.

For soil samples, the field RPD guideline is $\pm$ 50%. The data are not qualified on the basis of field duplicate results.

VI. Analyte Quantitation and Reported Detection Limits

A. Sample results were recalculated, with the proper dilution factors, weights, volumes, and percent moisture used to calculate the sample results. The samples were found to be correctly quantitated. The reported detection limits were consistent with the contract required report limits and reflect any dilutions, weights, volumes, and percent moisture.

VII. Graphite Furnace Atomic Absorption (GFAA) Analysis

A. GFAA was not performed

VIII. ICP Interference Check Sample

A. ICSAB percent recoveries were acceptable and spectral interference was not found.

MCAS El Toro, CTO 24
Gasoline – Data Qualification Summary – SDG 03-C154

No Sample Data Qualified in this SDG

MCAS El Toro, CTO 24
Gasoline – Laboratory Blank Data Qualification Summary – SDG 03-C154

No Sample Data Qualified in this SDG

MCAS El Toro, CTO 24
Diesel – Data Qualification Summary – SDG 03-C154

No Sample Data Qualified in this SDG

MCAS El Toro, CTO 24
Diesel – Laboratory Blank Data Qualification Summary – SDG 03-C154

No Sample Data Qualified in this SDG

MCAS El Toro, CTO 24
Volatiles – Data Qualification Summary – SDG 03-C154

Continuing calibration qualifications

Sample	Compound	Qualification	Protocol / Advisory
818655-3232	Carbon tetrachloride	UJ	Protocol
	2-Chloroethylvinyl ether	UJ	Protocol
818655-3233	Carbon tetrachloride	UJ	Protocol
	2-Chloroethylvinyl ether	UJ	Protocol
818655-3234	Carbon tetrachloride	UJ	Protocol
	2-Chloroethylvinyl ether	UJ	Protocol
818655-3235	Carbon tetrachloride	UJ	Protocol
	2-Chloroethylvinyl ether	UJ	Protocol
818655-3236	Carbon tetrachloride	UJ	Protocol
	2-Chloroethylvinyl ether	UJ	Protocol
818655-3237	Carbon tetrachloride	UJ	Protocol
	2-Chloroethylvinyl ether	UJ	Protocol
818655-3238	Carbon tetrachloride	UJ	Protocol
	2-Chloroethylvinyl ether	UJ	Protocol
818655-3239	Carbon tetrachloride	UJ	Protocol
	2-Chloroethylvinyl ether	UJ	Protocol
818655-3240	Carbon tetrachloride	UJ	Protocol
	2-Chloroethylvinyl ether	UJ	Protocol

Sample	Compound	Qualification	Protocol / Advisory
818655-3241	Acetone	UJ	Protocol
	MTBE	UJ	Protocol
	Vinyl acetate	UJ	Protocol
	2-Butanone	UJ	Protocol
	Carbon tetrachloride	UJ	Protocol
	2-Chloroethylvinyl ether	UJ	Protocol
	4-Methyl-2-pentanone	UJ	Protocol
	2-Hexanone	UJ	Protocol
	Tetrachloroethene	UJ	Protocol
818655-3242	Acetone	J	Protocol
	MTBE	UJ	Protocol
	Vinyl acetate	UJ	Protocol
	2-Butanone	UJ	Protocol
	Carbon tetrachloride	UJ	Protocol
	2-Chloroethylvinyl ether	UJ	Protocol
	4-Methyl-2-pentanone	UJ	Protocol
	2-Hexanone	UJ	Protocol
	Tetrachloroethene	UJ	Protocol
818655-3243	Acetone	UJ	Protocol
	MTBE	UJ	Protocol
	Vinyl acetate	UJ	Protocol
	2-Butanone	UJ	Protocol
	Carbon tetrachloride	UJ	Protocol
	2-Chloroethylvinyl ether	UJ	Protocol
	4-Methyl-2-pentanone	UJ	Protocol
	2-Hexanone	UJ	Protocol
	Tetrachloroethene	UJ	Protocol
818655-3244	Acetone	J	Protocol
	MTBE	UJ	Protocol
	Vinyl acetate	UJ	Protocol
	2-Butanone	UJ	Protocol
	Carbon tetrachloride	UJ	Protocol
	2-Chloroethylvinyl ether	UJ	Protocol
	4-Methyl-2-pentanone	UJ	Protocol
	2-Hexanone	UJ	Protocol
	Tetrachloroethene	UJ	Protocol

MCAS El Toro, CTO 24
Volatiles – Laboratory Blank Data Qualification Summary – SDG 03-C154

No Sample Data Qualified in this SDG.

MCAS El Toro, CTO 24
Semivolatiles – Data Qualification Summary – SDG 03-C154

Continuing calibration qualifications

Sample	Compound	Qualification	Protocol / Advisory
818655-3233	Hexachlorocyclopentadiene	UJ	Protocol
	2,6-Dinitrotoluene	UJ	Protocol
	2,4-Dinitrophenol	UJ	Protocol
	2,4-Dinitrotoluene	UJ	Protocol
	4,6-Dinitro-2-methylphenol	UJ	Protocol
818655-3234	Hexachlorocyclopentadiene	UJ	Protocol
	2,6-Dinitrotoluene	UJ	Protocol
	2,4-Dinitrophenol	UJ	Protocol
	2,4-Dinitrotoluene	UJ	Protocol
	4,6-Dinitro-2-methylphenol	UJ	Protocol
818655-3235	Hexachlorocyclopentadiene	UJ	Protocol
	2,6-Dinitrotoluene	UJ	Protocol
	2,4-Dinitrophenol	UJ	Protocol
	2,4-Dinitrotoluene	UJ	Protocol
	4,6-Dinitro-2-methylphenol	UJ	Protocol
818655-3236	Hexachlorocyclopentadiene	UJ	Protocol
	2,6-Dinitrotoluene	UJ	Protocol
	2,4-Dinitrophenol	UJ	Protocol
	2,4-Dinitrotoluene	UJ	Protocol
	4,6-Dinitro-2-methylphenol	UJ	Protocol
818655-3237	Hexachlorocyclopentadiene	UJ	Protocol
	2,6-Dinitrotoluene	UJ	Protocol
	2,4-Dinitrophenol	UJ	Protocol
	2,4-Dinitrotoluene	UJ	Protocol
	4,6-Dinitro-2-methylphenol	UJ	Protocol
818655-3238	Hexachlorocyclopentadiene	UJ	Protocol
	2,6-Dinitrotoluene	UJ	Protocol
	2,4-Dinitrophenol	UJ	Protocol
	2,4-Dinitrotoluene	UJ	Protocol
	4,6-Dinitro-2-methylphenol	UJ	Protocol
818655-3239	Hexachlorocyclopentadiene	UJ	Protocol
	2,6-Dinitrotoluene	UJ	Protocol
	2,4-Dinitrophenol	UJ	Protocol
	2,4-Dinitrotoluene	UJ	Protocol
	4,6-Dinitro-2-methylphenol	UJ	Protocol
818655-3240	Hexachlorocyclopentadiene	UJ	Protocol
	2,6-Dinitrotoluene	UJ	Protocol
	2,4-Dinitrophenol	UJ	Protocol
	2,4-Dinitrotoluene	UJ	Protocol
	4,6-Dinitro-2-methylphenol	UJ	Protocol
818655-3241	Hexachlorocyclopentadiene	UJ	Protocol
	2,6-Dinitrotoluene	UJ	Protocol
	2,4-Dinitrophenol	UJ	Protocol
	2,4-Dinitrotoluene	UJ	Protocol
	4,6-Dinitro-2-methylphenol	UJ	Protocol

Sample	Compound	Qualification	Protocol / Advisory
818655-3242	Hexachlorocyclopentadiene	UJ	Protocol
	2,6-Dinitrotoluene	UJ	Protocol
	2,4-Dinitrophenol	UJ	Protocol
	2,4-Dinitrotoluene	UJ	Protocol
	4,6-Dinitro-2-methylphenol	UJ	Protocol
818655-3243	Hexachlorocyclopentadiene	UJ	Protocol
	2,6-Dinitrotoluene	UJ	Protocol
	2,4-Dinitrophenol	UJ	Protocol
	2,4-Dinitrotoluene	UJ	Protocol
	4,6-Dinitro-2-methylphenol	UJ	Protocol
818655-3244	Hexachlorocyclopentadiene	UJ	Protocol
	2,6-Dinitrotoluene	UJ	Protocol
	2,4-Dinitrophenol	UJ	Protocol
	2,4-Dinitrotoluene	UJ	Protocol
	4,6-Dinitro-2-methylphenol	UJ	Protocol

MCAS El Toro, CTO 24
Semivolatiles – Laboratory Blank Data Qualification Summary – SDG 03-C154

No Sample Data Qualified in this SDG.

MCAS El Toro, CTO 24
Semivolatiles-SIM – Data Qualification Summary – SDG 03-C154

No Sample Data Qualified in this SDG.

MCAS El Toro, CTO 24
Semivolatiles-SIM – Laboratory Blank Data Qualification Summary – SDG 03-C154

No Sample Data Qualified in this SDG.

MCAS El Toro, CTO 24
Pesticides – Data Qualification Summary – SDG 03-C154

No Sample Data Qualified in this SDG

MCAS El Toro, CTO 24
Pesticides – Laboratory Blank Data Qualification Summary – SDG 03-C154

No Sample Data Qualified in this SDG.

MCAS El Toro, CTO 24
Mercury – Data Qualification Summary – SDG 03-C154

No Sample Data Qualified in this SDG.

MCAS El Toro, CTO 24
Mercury – Laboratory Blank Data Qualification Summary – SDG 03-C154

No Sample Data Qualified in this SDG.

MCAS El Toro, CTO 24
Metals – Data Qualification Summary – SDG 03-C154

Analytical Spike qualifications

Sample	Compound	Qualification	Protocol / Advisory
818655-3233	Aluminum	J	Protocol
	Iron	J	Protocol
818655-3234	Aluminum	J	Protocol
	Iron	J	Protocol
818655-3235	Aluminum	J	Protocol
	Iron	J	Protocol
818655-3236	Aluminum	J	Protocol
	Iron	J	Protocol
818655-3237	Aluminum	J	Protocol
	Iron	J	Protocol
818655-3238	Aluminum	J	Protocol
	Iron	J	Protocol
818655-3239	Aluminum	J	Protocol
	Iron	J	Protocol
818655-3241	Aluminum	J	Protocol
	Iron	J	Protocol
818655-3242	Aluminum	J	Protocol
	Iron	J	Protocol
818655-3243	Aluminum	J	Protocol
	Iron	J	Protocol
818655-3244	Aluminum	J	Protocol
	Iron	J	Protocol

Matrix spike / Matrix spike duplicate qualifications

Sample	Compound	Qualification	Protocol / Advisory
818655-3233	Antimony	J	Protocol
818655-3234	Antimony	UJ	Protocol
818655-3235	Antimony	UJ	Protocol
818655-3236	Antimony	UJ	Protocol
818655-3237	Antimony	J	Protocol
818655-3238	Antimony	UJ	Protocol
818655-3239	Antimony	UJ	Protocol
818655-3241	Antimony	UJ	Protocol
818655-3242	Antimony	UJ	Protocol
818655-3243	Antimony	UJ	Protocol
818655-3244	Antimony	UJ	Protocol

ICP serial dilution qualifications

Sample	Compound	Qualification	Protocol / Advisory
818655-3233	Potassium	J	Protocol
818655-3234	Potassium	J	Protocol
818655-3235	Potassium	J	Protocol
818655-3236	Potassium	J	Protocol
818655-3237	Potassium	J	Protocol
818655-3238	Potassium	J	Protocol
818655-3239	Potassium	J	Protocol
818655-3241	Potassium	J	Protocol
818655-3242	Potassium	J	Protocol
818655-3243	Potassium	J	Protocol
818655-3244	Potassium	J	Protocol

MCAS El Toro, CTO 24
Metals – Laboratory Blank Data Qualification Summary – SDG 03-C154

Calibration and method blank contamination qualifications

Compound	Associated Samples	Qualification	Protocol / Advisory
Lead	818655-3233	2.96 U	Advisory
Sodium		220 U	Advisory
Lead	818655-3234	2.95 U	Advisory
Sodium		190 U	Advisory
Lead	818655-3235	4.33 U	Advisory
Sodium		252 U	Advisory
Lead	818655-3236	1.44 U	Advisory
Sodium		114 U	Advisory
Lead	818655-3237	1.94 U	Advisory
Sodium		117 U	Advisory
Lead	818655-3238	4.2 U	Advisory
Sodium		247 U	Advisory
Lead	818655-3239	2.77 U	Advisory
Sodium		180 U	Advisory
Lead	818655-3240	5.73 U	Advisory
Sodium		597 U	Advisory
Lead	818655-3241	1.66 U	Advisory
Sodium		116 U	Advisory
Lead	818655-3242	2.97 U	Advisory
Sodium		197 U	Advisory
Lead	818655-3243	2.39 U	Advisory
Sodium		184 U	Advisory
Lead	818655-3244	9.64 U	Advisory
Sodium		260 U	Advisory

Equipment rinsate blank contamination qualifications

Compound	Associated Samples	Qualification	Protocol / Advisory
Thallium	818655-3238	1.16 U	Advisory
Thallium	818655-3244	0.534 U	Advisory

FIELD DUPLICATE TABLE

Method	Analyte	Sample ID	Duplicate ID	Sample Value	Duplicate Value	RPD
Metals 6010	Aluminum	818655-3241	818655-3242	6700	15500	79%
	Arsenic			1.54	2.89	61%
	Beryllium			0.241	0.502	70%
	Chromium			6.32	11.3	57%
	Cobalt			2.94	6.24	72%
	Copper			4.38	7.57	53%
	Iron			7460	15100	68%
	Lead			1.66	2.97	57%
	Magnesium			3400	7260	72%
	Potassium			2040	4100	67%
	Sodium			116	197	52%
	Vanadium			19.4	35.8	59%
	Zinc			21.3	43.0	67%

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 continuing calibration problems in the Volatile analyses, Carbon tetrachloride and 2-Chloroethylvinyl ether were qualified as estimated for thirteen samples; Acetone, MTBE, Vinyl acetate, 2-Butanone, 4-Methyl-2-pentanone, 2-Hexanone, and Tetrachloroethene for four samples.

B Due to continuing calibration problems in the Semivolatile analyses, the following were qualified as estimated: Hexachlorocyclopentadiene, 2,6-Dinitrotoluene, 2,4-Dinitrophenol, 2,4-Dinitrotoluene, and 4,6-Dinitro-2-methylphenol for twelve samples.

C. Due to calibration and method blank contamination in the Metals analyses, the following were considered nondetected: Lead and Sodium for twelve samples. Due to equipment rinsate contamination, Thallium for two samples was considered nondetected. Due to analytical spike recovery problems, Aluminum and Iron were qualified as estimated for eleven samples. Due to matrix spike and matrix spike duplicate problems, Antimony was qualified as estimated for eleven samples Due to serial dilution problems, Potassium was qualified as estimated for eleven samples.

D 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.