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MCAS EL TORO
SSIC NO. 5090.3

OHM Remediation Services Corp.
1230 Columbia Street, Suite 1200
San Diego, California 92101

Former Underground Storage Tank Sites 67A and 67B
Marine Corps Air Station
El Toro, California

SWDIV Contract No. N68711-93-D-1459 – Delivery Order No. 0070 – Revision 0
OHM Project No. 18609 – Document Control No. SW9021 – December 28, 2000

Site Assessment Report

Appendix A - Tentative Reuse Parcel Locations of Former UST Sites 67A and 67B; Appendix B - Background Information; Appendix C - Station Drawings; Appendix D - Geophysical Survey Data; Appendix E - OCHCA Facility Modification Application; Appendix F - Site Inspection Log; Appendix G - Laboratory Analytical Reports; Appendix H - Soil Boring Logs; and Appendix I - Land Survey Data

Site Assessment Report

Former Underground Storage Tank Sites 67A and 67B
Marine Corps Air Station
El Toro, California

SWDIV Contract No. N68711-93-D-1459, Delivery Order No. 0070
OHM Project No. 918609
Document Control No. SW 9021
Revision 0
December 28, 2000

OHM Remediation Services Corp.

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Acronyms and Abbreviations

BNI	Bechtel National, Inc.
BRAC	Base Realignment and Closure Act
BTEX	benzene, toluene, ethylbenzene and total xylenes
CA LUFT	California Leaking Underground Fuel Tank
CSO	Caretaker Site Office
DCN	Document Control Number
DO	Delivery Order
EPA	U.S. Environmental Protection Agency
ft	foot
ft/ft	feet per foot
GPR	ground penetrating radar
INEL	Idaho National Engineering Laboratory
JEG	Jacobs Engineering Group Inc.
MCAS	Marine Corps Air Station
mg/kg	milligrams per kilogram
msl	mean sea level
MTBE	methyl tert-butyl ether
GeoVision	GeoVision Geophysical Services
OHM	OHM Remediation Services Corp.
Station	Marine Corps Air Station El Toro
SWDIV	Southwest Division Naval Facilities Engineering Command
TPH	total petroleum hydrocarbons
UST	underground storage tank
µg/kg	micrograms per kilogram

Section 1
Introduction

This report describes the assessment of former Underground Storage Tank (UST) Sites 67A and 67B at the Marine Corps Air Station El Toro, California (herein after referred to as the Station). The work was performed by OHM Remediation Services Corp. (OHM) under Delivery Order (DO) 0070 for the Southwest Division Naval Facilities Engineering Command (SWDIV) under the Remedial Action Contract No. N68711-93-D-1459.

The Base Realignment and Closure (BRAC) Business Plan (SWDIV, 2000) reports that USTs 67A and 67B were 1,500-gallon capacity steel USTs, installed in 1943, and were used for the storage of fuel oil. The BRAC Business Plan indicated that the USTs were deactivated and filled with sand in 1978.

According to the Idaho National Engineering Laboratory (INEL, 1990) records, USTs 67A and 67B were used as a fuel source for heating Building 67 which was the enlisted men barracks. Building 67 was demolished in 1978 and Building 823, Temporary Lodging Facility, was constructed at the same location (INEL 1990).

OHM performed verification drilling and sampling in the vicinity of former UST Sites 67A and 67B to evaluate the subsurface conditions and to ascertain whether or not a release occurred.

The former UST Sites 67A and 67B are located within an area that has been tentatively identified as an airport support and parking area according to the El Toro Community Reuse Plan (County of Orange, 1999). The El Toro Community Reuse Plan working map is provided in Appendix A.

Section 2
Environmental Setting

This section summarizes the general area surrounding the Station and the environmental setting in the vicinity of former UST Site 67A and 67B.

2.1 Site Description

The Station is located on the southeastern edge of the Tustin Plain, which slopes gently to the west-southwest. The Station is situated on the edge of the Tustin Plain and extends into the Santa Ana Mountains. Land surface elevations are approximately 215 feet above mean sea level (msl) at the western corner and approximately 800 feet msl at the east corner of the Station. The area of Site 67A and 67B is relatively flat, approximately 315 feet above msl datum in elevation.

The Station is located in Orange County, California, approximately 45 miles southeast of the city of Los Angeles and 1 mile north of the intersection of Interstate 5 (Santa Ana Freeway) and Interstate 405 (San Diego Freeway). The Station, which covers approximately 4,700 acres, was closed on July 2, 1999 in accordance with the Base Closure and Realignment Act of 1993 (BRAC III). The locations of the Station and the approximate location of the former UST 67 A and B site are shown on Figure 2-1.

Former UST Sites 67A and 67B are located in the northwest quadrant of the Station, west of the Bee Canyon wash and east of Marshburn Channel. These sites, located at the northeast corner of North 3rd Street and "G" Street under Building 823, are shown on Figure 2-2. Prior to Station closure Building 823 was used as a temporary lodging facility.

2.2 Geology

The Station is situated on alluvial fan deposits derived mainly from the Santa Ana Mountains. These Holocene materials consist of isolated, coarse-grained; stream channel deposits within a matrix of fine-grained overbank deposits, with a maximum thickness of approximately 300 feet (Herndon and Reilly, 1989).

The Holocene alluvial materials conformably overlie Pleistocene sediments predominantly composed of interlayered fine-grained lagoonal and near-shore marine deposits. These materials become increasingly mixed with beach sands, terrace deposits and stream channel deposits in the eastern portion of the Tustin Plain and along the plain edges. Thus, the Quaternary deposits form a heterogeneous mixture of silts and clays, with interbedded sands and fine gravel's that are as much as 500 feet thick in the western portion of the Tustin Plain (Singer, 1973).

The local geology of the site has been obtained from soil borings completed during the present assessment of the former USTs. Descriptions of soils from these borings indicate the presence of silty sand, silty clay, sandy silt, and sandy clay.

2.3 Hydrogeology

The Station is situated within the Irvine Groundwater Subbasin. The Irvine Subbasin comprises the southeast part of the Main Orange County Groundwater Basin. Regional groundwater flow in the Subbasin has been to the west and northwest since the 1940s and is controlled locally by large groundwater withdrawal depressions. From 1969 to 1982, an average gradient of 0.0046 feet per foot (ft/ft) to the northwest was reported in the principal aquifer zone of the Irvine area (Banks, 1967). Phase I remedial investigation data indicated a similar groundwater flow direction in the shallower groundwater zone, with a slightly higher gradient of 0.008 ft/ft (JEG, 1993).

The depth to groundwater beneath the Station ranges from approximately 45 feet below ground surface in the foothills to 240 feet below ground surface in the deepest portion of the Irvine Subbasin. The depth to groundwater in the vicinity of former UST Sites 67A and 67B is estimated at approximately 125 feet below ground surface, based on available water level data from downgradient monitoring wells 18_BGMW18 (Camp, Dresser, & McKee, Inc. Federal Programs, 2000), 651-MW-01 (OHM 2000) and upgradient well TF3 MW-02. The well locations are shown in Figure 2-2.

Section 3
Record Search

OHM performed a record search to obtain available information on the removal of USTs 67A and 67B. The BRAC Business Plan (SWDIV, 2000) listed two sources of information for USTs 67A and 67B.

- Station Environmental Office, Management Overview of Storage Tanks, December 1993 (Marine Corps Air Station El Toro Environmental Office, 1993)
- The Idaho National Engineering Laboratory (INEL), USMC Station Underground Storage Tank Survey Report 1990 (INEL, 1990)
- Information for USTs 67A and 67B was not present at the Station Environmental Office. Therefore, OHM conducted the following record search activities:
- Reviewed the Underground Storage Tank Survey Report (Enersource Engineering, 1990).
- Reviewed drawings at the Station's map room
- Consulted with the Station's Caretaker Site Office (CSO).

The INEL *Underground Storage Tank Survey Report* included information on USTs 67A and 67B, identified as ET-67A and ET-67B, respectively. ET-67A and ET-67B were installed in 1943 and constructed of carbon steel with a cylindrical geometry. The USTs were listed as inactive, 1,500-gallon tanks located at the Building 67, former Mess Hall. The USTs were deactivated in 1978. The INEL report is a UST questionnaire and does not include information on UST removal locations or analytical data. A copy of the INEL report for ET-67A and ET-67B is included in Appendix B, Background Information.

The Enersource Engineering (EnerSource) *Underground Tank Survey* included information on USTs 67A and 67B, identified as 67A and 67B, respectively. According to the survey, both tanks were demolished on July 31, 1978. The EnerSource survey also indicates that the tanks were removed. A copy of the EnerSource report for 67A and 67B is included in Appendix B, Background Information.

OHM conducted a search of the Station's map room to locate additional information regarding former USTs 67A and 67B. One facility drawing (drawing number not available), providing details on existing topography/demolition plan and planned construction details for the current building, is referenced. Building 823, Temporary Lodging Facility, was constructed on the former Building 67. Drawing number 262013 reveals the approximate location of the former USTs 67A and 67B under Building 823. The drawings are provided in Appendix C, Station Drawings.

Geovision, a geophysical survey firm subcontracted by OHM, performed field geophysical activities in May 2000 as part of the record search. During the field activities OHM and

Geovision discovered a fill line leading from the crest of the concrete drain culvert down the location of the suspected USTs. Geovision traced the fill line associated with USTs 67A and 67B and estimated the approximate location of former USTs 67A and 67B in reference to the existing building 823. Geovision's geophysical report is provided in Appendix D, Geophysical Survey Data.

After reviewing the historical information and Geovision report, OHM hand augered the area of the likely location of the former USTs based on historical maps and Geovision survey information. No USTs were discovered but construction debris, suspected to be associated with USTs 67A and 67B, was discovered during hand-augering activities under the sidewalk and adjacent to Building 823 where the USTs were likely located.

Based on the review of the records search data and field investigations including a geophysical survey, information indicates that USTs 67A and 67B were most likely removed during the construction of Building 823.

Section 4
Field Verification Activities

OHM conducted field activities at former UST Site 67 to confirm the removal of the USTs and to assess the possibility of an unauthorized release of petroleum hydrocarbons. Field activities included a site inspection, a geophysical survey, drilling and sampling of two soil borings at the locations of the former USTs, removal of remote fill piping, and collection and analysis of soil samples.

4.1 Site Inspection

OHM personnel conducted a site inspection on May 9, 2000 to identify the location of former USTs 67A and 67B using as-built drawings and the indications from the Geophysical survey. Based on the existing landmarks of G Street, and Building 823, OHM identified the possible location of the two former USTs, and the location of the two soil borings to be drilled. A copy of the Site Inspection Log is included in Appendix E, Site Inspection Log.

4.2 Utility Clearance and Geophysical Survey

The utility clearance consisted of reviewing site specific utility maps obtained from the Station, reviewing the site inspection log, performing a geophysical survey of the site, and notifying Underground Service Alert (USA) of the intent to drill two soil borings.

GeoVision, a California-certified geophysical service contractor, conducted a geophysical survey on May 1, 2000. A utility locator, metal detector and ground penetrating radar (GPR) were used to locate the potential UST backfill area and assess the potential presence of an abandoned UST. The results of the analog and GPR surveys indicated the presence of utility lines such as storm drain and sewer line. A remote fill line associated with the former USTs was also identified and traced. No UST-like anomaly was clearly identifiable, however the expected location of the USTs was found to lie below a re-enforced concrete sidewalk. These results verify the absence of the USTs in the survey area. In their report, GeoVision provided a drawing that superimposed the locations of former Building 67 and existing Building 823, along with the previously reported location of the USTs. A copy of the geophysical survey report is included in Appendix D.

4.3 Fill Pipe Removal and Soil Sampling

Based on GeoVision's findings of a remote fill line, OHM conducted a site investigation. On June 13, 2000, a three (3)-inch diameter steel pipe running northwest from the former tank hold was investigated and removed. OHM submitted and obtained approval on a Facility Modification Permit (plan check number 00PM28) from the Orange County Health Care Agency (OCHCA). An OCHCA field inspector visited the site and observed pipe removal activities. During the removal of fill line piping, OHM observed that a small section of

piping joint (approximately 15 feet) originating from the former USTs 67A and 67B to the nearest piping connection was missing, as shown in Figure 4-1. The piping had been sheared off and capped where it once entered into the former UST vaults. This suggests that USTs 67A and 67B and section of fill line piping had been removed, further confirming the results of the geophysical investigation. A copy of the approved Facility Modification Application is provided in Appendix E, OCHCA Facility Modification Application.

Approximately 130 feet of 3-inch piping was removed by OHM personnel from the pipe trench. No visible stains, fuel odors, or discolorations were observed on the piping trench bottom or sidewalls. Three grab soil samples were collected along the pipe trench excavation at a depth of approximately 4 and 10 feet below ground surface, as per OCHCA field inspector direction and submitted to EMAX Laboratories, a California-certified laboratory for analysis. The sample locations are shown in Figure 4-1. Fill piping was disposed off-site with other USTs as scrap metal.

Sampling, including sample handling and packaging, was conducted in accordance with the procedures described in the approved Draft Work Plan (OHM, 1995). The soil samples were analyzed for total petroleum hydrocarbons (TPH) purgeable and TPH extractable using California Leaking Underground Fuel Tank (CA LUFT) Method 8015 modified, total recoverable petroleum hydrocarbons (TRPH) using EPA Method 418.1; and Volatile Organic Compounds (VOCs) using EPA Method 8260.

No concentrations above stated laboratory reporting limits were detected for the VOCs analytes, TPH, and TRPH, except for a concentration of 17 mg/kg TRPH for one sample collected at 6 feet below ground surface (Sample 18609-3111). The analytical results of the three soil samples collected from the pipe trench are presented in Table 4-2, Verification Soil Sample Analytical Results – UST Sites 67 A and B Piping. Laboratory analytical reports provided by EMAX Laboratory are included in Appendix G, Laboratory Analytical Reports. The location of the pipe trench with respect to former USTs 67A and 67B is shown on Figure 4-1. Soil boring logs are provided in Appendix H.

4.4 Verification Soil Boring Activities

Soil borings were advanced in the former UST area to ascertain whether a release had occurred. OHM advanced two soil borings (SB01 and ASB02) in the vicinity of the former UST Sites 67A and 67B. The soil boring locations were identified based on a review of as-built drawings of former Building 67 and current Building 823. SB01 was a vertical boring and was drilled to a depth of approximately 60 feet below ground surface. Soil boring ASB02 was an angle boring and was advanced to a total length of 50 feet at approximately 34 degrees from the vertical. SB01 and ASB02 were completed using hollow stem drilling methods. Drilling was performed by BC^2 Drilling, a subcontractor to OHM.

Soil samples from the soil borings were collected using a California-modified split-spoon sampler. Soil boring SB01 was sampled at approximately 15, 30, 40, and 60 feet below ground surface. Soil boring ASB02 was sampled at 15, 23, 32, 40, and 50 feet on the angle. Following the completion of sampling activities, the soil borings were filled with bentonite

cement grout to the surface. The boring logs describing soil lithology are included as Appendix H, Soil Boring Logs.

Sampling, including sample handling and packaging, was conducted in accordance with the procedures described in the approved Draft Work Plan (OHM, 1995). The soil samples were analyzed for TPHd and TPHg using CA LUFT Method 8015M, and VOCs (including BTEX and MTBE) by EPA Method 8260A.

No concentrations were detected above laboratory stated reporting limits for TPHd, TPHg, BTEX, MTBE or TRPHs for any of the soil boring samples. The analytical results of the soil boring samples are presented in Table 4-1. Laboratory analytical reports and data validation reports are included in Appendix G.

4.5 Land Surveying

After completing the verification drilling, the soil boring and piping removal, locations were surveyed by Cal Vada Surveying, Inc., a California-registered land surveyor. The surveyed locations were measured to ± 0.01 feet horizontally and tied to the California State Plane Coordinate Systems, North American Datum 1983. The surveyed elevations were measured to ± 0.01 feet vertically and tied to msl elevation. The land surveying data for former UST Sites 67A and 67B are presented as Appendix I.

Section 5
Conclusions and Recommendations

The following observations and conclusions are based on, information from historical record search, surveys, existing available records, field surveys, and from OHM's field activities, which included removing a remote fill line and drilling two (2) confirmation soil borings:

- USTs 67A and 67B were removed from the site most likely in 1978 during construction of Building 823. Each UST had a capacity of 1,500 gallons and were used for storage of heating oil for the former Building 67.

- OHM removed approximately 130 feet of remaining remote fill piping associated with USTs 67A and 67B in June 2000 in the presence of OCHCA field inspector (plan check number 00PM28).

- The depth to groundwater is estimated to be approximately 125 feet below ground surface, based on monitoring well number 18_BGMW18.

- Three soil samples were collected from the former tank site. Analytical results from all soil sample results indicated that concentrations of TPH-D, TPH-G, and VOCs (including BTEX and MTBE) were not detected above the laboratory stated reporting limits. TRPH was detected in one soil sample collected at 6 feet below ground surface at a concentration of 17 mg/kg of TRPH.

- Two verification soil borings (one vertical and one angle) were advanced at the site and nine soil samples were collected. Analytical results from all soil sample results indicated that concentrations of TPH-D, TPH-G, and VOCs (including BTEX and MTBE) were not detected above the laboratory stated reporting limits.

Based on the information provided in this report and the absence of a significant release of petroleum hydrocarbons at former UST Sites 67A and 67B, OHM, on behalf of the Station, recommends a closure of the former UST Sites 67A and 67B be requested.

Section 6
References

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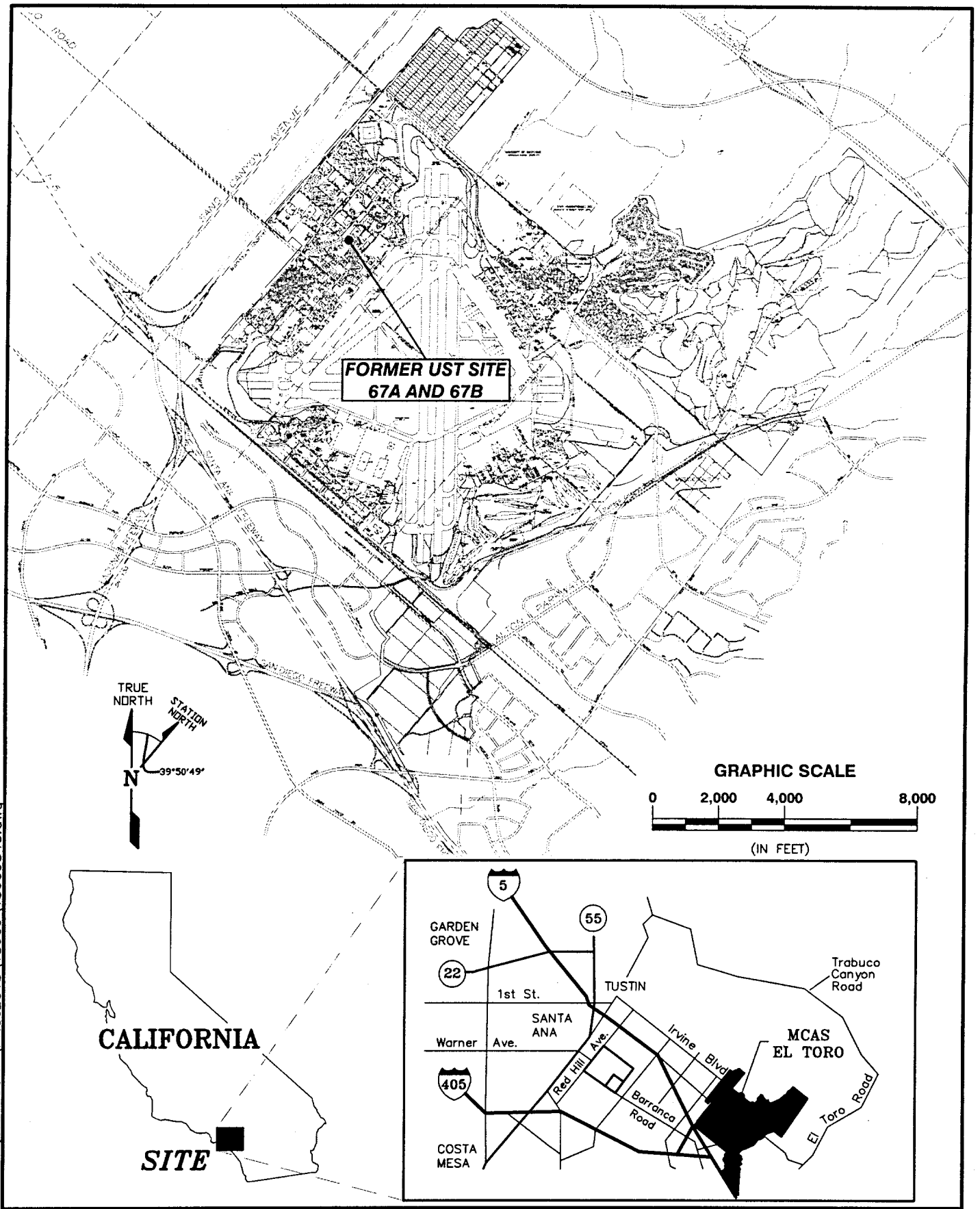
SWDIV. See Southwest Division Naval Facilities Engineering Command.

Figures



OHM Remediation Services Corp. A Subsidiary of OHM Corporation SAN DIEGO, CA	DRAWN BY R. PIRMORADIAN	DATE 1/2/01		FACILITY LOCATION MAP FORMER UST SITE 67A AND 67B			
	CHECKED BY G. Enich	DATE 1/3/01					
	APPROVED BY	DATE					
CONTRACT NAME SWDIV	PROJECT MANAGER DR	DATE 1/3/01		MARINE CORPS AIR STATION EL TORO, CALIFORNIA			
AUTOCAD FILE No. 18609343.DWG	PLOT SCALE 1=1	SHEET 1	OF 1	SCALE 1"=4,000'	DOCUMENT CONTROL No. SW9021	OHM PROJECT No. 18609	FIGURE No. FIG 2-1	REVISION 0

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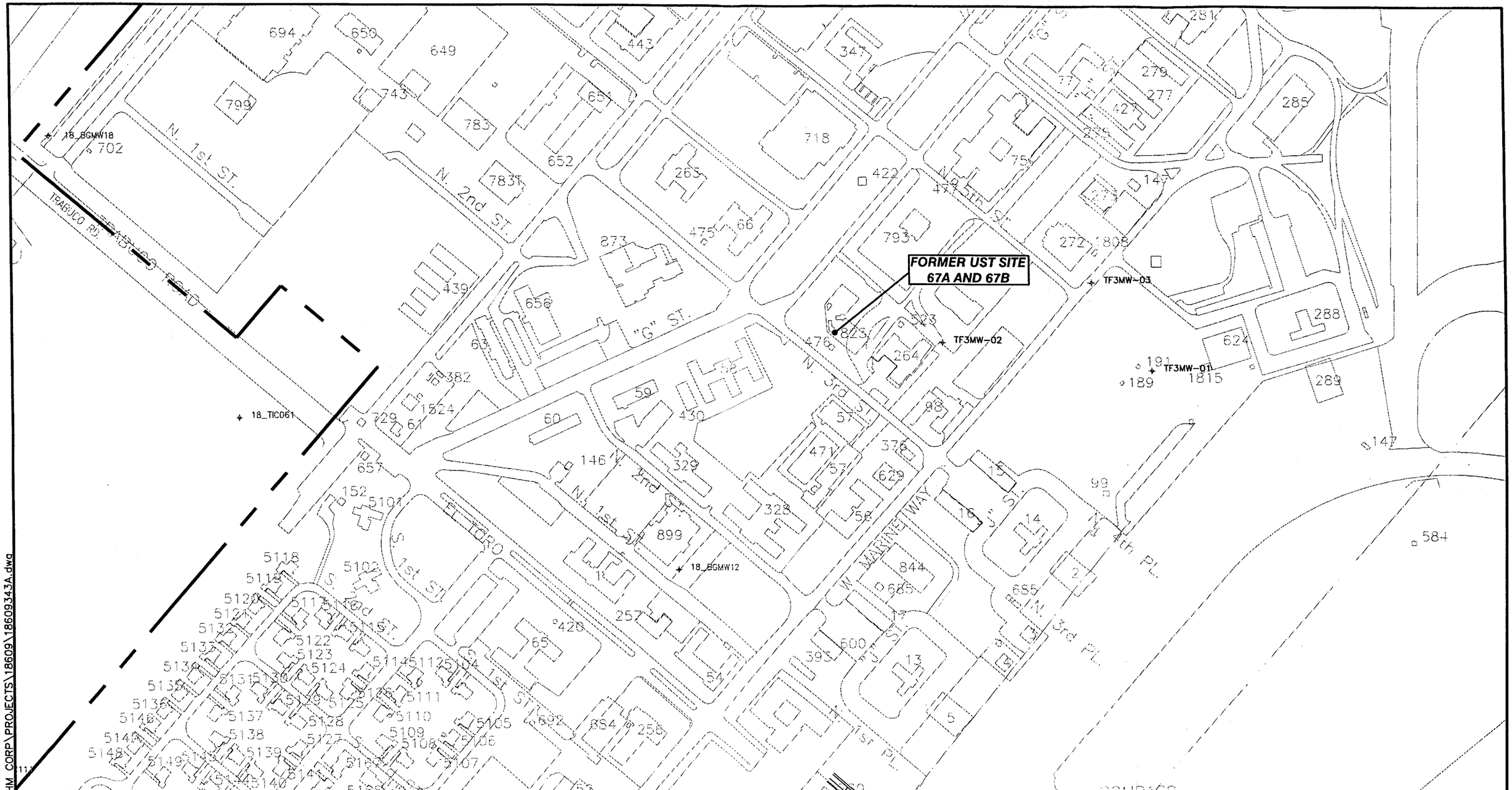

TRUE NORTH
STATION NORTH
N
39°50'49"

EXPLANATION:

✦ GROUNDWATER MONITORING WELL

GRAPHIC SCALE

0 150 300 600

(IN FEET)

REVISIONS			
REV. No.	DESCRIPTION	DATE	APPROVED

CONTRACT NAME	SWDIV
DRAWN BY R. PIRMORADIAN	DATE 1/2/01
CHECKED BY J. Enck	DATE 1/3/01
APPROVED BY	DATE
PROJECT MANAGER DR	DATE 1/6/01
AUTOCAD FILE No. 18609343A.DWG	

OHM Remediation Services Corp.
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IRVINE, CA

LOCATION MAP
FORMER UST SITE 67A AND 67B

MARINE CORPS AIR STATION
EL TORO, CALIFORNIA

SCALE	SHEET	OF	DOCUMENT CONTROL No.	OHM PROJECT No.	DRAWING No.
1"=300'	1	1	SW9021	18609	FIG 2-2

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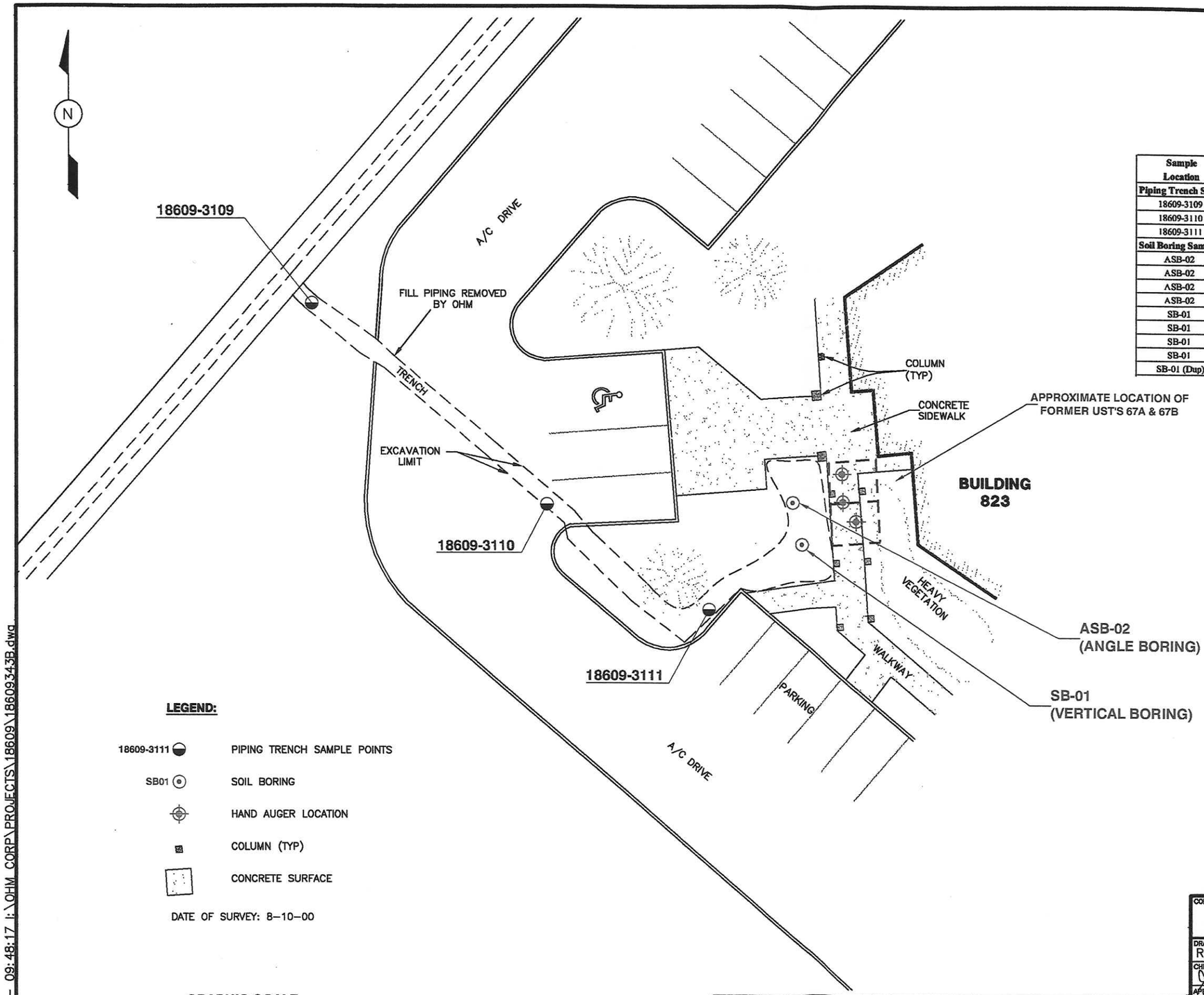

LEGEND:

18609-3111	PIPING TRENCH SAMPLE POINTS
SB01	SOIL BORING
	HAND AUGER LOCATION
	COLUMN (TYP)
	CONCRETE SURFACE

DATE OF SURVEY: 8-10-00

GRAPHIC SCALE

0 10 20 40

(IN FEET)

SAMPLE COORDINATE LISTING

NORTHING	EASTING	DESCRIPTION
2195521.21	6109181.31	SB 18609-3109
2195482.93	6109226.12	SB 18609-3110
2195462.86	6109256.90	SB 18609-3111
2195483.33	6109272.78	ASB-02
2195475.33	6109274.51	SB-1

Sample Location	Depth (feet bgs)	TPH-D (mg/kg)	TPH-G (mg/kg)	B (µg/kg)	E (µg/kg)	MTBE (µg/kg)	T (µg/kg)	X (µg/kg)	TRPH (mg/kg)
Piping Trench Samples									
18609-3109	4.0	10.5 U	1.05 U	5.2 U	5.2 U	10 U	5.2 U	5.2 U	10.5U
18609-3110	4.0	10.8 U	1.08 U	5.4 U	5.4 U	11 U	5.4 U	5.4 U	10.8U
18609-3111	6.0	10.8 U	1.08 U	5.4 U	5.4 U	11 U	5.4 U	5.4 U	17
Soil Boring Samples									
ASB-02	15.0	10.8 U	1.08 U	5.4 U	5.4 U	11 U	5.4 U	5.4 U	NA
ASB-02	23.0	11.5 U	1.15 U	5.8 U	5.8 U	12 U	5.8 U	5.8 U	NA
ASB-02	40.0	10.5 U	1.05 U	5.3 U	5.3 U	11 U	5.3 U	5.3 U	NA
ASB-02	50.0	11.8 U	1.18 U	5.9 UJ	5.9 UJ	12 UJ	5.9 UJ	5.9 UJ	NA
SB-01	15.0	10.4 U	1.04 U	5.2 U	5.2 U	10 U	5.2 U	5.2 U	NA
SB-01	30.0	11.8 U	1.18 U	5.9 U	5.9 U	12 U	5.9 U	5.9 U	NA
SB-01	40.0	10.5 U	1.05 U	5.3 U	5.3 U	11 U	5.3 U	5.3 U	NA
SB-01	60.0	11.4 U	1.14 U	5.7 U	5.7 U	11 U	5.7 U	5.7 U	NA
SB-01 (Dup)	59.5	11.5 U	1.15 U	5.8 U	5.8 U	12 U	5.8 U	5.8 U	NA

Explanation:

TPH-D - Total Petroleum Hydrocarbon as Diesel
TPH-G - Total petroleum Hydrocarbon as gasoline
B - Benzene
E - Ethylbenzene
MTBE - Methyl tert-butyl ether
T - Toluene
X - Xylenes
bgs - below ground surface
mg/kg - miligrams per kilogram
µg/kg - micrograms per kilogram
U - Not detected above or equal to the stated reporting limit
UJ - the sample detection limit is an estimated value
Dup - Duplicate sample
NA - Not analyzed

REVISIONS

REV. No.	DESCRIPTION	DATE	APPROVED
01	97102-UST67A/B.DWG BY CALVADA SURVEYING, INC.	8/10/00	

CONTRACT NAME: SWDIV

OHM Remediation Services Corp.
A Subsidiary of OHM Corporation
IRVINE, CA

DRAWN BY: R. PIRMORADIAN DATE: 1/2/01
CHECKED BY: J. Enck DATE: 1/3/01
APPROVED BY: DATE:
PROJECT MANAGER: DK DATE: 1/3/01
AUTOCAD FILE No.: 18609343B.DWG

SITE PLAN
FORMER UST SITE 67A AND 67B

MARINE CORPS AIR STATION
EL TORO, CALIFORNIA

SCALE	SHEET	OF	DOCUMENT CONTROL No.	OHM PROJECT No.	DRAWING No.
1"=20'	1	1	SW9021	18609	FIG 4-1

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Tables

Table 4-1
Verification Soil Sample Analytical Results - UST 67 A 67B Piping

Sample Identification		18609-3109	18609-3110	18609-3111
Location Code		UST-67A/B-Pipe 1	UST-67A/B-Pipe 2	UST-67A/B-Pipe 3
Date Sampled		06/13/00	06/13/00	06/13/00
Depth (feet below ground surface)		4.0	4.0	6.0
	Unit			
CA LUFT 8015M				
TPH as Diesel	mg/kg	10.5 U	10.8 U	10.8 U
TPH as Gasoline	mg/kg	1.05 U	1.08 U	1.08 U
EPA 8260A				
1,1,1-Trichloroethane	µg/kg	5.2 U	5.4 U	5.4 U
1,1,2,2-Tetrachloroethane	µg/kg	5.2 U	5.4 U	5.4 U
1,1,2-Trichloroethane	µg/kg	5.2 U	5.4 U	5.4 U
1,1-Dichloroethane	µg/kg	5.2 U	5.4 U	5.4 U
1,1-Dichloroethene	µg/kg	5.2 U	5.4 U	5.4 U
1,2-Dichloroethane	µg/kg	5.2 U	5.4 U	5.4 U
1,2-Dichloropropane	µg/kg	5.2 U	5.4 U	5.4 U
2-Butanone (MEK)	µg/kg	52 U	54 U	54 U
2-Chloroethyl vinyl ether	µg/kg	52 U	54 U	54 U
2-Hexanone	µg/kg	52 U	54 U	54 U
4-Methyl-2-pentanone (MIBK)	µg/kg	52 U	54 U	54 U
Acetone	µg/kg	52 U	54 U	54 U
Benzene	µg/kg	5.2 U	5.4 U	5.4 U
Bromodichloromethane	µg/kg	5.2 U	5.4 U	5.4 U
Bromoform	µg/kg	5.2 U	5.4 U	5.4 U
Bromomethane	µg/kg	5.2 U	5.4 U	5.4 U
Carbon disulfide	µg/kg	10 U	11 U	11 U
Carbon tetrachloride	µg/kg	5.2 U	5.4 U	5.4 U
Chlorobenzene	µg/kg	5.2 U	5.4 U	5.4 U
Chloroethane	µg/kg	5.2 U	5.4 U	5.4 U
Chloroform	µg/kg	5.2 U	5.4 U	5.4 U
Chloromethane	µg/kg	5.2 U	5.4 U	5.4 U
cis-1,2-Dichloroethene	µg/kg	5.2 U	5.4 U	5.4 U
cis-1,3-Dichloropropene	µg/kg	5.2 U	5.4 U	5.4 U
Dibromochloromethane	µg/kg	5.2 U	5.4 U	5.4 U
Ethylbenzene	µg/kg	5.2 U	5.4 U	5.4 U
Methyl tert-butyl ether (MTBE)	µg/kg	10 U	11 U	11 U
Methylene chloride	µg/kg	10 U	11 U	11 U
Styrene	µg/kg	5.2 U	5.4 U	5.4 U

Table 4-1
Verification Soil Sample Analytical Results - UST 67 A 67B Piping

Sample Identification		18609-3109	18609-3110	18609-3111
Location Code		UST-67A/B-Pipe 1	UST-67A/B-Pipe 2	UST-67A/B-Pipe 3
Date Sampled		06/13/00	06/13/00	06/13/00
Depth (feet below ground surface)		4.0	4.0	6.0
	Unit			
Tetrachloroethene	µg/kg	5.2 U	5.4 U	5.4 U
Toluene	µg/kg	5.2 U	5.4 U	5.4 U
trans-1,2-Dichloroethene	µg/kg	5.2 U	5.4 U	5.4 U
trans-1,3-Dichloropropene	µg/kg	5.2 U	5.4 U	5.4 U
Trichloroethene	µg/kg	5.2 U	5.4 U	5.4 U
Vinyl acetate	µg/kg	52 U	54 U	54 U
Vinyl chloride	µg/kg	5.2 U	5.4 U	5.4 U
Xylenes (total)	µg/kg	5.2 U	5.4 U	5.4 U
EPA 418.1				
Total Recoverable Petroleum Hydrocarbon	mg/kg	10.5 U	10.8 U	17

Table 4-1
Verification Soil Sample Analytical Results - UST 67A 67B Piping

Explanation:
CA LUFT - California Leaking Underground Fuel Tank
EPA - United States Environmental Protection Agency
J - estimated value
M - Modified
mg/kg - milligrams per kilogram
OHM - OHM Remediation Services Corp.
TPH - total petroleum hydrocarbons
U - not detected above or equal to the stated reporting limit
UJ - the sample detection limit is an estimated value
µg/kg - micrograms per kilogram
UST - underground storage tanks

Table 4-2
Verification Soil Sample Analytical Results - Site 67 A 67B Soil Borings

Sample Identification		18609-3397	18609-3398	18609-3400	18609-3401	18609-3391	18609-3392	18609-3393
Location Code (UST-67A/B-)		ASB-02	ASB-02	ASB-02	ASB-02	SB-01	SB-01	SB-01
Date Sampled		08/07/00	08/07/00	08/07/00	08/07/00	08/07/00	08/07/00	08/07/00
Depth (feet below ground surface)		15.0	23.0	40.0	50.0	15.0	30.0	40.0
	Unit							
CA LUFT 8015M								
TPH as Diesel	mg/kg	10.8 U	11.5 U	10.5 U	11.8 U	10.4 U	11.8 U	10.5 U
TPH as Gasoline	mg/kg	1.08 U	1.15 U	1.05 U	1.18 U	1.04 U	1.18 U	1.05 U
EPA 8260A								
1,1,1-Trichloroethane	µg/kg	5.4 U	5.8 U	5.3 U	5.9 UJ	5.2 U	5.9 U	5.3 U
1,1,2,2-Tetrachloroethane	µg/kg	5.4 U	5.8 UJ	5.3 U	5.9 UJ	5.2 U	5.9 U	5.3 U
1,1,2-Trichloroethane	µg/kg	5.4 U	5.8 U	5.3 U	5.9 UJ	5.2 U	5.9 U	5.3 U
1,1-Dichloroethane	µg/kg	5.4 U	5.8 U	5.3 U	5.9 UJ	5.2 U	5.9 U	5.3 U
1,1-Dichloroethene	µg/kg	5.4 U	5.8 U	5.3 U	5.9 UJ	5.2 U	5.9 U	5.3 U
1,2-Dichloroethane	µg/kg	5.4 U	5.8 U	5.3 U	5.9 UJ	5.2 U	5.9 U	5.3 U
1,2-Dichloropropane	µg/kg	5.4 U	5.8 U	5.3 U	5.9 UJ	5.2 U	5.9 U	5.3 U
2-Butanone (MEK)	µg/kg	54 U	58 U	53 U	59 UJ	52 U	59 U	53 U
2-Chloroethyl vinyl ether	µg/kg	54 U	58 U	53 U	59 UJ	52 U	59 U	53 U
2-Hexanone	µg/kg	54 U	58 U	53 U	59 UJ	52 U	59 U	53 U
4-Methyl-2-pentanone (MIBK)	µg/kg	54 U	58 U	53 U	59 UJ	52 U	59 U	53 U
Acetone	µg/kg	54 U	6.3 J	53 U	59 UJ	52 U	59 U	53 U
Benzene	µg/kg	5.4 U	5.8 U	5.3 U	5.9 UJ	5.2 U	5.9 U	5.3 U
Bromodichloromethane	µg/kg	5.4 U	5.8 U	5.3 U	5.9 UJ	5.2 U	5.9 U	5.3 U
Bromoform	µg/kg	5.4 U	5.8 UJ	5.3 U	5.9 UJ	5.2 U	5.9 U	5.3 U
Bromomethane	µg/kg	5.4 U	5.8 U	5.3 U	5.9 UJ	5.2 U	5.9 U	5.3 U
Carbon disulfide	µg/kg	11 U	12 U	11 U	12 UJ	10 U	12 U	11 U
Carbon tetrachloride	µg/kg	5.4 U	5.8 U	5.3 U	5.9 UJ	5.2 U	5.9 U	5.3 U
Chlorobenzene	µg/kg	5.4 U	5.8 U	5.3 U	5.9 UJ	5.2 U	5.9 U	5.3 U
Chloroethane	µg/kg	5.4 U	5.8 U	5.3 U	5.9 UJ	5.2 U	5.9 U	5.3 U
Chloroform	µg/kg	5.4 U	5.8 U	5.3 U	5.9 UJ	5.2 U	5.9 U	5.3 U
Chloromethane	µg/kg	5.4 U	5.8 U	5.3 U	5.9 UJ	5.2 U	5.9 U	5.3 U
cis-1,2-Dichloroethene	µg/kg	5.4 U	5.8 U	5.3 U	5.9 UJ	5.2 U	5.9 U	5.3 U
cis-1,3-Dichloropropene	µg/kg	5.4 U	5.8 U	5.3 U	5.9 UJ	5.2 U	5.9 U	5.3 U
Dibromochloromethane	µg/kg	5.4 U	5.8 U	5.3 U	5.9 UJ	5.2 U	5.9 U	5.3 U
Ethylbenzene	µg/kg	5.4 U	5.8 U	5.3 U	5.9 UJ	5.2 U	5.9 U	5.3 U
Methyl tert-butyl ether (MTBE)	µg/kg	11 U	12 U	11 U	12 UJ	10 U	12 U	11 U
Methylene chloride	µg/kg	11 U	12 U	11 U	3.8 J	10 U	12 U	11 U
Styrene	µg/kg	5.4 U	5.8 U	5.3 U	5.9 UJ	5.2 U	5.9 U	5.3 U

Table 4-2
Verification Soil Sample Analytical Results - Site 67 A 67B Soil Borings

Sample Identification		18609-3397	18609-3398	18609-3400	18609-3401	18609-3391	18609-3392	18609-3393
Location Code (UST-67A/B-)		ASB-02	ASB-02	ASB-02	ASB-02	SB-01	SB-01	SB-01
Date Sampled		08/07/00	08/07/00	08/07/00	08/07/00	08/07/00	08/07/00	08/07/00
Depth (feet below ground surface)		15.0	23.0	40.0	50.0	15.0	30.0	40.0
	Unit							
Tetrachloroethene	µg/kg	5.4 U	5.8 U	5.3 U	5.9 UJ	5.2 U	5.9 U	5.3 U
Toluene	µg/kg	5.4 U	5.8 U	5.3 U	5.9 UJ	5.2 U	5.9 U	5.3 U
trans-1,2-Dichloroethene	µg/kg	5.4 U	5.8 U	5.3 U	5.9 UJ	5.2 U	5.9 U	5.3 U
trans-1,3-Dichloropropene	µg/kg	5.4 U	5.8 U	5.3 U	5.9 UJ	5.2 U	5.9 U	5.3 U
Trichloroethene	µg/kg	5.4 U	5.8 U	5.3 U	5.9 UJ	5.2 U	5.9 U	5.3 U
Vinyl acetate	µg/kg	54 U	58 U	53 U	59 UJ	52 U	59 U	53 U
Vinyl chloride	µg/kg	5.4 U	5.8 U	5.3 U	5.9 UJ	5.2 U	5.9 U	5.3 U
Xylenes (total)	µg/kg	5.4 U	5.8 U	5.3 U	5.9 UJ	5.2 U	5.9 U	5.3 U

Table 4-2
Verification Soil Sample Analytical Results - Site 67 A 67B Soil Borings

Sample Identification		18609-3394	18609-3395 (Dup)
Location Code (UST-67A/B-)		SB-01	SB-01
Date Sampled		08/07/00	08/07/00
Depth (feet below ground surface)		60.0	59.5
	Unit		
CA LUFT 8015M			
TPH as Diesel	mg/kg	11.4 U	11.5 U
TPH as Gasoline	mg/kg	1.14 U	1.15 U
EPA 8260A			
1,1,1-Trichloroethane	µg/kg	5.1 J	5.8 U
1,1,2,2-Tetrachloroethane	µg/kg	5.7 U	5.8 U
1,1,2-Trichloroethane	µg/kg	5.7 U	5.8 U
1,1-Dichloroethane	µg/kg	5.7 U	5.8 U
1,1-Dichloroethene	µg/kg	5.7 U	5.8 U
1,2-Dichloroethane	µg/kg	5.7 U	5.8 U
1,2-Dichloropropane	µg/kg	5.7 U	5.8 U
2-Butanone (MEK)	µg/kg	57 U	58 U
2-Chloroethyl vinyl ether	µg/kg	57 U	58 U
2-Hexanone	µg/kg	57 U	58 U
4-Methyl-2-pentanone (MIBK)	µg/kg	57 U	58 U
Acetone	µg/kg	57 U	58 U
Benzene	µg/kg	5.7 U	5.8 U
Bromodichloromethane	µg/kg	5.7 U	5.8 U
Bromoform	µg/kg	5.7 U	5.8 U
Bromomethane	µg/kg	5.7 U	5.8 U
Carbon disulfide	µg/kg	11 U	12 U
Carbon tetrachloride	µg/kg	5.7 U	5.8 U
Chlorobenzene	µg/kg	5.7 U	5.8 U
Chloroethane	µg/kg	5.7 U	5.8 U
Chloroform	µg/kg	5.7 U	5.8 U
Chloromethane	µg/kg	5.7 U	5.8 U
cis-1,2-Dichloroethene	µg/kg	5.7 U	5.8 U
cis-1,3-Dichloropropene	µg/kg	5.7 U	5.8 U
Dibromochloromethane	µg/kg	5.7 U	5.8 U
Ethylbenzene	µg/kg	5.7 U	5.8 U
Methyl tert-butyl ether (MTBE)	µg/kg	11 U	12 U
Methylene chloride	µg/kg	11 U	12 U
Styrene	µg/kg	5.7 U	5.8 U

Table 4-2
Verification Soil Sample Analytical Results - Site 67 A 67B Soil Borings

Sample Identification		18609-3394	18609-3395 (Dup)
Location Code (UST-67A/B-)		SB-01	SB-01
Date Sampled		08/07/00	08/07/00
Depth (feet below ground surface)		60.0	59.5
	Unit		
Tetrachloroethene	µg/kg	5.7 U	5.8 U
Toluene	µg/kg	5.7 U	5.8 U
trans-1,2-Dichloroethene	µg/kg	5.7 U	5.8 U
trans-1,3-Dichloropropene	µg/kg	5.7 U	5.8 U
Trichloroethene	µg/kg	5.7 U	5.8 U
Vinyl acetate	µg/kg	57 U	58 U
Vinyl chloride	µg/kg	5.7 U	5.8 U
Xylenes (total)	µg/kg	5.7 U	5.8 U

Table 4-2
Verification Soil Sample Analytical Results - Site 67 A 67B Soil Borings

Explanation:
CA LUFT - California Leaking Underground Fuel Tank
EPA - United States Environmental Protection Agency
J - estimated value
M - Modified
mg/kg - milligrams per kilogram
OHM - OHM Remediation Services Corp.
TPH - total petroleum hydrocarbons
U - not detected above or equal to the stated reporting limit
UJ - the sample detection limit is an estimated value
µg/kg - micrograms per kilogram
UST - underground storage tanks

Table 2
Summary of QC Results — UST 67A/B

Sample Identification		18609-3390
Location Code		Trip Blank
Date Sampled		08/07/00
	Unit	
EPA 8260A		
1,1,1-Trichloroethane	µg/L	5 U
1,1,2,2-Tetrachloroethane	µg/L	5 U
1,1,2-Trichloroethane	µg/L	5 U
1,1-Dichloroethane	µg/L	5 U
1,1-Dichloroethene	µg/L	5 U
1,2-Dichloroethane	µg/L	5 U
1,2-Dichloropropane	µg/L	5 U
2-Butanone (MEK)	µg/L	50 U
2-Chloroethyl vinyl ether	µg/L	50 U
2-Hexanone	µg/L	50 U
4-Methyl-2-pentanone (MIBK)	µg/L	50 U
Acetone	µg/L	50 U
Benzene	µg/L	5 U
Bromodichloromethane	µg/L	5 U
Bromoform	µg/L	5 U
Bromomethane	µg/L	5 U
Carbon disulfide	µg/L	5 U
Carbon tetrachloride	µg/L	5 U
Chlorobenzene	µg/L	5 U
Chloroethane	µg/L	5 U
Chloroform	µg/L	5 U
Chloromethane	µg/L	5 U
cis-1,2-Dichloroethene	µg/L	5 U
cis-1,3-Dichloropropene	µg/L	5 U
Dibromochloromethane	µg/L	5 U
Ethylbenzene	µg/L	5 U
Methyl tert-butyl ether (MTBE)	µg/L	10 U
Methylene chloride	µg/L	5 U
Styrene	µg/L	5 U
Tetrachloroethene	µg/L	5 U
Toluene	µg/L	5 U
trans-1,2-Dichloroethene	µg/L	5 U
trans-1,3-Dichloropropene	µg/L	5 U

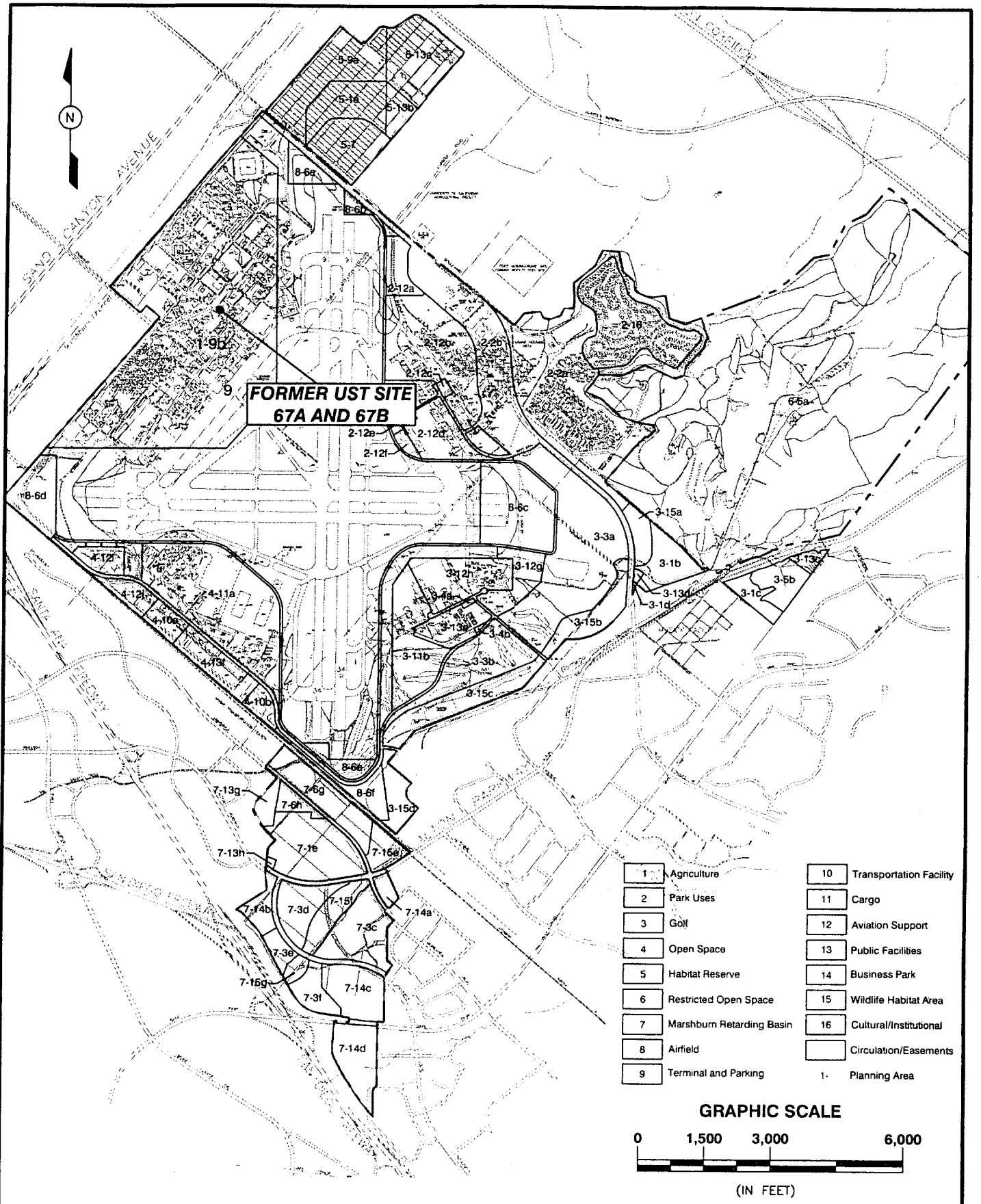
Table 2
Summary of QC Results — UST 67A/B

Sample Identification		18609-3390
Location Code		Trip Blank
Date Sampled		08/07/00
	Unit	
Trichloroethene	µg/L	5 U
Vinyl acetate	µg/L	50 U
Vinyl chloride	µg/L	5 U
Xylenes (total)	µg/L	5 U

Table 2
Summary of QC Results — UST 67A/B

Explanation:
CA LUFT - California Leaking Underground Fuel Tank
EPA - United States Environmental Protection Agency
J - estimated value
M - Modified
mg/L - milligrams per liter
NA - not analyzed
OHM - OHM Remediation Services Corp.
RL - reporting limit
TPH - total petroleum hydrocarbons
U - not detected above or equal to the stated reporting limit
UJ - the sample detection limit is an estimated value
ug/L - micrograms per liter
UST - underground storage tanks

Appendix A
Tentative Reuse Parcel Locations of Former UST Sites 67A and 67B



OHM Remediation Services Corp. A Subsidiary of OHM Corporation SAN DIEGO, CA	DRAWN BY R. PIRMORADIAN	DATE 1/2/01	TENTATIVE REUSE PARCEL LOCATION FORMER UST SITE 67A AND 67B
	CHECKED BY	DATE 1/3/01	
	APPROVED BY	DATE	
CONTRACT NAME SWDIV	PROJECT MANAGER	DATE 1/3/01	MARINE CORPS AIR STATION EL TORO, CALIFORNIA

AUTOCAD FILE No.	PLOT SCALE	SHEET	OF	SCALE	DOCUMENT CONTROL No.	OHM PROJECT No.	FIGURE No.	REVISION
18609343C.DWG	1=1	1	1	1"=3000'	SW9021	18609	FIG 1-2	0

Jan 02, 2001 - 7:55:18 I:\OHM CORP\PROJECTS\18609\18609343C.dwg

Appendix B
Background Information

INACTIVE UNDERGROUND STORAGE TANK QUESTIONNAIRE

1. General Information

1.	Tank Identification No:	ET-67A
2.	Facility Name:	Enlisted Men
3.	Operator Organization:	Heat Shop
4.	Current Status:	Inactive
5.	EPA Reported:	Yes

2. Construction Details

1.	Date Installed:	1943
2.	Date Last in Service:	1978
3.	Date Removed:	Not Available
4.	Volume:	1,500 Gallons
5.	Contents:	Sand
6.	Tank Construction:	
	Material:	Carbon Steel
	Geometry:	Cylindrical
	Installation:	Horizontal
	Containment:	None
7.	Facility Drawing Number(s):	224297, 224349
8.	Tank Dimensions:	Not Available
	Source:	None

3. Geophysical Data

1.	Surrounding Soil:	
	Type:	Sandy Loam
	pH:	8.15
	Resistivity:	>2000 ohm/cm
	Permeability:	High

2. Adjacent Surface Water: None

3. Surface Finish: Not Available

4. Groundwater Depth: 105 ft

5. Adjacent Monitoring Well: None

6. Hydraulic Conductivity and Direction: 30 ft/day to NW

4. Environmental and Risk Hazards

1. Adjacent Sensitive Receivers: Not Available

2. Adjacent Underground Utilities: Not Available

5. Comments, Updates and Modifications

Converted facility to natural gas 73-C-5295, filled tank with sand 1978.

INACTIVE UNDERGROUND STORAGE TANK QUESTIONNAIRE

1. General Information

1. Tank Identification No: ET-67B
2. Facility Name: Enlisted Men
3. Operator Organization: Heat Shop
4. Current Status: Inactive
5. EPA Reported: Yes

2. Construction Details

1. Date Installed: 1943
2. Date Last in Service: 1978
3. Date Removed: Not Available
4. Volume: 1,500 Gallons
5. Contents: Sand
6. Tank Construction:
   - Material: Carbon Steel
   - Geometry: Cylindrical
   - Installation: Horizontal
   - Containment: None
7. Facility Drawing Number(s): 224297, 224349
8. Tank Dimensions: Not Available
   - Source: None

3. Geophysical Data

1. Surrounding Soil:
   - Type: Sandy Loam
   - pH: 8.15
   - Resistivity: >2000 ohm/cm
   - Permeability: High

2. Adjacent Surface Water: None

3. Surface Finish: Not Available

4. Groundwater Depth: 105 ft

5. Adjacent Monitoring Well: None

6. Hydraulic Conductivity and Direction: 30 ft/day to NW

4. Environmental and Risk Hazards

1. Adjacent Sensitive Receivers: Not Available

2. Adjacent Underground Utilities: Not Available

5. Comments, Updates and Modifications

Converted facility to natural gas 73-C-5295, filled tank with sand 1978.

UNDERGROUND TANK SURVEY
CONTRACT N62474-86-C-5005

MARINE CORPS AIR STATIONS
EL TORO, CALIFORNIA
TUSTIN, CALIFORNIA

21 August 1988

Submitted By:

EnerSource Engineering
17280 Newhope Street, Suite 20
Fountain Valley, CA 92708

TANK NO. 67A

GENERAL TANK DATA

BASE..... EL TORO

USER..... ENLISTED MEN

SIZE (GAL).... 0

PRODUCT.....

BY..... JB

DATE..... 10/20/87

MAP GRID.....

REF DWG NO....

TANK LOCATED.. NO

TANK REMOVED.. YES

TANK ABANDONED

SPECIFIC TANK DATA

TYPE OF CONSTRUCTION.....

ABOVE GROUND OR BELOW.....

APPLICATION.....

CONNECTED TO APPLICATION....

DIMENSIONAL DATA

SEE SKETCH NO.....

VENT SIZE..... 0.00 INCHES

FILL SIZE..... 0.00 INCHES

MANWAY SIZE... 0.00 INCHES

DEPTH TANK.... 0.00 INCHES

DEPTH WATER... 0.00 INCHES

DEPTH PRODUCT. 0.00 INCHES

COMMENTS

Record#	NOTES
41	DEMOLISHED : JULY 31,1978 PROPERTY RECORD : 2-00145 PER FILE DATA TANK CLOSED WITH SAND,1978

TANK NO. 67B

GENERAL TANK DATA

BASE..... EL TORO

USER..... ENLISTED MEN

SIZE (GAL).... 0

PRODUCT.....

BY..... JB

DATE..... 10/20/87

MAP GRID.....

REF DWG NO....

TANK LOCATED.. NO

TANK REMOVED.. YES

TANK ABANDONED

SPECIFIC TANK DATA

TYPE OF CONSTRUCTION.....

ABOVE GROUND OR BELOW.....

APPLICATION.....

CONNECTED TO APPLICATION....

DIMENSIONAL DATA

SEE SKETCH NO.....

VENT SIZE..... 0.00 INCHES

FILL SIZE..... 0.00 INCHES

MANWAY SIZE... 0.00 INCHES

DEPTH TANK.... 0.00 INCHES

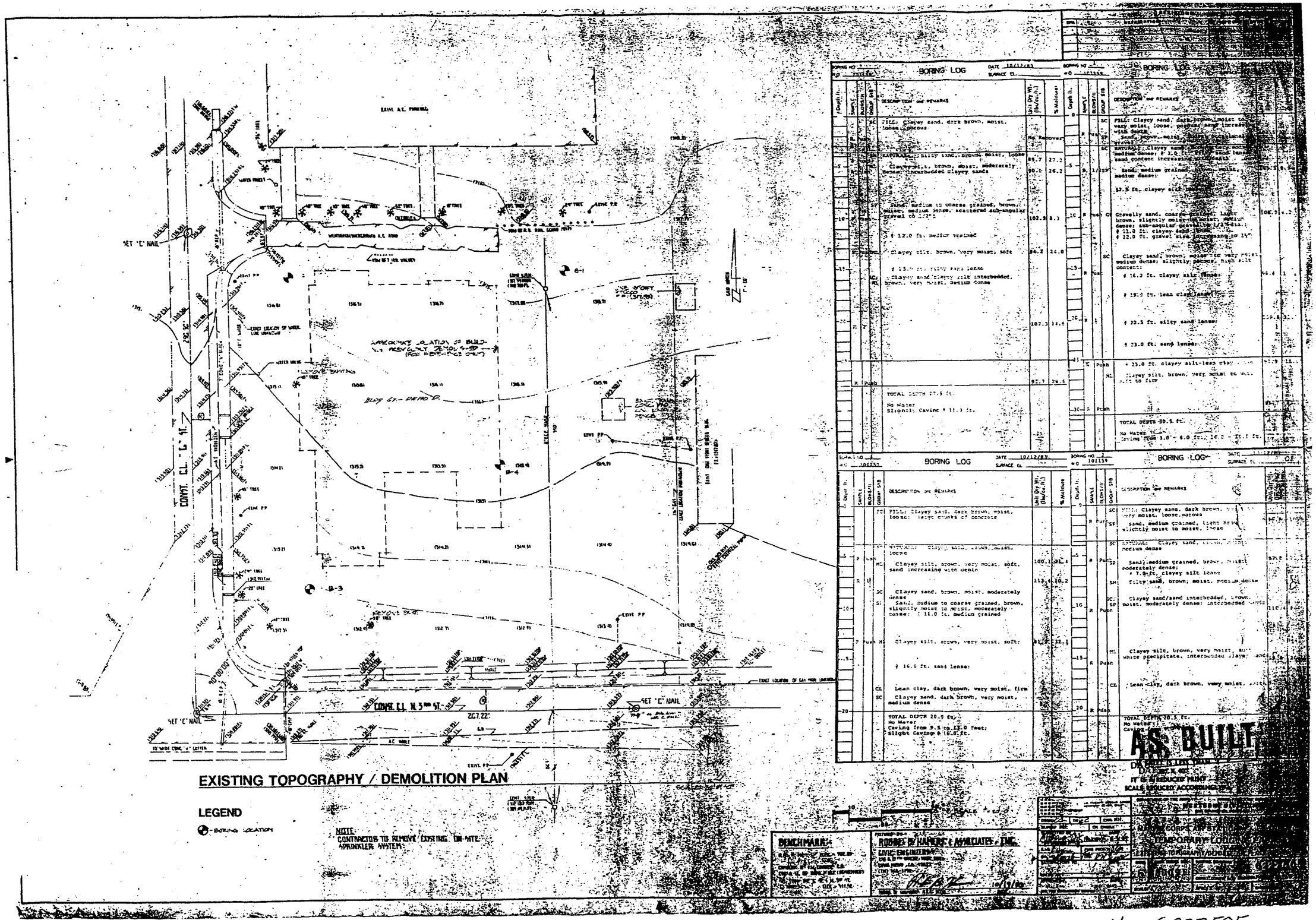
DEPTH WATER... 0.00 INCHES

DEPTH PRODUCT. 0.00 INCHES

COMMENTS

Record#	NOTES
40	DEMOLISHED : JULY 31,1978 PROPERTY RECORD : 2-00145 PER FILE DATA TANK CLOSED WITH SAND,1978

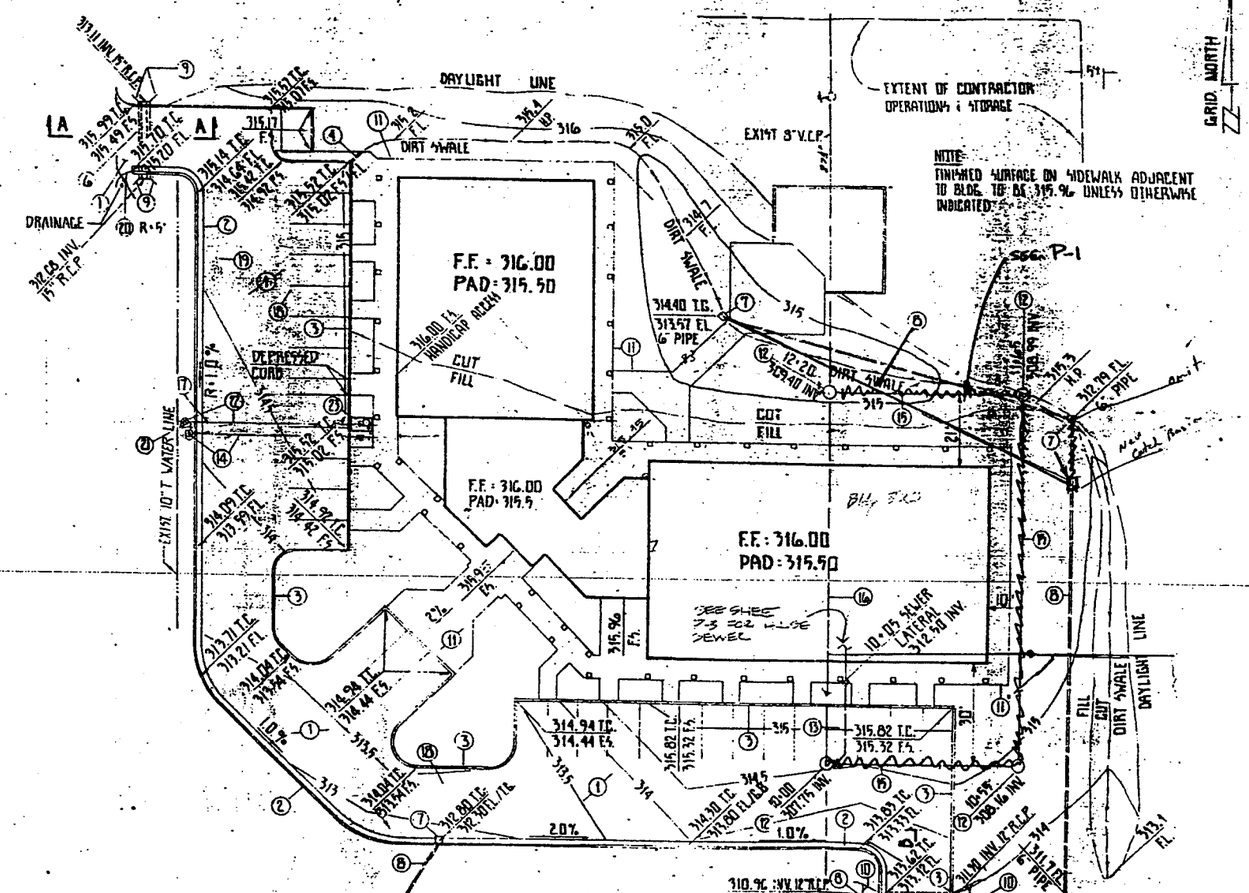
Appendix C
Station Drawings



Drawing No. 6227505

DETAIL - 6" CURB ONLY

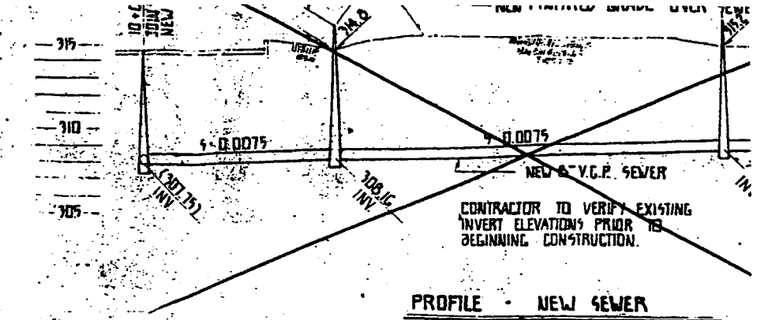
DETAIL - 6" CURB & GUTTER



NOTE:
FINISHED SURFACE ON SIDEWALK ADJACENT TO BLDG. TO BE 315.96 UNLESS OTHERWISE INDICATED.

NOTE:
EXCAVATE BUILDING PAD TO A MINIMUM ELEV. OF 316.00. REMOVE ALL DELETERIOUS AND UNSUITABLE MATERIAL FROM SITE. REPLACE AND RECOMPACT PER SOIL REPORT.

GRADING AND PAVING & ALL SEWER WATER



CONTRACTOR TO VERIFY EXISTING INVERT ELEVATIONS PRIOR TO BEGINNING CONSTRUCTION.

PROFILE - NEW SEWER

SCALE: 1" = 20' HORIZ.
1" = 4' VERT.

BENCHMARK:

#152 ELEV. = 392.03
CHIS. "D" AT S.W. COR. OF C.B. 250 FEET WEST OF BLDG Nº 62 (TURN DOWN)

T.B.M. AT INT. 3RD & "C" STREET
"C" NAIL ELEV. = 311.52

EARTHWORK ESTIMATE:

RAW CUT	375 C.Y.
SUBSIDENCE (0.1')	-190 C.Y.
SHRINKAGE (15%)	-422 C.Y.
RAW FILL	-657 C.Y.
IMPORT (IN PLACE)	894 C.Y.

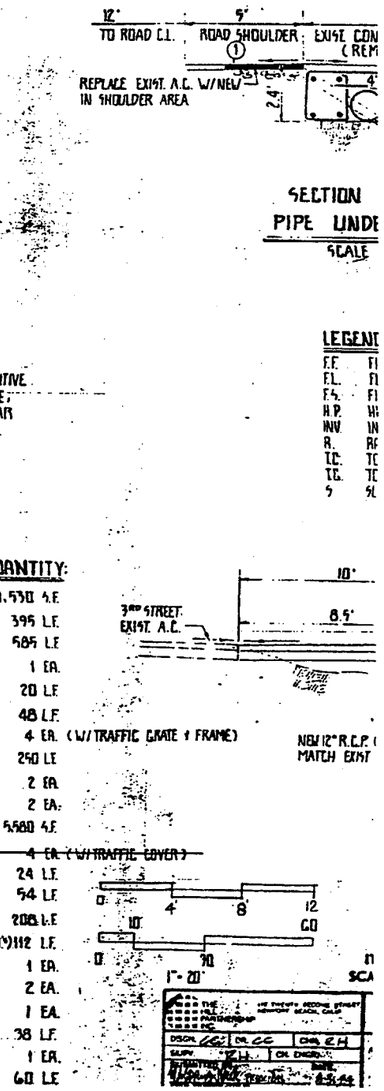
SHRINKAGE VALUE APPLIED TO CUT AND OVEREXCAVATION.

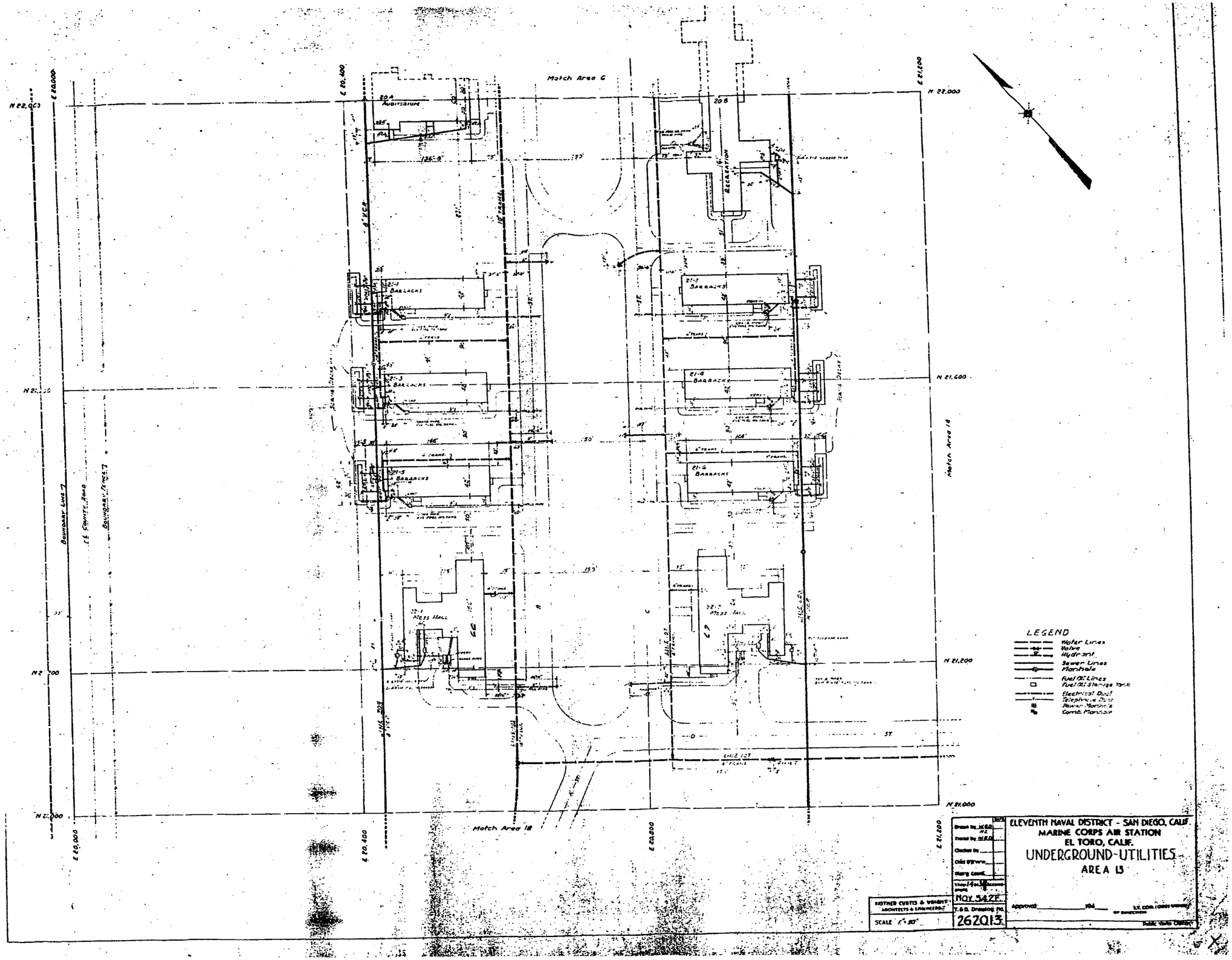
WATER METER:

METER TO BE 2½" BRONZE DISC MEJER WITH POSITIVE DISPLACEMENT MEASUREMENT, CAST BRONZE CASE, BRONZE MEASURING CHAMBER AND INTERNAL GEAR TRAIN, WITH NUTATING DISC, 5/16" STAINLESS STEEL DIAPHRAM, AND 302 STAINLESS STEEL STRAINER

CONSTRUCTION NOTES:

		QUANTITY:
**	(1) A.C. PAVING (3" A.C. OVER 5" A.B.)	14,530 S.F.
	(2) 6" CURB & GUTTER PER DETAIL HEREON	395 L.F.
	(3) 6" CURB ONLY PER DETAIL HEREON	585 L.F.
	(4) 4" P.V.C. UNDER WALK DRAIN	1 EA.
	(5) 12" R.C.P. DRAIN PIPE (2500 D) PER SECTION B-B	20 L.F.
	(6) 15" R.C.P. DRAIN PIPE (2500 D) PER SECTION A-A	48 L.F.
	(7) STANDARD CATCH BASIN PER SKETCH NFGS-02420-3	4 EA. (W/TRAFFIC GRATE & FRAME)
	(8) 6" P.V.C. DRAIN PIPE	250 L.F.
	(9) REINF. CONC. HEADWALL, TYPE "Z", PER SKETCH NFGS-02420-10	2 EA.
	(10) RE-GRADE SWALE TO JOIN END OF CONC. PIPE	2 EA.
	(11) 4" P.C.C. SIDEWALK	5,580 S.F.
	~~(12) 48" I.D. SEWER MANHOLE PER SKETCH NFGS-02420-1~~	~~4 EA. (W/TRAFFIC COVER)~~
	(13) 6" V.C.P. SEWER LATERAL & WYE	24 L.F.
*	(14) 2½" COPPER WATER SERVICE W/METER	54 L.F.
	(15) 8" V.C.P. SEWER (SEE PROFILE ABOVE RIGHT)	208 L.F.
	(16) REMOVE EXIST. 8" V.C.P. SEWER (BETWEEN NEW M.H.'S)	112 L.F.
	(17) 6" x 6" x 2" C.I. TEE, C.I. 179	1 EA.
	(18) REMOVE EXIST. TREE	2 EA.
	(19) REMOVE EXIST. WATER VALVE AND CAP END	1 EA.
	(20) 2" x 6" REDWOOD HEADER	38 L.F.
	(21) 6" x 6" x 2½" C.I. TEE, C.I. 179	1 EA.
	(22) 6" P.V.C. WATER LINE W/SHUTOFF VALVE	60 L.F.

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21-6
BARRACKS
MESS HALL
BOUNDARY LINE
C.E. COUNTY ROAD
BOUNDARY FENCE
LEGEND
Water Lines
Valve
Hydrant
Sewer Lines
Manhole
Fuel Oil Lines
Fuel Oil Storage Tank
Electrical Duct
Telephone Duct
Power Manhole
Comb. Manhole
ELEVENTH NAVAL DISTRICT - SAN DIEGO, CALIF.
MARINE CORPS AIR STATION
EL TORO, CALIF.
UNDERGROUND-UTILITIES
AREA 13
NOV. 1942
262013
SCALE 1" = 50'
KISTNER CURTIS & WRIGHT
ARCHITECTS & ENGINEERS
Public Works Department

Appendix D
Geophysical Survey Data

GEOVision
geophysical services
a division of Blackhawk Geometrics

BLACKHAWK
GEOMETRICS

GEOPHYSICAL SURVEY RESULTS
SITE 66 & 67 - UST SURVEY

MARINE CORPS AIR STATION, EL TORO
SANTA ANA, CALIFORNIA

Prepared for

IT/OHM Remediation Services Corporation
Irvine, California

Prepared by

GEOVISION GEOPHYSICAL SERVICES
1785 Pomona Road, Suite B
Corona, California, 91720

May 24, 2000

GEOVISION JOB NUMBER: 99254

1.0 Introduction

A geophysical investigation was carried out May 1, 2000 for IT/OHM Remediation Services Corporation at UST Site 66 & 67 at Marine Corps Air Station (MCAS) El Toro, Santa Ana, California under Delivery Order 070.

The investigation was conducted to locate a possible UST and to locate and mark utilities transecting the UST survey area.

2.0 Field Procedures

GeoVision's standard geophysical clearance procedures were used to survey the suspected UST location. The GEOVision field team used the attached GEOPHYSICAL CLEARANCE FORM CHECKLISTS to ensure that the following investigation methods were used:

- Base utility maps were reviewed in order to identify utilities in the site vicinity. Non metallic utilities from the maps were identified as such on the GEOPHYSICAL CLEARANCE FORMS
- Subsurface utilities apparent from surface features, (cracks in asphalt, manholes, valve boxes, pipe stickups, etc.) within the vicinity of the site were traced and marked.
- All nearby manholes, vaults and valve boxes were opened, if possible, to determine depth, type of pipe, and direction.
- The site was scanned with the EM utility locator in passive 50/60 Hz mode to locate any active electrical lines not already located by other means.
- The Fisher Metal Detector was used to scan the site for larger metallic objects. Its use was focused over the area of the suspected tank location.
- The utility locator transmitter was held over the suspected UST location and circled at about a 40-foot radius with the receiver, tracing and marking any utilities encountered.
- Multiple perpendicular GPR profiles were collected across the UST survey area using a GSSI SIR2 system with a 300MHz or 500 MHz antenna. A marker switch on the antenna handle was used to place 5' spaced distance marks on each profile as the antenna was pulled along the ground. Multiple discretionary GPR profiles were collected for interpretation purposes. All GPR records were stored on the system's hard drive and printed on site using a portable printer.

- An accurate, scaled geophysical survey map was then drawn on the back of the geophysical clearance form. All landmarks and buildings in the vicinity were drawn in and labeled. All utilities identified and marked on the ground were also accurately plotted on the survey map. All GPR profiles collected are shown on the map along with their corresponding file numbers.

- All utilities located by the geophysical survey or inferred from base utility drawings or GPR were marked on the ground with surveyor's paint using APWA color codes. The locations of the pipes/utilities were also recorded on the GEOPHYSICAL CLEARANCE FORMS. Copies of the area utility maps were copied and attached to the geophysical clearance form.

3.0 Conclusions

- A remote fill line was traced leading from the crest of the concrete drain culvert toward the location of the suspected UST.
- The suspected UST location was surveyed as indicated on the scaled hand-drawn site map and cleared for subsurface utilities.
- No UST-like anomaly was clearly identifiable. The expected location of the UST lies below a re-inforced concrete sidewalk.
- We do NOT recommend drilling within 3 feet of any marked utilities, fences or structures.
- It is our opinion that all detectable utilities have been marked which transect the survey area. Extreme caution should be used when drilling in the vicinity of utilities marked from base utility maps only. Extreme caution should be used when drilling in areas of disturbed soil as utilities may be present but, beyond the depth of penetration of the ground penetrating radar unit.
- All underground lines detectable using geophysical methods or inferred from base utility maps were marked on the ground and are accurately recorded on the back of the GEOPHYSICAL CLEARANCE FORMS. Use extreme caution when excavating within 3 feet of a marked utility line. Do not drill over cracks in the concrete.

This report was written by:

Rod Merrill
Project Geophysicist
GeoVision Geophysical Services

This report was reviewed and approved by:

Antony J. Martin, R.GP. 989
Technical Director
GeoVision Geophysical Services

REGISTERED GEOPHYSICIST
ANTONY JEFFREY MARTIN
GP 989
exp 3/31/2001
STATE OF CALIFORNIA

GE Vision
geophysical services
a division of Blackhawk Geometrics

GEOPHYSICAL CLEARANCE FORM

PROJECT NAME: FT/OHM PROJECT NUMBER D.20, 9255
LOCATION MCAS EL TORO
DATE 1 MAY 00 TIME 0945L
SITE DESCRIPTION: UST SITE 66 & 67

SCOPE OF WORK: LOCATE POSS. BLE UST AND CLEAR UTILITIES

GEOPHYSICAL EQUIPMENT

GROUND PENETRATING RADAR (GPR) UNIT: SIR2 MAGNETOMETER: –
ELECTROMAGNETIC (EM): – UTILITY LOCATOR (UL): 9890
METAL DETECTOR (MD): FISHER OTHER: –

PROCEDURES

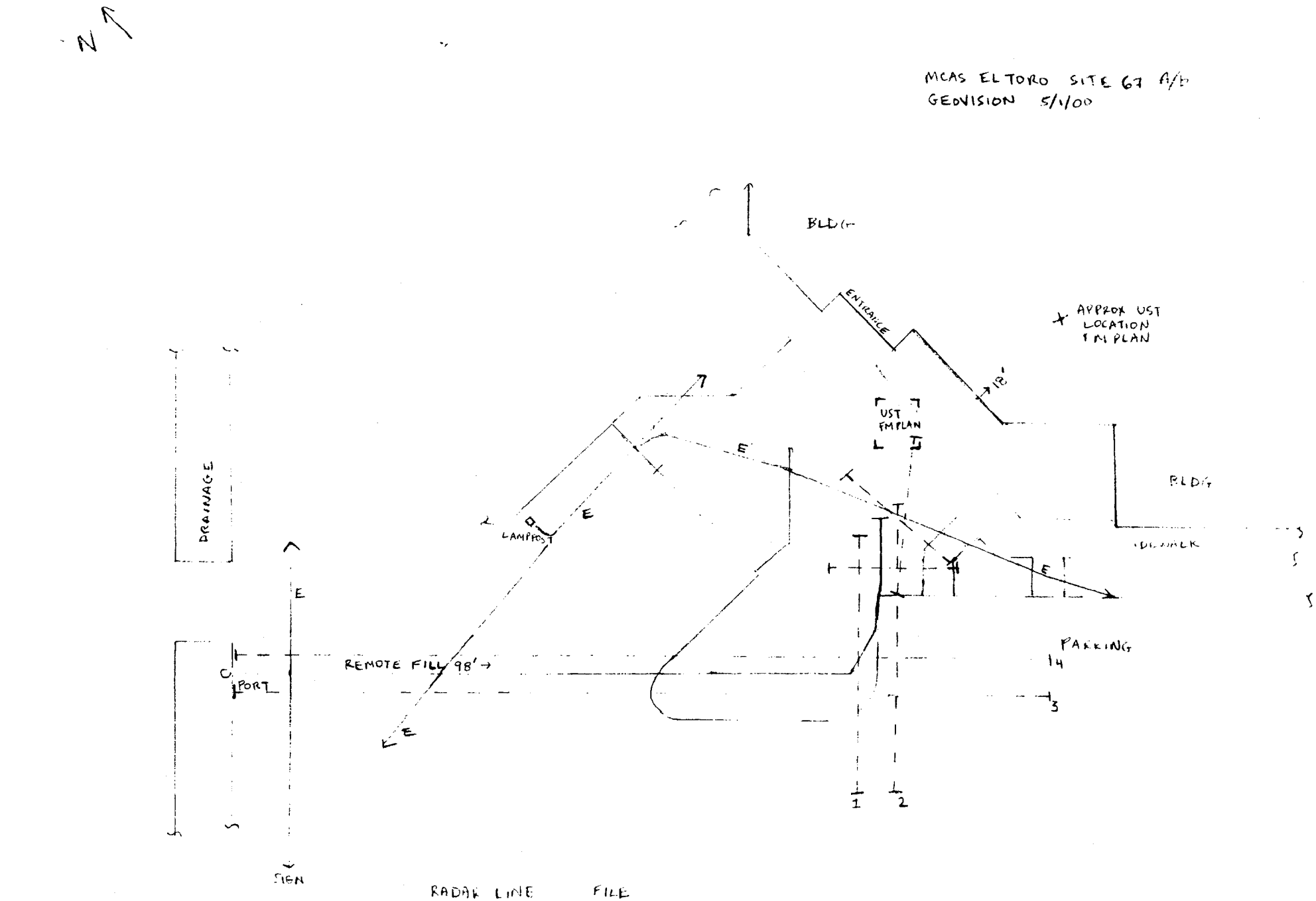
☑ 1. Inspect available utility maps and trace all recorded utilities in the vicinity of the target using UL, and if necessary GPR.
① ☐ 2. ~~Review available geophysical data: Magnetic~~ EM-31 EM-61
☑ 3. Inspect site and trace all pipes evident from field observations (i.e. manhole, vault, valve, cracked asphalt, pipe at surface, etc.)
☑ 4. Sweep target area with ~~UL in~~ passive 50/60 Hz mode.
☑ 5. Hold UL transmitter over target / at several locations around target area and circle at about a 40-foot radius with receiver tracing all utilities encountered.
☑ 6. Sweep target ~~area with~~ MD.
☑ 7. Conduct perpendicular / multiple GPR profiles through target area (see map on reverse).
GPR antenna: 300 MHZ
GPR range: 40NSEC Estimated depth penetration *: 3-4'
* utility lines or other features below this depth cannot be detected using GPR
☑ 8. Other ① NOT AVAILABLE UTILITIES MARKED W/ APWA COLORS. UTILITIES LOCATED FROM PLANS MARKED AS SUCH.

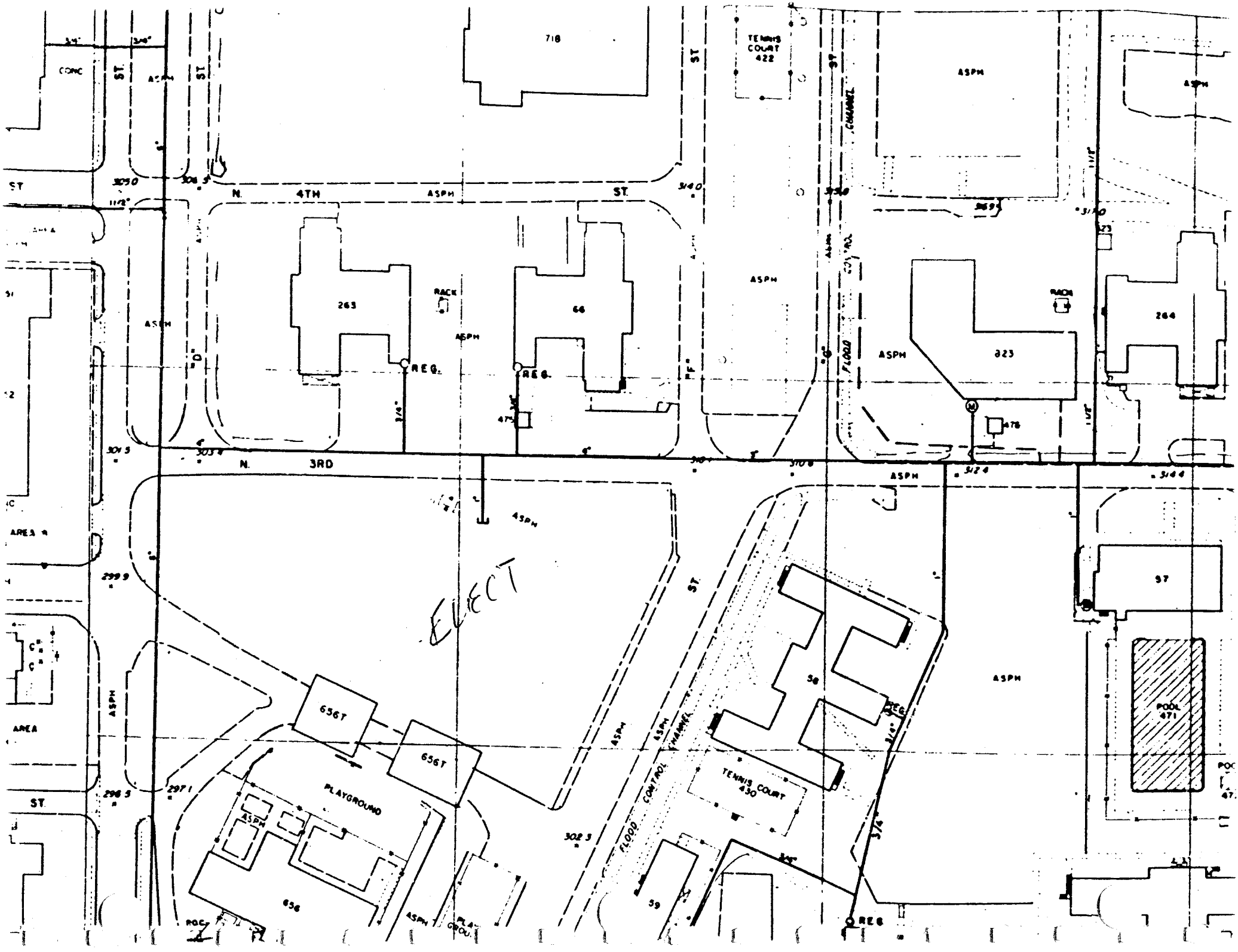
FIELD PERSONNEL: R.A MERRILL L. BROWN

SIGNATURE:

CLEARFRM.DOC 02/98

MCAS EL TORO SITE 67 A/B
GEOVISION 5/1/00

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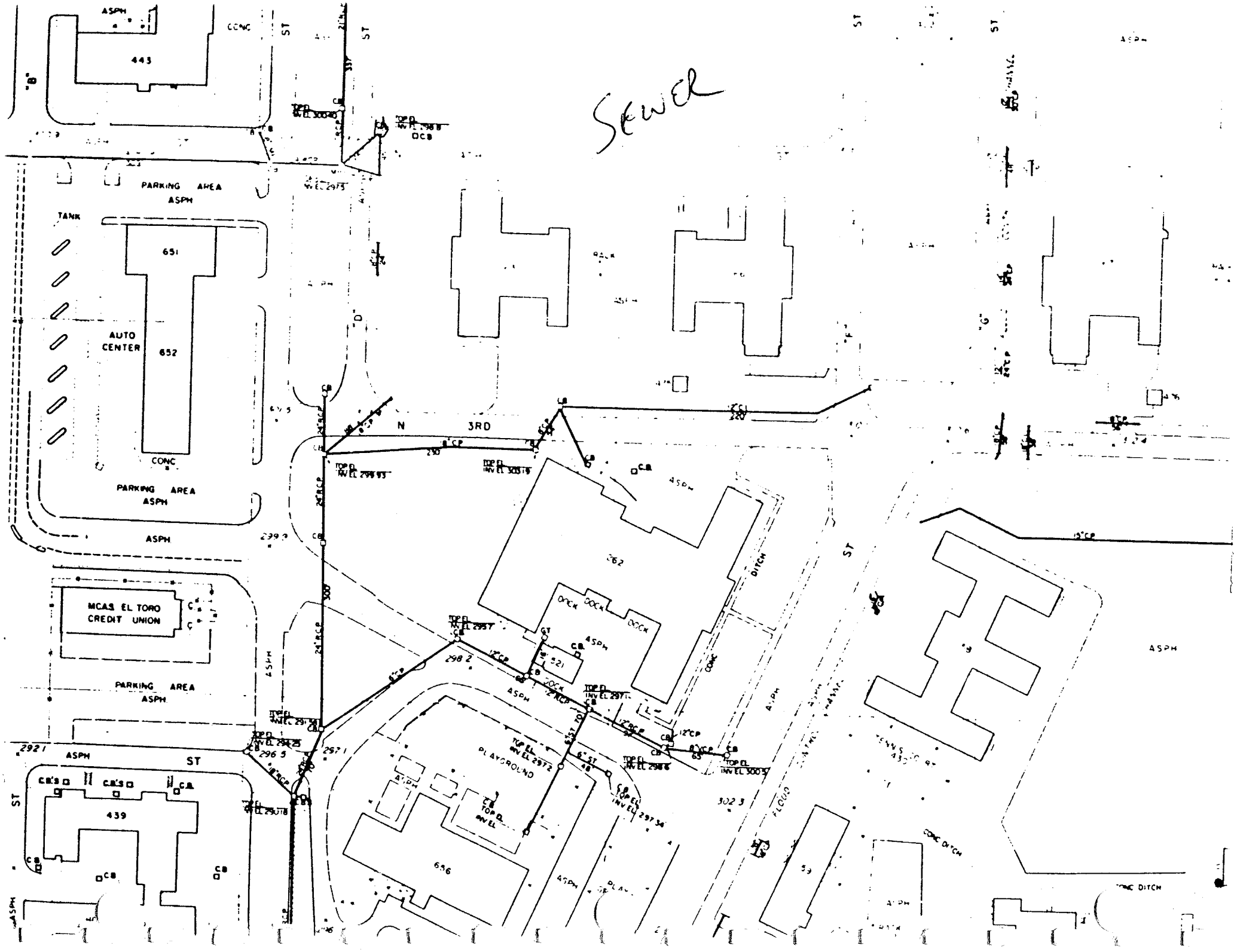
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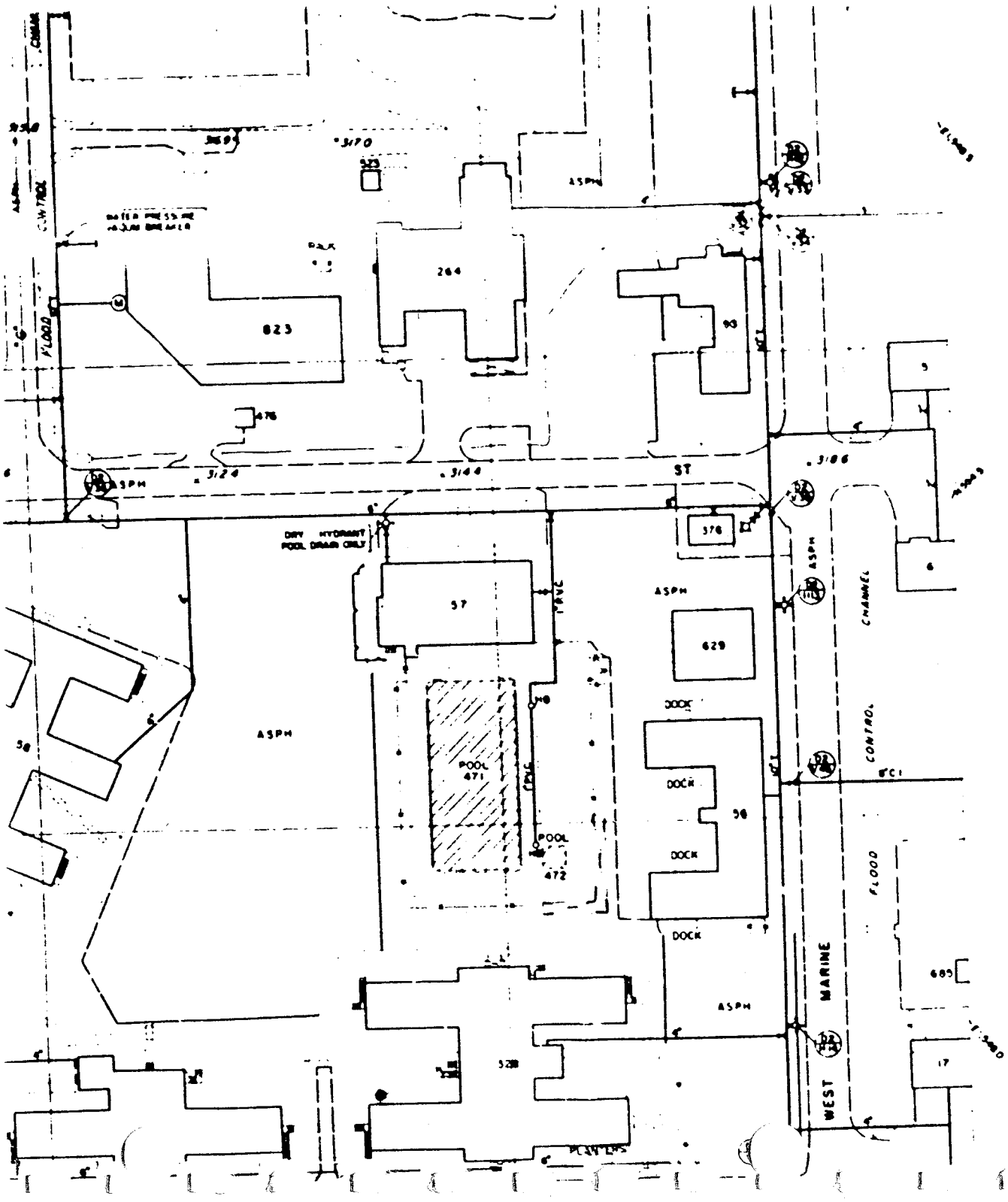
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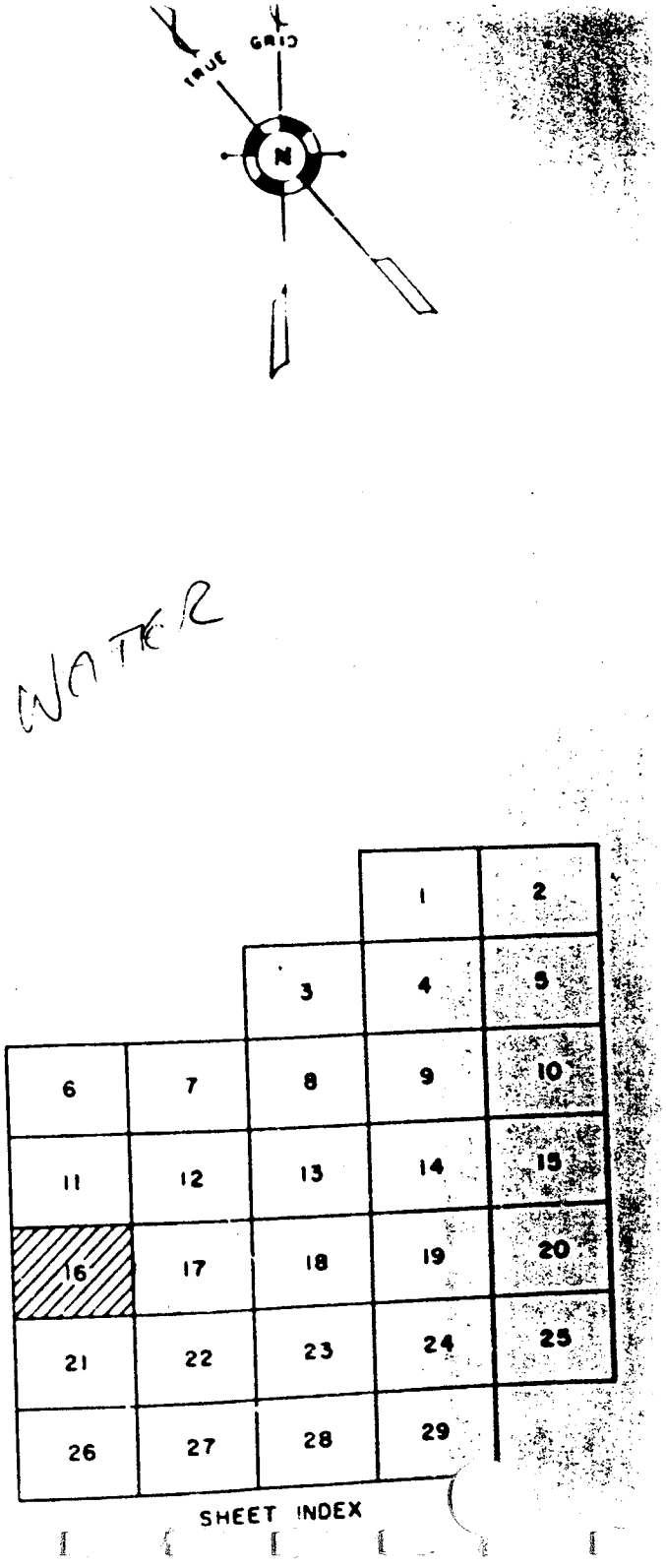
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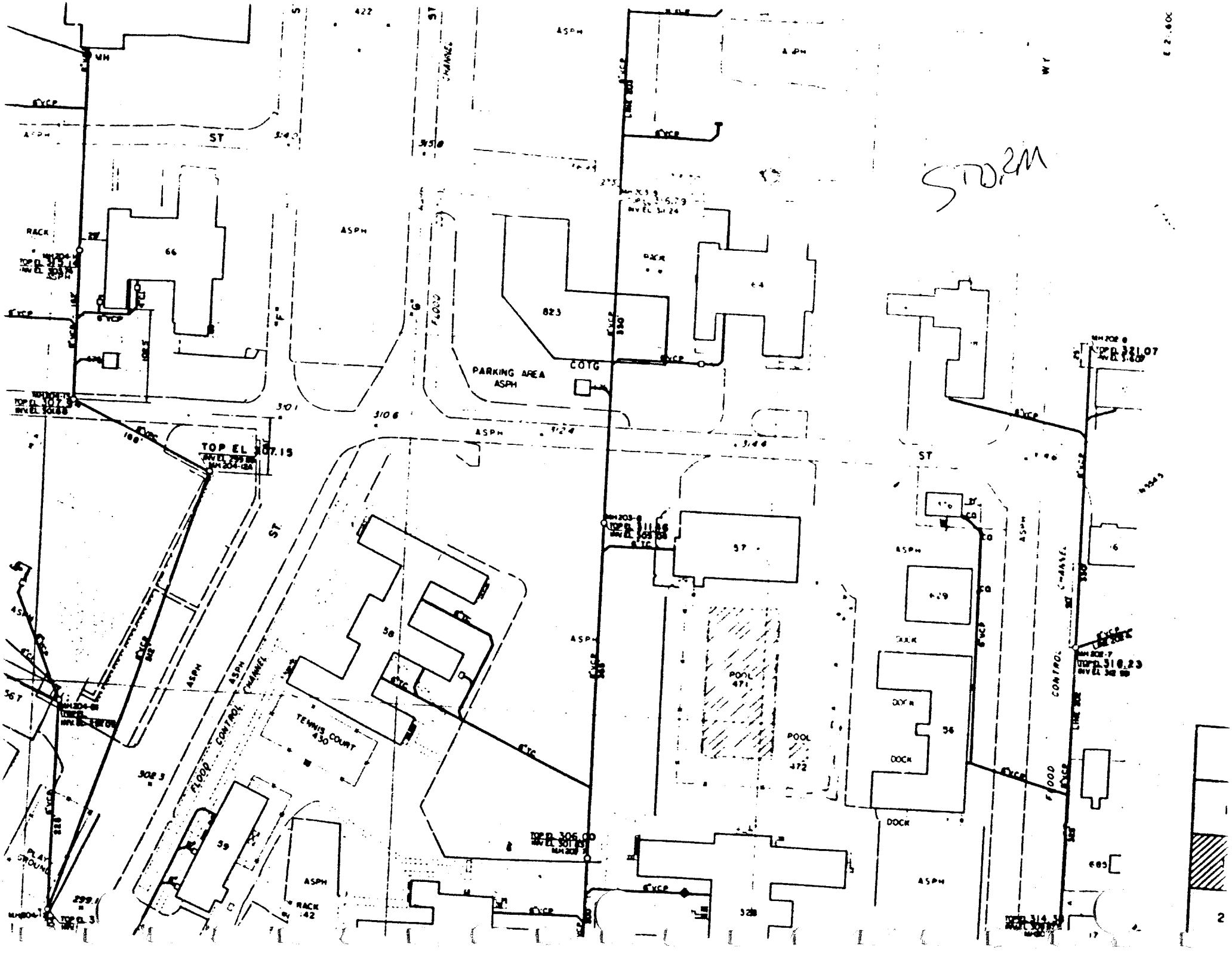
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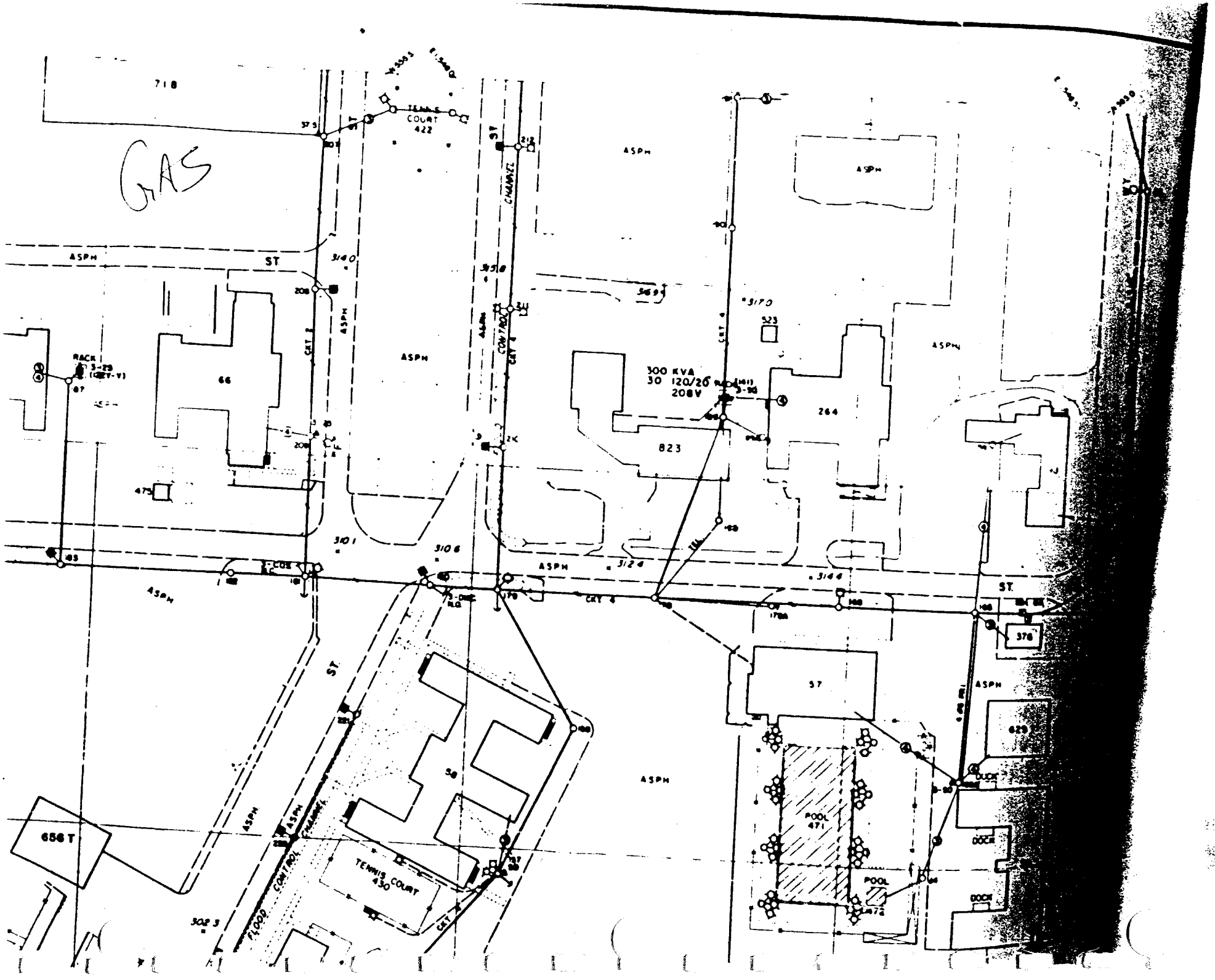
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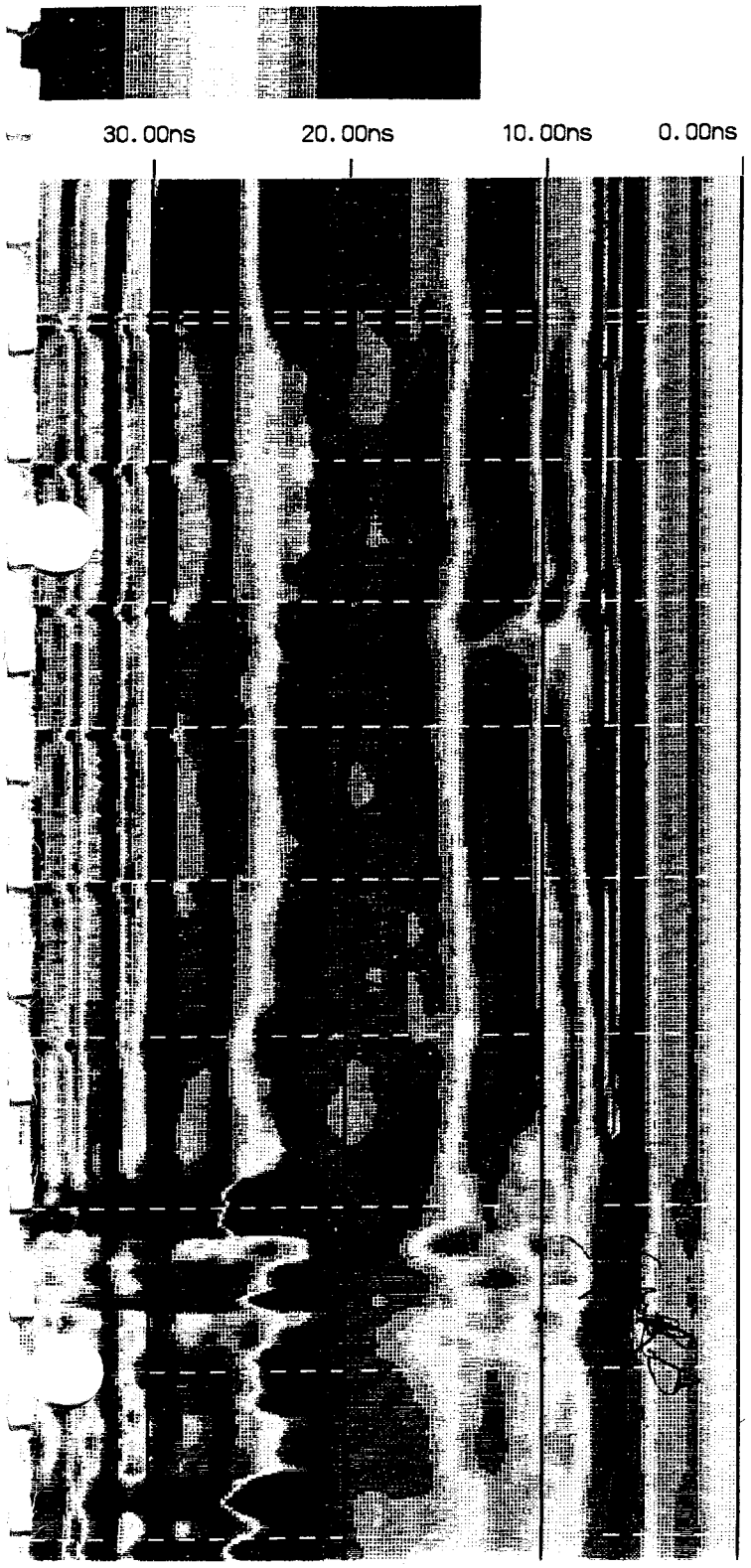

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V(IIR LP N=1 F=900)
V(IIR HP N=2 F=50)
H(IIR STK TC=3)

Table #15; Transform #1

1 SIZE 6' A/B

Appendix E
OCHCA Facility Modification Application

TOM URAM
DIRECTOR

HUGH F. STALLWORTH, M.D.
HEALTH OFFICER

ENVIRONMENTAL HEALTH DIVISION
ROBERT E. MERRYMAN, REHS, MPH
DEPUTY DIRECTOR

COUNTY OF ORANGE

HEALTH CARE AGENCY
PUBLIC HEALTH SERVICES
ENVIRONMENTAL HEALTH DIVISION
2009 E. EDINGER AVENUE
SANTA ANA, CALIFORNIA 92705
(714) 667-3700

RECEIVED
MAY 23 2000
ENVIRONMENTAL HEALTH

FACILITY MODIFICATION APPLICATION (INSTALLATION/REMOVAL/REPAIR) (COMPLETE PAGES 1 & 2)

DATE: 5/1/00

FACILITY INFORMATION

NAME: MARINE CORPS AIR STATION ELTORO

STREET ADDRESS: UST 67A/B, Near Bldg. 823,

CITY: North 3rd St & D'St. IRVINE CA

TOTAL NUMBER OF TANKS (AFTER INSTALLATION/REMOVAL) AT THIS LOCATION: 0

TYPE OF BUSINESS:
- ☐ GASOLINE STATION
- ☒ GOVERNMENT
- ☐ FARM
- ☐ OTHER

NK OWNER *NAME (CORP., INDIVIDUAL, PUBLIC AGENCY):*

MCAS ELTORO / CSO

STREET ADDRESS: P O Box 444

CITY: EAST IRVINE

STATE: CA ZIP 92650

TELEPHONE NO: 949-726-2506

BILLING ADDRESS INFORMATION

BILL TO NAME: IT CORPORATION

BILL TO ADDRESS: 3347 MICHELSON DRIVE #200

CITY: IRVINE

STATE: CA ZIP 92612

TELEPHONE NO.: 949-261-6441

TYPE OF CONSTRUCTION

INDICATE NO. OF TANK(S) BEING REMOVED/REPAIRED/INSTALLED BELOW: (COMPLETE PAGE 2 - INDICATING THE TANKS TO BE INSTALLED/REMOVED, OR AFFECTED BY THE REPAIR)

- ☐ INSTALLATION(S)
- ☐ REPAIR(S)/RELINE(S) TO USTs
- ☐ CLOSURE(S)/REMOVAL(S)
- ☐ SYSTEM MODIFICATION (E.G. REPIPE, REPAIR TO PIPING)
- ☐ OTHER (SPECIFY) Piping Removal

24 HOUR EMERGENCY CONTACT PERSON

DAYS: SCOTT KEHE (NAME) OFF - 949-726-2506 CELL - 619-572-1400 (TELEPHONE)

NIGHTS: IT/OHM - 800-537-9540 (24hr) (NAME) ELTORO - 949-726-9911/2172 (TELEPHONE)

APPLICANT

NAME: Dhananjay B. Rawal
PLEASE PRINT

SIGNATURE: [signature]

COMPANY NAME: IT CORPORATION

TELEPHONE NO: 949-660-7576

FACILITY OPERATOR (CONTACT PERSON)

NAME: SCOTT KEHE, CARETAKER SITE OFFICE

BUSINESS TELEPHONE NO.: 949-726-2506

NOTES: NEW INSTALLATIONS, CLOSURES, REPAIRS AND SYSTEM MODIFICATIONS OF UNDERGROUND STORAGE TANKS REQUIRE THE SUBMITTAL OF (4) SETS OF PLANS TO THIS DIVISION. THESE PLANS MUST BE APPROVED PRIOR TO THE INITIATION OF ANY CONSTRUCTION OR MODIFICATION. ALL PLANS OR REPORTS REQUIRED MUST ACCOMPANY THIS FORM AT THE TIME OF SUBMITTAL.

PLAN APPROVAL AND FEES ARE VALID FOR ONE YEAR. IF TANKS HAVE NOT BEEN REMOVED, INSTALLED OR MODIFIED WITHIN ONE YEAR OF THE APPROVAL DATE, NEW PLANS AND FEES MUST BE SUBMITTED.

OFFICE USE ONLY

CHECK NO.: 00PM28 FEES PAID: RCVD. BY:

PLAN APPROVAL DATE: 6-6-00 BY: DR

NUMBER OF TANKS TO RECEIVE A SURCHARGE BILL: NUMBER OF TANKS TO BE ADDED TO BILLING:

TANK INFORMATION

PROVIDE THE INFORMATION BELOW FOR ALL TANKS AND PIPING SYSTEMS TO BE INSTALLED, REMOVED OR REPAIRED. ALSO INDICATE THE UPGRADE/CHANGES TO BE MADE TO EACH TANK SYSTEM.

67A/B PIPING, FILLING

TANK I.D.			#1	#2	#3	#4
MATERIAL STORED	MATERIAL OR WASTE STORED	CURRENTLY	NONE			
		PROPOSED	NONE			
		PREVIOUSLY	Fuel oil			
	FUEL TYPE, I.E., UNLEADED		N/A			
CONTAINER	TYPE (TANK, SUMP, OTHERS)		UST's			
	DOUBLE WALL/SINGLE WALL		SINGLE			
	UL NUMBER		N/A			
	YEAR INSTALLED		1943			
	VAULTED/NOT VAULTED		NOT VAULTED			
	PRIMARY	MANUFACTURER	N/A			
		CAPACITY (GALLONS)	1,500			
		CONSTRUCTION MATERIAL	Steel			
		THICKNESS (UNITS)	None			
		INTERIOR LINING	None			
	SECONDARY	MANUFACTURER	N/A			
		CAPACITY (GALLONS)	N/A			
		CONSTRUCTION MATERIAL	N/A			
		THICKNESS (UNITS)	N/A			
	CORROSION PROTECTION		None			
	TYPE OF LEAK DETECTION FOR USTs (LIQUID, PROBE, ETC.)		None			
	MANUFACTURER OF LEAK DETECTOR		None			
PIPING	LOCATION (UNDER/ABOVE GROUND)		Underground			
	SUCTION/PRESSURE GRAVITY/UNKNOWN		gravity			
	PRIMARY	CONSTRUCTION MATERIAL	Steel			
		MANUFACTURER	N/A			
	SECONDARY	CONSTRUCTION MATERIAL	N/A			
		MANUFACTURER	N/A			
	TYPE OF LEAK DETECTION FOR PIPING (PRESSURE LOSS DEVICE, ETC.)		N/A			
	MANUFACTURER OF LEAK DETECTOR		None			
OVERFILL PROTECTION (TYPE)			None			
SPILL CONTAINMENT (TYPE)			None			

APPROVED
ORANGE COUNTY HEALTH CARE AGENCY
ENVIRONMENTAL HEALTH DIVISION
HAZARDOUS MATERIALS MANAGEMENT SECTION
THIS APPROVAL IS VALID FOR 12 MONTHS FROM THE APPROVAL DATE

Plan Reviewed By	Date	Plan #
NE	6/6/00	00PM28

This approval shall not be construed to permit the violation of any law, nor does it prevent further corrections of errors found on the plans. Plans must be resubmitted for approval if any additional changes are made by the applicant.

In addition to this approval, all applicable permits required by the local fire department, building department, and the Air Quality Management District must be obtained.

Underground tank installation, removal, and repair inspections are required and must be scheduled 48 hours in advance. Contact (714) 667 - 3600 for an appointment.

A copy of these approved plans must be available at the site at all times.

APPROVED

ORANGE COUNTY HEALTH CARE AGENCY
ENVIRONMENTAL HEALTH DIVISION
HAZARDOUS MATERIALS MANAGEMENT SECTION
THIS APPROVAL IS VALID FOR 12 MONTHS FROM THE APPROVAL DATE.

Plan Review By Date Plan #

This approval shall not be construed to permit the violation of any law or ordinance or prevent further corrections of errors found on the plans. Plans must be resubmitted for approval if any additional changes are made by the applicant.

In addition to this approval, all applicable permits required by the local fire department, building department and the Air Quality Management District must be obtained.

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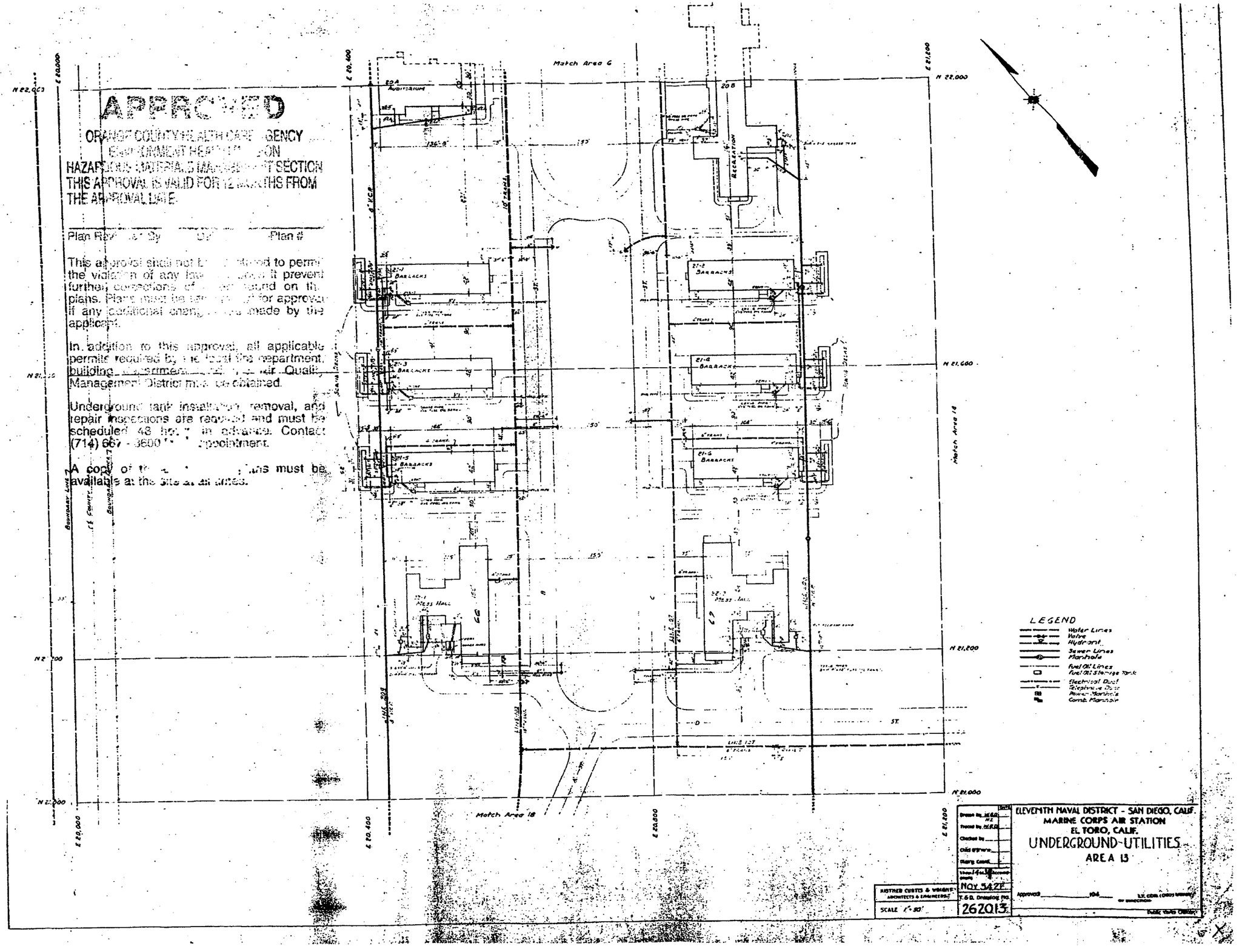
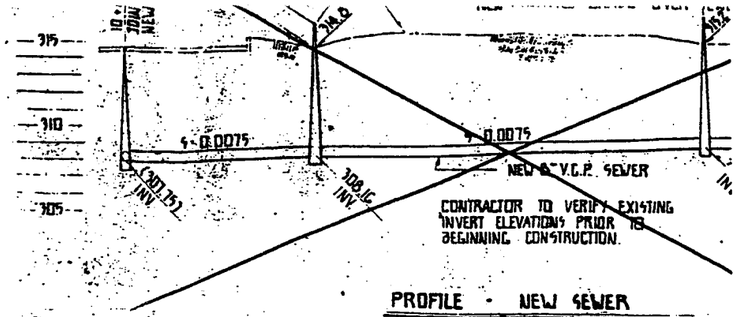
A copy of the approved plans must be available at the site at all times.



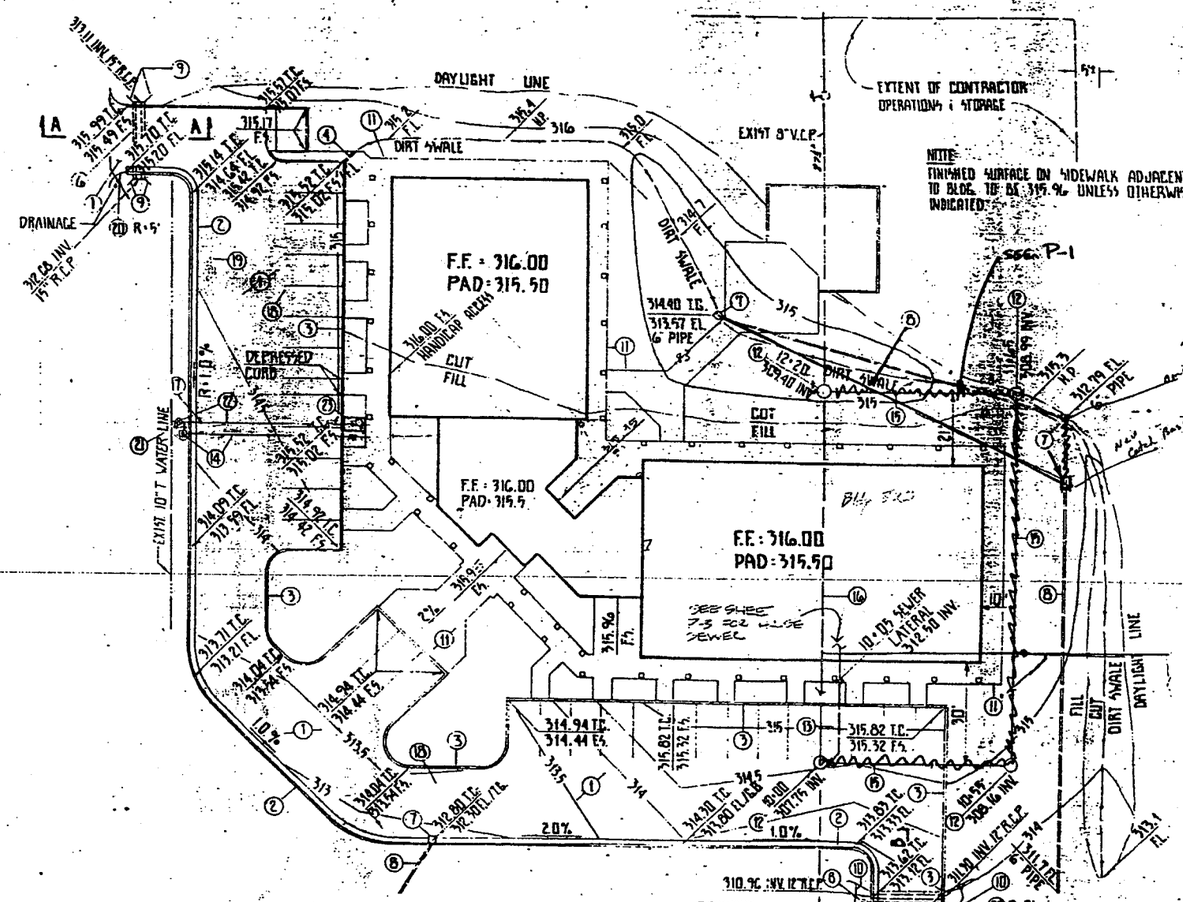
DETAIL - 6" CURB ONLY

DETAIL - 6" CURB & GUTTER



PROFILE - NEW SEWER

SCALE: 1"=20' HORIZ.
1"=4' VERT.



NOTE:
EXCAVATE BUILDING PAD TO A MINIMUM ELEV. OF 315.50. REMOVE ALL DELETERIOUS AND UNSUITABLE MATERIAL FROM SITE. REPLACE AND RECOMPACT PER SOILS REPORT.

GRADING AND PAVING & ALL SEWER WATER

BENCHMARK:

#152 ELEV. = 302.03
CHIS. "D" AT S.W. COR. OF C.B. 250 FEET WEST OF BLDG #2 (TOWN DOWN.)

T.B.M. AT INT. 3RD & "C" STREET
"C" NAIL ELEV. = 311.52

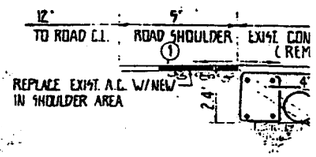
EARTHWORK ESTIMATE:

RAW CUT	375 C.Y.
SUBSIDENCE (0.1')	-190 C.Y.
SHRINKAGE (15%)	-422 C.Y.
RAW FILL	-657 C.Y.
IMPORT (IN PLACE)	894 C.Y.

SHRINKAGE VALUE APPLIED TO CUT AND OVEREXCAVATION.

WATER METER:

METER TO BE 2½" BRONZE DISC METER WITH POSITIVE DISPLACEMENT MEASUREMENT, CAST BRONZE CASE, BRONZE MEASURING CHAMBER AND INTERNAL GEAR TRAIN, WITH NUTATING DISC, 316" STAINLESS STEEL DIAPHRAM, AND 302 STAINLESS STEEL STRAINER

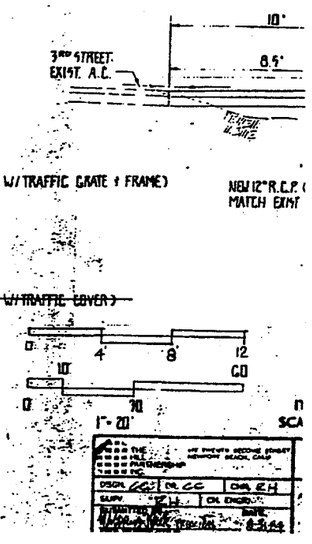


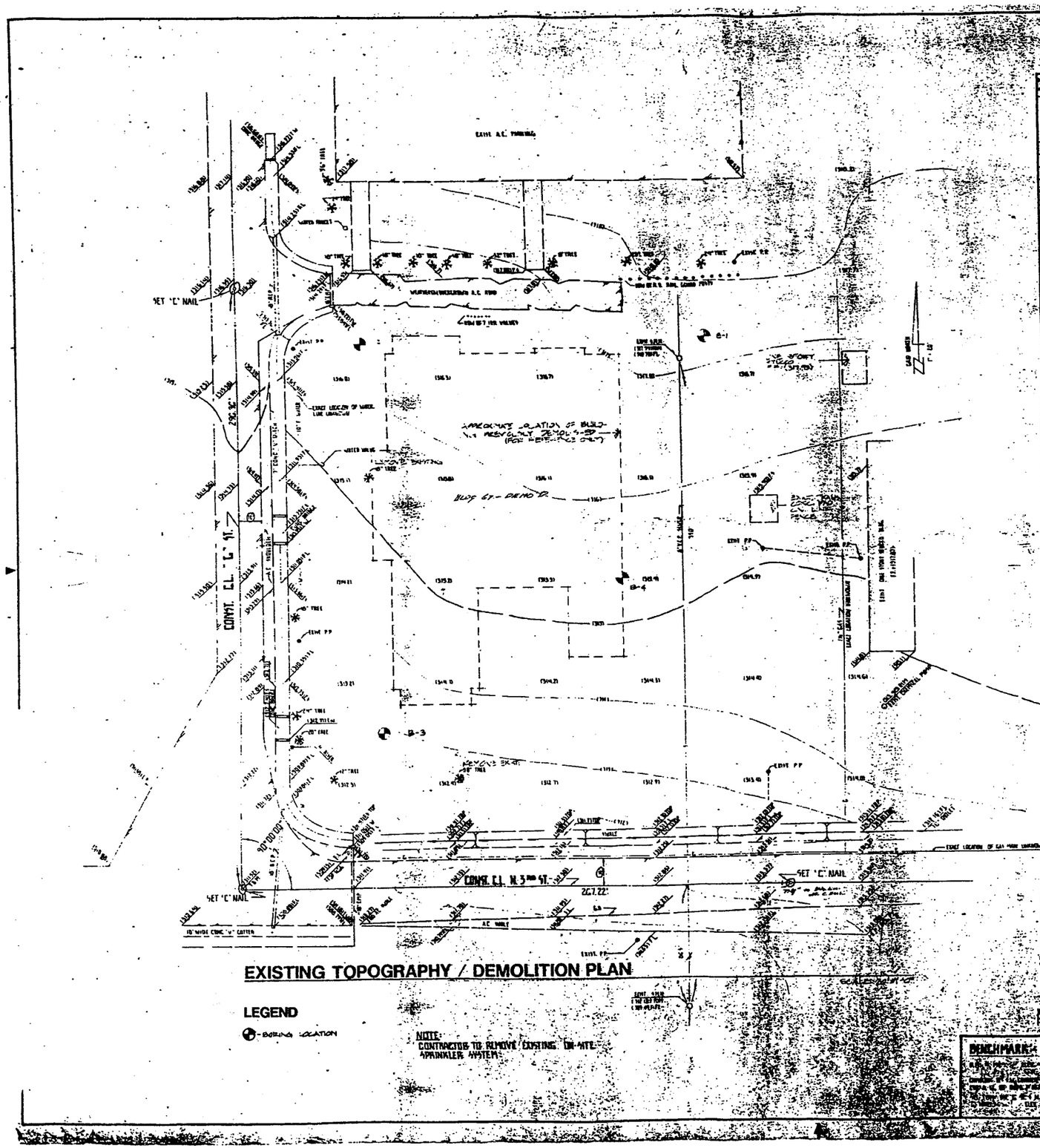
SECTION
PIPE UNDE
SCALE

LEGEND
F.F.
F.L.
F.S.
H.P.
INV.
R.
T.C.
T.G.
S

CONSTRUCTION NOTES:

		QUANTITY:
**	① A.C. PAVING (3" A.C. OVER 5" A.B.)	14,530 S.F.
	② 6" CURB & GUTTER PER DETAIL HEREON	395 L.F.
	③ 6" CURB ONLY PER DETAIL HEREON	585 L.F.
	④ 4" P.V.C. UNDER WALK DRAIN	1 EA.
	⑤ 12" R.C.P. DRAIN PIPE (2500 D) PER SECTION B-B	20 L.F.
	⑥ 15" R.C.P. DRAIN PIPE (2500 D) PER SECTION A-A	48 L.F.
	⑦ STANDARD CATCH BASIN PER SKETCH NFGS-02420-3	4 EA. (W/TRAFFIC GRATE & FRAME)
	⑧ 6" P.V.C. DRAIN PIPE	250 L.F.
	⑨ REINF. CONC. HEADWALL TYPE "C" PER SKETCH NFGS-02420-10	2 EA.
	⑩ RE-GRADE SWALE TO JOIN END OF CONC. PIPE	2 EA.
	⑪ 4" P.C.C. SIDEWALK	5,580 S.F.
	~~⑫ 48" I.D. SEWER MANHOLE PER SKETCH NFGS-02420-1~~	~~4 EA. (W/TRAFFIC COVER)~~
	⑬ 6" V.C.P. SEWER LATERAL & WYE	24 L.F.
*	⑭ 2½" COPPER WATER SERVICE W/METER	54 L.F.
	⑮ 8" V.C.P. SEWER (SEE PROFILE ABOVE RIGHT)	208 L.F.
	⑯ REMOVE EXIST. 8" V.C.P. SEWER (BETWEEN NEW M.H.'S)	112 L.F.
	⑰ 6" x 6" x 2" C.I. TEE, C.I. 179	1 EA.
	⑱ REMOVE EXIST. TREE	2 EA.
	⑲ REMOVE EXIST. WATER VALVE AND CAP END	1 EA.
	⑳ 2" x 6" REDWOOD HEADER	38 L.F.
	㉑ 6" x 6" x 2½" C.I. TEE, C.I. 179	1 EA.
	㉒ 6" P.V.C. WATER LINE W/SHUTOFF VALVE	60 L.F.





EXISTING TOPOGRAPHY / DEMOLITION PLAN

LEGEND

B - BORING LOCATION

NOTE:
CONTRACTOR TO REMOVE EXISTING ON-SITE SPRINKLER SYSTEM.

BORING LOG

BORING NO. 1 — DATE 10/12/83 — SURFACE EL.

Depth ft.	Sample #	Blows/ft	Group SYB	Description and Remarks	Unit Dry Wt. (lbs/cu.ft.)	% Moisture
			SC	FILL: Clayey sand, dark brown, moist, loose, porous		
					No Recover	
5				NATURAL: Silty sand, brown, moist, loose	85.7	27.2
				Clayey silt, brown, moist, moderately dense; interbedded clayey sands	90.2	26.2
10			SP	Sand, medium to coarse grained, brown, moist, medium dense, scattered sub-angular gravel to 1/2"	102.9	8.1
				@ 12.0 ft. medium grained		
				Clayey silt, brown, very moist, soft	94.3	24.0
15				@ 15.0 ft. silty sand lense		
			SC ML	Clayey sand/clayey silt interbedded, brown, very moist, medium dense		
20					107.3	14.6
	R	Push			92.7	28.6
				TOTAL DEPTH 27.5 ft.		
				No Water		
				Slight Caving @ 11.5 ft.		

BORING LOG

BORING NO. 2 — DATE 10/12/83 — SURFACE EL.

Depth ft.	Sample #	Blows/ft	Group SYB	Description and Remarks	Unit Dry Wt. (lbs/cu.ft.)	% Moisture
			SC	FILL: Clayey sand, dark brown, moist, very moist, loose, porous; large chunks of concrete		
5	R	Push		NATURAL: Silty sand, brown, moist, loose		
			ML	Clayey silt, brown, very moist, soft, sand increasing with depth	100.1	31.4
	R				113.4	16.2
			SC SP	Clayey sand, brown, moist, moderately dense; Sand, medium to coarse grained, brown, slightly moist to moist, moderately dense: @ 11.0 ft. medium grained		
10	R	Push		Clayey silt, brown, very moist, soft;	91.6	32.1
				@ 16.0 ft. sand lense:		
15			CL SC	Lean clay, dark brown, very moist, firm; Clayey sand, dark brown, very moist, medium dense		
20	R	Push		TOTAL DEPTH 20.0 ft. No Water; Caving from 9.5 to 12.0 feet; Slight Caving @ 16.0 ft.		

BORING LOG

BORING NO. 3 — DATE — SURFACE EL.

Depth ft.	Sample #	Blows/ft	Group SYB	Description and Remarks	Unit Dry Wt. (lbs/cu.ft.)	% Moisture
			SC	FILL: Clayey sand, dark brown, moist, loose, porous		
	R	Push	SP	Sand, medium grained, light brown, slightly moist to moist, loose		
			SC	NATURAL: Clayey sand, brown, moist, medium dense		
5	R	Push	SP	Sand, medium grained, brown, moist, moderately dense; @ 7.0 ft. clayey silt lense		
			SM	Silty sand, brown, moist, medium dense		
10	R	Push	SC/SP	Clayey sand/sand interbedded, brown, moist, moderately dense; interbedded sand		
15	R	Push	ML	Clayey silt, brown, very moist, soft; white precipitate, interbedded clayey sands		
			CL	Lean clay, dark brown, very moist, stiff		
20	R	Push		TOTAL DEPTH 20.5 ft. No Water; Caving from 3.0 - 6.0 ft., 16.0 - 17.5 ft.		

BORING LOG

BORING NO. 4 — DATE — SURFACE EL.

Depth ft.	Sample #	Blows/ft	Group SYB	Description and Remarks	Unit Dry Wt. (lbs/cu.ft.)	% Moisture
			SC	FILL: Clayey sand, dark brown, moist, very moist, loose, porous		
	R	Push	SP	Sand, medium grained, light brown, slightly moist to moist, loose		
			SC	NATURAL: Clayey sand, brown, moist, medium dense		
5	R	Push	SP	Sand, medium grained, brown, moist, moderately dense; @ 7.0 ft. clayey silt lense		
			SM	Silty sand, brown, moist, medium dense		
10	R	Push	SC/SP	Clayey sand/sand interbedded, brown, moist, moderately dense; interbedded sand		
15	R	Push	ML	Clayey silt, brown, very moist, soft; white precipitate, interbedded clayey sands		
			CL	Lean clay, dark brown, very moist, stiff		
20	R	Push		TOTAL DEPTH 20.5 ft. No Water; Caving [illegible]		

AS BUILT

DRAWN BY [illegible]
DATE [illegible]
IF 6" IS REDUCED TO 1"
SCALE REDUCED ACCORDINGLY

BENCHMARK:

RUDNICK & HANCOCK ASSOCIATES, INC.
CIVIL ENGINEERS

10/5/83

TEMPORARY CONDITIONS

Appendix F
Site Inspection Log

SITE ASSESSMENT LOG
MCAS El Toro
REMEDIATION OF VARIOUS UST SITES
20242, D.O. 112

UST SITE: 67A/B

Field Observations by: D. Rawal **Date:** 5/1/2000 5/9/2000

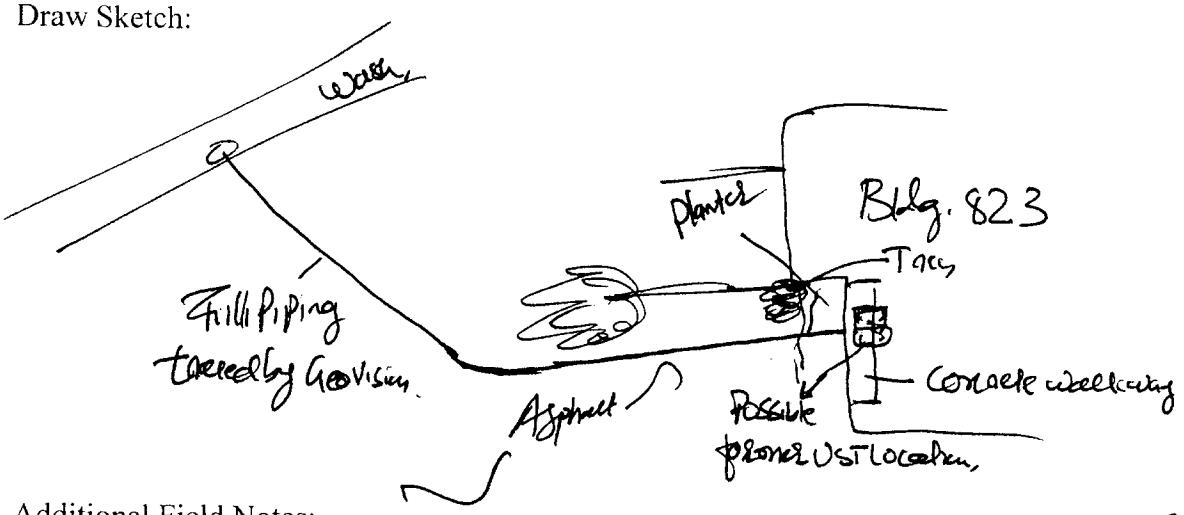
Former UST area: Paved or Unpaved, USTs 67 A/B located beneath Building 823, Building 67 demolished & Building 823 was built on the same site.
Paved: Concrete or Asphalt Concrete, walkway,
Unpaved: Open dirt area
Any Visible Sprinkler System: Yes / No

-Nearest Building or Structure Distance: Bldg. 823, Very close, Almost underneath the walkway.
-Any Underground Piping/Lines, or Transformer Observed: None

-Overhead Utility Lines/Poles:, Tree, which could pose problem for drilling.

-Site Setup Constrains: Tree & Close proximity of Building overhang walkway.

Draw Sketch:



Additional Field Notes:
GeoVision on-site to trace old Building 67 & USTs location with current Building 823. Discovered old fuel fill line from the nearby wash to Building 823. No trace of USTs but approximate locations were marked on ground. USTs are most likely removed or located underneath concrete walkway. Fillline will be removed and will trace if USTs are still present.

Appendix G
Laboratory Analytical Reports

the i group

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

CHAIN-OF-CUSTODY RECORD

LABORATORY COPY

A 12024

Site 823- Pipe Pull (UST67A/B)

FORM 0019 REV. 9-99

IT'S LAB COORDINATOR: M. Concepcion	LAB COORDINATOR'S PHONE: 949-660-7550	LAB COORDINATOR'S FAX: 949-475-5433	LABORATORY SERVICE ID: F058	LABORATORY CONTACT: EMAX	MAIL REPORT (COMPANY NAME): IT Corp
PROJECT NAME: El Toro - DOTO	PROJECT LOCATION: MCAS El Toro, CA	PROJECT NUMBER: 918609	LABORATORY PHONE: 310-618-8889	LABORATORY FAX: 310-618-0818	RECIPIENT NAME: Dwayne Ishida
PROJECT CONTACT: M. Concepcion	PROJECT PHONE NUMBER: 949-451-1667	PROJECT FAX: 949-451-1672	LABORATORY ADDRESS: Lab 3 630 Maple Ave.		ADDRESS: 3347 Michelson #200
PROJECT ADDRESS: —	CITY, STATE AND ZIP CODE: —	CLIENT: SWDIV	CITY, STATE AND ZIP CODE: Torrance, CA		CITY, STATE AND ZIP CODE: Irvine, CA 92612
PROJECT MANAGER: B. Sedlak	PROJECT MANAGER'S PHONE: 949-660-5446	PROJECT MANAGER'S FAX: 949-451-1672			

Item	Sample Identifier	Matrix	Date	Time	Preserved	# of Cont.	QC Level	T.A.T.	Analyses: TPH-Gas	TPH-Diesel	TRPH (HXL)	8260					Comments
1	18609-3109	S	6-13	1220	4c	1	3	5day	X	X	X	X					
2	18609-3110	S	6-13	1225	4c	1	3	5day	X	X	X	X					
3	18609-3111	S	6-13	1230	4c	1	3	5day	X	X	X	X					
4																	
5																	
6																	
7																	
8																	
9																	
10																	

W.S. 6-13-00

SAMPLES COLLECTED BY: W. Sekson

COURIER AND AIR BILL NUMBER: Courier

COOLER TEMPERATURE UPON RECEIPT:

RELINQUISHED BY	RECEIVED BY	DATE	TIME	SAMPLE'S CONDITION UPON RECEIPT
Way-Lynn Sekson				

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

Site 823 - Pipe Pull

Sample Point Location	Sample Type: G	C	F	QC
UST67A/B - Pipe 1 @45ft	X			
② UST67A/B - Pipe 2 @45ft	X			
③ UST67A/B - Pipe 3 @60ft	X			

Comments: due 6/21/00

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

CHAIN OF CUSTODY
Orange County Health Care Agency
Environmental Health Division
2009 E. Edinger Ave., Santa Ana, CA 92705
Telephone: (714) 667-3700

1. **ALL SAMPLES ARE TO BE HANDLED AS COURT EVIDENCE, AND ARE TO BE PROPERLY STORED IN A SECURE LOCATION.**

2. **PLEASE WRITE LEGIBLY.**

3. **ATTACH THIS FORM TO THE ORIGINAL REPORT OF THE ANALYTICAL RESULTS AND RETURN THEM TO THIS OFFICE. LABORATORY RESULTS RECEIVED WITHOUT PROPER CHAIN OF CUSTODY DOCUMENTATION WILL NOT BE ACCEPTED.**

4. **TO BE COMPLETED BY LABORATORY ANALYST**

LAB NO.: 00F058

DATE RECEIVED: 06-13-00

SAMPLE(S) CONDITION (PLEASE CHECK):

CHILLED: ✓ (2.0 C.) **COUNTY SEAL(S) INTACT:** ✓

CONTAINER IN GOOD CONDITION: ✓

DATE ANALYSIS COMPLETED: 06/15/00 (Diesel, etc) 06/17/00 (BTEX)

ANALYST: DN / [illegible]

5. **TO BE COMPLETED BY SAMPLE COLLECTOR**

SITE NAME/ADDRESS: MCAS El Toro UST 67A/B (Piping), Santa Ana

DATE OF COLLECTION: 6-13-00

SAMPLE COLLECTOR/COMPANY: W. Jefferson IT Corporation

TELEPHONE NO.:

HCA REPRESENTATIVE: A. Rashidi-Ard

6.

SAMPLE NUMBER	DETERMINATION REQUESTED	SAMPLE DESCRIPTION/COMMENTS	TIME OF COLLECTION
SL09-3109-67A/B	TRPH (418.1), TPH diesel (8015), BTEX + MTBE (8260)		
SL09-3110-67A/B	↓	↓	
SL09-3111-67A/B	↓	↓	

7. **CHAIN OF CUSTODY**

	SIGNATURE	COMPANY/AGENCY	INCLUSIVE DATES/TIMES
1.	Mohammad Rashidi-Ard	Haz Waste	6-13-00 - 12:40pm
2.	W. Jefferson	IT Corp	6-13-00 - 12:40pm
3.	[illegible]	IT Corp	[illegible]
4.	[illegible]	Emily	[illegible]
5.	[illegible]	Emily	[illegible]
6.	[illegible]	Emily	[illegible]

WHITE-RETURN THIS COPY TO ENVIRONMENTAL HEALTH, CANARY-LABORATORY COPY
PINK-CONTRACTOR/CONSULTANT COPY, GOLDENROD-OFFICE COPY

F272-9.1531.1(R8/89)

EMAX
LABORATORIES, INC.
630 Maple Ave.
Torrance, CA 90503
Telephone: (310) 618-8889
Fax: (310) 618-0818

Date: 06-22-2000
EMAX Batch No.: 00F058

Attn: Dwayne Ishida

IT Corporation
3347 Michelson Dr. # 200
Irvine CA 92612

Subject: Laboratory Report
Project: MCAS El Toro/18609/D.O. 70

Enclosed is the Laboratory report for samples received on 06/13/00. The data reported include :

Sample ID	Control #	Col Date	Matrix	Analysis
18609-3091	F058-01	06/13/00	SOIL	TPH Diesel
				TPH Gasoline
				Volatile Organics by GC/MS
18609-3092	F058-02	06/13/00	SOIL	TPH Diesel
				TPH Gasoline
				Volatile Organics by GC/MS
18609-3093	F058-03	06/13/00	SOIL	TPH Diesel
				TPH Gasoline
				Volatile Organics by GC/MS
				TPH Recoverable
18609-3094	F058-04	06/13/00	SOIL	TPH Diesel
				TPH Gasoline
				Volatile Organics by GC/MS
				TPH Recoverable
18609-3095	F058-05	06/13/00	SOIL	TPH Diesel
				TPH Gasoline
				Volatile Organics by GC/MS
				TPH Recoverable
18609-3096	F058-06	06/13/00	SOIL	TPH Diesel

Sample ID	Control #	Col Date	Matrix	Analysis
				TPH Gasoline
				Volatile Organics by GC/MS
				TPH Recoverable
18609-3097	F058-07	06/13/00	SOIL	TPH Diesel
				TPH Gasoline
				Volatile Organics by GC/MS
				TPH Recoverable
18609-3098	F058-08	06/13/00	SOIL	TPH Diesel
				TPH Gasoline
				Volatile Organics by GC/MS
				TPH Recoverable
18609-3099	F058-09	06/13/00	SOIL	TPH Diesel
				TPH Gasoline
				Volatile Organics by GC/MS
				TPH Recoverable
18609-3100	F058-10	06/13/00	SOIL	TPH Diesel
				TPH Gasoline
				Volatile Organics by GC/MS
				TPH Recoverable
18609-3101	F058-11	06/13/00	SOIL	TPH Diesel
				TPH Gasoline
				Volatile Organics by GC/MS
				TPH Recoverable
18609-3102	F058-12	06/13/00	SOIL	TPH Diesel
				TPH Gasoline
				Volatile Organics by GC/MS
				TPH Recoverable
18609-3103	F058-13	06/13/00	SOIL	TPH Diesel
				TPH Gasoline
				Volatile Organics by GC/MS
				TPH Recoverable
18609-3104	F058-14	06/13/00	SOIL	TPH Diesel
				TPH Gasoline
				Volatile Organics by GC/MS
				TPH Recoverable
18609-3105	F058-15	06/13/00	SOIL	TPH Diesel
				TPH Gasoline
				Volatile Organics by GC/MS
				TPH Recoverable
18609-3106	F058-16	06/13/00	SOIL	TPH Diesel
				TPH Gasoline

Sample ID	Control #	Col Date	Matrix	Analysis
				Volatile Organics by GC/MS
				TPH Recoverable
18609-3107	F058-17	06/13/00	SOIL	TPH Diesel
				TPH Gasoline
				Volatile Organics by GC/MS
				TPH Recoverable
18609-3108	F058-18	06/13/00	SOIL	TPH Diesel
				TPH Gasoline
				Volatile Organics by GC/MS
				TPH Recoverable
18609-3109	F058-19	06/13/00	SOIL	TPH Diesel
				TPH Gasoline
				Volatile Organics by GC/MS
				TPH Recoverable
18609-3110	F058-20	06/13/00	SOIL	TPH Diesel
				TPH Gasoline
				Volatile Organics by GC/MS
				TPH Recoverable
18609-3111	F058-21	06/13/00	SOIL	TPH Diesel
				TPH Gasoline
				Volatile Organics by GC/MS
				TPH Recoverable

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

METHOD M8015
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client : IT CORPORATION
Project : MCAS EL TORO/18(0
Batch No. : 00F058

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	DSF020SB	ND	79	87	1	NA	10	3.47	06/16/0021:31	06/14/0012:00	TF05043A	TF05035A	DSF020S	NA	06/14/00
LCS1S	DSF020SL	636	86	94	1	NA	10	3.47	06/16/0022:21	06/14/0012:00	TF05044A	TF05035A	DSF020S	NA	06/14/00
LCD1S	DSF020SC	620	86	94	1	NA	10	3.47	06/16/0023:11	06/14/0012:00	TF05045A	TF05035A	DSF020S	NA	06/14/00
MBLK2S	DSF021SB	ND	81	86	1	NA	10	3.47	06/17/0001:40	06/14/0015:45	TF05048A	TF05046A	DSF021S	NA	06/14/00
LCS2S	DSF021SL	585	89	98	1	NA	10	3.47	06/17/0002:29	06/14/0015:45	TF05049A	TF05046A	DSF021S	NA	06/14/00
MBLK3S	DSF024SB	ND	74	86	1	NA	10	3.47	06/16/0015:55	06/16/0014:40	TF05037A	TF05035A	DSF024S	NA	06/16/00
LCS3S	DSF024SL	666	89	100	1	NA	10	3.47	06/16/0019:52	06/16/0014:40	TF05041A	TF05035A	DSF024S	NA	06/16/00
LCD3S	DSF024SC	650	89	99	1	NA	10	3.47	06/16/0020:42	06/16/0014:40	TF05042A	TF05035A	DSF024S	NA	06/16/00
18609-3091	F058-01	5800	DO	DO	10	6.2	107	37	06/16/0012:35	06/14/0015:45	TF05033A	TF05024A	DSF021S	06/13/00	06/13/00
18609-3092	F058-02R **	59	89	99	1	9.2	11	3.82	06/17/0006:37	06/16/0014:40	TF05054A	TF05046A	DSF024S	06/13/00	06/13/00
18609-3093	F058-03R	ND	91	106	1	13.6	11.6	4.02	06/17/0007:27	06/16/0014:40	TF05055A	TF05046A	DSF024S	06/13/00	06/13/00
18609-3094	F058-04	ND	82	97	1	13.9	11.6	4.03	06/16/0013:25	06/14/0015:45	TF05034A	TF05024A	DSF021S	06/13/00	06/13/00
18609-3095	F058-05	ND	86	88	1	14.2	11.7	4.04	06/15/0020:53	06/14/0015:45	TF05014A	TF05013A	DSF021S	06/13/00	06/13/00
18609-3096	F058-06	ND	87	98	1	11.2	11.3	3.91	06/15/0021:43	06/14/0015:45	TF05015A	TF05013A	DSF021S	06/13/00	06/13/00
18609-3109	F058-19	ND	99	124	1	4.6	10.5	3.64	06/16/0011:45	06/14/0015:45	TF05032A	TF05024A	DSF021S	06/13/00	06/13/00
18609-3110	F058-20R	ND	88	104	1	7.0	10.8	3.73	06/17/0008:16	06/16/0014:40	TF05056A	TF05046A	DSF024S	06/13/00	06/13/00
18609-3110MS	F058-20U	631	94	110	1	7.0	10.8	3.73	06/17/0009:06	06/16/0014:40	TF05057A	TF05046A	DSF024S	06/13/00	06/13/00
18609-3110MSD	F058-20V	610	92	113	1	7.0	10.8	3.73	06/17/0011:34	06/16/0014:40	TF05060A	TF05058A	DSF024S	06/13/00	06/13/00
18609-3111	F058-21	ND	90	104	1	7.3	10.8	3.74	06/16/0015:05	06/14/0012:00	TF05036A	TF05035A	DSF020S	06/13/00	06/13/00

QC LIMIT : (SOIL) 60-140 55-150
QC LIMIT : (WATER) 65-135 60-145
SURR1 : Bromobenzene
SURR2 : Hexacosane
RL : Reporting Limit
** : Chromatogram shows a non-typical fuel pattern, calculated and reported as Diesel.

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

T: IT CORPORATION
CT: MCAS EL TORO/18609/D.O. 70
BATCH NO.: 00F058
METHOD: METHOD M8015

MATRIX: SOIL % MOISTURE: NA

DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	DSF020SB	DSF020SL	DSF020SC		
LAB FILE ID:	TF05043A	TF05044A	TF05045A		
DATE EXTRACTED:	06/14/0012:00	06/14/0012:00	06/14/0012:00	DATE COLLECTED:	NA
DATE ANALYZED:	06/16/0021:31	06/16/0022:21	06/16/0023:11	DATE RECEIVED:	06/14/00
PREP. BATCH:	DSF020S	DSF020S	DSF020S		
CALIB. REF:	TF05035A	TF05035A	TF05035A		

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 (%)
Diesel	ND	500	636	127	500	620	124	3	51-153	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 (%)
[illegible]benzene	100	85.8	86	100	85.6	86	60-140
[illegible]sane	25	23.5	94	25	23.4	94	55-150

EMAX QUALITY CONTROL DATA
LCS ANALYSIS

CLIENT: IT CORPORATION
PROJECT: MCAS EL TORO/18609/D.O. 70
BATCH NO.: 00F058
METHOD: METHOD M8015

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MATRIX:	SOIL		% MOISTURE:	NA
DILUTION FACTOR:	1	1		
SAMPLE ID:	MBLK2S			
LAB SAMP ID:	DSF021SB	DSF021SL		
LAB FILE ID:	TF05048A	TF05049A		
DATE EXTRACTED:	06/14/0015:45	06/14/0015:45	DATE COLLECTED:	NA
DATE ANALYZED:	06/17/0001:40	06/17/0002:29	DATE RECEIVED:	06/14/00
PREP. BATCH:	DSF021S	DSF021S		
CALIB. REF:	TF05046A	TF05046A		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	QC LIMIT (%)
Diesel	ND	500	585	117	51-153

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SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	QC LIMIT (%)	✓
Bromobenzene	100	89.1	89	60-140	
Hexacosane	25	24.5	98	55-150	

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

IT: IT CORPORATION
ECT: MCAS EL TORO/18609/D.O. 70
BATCH NO.: 00F058
METHOD: METHOD M8015

MATRIX: SOIL % MOISTURE: NA

DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK3S				
LAB SAMP ID:	DSF024SB	DSF024SL	DSF024SC		
LAB FILE ID:	TF05037A	TF05041A	TF05042A		
DATE EXTRACTED:	06/16/0014:40	06/16/0014:40	06/16/0014:40	DATE COLLECTED:	NA
DATE ANALYZED:	06/16/0015:55	06/16/0019:52	06/16/0020:42	DATE RECEIVED:	06/16/00
PREP. BATCH:	DSF024S	DSF024S	DSF024S		
CALIB. REF:	TF05035A	TF05035A	TF05035A		

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 (%)
Diesel	ND	500	666	133	500	650	130	2	51-153	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 (%)
obenzene	100	88.7	89	100	89.4	89	60-140
osane	25	25	100	25	24.8	99	55-150

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: IT CORPORATION
PROJECT: MCAS EL TORO/18609/D.O. 70
BATCH NO.: 00F058
METHOD: METHOD M8015

MATRIX:	SOIL			% MOISTURE:	7.0
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	18609-3110				
LAB SAMP ID:	F058-20R	F058-20U	F058-20V		
LAB FILE ID:	TF05056A	TF05057A	TF05060A		
DATE EXTRACTED:	06/16/0014:40	06/16/0014:40	06/16/0014:40	DATE COLLECTED:	06/13/00
DATE ANALYZED:	06/17/0008:16	06/17/0009:06	06/17/0011:34	DATE RECEIVED:	06/13/00
PREP. BATCH:	DSF024S	DSF024S	DSF024S		
CALIB. REF:	TF05046A	TF05046A	TF05058A		

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	537	631	118	537	610	114	3	51-153	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	107	101	94	107	98.7	92	60-140
Hexacosane	26.8	29.4	110	26.8	30.3	113	55-150

METHOD 5[illegible] 8015
TOTAL PETROLEUM HYDROCARBONS BY PURGE & TRAP

Client : IT CORPORATION
Project : MCAS EL TORO/18609/D.O. 70
Batch No. : 00F058

Matrix : SOIL
Instrument ID : GCT039

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	SURR (%)	DLF	MOIST	PRL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1S	VAF2639B	ND	89	1	NA	1	.02	06/14/0019:21	06/14/0019:21	EF09016A	EF09015A	VAF2639	NA	06/14/00
LCS1S	VAF2639L	2.71	113	1	NA	1	.02	06/14/0019:56	06/14/0019:56	EF09017A	EF09015A	VAF2639	NA	06/14/00
LCD1S	VAF2639C	2.43	116	1	NA	1	.02	06/14/0020:32	06/14/0020:32	EF09018A	EF09015A	VAF2639	NA	06/14/00
MBLK2S	VMF2739B	ND	88	10	NA	10	.2	06/15/0011:05	06/15/0011:05	EF09042A	EF09039A	VMF2739	NA	06/15/00
LCS2S	VMF2739L	28.9	110	10	NA	10	.2	06/15/0011:40	06/15/0011:40	EF09043A	EF09039A	VMF2739	NA	06/15/00
LCD2S	VMF2739C	28	109	10	NA	10	.2	06/15/0012:15	06/15/0012:15	EF09044A	EF09039A	VMF2739	NA	06/15/00
MBLK3S	VAF2839B	ND	89	1	NA	1	.02	06/15/0020:12	06/15/0020:12	EF09056A	EF09048A	VAF2839	NA	06/15/00
LCS3S	VAF2839L	2.41	102	1	NA	1	.02	06/15/0019:01	06/15/0019:01	EF09054A	EF09048A	VAF2839	NA	06/15/00
LCD3S	VAF2839C	2.57	109	1	NA	1	.02	06/15/0019:36	06/15/0019:36	EF09055A	EF09048A	VAF2839	NA	06/15/00
18609-3091	F058-01*	2800	82	1000	6.2	1070	21.3	06/15/0017:50	06/15/0017:50	EF09052A	EF09048A	VMF2739 ✓	06/13/00	06/13/00
18609-3092	F058-02	ND	71	1	9.2	1.1	.022	06/15/0003:32	06/15/0003:32	EF09030A	EF09027A	VAF2639	06/13/00	06/13/00
18609-3093	F058-03	ND	102	1	13.6	1.16	.0231	06/15/0004:07	06/15/0004:07	EF09031A	EF09027A	VAF2639	06/13/00	06/13/00
18609-3093MS	F058-03M	2.52	104	1	13.6	1.16	.0231	06/15/0023:41	06/15/0023:41	EF09062A	EF09059A	VAF2839	06/13/00	06/13/00
18609-3093MSD	F058-03S	3.13	114	1	13.6	1.16	.0231	06/16/0000:16	06/16/0000:16	EF09063A	EF09059A	VAF2839	06/13/00	06/13/00
18609-3094	F058-04	ND	92	1	13.9	1.16	.0232	06/15/0004:41	06/15/0004:41	EF09032A	EF09027A	VAF2639	06/13/00	06/13/00
18609-3095	F058-05	ND	88	1	14.2	1.17	.0233	06/15/0005:16	06/15/0005:16	EF09033A	EF09027A	VAF2639	06/13/00	06/13/00
18609-3096	F058-06	ND	85	1	11.2	1.13	.0225	06/15/0005:50	06/15/0005:50	EF09034A	EF09027A	VAF2639	06/13/00	06/13/00
18609-3097	F058-07	ND	84	1	12.8	1.15	.0229	06/15/0006:25	06/15/0006:25	EF09035A	EF09027A	VAF2639	06/13/00	06/13/00
18609-3098	F058-08	ND	105	1	16.6	1.2	.024	06/15/0007:00	06/15/0007:00	EF09036A	EF09027A	VAF2639	06/13/00	06/13/00
18609-3099	F058-09*	300	84	50	15.7	59.3	1.19	06/15/0017:15	06/15/0017:15	EF09051A	EF09048A	VMF2739 ✓	06/13/00	06/13/00
18609-3100	F058-10	ND	92	1	14.6	1.17	.0234	06/15/0009:19	06/15/0009:19	EF09040A	EF09039A	VAF2639	06/13/00	06/13/00
18609-3101	F058-11	ND	88	1	8.1	1.09	.0218	06/15/0009:53	06/15/0009:53	EF09041A	EF09039A	VAF2639	06/13/00	06/13/00
18609-3102	F058-12	ND	86	1	12.8	1.15	.0229	06/16/0003:43	06/16/0003:43	EF09069A	EF09059A	VAF2839	06/13/00	06/13/00
18609-3103	F058-13	ND	88	1	11.7	1.13	.0227	06/15/0020:47	06/15/0020:47	EF09057A	EF09048A	VAF2839	06/13/00	06/13/00
18609-3104	F058-14	ND	84	1	12.4	1.14	.0228	06/15/0021:22	06/15/0021:22	EF09058A	EF09048A	VAF2839	06/13/00	06/13/00
18609-3105	F058-15	ND	84	1	13.5	1.16	.0231	06/15/0022:32	06/15/0022:32	EF09060A	EF09059A	VAF2839	06/13/00	06/13/00
18609-3106	F058-16	ND	92	1	12.2	1.14	.0228	06/15/0023:06	06/15/0023:06	EF09061A	EF09059A	VAF2839	06/13/00	06/13/00
18609-3107	F058-17	ND	83	1	11.1	1.12	.0225	06/16/0000:50	06/16/0000:50	EF09064A	EF09059A	VAF2839	06/13/00	06/13/00
18609-3108	F058-18	ND	79	1	9.5	1.1	.0221	06/16/0001:25	06/16/0001:25	EF09065A	EF09059A	VAF2839	06/13/00	06/13/00
18609-3109	F058-19	ND	80	1	4.6	1.05	.021	06/16/0002:00	06/16/0002:00	EF09066A	EF09059A	VAF2839	06/13/00	06/13/00
18609-3110	F058-20	ND	79	1	7.0	1.08	.0215	06/16/0002:34	06/16/0002:34	EF09067A	EF09059A	VAF2839	06/13/00	06/13/00
18609-3111	F058-21	ND	82	1	7.3	1.08	.0216	06/16/0003:09	06/16/0003:09	EF09068A	EF09059A	VAF2839	06/13/00	06/13/00

SURR : Bromofluorobenzene (W)65-135 (S)60-140
PRL : Reporting Limit
E : Value exceed the upper level of the initial calibration
D : Value from dilution
* : Presence of hydrocarbon heavier than Gasoline.

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: IT CORPORATION
PROJECT: MCAS EL TORO/18609/D.O. 70
BATCH NO.: 00F058
METHOD: METHOD 5030B/M8015

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	VAF2639B	VAF2639L	VAF2639C		
LAB FILE ID:	EF09016A	EF09017A	EF09018A		
DATE EXTRACTED:	06/14/0019:21	06/14/0019:56	06/14/0020:32	DATE COLLECTED:	NA
DATE ANALYZED:	06/14/0019:21	06/14/0019:56	06/14/0020:32	DATE RECEIVED:	06/14/00
PREP. BATCH:	VAF2639	VAF2639	VAF2639		
CALIB. REF:	EF09015A	EF09015A	EF09015A		

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	2.75	2.71	98	2.75	2.43	88	11	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	.1	.113	113	.1	.116	116	60-140

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

NT: IT CORPORATION
ECT: MCAS EL TORO/18609/D.O. 70
CH NO.: 00F058
METHOD: METHOD 5030B/M8015

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	10	10	10		
SAMPLE ID:	MBLK2S				
LAB SAMP ID:	VMF2739B	VMF2739L	VMF2739C		
LAB FILE ID:	EF09042A	EF09043A	EF09044A		
DATE EXTRACTED:	06/15/0011:05	06/15/0011:40	06/15/0012:15	DATE COLLECTED:	NA
DATE ANALYZED:	06/15/0011:05	06/15/0011:40	06/15/0012:15	DATE RECEIVED:	06/15/00
PREP. BATCH:	VMF2739	VMF2739	VMF2739		
CALIB. REF:	EF09039A	EF09039A	EF09039A		

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	28.9	105	27.5	28	102	3	57-146	50

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	QC LIMIT (%)
Bromofluorobenzene	1	1.1	110	1	1.09	109	60-140

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: IT CORPORATION
PROJECT: MCAS EL TORO/18609/D.O. 70
BATCH NO.: 00F058
METHOD: METHOD 5030B/M8015

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK3S				
LAB SAMP ID:	VAF2839B	VAF2839L	VAF2839C		
LAB FILE ID:	EF09056A	EF09054A	EF09055A		
DATE EXTRACTED:	06/15/0020:12	06/15/0019:01	06/15/0019:36	DATE COLLECTED:	NA
DATE ANALYZED:	06/15/0020:12	06/15/0019:01	06/15/0019:36	DATE RECEIVED:	06/15/00
PREP. BATCH:	VAF2839	VAF2839	VAF2839		
CALIB. REF:	EF09048A	EF09048A	EF09048A		

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	2.75	2.41	88	2.75	2.57	93	6	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	.1	.102	102	.1	.109	109	60-140

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

IT: IT CORPORATION
JECT: MCAS EL TORO/18609/D.O. 70
BATCH NO.: 00F058
METHOD: METHOD 5030B/M8015

MATRIX:	SOIL			% MOISTURE:	13.6
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	18609-3093				
LAB SAMP ID:	F058-03	F058-03M	F058-03S		
LAB FILE ID:	EF09031A	EF09062A	EF09063A		
DATE EXTRACTED:	06/15/0004:07	06/15/0023:41	06/16/0000:16	DATE COLLECTED:	06/13/00
DATE ANALYZED:	06/15/0004:07	06/15/0023:41	06/16/0000:16	DATE RECEIVED:	06/13/00
PREP. BATCH:	VAF2639	VAF2839	VAF2839		
CALIB. REF:	EF09027A	EF09059A	EF09059A		

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 (%)
Gasoline	ND	3.18	2.52	79	3.18	3.13	98	22	57-146	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 (%)
nofluorobenzene	.116	.12	104	.116	.132	114	60-140

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

Client	: IT CORPORATION	Date Collected:	06/13/00
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	06/13/00
Batch No.	: 00F058	Date Extracted:	06/15/00 08:26
Sample ID:	18609-3109	Date Analyzed:	06/15/00 08:26
Lab Samp ID:	F058-19	Dilution Factor:	1
Lab File ID:	RFV365	Matrix :	SOIL
Ext Btch ID:	VOF3301	% Moisture :	4.6
Calib. Ref.:	RFV356	Instrument ID :	T-001

PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.2	.36
1,1,2,2-TETRACHLOROETHANE	ND	5.2	.77
1,1,2-TRICHLOROETHANE	ND	5.2	.69
1,1-DICHLOROETHANE	ND	5.2	.55
1,1-DICHLOROETHENE	ND	5.2	.5
1,2-DICHLOROETHANE	ND	5.2	1
1,2-DICHLOROPROPANE	ND	5.2	.57
2-BUTANONE	ND	52	1.6
2-CHLOROETHYLVINYLETHER	ND	52	.78
2-HEXANONE	ND	52	1.5
4-METHYL-2-PENTANONE	ND	52	2.9
ACETONE	ND	52	3
BENZENE	ND	5.2	.55
BROMODICHLOROMETHANE	ND	5.2	.44
BROMOFORM	ND	5.2	.62
BROMOMETHANE	ND	5.2	3.8
CARBON DISULFIDE	ND	10	.35
CARBON TETRACHLORIDE	ND	5.2	.56
CHLOROBENZENE	ND	5.2	.49
CHLOROETHANE	ND	5.2	.97
CHLOROFORM	ND	5.2	.55
CHLOROMETHANE	ND	5.2	.55
CIS-1,2-DICHLOROETHENE	ND	5.2	.48
CIS-1,3-DICHLOROPROPENE	ND	5.2	.42
DIBROMOCHLOROMETHANE	ND	5.2	.38
ETHYLBENZENE	ND	5.2	.48
MTBE	ND	10	.79
METHYLENE CHLORIDE	ND	10	3.2
STYRENE	ND	5.2	.36
TETRACHLOROETHENE	ND	5.2	.35
TOLUENE	ND	5.2	.6
TRANS-1,2-DICHLOROETHENE	ND	5.2	.5
TRANS-1,3-DICHLOROPROPENE	ND	5.2	.47
TRICHLOROETHENE	ND	5.2	.64
VINYL ACETATE	ND	52	.87
VINYL CHLORIDE	ND	5.2	.61
XYLENES	ND	5.2	1.2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	116	52-149
BROMOFLUOROBENZENE	92	65-135
TOLUENE-D8	102	65-135

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

ıt	: IT CORPORATION	Date Collected:	06/13/00
ject	: MCAS EL TORO/18609/D.O. 70	Date Received:	06/13/00
Batch No.	: 00F058	Date Extracted:	06/15/00 09:00
Sample ID:	18609-3110	Date Analyzed:	06/15/00 09:00
Lab Samp ID:	F058-20	Dilution Factor:	1
Lab File ID:	RFV366	Matrix :	SOIL
Ext Btch ID:	VOF3301	% Moisture :	7.0
Calib. Ref.:	RFV356	Instrument ID :	T-001

PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.4	.37
1,1,2,2-TETRACHLOROETHANE	ND	5.4	.79
1,1,2-TRICHLOROETHANE	ND	5.4	.71
1,1-DICHLOROETHANE	ND	5.4	.56
1,1-DICHLOROETHENE	ND	5.4	.52
1,2-DICHLOROETHANE	ND	5.4	1.1
1,2-DICHLOROPROPANE	ND	5.4	.59
2-BUTANONE	ND	54	1.6
2-CHLOROETHYLVINYLETHER	ND	54	.8
2-HEXANONE	ND	54	1.6
4-METHYL-2-PENTANONE	ND	54	3
ACETONE	ND	54	3.1
BENZENE	ND	5.4	.57
BROMODICHLOROMETHANE	ND	5.4	.45
BROMOFORM	ND	5.4	.64
BROMOMETHANE	ND	5.4	3.9
CARBON DISULFIDE	ND	11	.36
CARBON TETRACHLORIDE	ND	5.4	.58
CHLOROBENZENE	ND	5.4	.5
CHLOROETHANE	ND	5.4	.99
OFORM	ND	5.4	.56
OMETHANE	ND	5.4	.57
CIS-1,2-DICHLOROETHENE	ND	5.4	.49
CIS-1,3-DICHLOROPROPENE	ND	5.4	.43
DIBROMOCHLOROMETHANE	ND	5.4	.39
ETHYLBENZENE	ND	5.4	.49
MTBE	ND	11	.81
METHYLENE CHLORIDE	ND	11	3.2
STYRENE	ND	5.4	.37
TETRACHLOROETHENE	ND	5.4	.36
TOLUENE	ND	5.4	.62
TRANS-1,2-DICHLOROETHENE	ND	5.4	.51
TRANS-1,3-DICHLOROPROPENE	ND	5.4	.48
TRICHLOROETHENE	ND	5.4	.66
VINYL ACETATE	ND	54	.89
VINYL CHLORIDE	ND	5.4	.63
XYLENES	ND	5.4	1.2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	125	52-149
BROMOFLUOROBENZENE	83	65-135
TOLUENE-D8	98	65-135

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

Client	: IT CORPORATION	Date Collected:	06/13/00
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	06/13/00
Batch No.	: 00F058	Date Extracted:	06/15/00 09:34
Sample ID:	18609-3111	Date Analyzed:	06/15/00 09:34
Lab Samp ID:	F058-21	Dilution Factor:	1
Lab File ID:	RFV367	Matrix :	SOIL
Ext Btch ID:	VOF3301	% Moisture :	7.3
Calib. Ref.:	RFV356	Instrument ID :	T-001

PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.4	.37
1,1,2,2-TETRACHLOROETHANE	ND	5.4	.8
1,1,2-TRICHLOROETHANE	ND	5.4	.71
1,1-DICHLOROETHANE	ND	5.4	.57
1,1-DICHLOROETHENE	ND	5.4	.52
1,2-DICHLOROETHANE	ND	5.4	1.1
1,2-DICHLOROPROPANE	ND	5.4	.59
2-BUTANONE	ND	54	1.6
2-CHLOROETHYLVINYLETHER	ND	54	.8
2-HEXANONE	ND	54	1.6
4-METHYL-2-PENTANONE	ND	54	3
ACETONE	ND	54	3.1
BENZENE	ND	5.4	.57
BROMODICHLOROMETHANE	ND	5.4	.46
BROMOFORM	ND	5.4	.64
BROMOMETHANE	ND	5.4	3.9
CARBON DISULFIDE	ND	11	.36
CARBON TETRACHLORIDE	ND	5.4	.58
CHLOROBENZENE	ND	5.4	.5
CHLOROETHANE	ND	5.4	.99
CHLOROFORM	ND	5.4	.57
CHLOROMETHANE	ND	5.4	.57
CIS-1,2-DICHLOROETHENE	ND	5.4	.5
CIS-1,3-DICHLOROPROPENE	ND	5.4	.43
DIBROMOCHLOROMETHANE	ND	5.4	.4
ETHYLBENZENE	ND	5.4	.5
MTBE	ND	11	.82
METHYLENE CHLORIDE	ND	11	3.3
STYRENE	ND	5.4	.37
TETRACHLOROETHENE	ND	5.4	.36
TOLUENE	ND	5.4	.62
TRANS-1,2-DICHLOROETHENE	ND	5.4	.51
TRANS-1,3-DICHLOROPROPENE	ND	5.4	.49
TRICHLOROETHENE	ND	5.4	.66
VINYL ACETATE	ND	54	.9
VINYL CHLORIDE	ND	5.4	.63
XYLENES	ND	5.4	1.2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	122	52-149
BROMOFLUOROBENZENE	86	65-135
TOLUENE-D8	100	65-135

PRL: Project Reporting L
* : Out side of QC Limit
J : An estimated value b
E : Value exceed the up ...itial calibration
B : Found in the assoc... ...blank
D : Value from dilution analysis

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

Client	: IT CORPORATION	Date Collected:	NA
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	06/15/00
Batch No.	: 00F058	Date Extracted:	06/15/00 05:02
Sample ID:	MBLK2S	Date Analyzed:	06/15/00 05:02
Lab Samp ID:	VOF3301B	Dilution Factor:	1
Lab File ID:	RFV359	Matrix :	SOIL
Ext Btch ID:	VOF3301	% Moisture :	NA
Calib. Ref.:	RFV356	Instrument ID :	T-001

PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5	.34
1,1,2,2-TETRACHLOROETHANE	ND	5	.74
1,1,2-TRICHLOROETHANE	ND	5	.66
1,1-DICHLOROETHANE	ND	5	.52
1,1-DICHLOROETHENE	ND	5	.48
1,2-DICHLOROETHANE	ND	5	.99
1,2-DICHLOROPROPANE	ND	5	.55
2-BUTANONE	ND	50	1.5
2-CHLOROETHYLVINYLETHER	ND	50	.74
2-HEXANONE	ND	50	1.5
4-METHYL-2-PENTANONE	ND	50	2.8
ACETONE	ND	50	2.9
BENZENE	ND	5	.53
BROMODICHLOROMETHANE	ND	5	.42
BROMOFORM	ND	5	.59
BROMOMETHANE	ND	5	3.6
CARBON DISULFIDE	ND	10	.33
CARBON TETRACHLORIDE	ND	5	.54
CHLOROBENZENE	ND	5	.46
C[illegible]OETHANE	ND	5	.92
[illegible] FORM	ND	5	.52
[illegible]OMETHANE	ND	5	.53
CIS-1,2-DICHLOROETHENE	ND	5	.46
CIS-1,3-DICHLOROPROPENE	ND	5	.4
DIBROMOCHLOROMETHANE	ND	5	.37
ETHYLBENZENE	ND	5	.46
MTBE	ND	10	.76
METHYLENE CHLORIDE	ND	10	3
STYRENE	ND	5	.34
TETRACHLOROETHENE	ND	5	.34
TOLUENE	ND	5	.58
TRANS-1,2-DICHLOROETHENE	ND	5	.47
TRANS-1,3-DICHLOROPROPENE	ND	5	.45
TRICHLOROETHENE	ND	5	.61
VINYL ACETATE	ND	50	.83
VINYL CHLORIDE	ND	5	.58
XYLENES	ND	5	1.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	123	52-149
BROMOFLUOROBENZENE	83	65-135
TOLUENE-D8	97	65-135

PRL: Project Reporting Limit
* : Out side of QC Limit
: An estimated value between PRL and MDL
: Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: IT CORPORATION
PROJECT: MCAS EL TORO/18609/D.O. 70
BATCH NO.: 00F058
METHOD: METHOD 5030A/8260A

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2S				
LAB SAMP ID:	VOF3301B	VOF3301L	VOF3301C		
LAB FILE ID:	RFV359	RFV357	RFV358		
DATE EXTRACTED:	06/15/0005:02	06/15/0003:54	06/15/0004:28	DATE COLLECTED:	NA
DATE ANALYZED:	06/15/0005:02	06/15/0003:54	06/15/0004:28	DATE RECEIVED:	06/15/00
PREP. BATCH:	VOF3301	VOF3301	VOF3301		
CALIB. REF:	RFV356	RFV356	RFV356		

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	21.7	109	20	21	105	3	65-135	30
Benzene	ND	20	18.6	93	20	18.4	92	1	65-135	30
Chlorobenzene	ND	20	20	100	20	19.8	99	1	65-135	30
Toluene	ND	20	19.2	96	20	19.2	96	0	64-135	30
Trichloroethene	ND	20	20.4	102	20	20.2	101	1	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-Dichlorethane-d4	50	60.3	121	50	59.6	119	52-149
Bromofluorobenzene	50	43	86	50	43.4	87	65-135
Toluene-d8	50	48.1	96	50	48.7	97	65-135

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

ENT: IT CORPORATION
ECT: MCAS EL TORO/18609/D.O. 70
CH NO.: 00F058
METHOD: METHOD 5030A/8260A

MATRIX:	SOIL			% MOISTURE:	13.6
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	18609-3093				
LAB SAMP ID:	F058-03	F058-03M	F058-03S		
LAB FILE ID:	RFV340	RFV351	RFV352		
DATE EXTRACTED:	06/14/0018:28	06/15/0000:31	06/15/0001:05	DATE COLLECTED:	06/13/00
DATE ANALYZED:	06/14/0018:28	06/15/0000:31	06/15/0001:05	DATE RECEIVED:	06/13/00
PREP. BATCH:	VOF3101	VOF3101	VOF3101		
CALIB. REF:	RFV333	RFV333	RFV333		

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 (%)
1,1-Dichloroethene	ND	57.9	50.5	87	57.9	52.8	91	5	65-135	30
Benzene	ND	57.9	42	73	57.9	46.2	80	9	65-135	30
Chlorobenzene	ND	57.9	45.6	79	57.9	49.4	85	8	65-135	30
Toluene	ND	57.9	44.3	77	57.9	48.3	83	8	64-135	30
Trichloroethene	ND	57.9	60.2	104	57.9	66.7	115	10	61-135	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 (%)
1,2-Dichlorethane-d4	57.9	75.3	130	57.9	69.6	120	52-149
fluorobenzene	57.9	49.6	86	57.9	50.7	88	65-135
ne-d8	57.9	56	97	57.9	56.2	97	65-135

* : Out side of QC Limit

METHOD 418.1
TOTAL RECOVERABLE PETROLEUM HYDROCARBONS

Client : IT CORPORATION
Project : MCAS EL TORO/18609/D.O. 70
Batch No. : 00F058

Matrix : SOIL
Instrument ID : T018

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
18609-3093	F058-03	490	10	13.6	116	48	06/15/0014:35	06/14/0017:30	TRF006S-8	TRF009C	TRF006S	06/13/00	06/13/00
18609-3094	F058-04	ND	1	13.9	11.6	4.82	06/15/0014:40	06/14/0017:30	TRF006S-9	TRF009C	TRF006S	06/13/00	06/13/00
18609-3095	F058-05	19	1	14.2	11.7	4.84	06/15/0014:45	06/14/0017:30	TRF006S-10	TRF009C	TRF006S	06/13/00	06/13/00
18609-3096	F058-06	37	1	11.2	11.3	4.67	06/15/0014:50	06/14/0017:30	TRF006S-11	TRF009C	TRF006S	06/13/00	06/13/00
18609-3097	F058-07	ND	1	12.8	11.5	4.76	06/15/0014:55	06/14/0017:30	TRF006S-12	TRF009C	TRF006S	06/13/00	06/13/00
18609-3098	F058-08	ND	1	16.6	12	4.98	06/15/0015:10	06/14/0017:30	TRF006S-15	TRF010C	TRF006S	06/13/00	06/13/00
18609-3099	F058-09	190	1	15.7	11.9	4.92	06/15/0015:15	06/14/0017:30	TRF006S-16	TRF010C	TRF006S	06/13/00	06/13/00
18609-3100	F058-10	ND	1	14.6	11.7	4.86	06/15/0015:20	06/14/0017:30	TRF006S-17	TRF010C	TRF006S	06/13/00	06/13/00
18609-3101	F058-11	ND	1	8.1	10.9	4.52	06/15/0015:25	06/14/0017:30	TRF006S-18	TRF010C	TRF006S	06/13/00	06/13/00
18609-3102	F058-12	ND	1	12.8	11.5	4.76	06/15/0015:30	06/14/0017:30	TRF006S-19	TRF010C	TRF006S	06/13/00	06/13/00
18609-3103	F058-13	ND	1	11.7	11.3	4.7	06/15/0015:35	06/14/0017:30	TRF006S-20	TRF010C	TRF006S	06/13/00	06/13/00
18609-3104	F058-14	46	1	12.4	11.4	4.74	06/15/0015:40	06/14/0017:30	TRF006S-21	TRF010C	TRF006S	06/13/00	06/13/00
18609-3105	F058-15	ND	1	13.5	11.6	4.8	06/15/0015:45	06/14/0017:30	TRF006S-22	TRF010C	TRF006S	06/13/00	06/13/00
18609-3106	F058-16	130	1	12.2	11.4	4.73	06/15/0015:50	06/14/0017:30	TRF006S-23	TRF010C	TRF006S	06/13/00	06/13/00
18609-3107	F058-17	ND	1	11.1	11.2	4.67	06/15/0015:55	06/14/0017:30	TRF006S-24	TRF010C	TRF006S	06/13/00	06/13/00
18609-3108	F058-18	45	1	9.5	11	4.59	06/15/0016:10	06/14/0017:30	TRF006S-27	TRF011C	TRF006S	06/13/00	06/13/00
18609-3109	F058-19	ND	1	4.6	10.5	4.35	06/15/0016:15	06/14/0017:30	TRF006S-28	TRF011C	TRF006S	06/13/00	06/13/00
18609-3110	F058-20	ND	1	7.0	10.8	4.46	06/15/0016:20	06/14/0017:30	TRF006S-29	TRF011C	TRF006S	06/13/00	06/13/00
18609-3110MS	F058-20M	155	1	7.0	10.8	4.46	06/15/0016:25	06/14/0017:30	TRF006S-30	TRF011C	TRF006S	06/13/00	06/13/00
18609-3110MSD	F058-20S	166	1	7.0	10.8	4.46	06/15/0016:30	06/14/0017:30	TRF006S-31	TRF011C	TRF006S	06/13/00	06/13/00
MBLK1S	TRF006SI	ND	1	NA	10	4.15	06/15/0014:10	06/14/0017:30	TRF006S-3	TRF009C	TRF006S	NA	06/15/00
LCS1S	TRF006SL	149	1	NA	10	4.15	06/15/0014:15	06/14/0017:30	TRF006S-4	TRF009C	TRF006S	NA	06/15/00
18609-3111	F058-21	17	1	7.3	10.8	4.48	06/15/0016:50	06/14/0018:00	TRF007S-35	TRF011S	TRF007S	06/13/00	06/13/00
MBLK2S	TRF007SB	ND	1	NA	10	4.15	06/15/0016:35	06/14/0018:00	TRF007S-32	TRF011S	TRF007S	NA	06/15/00
LCS2S	TRF007SL	149	1	NA	10	4.15	06/15/0016:40	06/14/0018:00	TRF007S-33	TRF011S	TRF007S	NA	06/15/00
LCD2S	TRF007SC	150	1	NA	10	4.15	06/15/0016:45	06/14/0018:00	TRF007S-34	TRF011S	TRF007S	NA	06/15/00

RL: Reporting Limit

3110
3110MS
3110MSD

5041

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

:NT: IT CORPORATION
'ECT: MCAS EL TORO/18609/D.O. 70
IOD: METHOD 418.1
:IX: SOIL
)ISTURE: 7.0

:H NO.: 00F058
'LE ID: 18609-3110MS/MSD
'ROL NO.: F058-20M/S

DATE RECEIVED: 06/13/00
DATE EXTRACTED: 06/14/00 17:30
DATE ANALYZED: 06/15/00 16:25/16:30

:SSION:

\METER	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 %	RPD LIMIT %
1	ND	161	155	96	161	166	103	7	65-135	30

5042

EMAX QUALITY CONTROL DATA
LCS ANALYSIS

NT: IT CORPORATION
ECT: MCAS EL TORO/18609/D.O. 70
OD: METHOD 418.1
IX: SOIL
ISTURE: NA

==========

:H NO.: 00F058 DATE RECEIVED: 06/15/00
'LE ID: LCS1S DATE EXTRACTED: 06/14/00 17:30
ROL NO.: TRF006SL DATE ANALYZED: 06/15/00 14:15

SSION:

METER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	LCS RSLT (mg/kg)	LCS % REC	QC LIMIT (%)
	ND	150	149	99	75-125

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

ENT: IT CORPORATION
JECT: MCAS EL TORO/18609/D.O. 70
HOD: METHOD 418.1
RIX: SOIL
DISTURE: NA

CH NO.: 00F058
PLE ID: LCS2S/LCD2S
TROL NO.: TRF007SL/C

DATE RECEIVED: 06/13/00
DATE EXTRACTED: 06/14/00 18:00
DATE ANALYZED: 06/15/00 16:40/16:45

ESSION:

AMETER	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 %	RPD LIMIT %
H	ND	150	149	99	150	150	100	1	75-125	30

5044

COMPLETED 8/8 mg 8/9/00

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 12088

UST 67A/B Soil/Angle Boring

FORM 0019 REV. 9-99

LAB COORDINATOR: M. Concepcion	LAB COORDINATOR'S PHONE: 949-600-7550	LAB COORDINATOR'S FAX: 949-475-5433	LABORATORY SERVICE ID: 00H055	LABORATORY CONTACT: EMAY	MAIL REPORT (COMPANY NAME): IT Group
PROJECT NAME: UST 67A/B	PROJECT LOCATION: MCASEI Toro, CA	PROJECT NUMBER: 18609	LABORATORY PHONE: 310-618-8889	LABORATORY FAX: 310-618-0818	RECIPIENT NAME: Dwayne Ishida
PROJECT CONTACT: M. Concepcion	PROJECT PHONE NUMBER: 949-451-1667	PROJECT FAX: 949-451-1672	LABORATORY ADDRESS: 630 Maple		ADDRESS: 3347 Michelson Dr. #200
PROJECT ADDRESS:	CITY, STATE AND ZIP CODE:	CLIENT: SWDIV	CITY, STATE AND ZIP CODE: Torrance, CA		CITY, STATE AND ZIP CODE: Irvine, CA 92612
PROJECT MANAGER: B. Sedlak	PROJECT MANAGER'S PHONE: 949-600-5446	PROJECT MANAGER'S FAX: 949-474-8307			

Item	Sample Identifier	Matrix	2000 Date	Time	Preserved	# of Cont.	QC Level	T.A.T.	Analyses 8260	TPH-Gas	TPH-Diesel						Comments
1	18609-3390	W	8-7	0740	4°C	2	3	5 day	X								
2	18609-3391	S		0830	4°C	1	3	5 day	X	X	X						
3	18609-3392	S		0845	4°C	1	3	5 day	X	X	X						
4	18609-3393	S		0900		1	3		X	X	X						
5	18609-3394	S		0925		1	3		X	X	X						
6	18609-3395	S		0930		1	4		X	X	X						
7	18609-3396	W		1055		5	3		X	X	X						
8	18609-3397	S		1335		1	3		X	X	X						
9	18609-3398	S		1345		1	3		X	X	X						
10	18609-3399	S		1355		1	3		X	X	X	WL					Cancel 18609-3399

SAMPLES COLLECTED BY: W. Jefferson

COURIER AND AIR BILL NUMBER: Courier

COOLER TEMPERATURE UPON RECEIPT:

RELINQUISHED BY	RECEIVED BY	DATE	TIME	SAMPLE'S CONDITION UPON RECEIPT
[illegible]	[illegible]	8-7-00	2:46	

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

UST 67A/B - Soil/Angle Boring

Sample Point Location	Sample Type G	C	F	QC
(1) Trip Blank	X			X
(2) UST 67A/B SB-01 @ 15.0'-15.5' bgs	X			
(3) UST 67A/B-SB-01 @ 30.0'-30.5' bgs	X			
(4) UST 67A/B-SB-01 @ 40.0'-40.5' bgs	X			
(5) UST 67A/B-SB-01 @ 60.0'-60.5' bgs	X			
(6) UST 67A/B-SB-01 @ 59.5'-60.0' bgs (Dup)	X		X	X
(7) Equipment Rinsate				
(8) UST 67A/B-ASB-02 @ 15.0'-15.5' bgs	X			
(9) UST 67A/B-ASB-02 @ 23.0'-23.5' bgs	X			
(10) UST 67A/B-ASB-02 @ 40.0'-40.5'	X			

Comments 30.0'-30.5' bgs

due 8/15/00

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

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

CHAIN-OF-CUSTODY REC

PROJECT DATA MANAGER'S COPY

A 12049

UST 67A/B - Soil Boring

FORM 0019 REV. 9-99

LAB COORDINATOR: A. Concepcion	LAB COORDINATOR'S PHONE: 949-660-7550	LAB COORDINATOR'S FAX: 949-451-1667	LABORATORY SERVICE ID: 00H055	LABORATORY CONTACT: EMAX	MAIL REPORT (COMPANY NAME): IT Group
PROJECT NAME: UST 67A/B-SB.	PROJECT LOCATION: MCAS El Toro, CA	PROJECT NUMBER: 18609	LABORATORY PHONE: 310-618-8889	LABORATORY FAX: 310-618-0818	RECIPIENT NAME: Dwayne Ishida
PROJECT CONTACT: A. Concepcion	PROJECT PHONE NUMBER: 949-451-1667	PROJECT FAX: 949-475-5433	LABORATORY ADDRESS: 630 Maple Ave.		ADDRESS: 3347 Michelson #200
PROJECT ADDRESS	CITY, STATE AND ZIP CODE	CLIENT: SWDIV	CITY, STATE AND ZIP CODE: Torrance, CA ~~90265~~ 90501		CITY, STATE AND ZIP CODE: Irvine, CA 92650
PROJECT MANAGER: B. Sedlak	PROJECT MANAGER'S PHONE: 949-660-5446	PROJECT MANAGER'S FAX: 949-474-8307			

Item	Sample Identifier	Matrix	Date	Time	Preserved	# of Cont.	QC Level	T.A.T.	Analyses 8260	TPH-Gas	TPH-Diesel	Comments
1	18609-3400	S	8-7	1410	4°C	1	3	5 day	X	X	X	
2	18609-3401	S	8-7	1420	4°C	1	3	5 day	X	X	X	
3												
4												
5												
6												
7												
8												
9												
10												

W.J. 8-7-00

SAMPLES COLLECTED BY: D. Patterson

COURIER AND AIR BILL NUMBER: Courier

COOLER TEMPERATURE UPON RECEIPT:

RELINQUISHED BY	RECEIVED BY	DATE	TIME	SAMPLE'S CONDITION UPON RECEIPT
Dayl Ryan SBB	[illegible]	8-7-00	2:10	

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

UST 67A/B Soil / Angle Boring

Sample Point Location	G	C	F	QC
① UST 67A/B-ASB-02 @ 40.0' ~~40.5'~~	X			
② UST 67A/B-ASB-02 @ 60'	X			

Comments: due 8/15/00

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

5243

EMAX
LABORATORIES, INC.
630 Maple Ave.
Torrance, CA 90503
Telephone: (310) 618-8889
Fax: (310) 618-0818

Date: 08-21-2000
EMAX Batch No.: 00H055

Attn: Dwayne Ishida

IT Corporation
3347 Michelson Dr. # 200
Irvine CA 92612

Subject: Laboratory Report
Project: MCAS El Toro/18609/D.O. 70

Enclosed is the Laboratory report for samples received on 08/07/00. The data reported include :

Sample ID	Control #	Col Date	Matrix	Analysis
18609-3390	H055-01	08/07/00	WATER	VOLATILE ORGANICS BY GC/MS
18609-3391	H055-02	08/07/00	SOIL	TPH DIESEL
				TPH GASOLINE
				VOLATILE ORGANICS BY GC/MS
18609-3392	H055-03	08/07/00	SOIL	TPH DIESEL
				TPH GASOLINE
				VOLATILE ORGANICS BY GC/MS
18609-3393	H055-04	08/07/00	SOIL	TPH DIESEL
				TPH GASOLINE
				VOLATILE ORGANICS BY GC/MS
18609-3394	H055-05	08/07/00	SOIL	TPH DIESEL
				TPH GASOLINE
				VOLATILE ORGANICS BY GC/MS
18609-3395	H055-06	08/07/00	SOIL	TPH DIESEL
				TPH GASOLINE
				VOLATILE ORGANICS BY GC/MS
18609-3396	H055-07	08/07/00	WATER	VOLATILE ORGANICS BY GC/MS
				TPH GASOLINE
				TPH DIESEL

Sample ID	Control #	Col Date	Matrix	Analysis
18609-3397	H055-08	08/07/00	SOIL	TPH DIESEL
				TPH GASOLINE
				VOLATILE ORGANICS BY GC/MS
18609-3398	H055-09	08/07/00	SOIL	TPH DIESEL
				TPH GASOLINE
				VOLATILE ORGANICS BY GC/MS
18609-3399	H055-10	08/07/00	SOIL	CANCELLED
18609-3400	H055-11	08/07/00	SOIL	TPH DIESEL
				TPH GASOLINE
				VOLATILE ORGANICS BY GC/MS
18609-3401	H055-12	08/07/00	SOIL	TPH DIESEL
				TPH GASOLINE
				VOLATILE ORGANICS BY GC/MS

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., 630 Maple Ave., Torrance, CA 90503 TEL: (310) 618-8889 FAX: (310) 618-0818

METHOD M8015
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client : IT CORPORATION
Project : MCAS EL TORO/18609/D.O. 70
Batch No. : 00H055

Matrix : SOIL
Instrument ID : GCT043

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	DSH014SB	ND	87	87	1	NA	10	3.47	08/08/0015:47	08/08/0013:00	DH02034A	DH02026A	DSH014S	NA	08/08/00
LCS1S	DSH014SL	395	96	94	1	NA	10	3.47	08/08/0016:36	08/08/0013:00	DH02035A	DH02026A	DSH014S	NA	08/08/00
18609-3391	H055-02	ND	139	138	1	3.7	10.4	3.6	08/10/0022:51	08/08/0013:00	DH03040A	DH03035A	DSH014S	08/07/00	08/07/00
18609-3391MS	H055-02M	684	138	144	1	3.7	10.4	3.6	08/11/0014:24	08/08/0013:00	DH03055A	DH03052A	DSH014S	08/07/00	08/07/00
18609-3391MSD	H055-02S	573	132	128	1	3.7	10.4	3.6	08/11/0015:12	08/08/0013:00	DH03056A	DH03052A	DSH014S	08/07/00	08/07/00
18609-3392	H055-03	ND	130	142	1	15.6	11.8	4.11	08/11/0001:14	08/08/0013:00	DH03043A	DH03035A	DSH014S	08/07/00	08/07/00
18609-3393	H055-04	ND	138	148	1	5.2	10.5	3.66	08/11/0002:02	08/08/0013:00	DH03044A	DH03035A	DSH014S	08/07/00	08/07/00
18609-3394	H055-05	ND	131	122	1	11.9	11.4	3.94	08/11/0002:50	08/08/0013:00	DH03045A	DH03035A	DSH014S	08/07/00	08/07/00
18609-3395	H055-06	ND	138	127	1	13.2	11.5	4	08/11/0004:26	08/08/0013:00	DH03047A	DH03046A	DSH014S	08/07/00	08/07/00
18609-3397	H055-08	ND	139	142	1	7.5	10.8	3.75	08/11/0012:47	08/08/0013:00	DH03053A	DH03052A	DSH014S	08/07/00	08/07/00
18609-3398	H055-09	ND	140	137	1	13.2	11.5	4	08/11/0006:02	08/08/0013:00	DH03049A	DH03046A	DSH014S	08/07/00	08/07/00
18609-3400	H055-11	ND	136	138	1	4.8	10.5	3.64	08/11/0013:35	08/08/0013:00	DH03054A	DH03052A	DSH014S	08/07/00	08/07/00
18609-3401	H055-12	ND	139	133	1	15.3	11.8	4.1	08/11/0007:37	08/08/0013:00	DH03051A	DH03046A	DSH014S	08/07/00	08/07/00

QC LIMIT : (SOIL) 60-140 55-150
QC LIMIT : (WATER) 65-135 60-145
SURR1 : Bromobenzene
SURR2 : Hexacosane
RL : Reporting Limit
(Carbon chain provided from C10-C36)

OD M8015

TOTAL PETROLEU... ...DROCARBONS BY EXTRACTION

Client : IT CORPORATION
Project : MCAS EL TORO/18609/D.O. 70
Batch No. : OOH055

Matrix : WATER
Instrument ID : GCT043

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	DSH015WB	ND	110	138	1	NA	.1	.067	08/09/0021:13	08/09/0014:00	DH03008A	DH03002A	DSH015W	NA	08/09/00
LCS1W	DSH015WL	5.3	112	143	1	NA	.1	.067	08/09/0022:49	08/09/0014:00	DH03010A	DH03002A	DSH015W	NA	08/09/00
LCD1W	DSH015WC	5.18	90	142	1	NA	.1	.067	08/09/0023:36	08/09/0014:00	DH03011A	DH03002A	DSH015W	NA	08/09/00
18609-3396	H055-07	ND	108	132	.97	NA	.097	.065	08/10/0000:24	08/09/0014:00	DH03012A	DH03002A	DSH015W	08/07/00	08/07/00

QC LIMIT : (SOIL) 60-140 55-150
QC LIMIT : (WATER) 65-135 60-145
SURR1 : Bromobenzene
SURR2 : Hexacosane
RL : Reporting Limit
(Carbon chain provided from C10-C36)

✓

5005

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: IT CORPORATION
PROJECT: MCAS EL TORO/18609/D.O. 70
BATCH NO.: 00H055
METHOD: METHOD M8015

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	DSH015WB	DSH015WL	DSH015WC		
LAB FILE ID:	DH03008A	DH03010A	DH03011A		
DATE EXTRACTED:	08/09/0014:00	08/09/0014:00	08/09/0014:00	DATE COLLECTED:	NA
DATE ANALYZED:	08/09/0021:13	08/09/0022:49	08/09/0023:36	DATE RECEIVED:	08/09/00
PREP. BATCH:	DSH015W	DSH015W	DSH015W		
CALIB. REF:	DH03002A	DH03002A	DH03002A		

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Diesel	ND	5	5.3	106	5	5.18	104	2	61-143	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	1.12	112	1	.898	90	65-135
Hexacosane	.25	.358	143	.25	.356	142	60-145

EMAX QUALITY CONTROL DATA
LCS ANALYSIS

CLIENT: IT CORPORATION
PROJECT: MCAS EL TORO/18609/D.O. 70
JOB NO.: 00H055
METHOD: METHOD M8015

MATRIX:	SOIL		% MOISTURE:	NA
DILUTION FACTOR:	1	1		
SAMPLE ID:	MBLK1S			
LAB SAMP ID:	DSH014SB	DSH014SL		
LAB FILE ID:	DH02034A	DH02035A		
DATE EXTRACTED:	08/08/0013:00	08/08/0013:00	DATE COLLECTED:	NA
DATE ANALYZED:	08/08/0015:47	08/08/0016:36	DATE RECEIVED:	08/08/00
PREP. BATCH:	DSH014S	DSH014S		
CALIB. REF:	DH02026A	DH02026A		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	QC LIMIT (%)
Diesel	ND	500	395	79	51-153

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	QC LIMIT (%)
Bromobenzene	100	96.2	96	60-140
Hexacosane	25	23.4	94	55-150

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: IT CORPORATION
PROJECT: MCAS EL TORO/18609/D.O. 70
BATCH NO.: 00H055
METHOD: METHOD M8015

MATRIX:	SOIL			% MOISTURE:	3.7
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	18609-3391				
LAB SAMP ID:	H055-02	H055-02M	H055-02S		
LAB FILE ID:	DH03040A	DH03055A	DH03056A		
DATE EXTRACTED:	08/08/0013:00	08/08/0013:00	08/08/0013:00	DATE COLLECTED:	08/07/00
DATE ANALYZED:	08/10/0022:51	08/11/0014:24	08/11/0015:12	DATE RECEIVED:	08/07/00
PREP. BATCH:	DSH014S	DSH014S	DSH014S		
CALIB. REF:	DH03035A	DH03052A	DH03052A		

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	519	684	132	519	573	110	18	51-153	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	104	144	138	104	137	132	60-140
Hexacosane	26	37.4	144	26	33.1	128	55-150

METHOD /M8015
TOTAL PETROLEUM HYDROCARBONS BY PURGE & TRAP

Client : IT CORPORATION
Project : MCAS EL TORO/18609/D.O. 70
Batch No. : 00H055

Matrix : SOIL
Instrument ID : GCT039

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	SURR (%)	DLF	MOIST	PRL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1S	VAH1639B	ND	76	1	NA	1	.02	08/09/0001:52	08/09/0001:52	EH03060A	EH03059A	VAH1639	NA	08/09/00
LCS1S	VAH1639L	2.88	103	1	NA	1	.02	08/09/0002:26	08/09/0002:26	EH03061A	EH03059A	VAH1639	NA	08/09/00
LCD1S	VAH1639C	2.61	96	1	NA	1	.02	08/09/0003:01	08/09/0003:01	EH03062A	EH03059A	VAH1639	NA	08/09/00
18609-3391	H055-02	ND	83	1	3.7	1.04	.0208	08/09/0004:44	08/09/0004:44	EH03065A	EH03059A	VAH1639	08/07/00	08/07/00
18609-3392	H055-03	ND	78	1	15.6	1.18	.0237	08/09/0005:18	08/09/0005:18	EH03066A	EH03059A	VAH1639	08/07/00	08/07/00
18609-3393	H055-04	ND	85	1	5.2	1.05	.0211	08/09/0005:53	08/09/0005:53	EH03067A	EH03059A	VAH1639	08/07/00	08/07/00
18609-3394	H055-05	ND	86	1	11.9	1.14	.0227	08/09/0006:27	08/09/0006:27	EH03068A	EH03059A	VAH1639	08/07/00	08/07/00
18609-3395	H055-06	ND	80	1	13.2	1.15	.023	08/09/0007:02	08/09/0007:02	EH03069A	EH03059A	VAH1639	08/07/00	08/07/00
18609-3395MS	H055-06M	3.49	104	1	13.2	1.15	.023	08/09/0008:45	08/09/0008:45	EH03072A	EH03071A	VAH1639	08/07/00	08/07/00
18609-3395MSD	H055-06S	2.5	82	1	13.2	1.15	.023	08/09/0009:19	08/09/0009:19	EH03073A	EH03071A	VAH1639	08/07/00	08/07/00
18609-3397	H055-08	ND	83	1	7.5	1.08	.0216	08/09/0009:54	08/09/0009:54	EH03074A	EH03071A	VAH1639	08/07/00	08/07/00
18609-3398	H055-09	ND	84	1	13.2	1.15	.023	08/09/0011:03	08/09/0011:03	EH03076A	EH03071A	VAH1639	08/07/00	08/07/00
18609-3400	H055-11	ND	87	1	4.8	1.05	.021	08/09/0010:28	08/09/0010:28	EH03075A	EH03071A	VAH1639	08/07/00	08/07/00
18609-3401	H055-12	ND	88	1	15.3	1.18	.0236	08/09/0011:38	08/09/0011:38	EH03077A	EH03071A	VAH1639	08/07/00	08/07/00

SURR : Bromofluorobenzene (W)65-135 (S)60-140
PRL : Reporting Limit
E : Value exceed the upper level of the initial calibration
D : Value from dilution

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

Client : IT CORPORATION
Project : MCAS EL TORO/18609/D.O. 70
Batch No. : 00H055

Matrix : WATER
Instrument ID : GCT039

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	SURR (%)	DLF	MOIST	PRL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	VAH1739B	ND	90	1	NA	.1	.012	08/09/0012:48	08/09/0012:48	EH03079A	EH03071A	VAH1739	NA	08/09/00
LCS1W	VAH1739L	.624	115	1	NA	.1	.012	08/09/0017:22	08/09/0017:22	EH03082A	EH03081A	VAH1739	NA	08/09/00
LCD1W	VAH1739C	.649	112	1	NA	.1	.012	08/09/0017:57	08/09/0017:57	EH03083A	EH03081A	VAH1739	NA	08/09/00
18609-3396	H055-07	ND	94	1	NA	.1	.012	08/09/0019:42	08/09/0019:42	EH03086A	EH03081A	VAH1739	08/07/00	08/07/00

SURR : Bromofluorobenzene (W)65-135 (S)60-140
PRL : Reporting Limit
E : Value exceed the upper level of the initial calibration
D : Value from dilution

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

:LIENT: IT CORPORATION
T: MCAS EL TORO/18609/D.O. 70
IO.: 00H055
METHOD: METHOD 5030B/M8015

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
AMPLE ID:	MBLK1W				
AB SAMP ID:	VAH1739B	VAH1739L	VAH1739C		
LAB FILE ID:	EH03079A	EH03082A	EH03083A		
DATE EXTRACTED:	08/09/0012:48	08/09/0017:22	08/09/0017:57	DATE COLLECTED:	NA
ATE ANALYZED:	08/09/0012:48	08/09/0017:22	08/09/0017:57	DATE RECEIVED:	08/09/00
REP. BATCH:	VAH1739	VAH1739	VAH1739		
CALIB. REF:	EH03071A	EH03081A	EH03081A		

CCESSION:

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 (%)
asoline	ND	.55	.624	113	.55	.649	118	4	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 (%)
romofluorobenzene	.02	.023	115	.02	.0225	112	65-135

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: IT CORPORATION
PROJECT: MCAS EL TORO/18609/D.O. 70
BATCH NO.: 00H055
METHOD: METHOD 5030B/M8015

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	VAH1639B	VAH1639L	VAH1639C		
LAB FILE ID:	EH03060A	EH03061A	EH03062A		
DATE EXTRACTED:	08/09/0001:52	08/09/0002:26	08/09/0003:01	DATE COLLECTED:	NA
DATE ANALYZED:	08/09/0001:52	08/09/0002:26	08/09/0003:01	DATE RECEIVED:	08/09/00
PREP. BATCH:	VAH1639	VAH1639	VAH1639		
CALIB. REF:	EH03059A	EH03059A	EH03059A		

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	2.75	2.88	105	2.75	2.61	95	10	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	.1	.103	103	.1	.0956	96	60-140

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: IT CORPORATION
CT: MCAS EL TORO/18609/D.O. 70
NO.: 00H055
D: METHOD 5030B/M8015

MATRIX: SOIL % MOISTURE: 13.2

DILUTION FACTOR:	1	1	1		
SAMPLE ID:	18609-3395				
LAB SAMP ID:	H055-06	H055-06M	H055-06S		
LAB FILE ID:	EH03069A	EH03072A	EH03073A		
DATE EXTRACTED:	08/09/0007:02	08/09/0008:45	08/09/0009:19	DATE COLLECTED:	08/07/00
DATE ANALYZED:	08/09/0007:02	08/09/0008:45	08/09/0009:19	DATE RECEIVED:	08/07/00
PREP. BATCH:	VAH1639	VAH1639	VAH1639		
CALIB. REF:	EH03059A	EH03071A	EH03071A		

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 (%)
Gasoline	ND	3.17	3.49	110	3.17	2.5	79	33	57-146	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 (%)
Bromofluorobenzene	.115	.12	104	.115	.095	82	60-140

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

Client	: IT CORPORATION	Date Collected:	08/07/00
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	08/07/00
Batch No.	: 00H055	Date Extracted:	08/16/00 16:56
Sample ID:	18609-3390	Date Analyzed:	08/16/00 16:56
Lab Samp ID:	H055-01	Dilution Factor:	1
Lab File ID:	RHK406	Matrix :	WATER
Ext Btch ID:	VOH3952	% Moisture :	NA
Calib. Ref.:	RHK400	Instrument ID :	T-052

PARAMETERS	RESULTS (ug/L)	PRL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	5	.91
1,1,2,2-TETRACHLOROETHANE	ND	5	1.1
1,1,2-TRICHLOROETHANE	ND	5	.83
1,1-DICHLOROETHANE	ND	5	.65
1,1-DICHLOROETHENE	ND	5	.86
1,2-DICHLOROETHANE	ND	5	.95
1,2-DICHLOROPROPANE	ND	5	.73
2-BUTANONE	ND	50	6.7
2-CHLOROETHYLVINYLETHER	ND	50	1.3
2-HEXANONE	ND	50	5.6
4-METHYL-2-PENTANONE	ND	50	3.6
ACETONE	ND	50	9.6
BENZENE	ND	5	.77
BROMODICHLOROMETHANE	ND	5	.82
BROMOFORM	ND	5	.74
BROMOMETHANE	ND	5	1.9
CARBON DISULFIDE	ND	5	.61
CARBON TETRACHLORIDE	ND	5	.83
CHLOROBENZENE	ND	5	1.1
CHLOROETHANE	ND	5	1.7
CHLOROFORM	ND	5	.67
CHLOROMETHANE	ND	5	.67
CIS-1,2-DICHLOROETHENE	ND	5	.79
CIS-1,3-DICHLOROPROPENE	ND	5	.79
DIBROMOCHLOROMETHANE	ND	5	.71
ETHYLBENZENE	ND	5	1
MTBE	ND	10	.77
METHYLENE CHLORIDE	3.7JB	5	1.4
STYRENE	ND	5	.87
TETRACHLOROETHENE	ND	5	1.1
TOLUENE	ND	5	.99
TRANS-1,2-DICHLOROETHENE	ND	5	.73
TRANS-1,3-DICHLOROPROPENE	ND	5	.82
TRICHLOROETHENE	ND	5	.89
VINYL ACETATE	ND	50	1.4
VINYL CHLORIDE	ND	5	2.5
XYLENES	ND	5	3.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	90	62-139
BROMOFLUOROBENZENE	91	75-125
TOLUENE-D8	88	75-125

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

: IT CORPORATION	Date Collected: 08/07/00
t : MCAS EL TORO/18609/D.O. 70	Date Received: 08/07/00
Batch No. : 00H055	Date Extracted: 08/17/00 21:12
ample ID: 18609-3391	Date Analyzed: 08/17/00 21:12
ab Samp ID: H055-02	Dilution Factor: 1
Lab File ID: RHK447	Matrix : SOIL
Ext Btch ID: VOH4252	% Moisture : 3.7
alib. Ref.: RHK441	Instrument ID : T-052

ARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
,1,1-TRICHLOROETHANE	ND	5.2	.35
1,1,2,2-TETRACHLOROETHANE	ND	5.2	.77
1,1,2-TRICHLOROETHANE	ND	5.2	.68
,1-DICHLOROETHANE	ND	5.2	.54
,1-DICHLOROETHENE	ND	5.2	.5
,2-DICHLOROETHANE	ND	5.2	1
1,2-DICHLOROPROPANE	ND	5.2	.57
-BUTANONE	ND	52	1.6
-CHLOROETHYLVINYLETHER	ND	52	.77
-HEXANONE	ND	52	1.5
4-METHYL-2-PENTANONE	ND	52	2.9
CETONE	ND	52	3
ENZENE	ND	5.2	.55
ROMODICHLOROMETHANE	ND	5.2	.44
BROMOFORM	ND	5.2	.61
PROMOMETHANE	ND	5.2	3.7
ARBON DISULFIDE	ND	10	.35
ARBON TETRACHLORIDE	ND	5.2	.56
HLOROBENZENE	ND	5.2	.48
CHLOROETHANE	ND	5.2	.96
FORM	ND	5.2	.54
ETHANE	ND	5.2	.55
2-DICHLOROETHENE	ND	5.2	.48
CIS-1,3-DICHLOROPROPENE	ND	5.2	.42
IBROMOCHLOROMETHANE	ND	5.2	.38
THYLBENZENE	ND	5.2	.48
TBE	ND	10	.79
METHYLENE CHLORIDE	ND	10	3.1
STYRENE	ND	5.2	.35
ETRACHLOROETHENE	ND	5.2	.35
OLUENE	ND	5.2	.6
RANS-1,2-DICHLOROETHENE	ND	5.2	.49
TRANS-1,3-DICHLOROPROPENE	ND	5.2	.47
RICHLOROETHENE	ND	5.2	.64
INYL ACETATE	ND	52	.86
INYL CHLORIDE	ND	5.2	.61
XYLENES	ND	5.2	1.2

URROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	110	52-149
BROMOFLUOROBENZENE	103	65-135
OLUENE-D8	106	65-135

RL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
. : Value exceed the upper level of the initial calibration
J : Found in the associated blank
D : Value from dilution analysis

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

Client : IT CORPORATION	Date Collected: 08/07/00
Project : MCAS EL TORO/18609/D.O. 70	Date Received: 08/07/00
Batch No. : 00H055	Date Extracted: 08/17/00 21:51
Sample ID: 18609-3392	Date Analyzed: 08/17/00 21:51
Lab Samp ID: H055-03	Dilution Factor: 1
Lab File ID: RHK448	Matrix : SOIL
Ext Btch ID: VOH4252	% Moisture : 15.6
Calib. Ref.: RHK441	Instrument ID : T-052

PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.9	.4
1,1,2,2-TETRACHLOROETHANE	ND	5.9	.87
1,1,2-TRICHLOROETHANE	ND	5.9	.78
1,1-DICHLOROETHANE	ND	5.9	.62
1,1-DICHLOROETHENE	ND	5.9	.57
1,2-DICHLOROETHANE	ND	5.9	1.2
1,2-DICHLOROPROPANE	ND	5.9	.65
2-BUTANONE	ND	59	1.8
2-CHLOROETHYLVINYLETHER	ND	59	.88
2-HEXANONE	ND	59	1.7
4-METHYL-2-PENTANONE	ND	59	3.3
ACETONE	ND	59	3.4
BENZENE	ND	5.9	.62
BROMODICHLOROMETHANE	ND	5.9	.5
BROMOFORM	ND	5.9	.7
BROMOMETHANE	ND	5.9	4.2
CARBON DISULFIDE	ND	12	.4
CARBON TETRACHLORIDE	ND	5.9	.64
CHLOROBENZENE	ND	5.9	.55
CHLOROETHANE	ND	5.9	1.1
CHLOROFORM	ND	5.9	.62
CHLOROMETHANE	ND	5.9	.62
CIS-1,2-DICHLOROETHENE	ND	5.9	.54
CIS-1,3-DICHLOROPROPENE	ND	5.9	.48
DIBROMOCHLOROMETHANE	ND	5.9	.43
ETHYLBENZENE	ND	5.9	.54
MTBE	ND	12	.9
METHYLENE CHLORIDE	ND	12	3.6
STYRENE	ND	5.9	.4
TETRACHLOROETHENE	ND	5.9	.4
TOLUENE	ND	5.9	.68
TRANS-1,2-DICHLOROETHENE	ND	5.9	.56
TRANS-1,3-DICHLOROPROPENE	ND	5.9	.53
TRICHLOROETHENE	ND	5.9	.73
VINYL ACETATE	ND	59	.98
VINYL CHLORIDE	ND	5.9	.69
XYLENES	ND	5.9	1.3

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	108	52-149
BROMOFLUOROBENZENE	105	65-135
TOLUENE-D8	106	65-135

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

	: IT CORPORATION	Date Collected:	08/07/00
t	: MCAS EL TORO/18609/D.O. 70	Date Received:	08/07/00
Batch No.	: 00H055	Date Extracted:	08/17/00 22:29
Sample ID	: 18609-3393	Date Analyzed:	08/17/00 22:29
Lab Samp ID	: H055-04	Dilution Factor:	1
Lab File ID	: RHK449	Matrix	: SOIL
Ext Btch ID	: VOH4252	% Moisture	: 5.2
Calib. Ref.	: RHK441	Instrument ID	: T-052

PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
,1,1-TRICHLOROETHANE	ND	5.3	.36
1,1,2,2-TETRACHLOROETHANE	ND	5.3	.78
1,1,2-TRICHLOROETHANE	ND	5.3	.69
,1-DICHLOROETHANE	ND	5.3	.55
,1-DICHLOROETHENE	ND	5.3	.51
,2-DICHLOROETHANE	ND	5.3	1
1,2-DICHLOROPROPANE	ND	5.3	.58
-BUTANONE	ND	53	1.6
-CHLOROETHYLVINYLETHER	ND	53	.78
-HEXANONE	ND	53	1.6
4-METHYL-2-PENTANONE	ND	53	3
CETONE	ND	53	3
ENZENE	ND	5.3	.55
ROMODICHLOROMETHANE	ND	5.3	.45
BROMOFORM	ND	5.3	.62
BROMOMETHANE	ND	5.3	3.8
ARBON DISULFIDE	ND	11	.35
ARBON TETRACHLORIDE	ND	5.3	.57
HLOROBENZENE	ND	5.3	.49
CHLOROETHANE	ND	5.3	.97
FORM	ND	5.3	.55
ETHANE	ND	5.3	.56
2-DICHLOROETHENE	ND	5.3	.48
CIS-1,3-DICHLOROPROPENE	ND	5.3	.42
DIBROMOCHLOROMETHANE	ND	5.3	.39
ETHYLBENZENE	ND	5.3	.48
MTBE	ND	11	.8
METHYLENE CHLORIDE	ND	11	3.2
STYRENE	ND	5.3	.36
TETRACHLOROETHENE	ND	5.3	.36
TOLUENE	ND	5.3	.61
TRANS-1,2-DICHLOROETHENE	ND	5.3	.5
TRANS-1,3-DICHLOROPROPENE	ND	5.3	.47
TRICHLOROETHENE	ND	5.3	.65
VINYL ACETATE	ND	53	.88
VINYL CHLORIDE	ND	5.3	.62
XYLENES	ND	5.3	1.2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	113	52-149
BROMOFLUOROBENZENE	109	65-135
TOLUENE-D8	105	65-135

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

Client	: IT CORPORATION	Date Collected:	08/07/00
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	08/07/00
Batch No.	: 00H055	Date Extracted:	08/16/00 20:20
Sample ID:	18609-3394	Date Analyzed:	08/16/00 20:20
Lab Samp ID:	H055-05	Dilution Factor:	1
Lab File ID:	RHK411	Matrix :	SOIL
Ext Btch ID:	VOH3952	% Moisture :	11.9
Calib. Ref.:	RHK400	Instrument ID :	T-052

PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	5.1J	5.7	.39
1,1,2,2-TETRACHLOROETHANE	ND	5.7	.84
1,1,2-TRICHLOROETHANE	ND	5.7	.74
1,1-DICHLOROETHANE	ND	5.7	.59
1,1-DICHLOROETHENE	ND	5.7	.54
1,2-DICHLOROETHANE	ND	5.7	1.1
1,2-DICHLOROPROPANE	ND	5.7	.62
2-BUTANONE	ND	57	1.7
2-CHLOROETHYLVINYLETHER	ND	57	.84
2-HEXANONE	ND	57	1.7
4-METHYL-2-PENTANONE	ND	57	3.2
ACETONE	ND	57	3.3
BENZENE	ND	5.7	.6
BROMODICHLOROMETHANE	ND	5.7	.48
BROMOFORM	ND	5.7	.67
BROMOMETHANE	ND	5.7	4.1
CARBON DISULFIDE	ND	11	.38
CARBON TETRACHLORIDE	ND	5.7	.61
CHLOROBENZENE	ND	5.7	.53
CHLOROETHANE	ND	5.7	1
CHLOROFORM	ND	5.7	.59
CHLOROMETHANE	ND	5.7	.6
CIS-1,2-DICHLOROETHENE	ND	5.7	.52
CIS-1,3-DICHLOROPROPENE	ND	5.7	.46
DIBROMOCHLOROMETHANE	ND	5.7	.42
ETHYLBENZENE	ND	5.7	.52
MTBE	ND	11	.86
METHYLENE CHLORIDE	ND	11	3.4
STYRENE	ND	5.7	.39
TETRACHLOROETHENE	ND	5.7	.38
TOLUENE	ND	5.7	.65
TRANS-1,2-DICHLOROETHENE	ND	5.7	.54
TRANS-1,3-DICHLOROPROPENE	ND	5.7	.51
TRICHLOROETHENE	ND	5.7	.69
VINYL ACETATE	ND	57	.94
VINYL CHLORIDE	ND	5.7	.66
XYLENES	ND	5.7	1.3

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	104	52-149
BROMOFLUOROBENZENE	104	65-135
TOLUENE-D8	105	65-135

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

: IT CORPORATION		Date Collected:	08/07/00
: MCAS EL TORO/18609/D.O. 70		Date Received:	08/07/00
No. : 00H055		Date Extracted:	08/16/00 20:58
ample ID: 18609-3395		Date Analyzed:	08/16/00 20:58
ab Samp ID: H055-06		Dilution Factor:	1
ab File ID: RHK412		Matrix :	SOIL
Ext Btch ID: VOH3952		% Moisture :	13.2
alib. Ref.: RHK400		Instrument ID :	T-052

PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
,1,1-TRICHLOROETHANE	ND	5.8	.39
,1,2,2-TETRACHLOROETHANE	ND	5.8	.85
1,1,2-TRICHLOROETHANE	ND	5.8	.76
1-DICHLOROETHANE	ND	5.8	.6
1-DICHLOROETHENE	ND	5.8	.55
2-DICHLOROETHANE	ND	5.8	1.1
1,2-DICHLOROPROPANE	ND	5.8	.63
-BUTANONE	ND	58	1.8
CHLOROETHYLVINYLETHER	ND	58	.85
HEXANONE	ND	58	1.7
4-METHYL-2-PENTANONE	ND	58	3.2
CETONE	ND	58	3.3
NZENE	ND	5.8	.61
OMODICHLOROMETHANE	ND	5.8	.49
ROMOFORM	ND	5.8	.68
BROMOMETHANE	ND	5.8	4.1
RBON DISULFIDE	ND	12	.38
RBON TETRACHLORIDE	ND	5.8	.62
LOROBENZENE	ND	5.8	.53
CHLOROETHANE	ND	5.8	1.1
FORM	ND	5.8	.6
ETHANE	ND	5.8	.61
-DICHLOROETHENE	ND	5.8	.53
CIS-1,3-DICHLOROPROPENE	ND	5.8	.46
IBROMOCHLOROMETHANE	ND	5.8	.42
THYLBENZENE	ND	5.8	.53
TBE	ND	12	.87
ETHYLENE CHLORIDE	ND	12	3.5
STYRENE	ND	5.8	.39
ETRACHLOROETHENE	ND	5.8	.39
OLUENE	ND	5.8	.66
RANS-1,2-DICHLOROETHENE	ND	5.8	.55
TRANS-1,3-DICHLOROPROPENE	ND	5.8	.52
RICHLOROETHENE	ND	5.8	.71
INYL ACETATE	ND	58	.96
INYL CHLORIDE	ND	5.8	.67
XYLENES	ND	5.8	1.3

URROGATE PARAMETERS	% RECOVERY	QC LIMIT
,2-DICHLOROETHANE-D4	108	52-149
BROMOFLUOROBENZENE	99	65-135
OLUENE-D8	103	65-135

RL: Project Reporting Limit
* : Out side of QC Limit
: An estimated value between PRL and MDL
: Value exceed the upper level of the initial calibration
: Found in the associated blank
: Value from dilution analysis

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

Client	: IT CORPORATION	Date Collected:	08/07/00
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	08/07/00
Batch No.	: 00H055	Date Extracted:	08/16/00 17:46
Sample ID:	18609-3396	Date Analyzed:	08/16/00 17:46
Lab Samp ID:	H055-07	Dilution Factor:	1
Lab File ID:	RHK407	Matrix :	WATER
Ext Btch ID:	VOH3952	% Moisture :	NA
Calib. Ref.:	RHK400	Instrument ID :	T-052

PARAMETERS	RESULTS (ug/L)	PRL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	5	.91
1,1,2,2-TETRACHLOROETHANE	ND	5	1.1
1,1,2-TRICHLOROETHANE	ND	5	.83
1,1-DICHLOROETHANE	ND	5	.65
1,1-DICHLOROETHENE	ND	5	.86
1,2-DICHLOROETHANE	ND	5	.95
1,2-DICHLOROPROPANE	ND	5	.73
2-BUTANONE	ND	50	6.7
2-CHLOROETHYLVINYLETHER	ND	50	1.3
2-HEXANONE	ND	50	5.6
4-METHYL-2-PENTANONE	ND	50	3.6
ACETONE	ND	50	9.6
BENZENE	ND	5	.77
BROMODICHLOROMETHANE	ND	5	.82
BROMOFORM	ND	5	.74
BROMOMETHANE	ND	5	1.9
CARBON DISULFIDE	ND	5	.61
CARBON TETRACHLORIDE	ND	5	.83
CHLOROBENZENE	ND	5	1.1
CHLOROETHANE	ND	5	1.7
CHLOROFORM	ND	5	.67
CHLOROMETHANE	ND	5	.67
CIS-1,2-DICHLOROETHENE	ND	5	.79
CIS-1,3-DICHLOROPROPENE	ND	5	.79
DIBROMOCHLOROMETHANE	ND	5	.71
ETHYLBENZENE	ND	5	1
MTBE	ND	10	.77
METHYLENE CHLORIDE	4JB	5	1.4
STYRENE	ND	5	.87
TETRACHLOROETHENE	ND	5	1.1
TOLUENE	ND	5	.99
TRANS-1,2-DICHLOROETHENE	ND	5	.73
TRANS-1,3-DICHLOROPROPENE	ND	5	.82
TRICHLOROETHENE	ND	5	.89
VINYL ACETATE	ND	50	1.4
VINYL CHLORIDE	ND	5	2.5
XYLENES	ND	5	3.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	99	62-139
BROMOFLUOROBENZENE	94	75-125
TOLUENE-D8	95	75-125

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

: IT CORPORATION	Date Collected: 08/07/00
t : MCAS EL TORO/18609/D.O. 70	Date Received: 08/07/00
Batch No. : 00H055	Date Extracted: 08/17/00 23:08
Sample ID: 18609-3397	Date Analyzed: 08/17/00 23:08
Lab Samp ID: H055-08	Dilution Factor: 1
Lab File ID: RHK450	Matrix : SOIL
Ext Btch ID: VOH4252	% Moisture : 7.5
Calib. Ref.: RHK441	Instrument ID : T-052

PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
,1,1-TRICHLOROETHANE	ND	5.4	.37
,1,2,2-TETRACHLOROETHANE	ND	5.4	.8
1,1,2-TRICHLOROETHANE	ND	5.4	.71
,1-DICHLOROETHANE	ND	5.4	.57
,1-DICHLOROETHENE	ND	5.4	.52
,2-DICHLOROETHANE	ND	5.4	1.1
1,2-DICHLOROPROPANE	ND	5.4	.59
-BUTANONE	ND	54	1.6
-CHLOROETHYLVINYLETHER	ND	54	.8
-HEXANONE	ND	54	1.6
4-METHYL-2-PENTANONE	ND	54	3
CETONE	ND	54	3.1
ENZENE	ND	5.4	.57
ROMODICHLOROMETHANE	ND	5.4	.46
BROMOFORM	ND	5.4	.64
BROMOMETHANE	ND	5.4	3.9
ARBON DISULFIDE	ND	11	.36
ARBON TETRACHLORIDE	ND	5.4	.58
HLOROBENZENE	ND	5.4	.5
CHLOROETHANE	ND	5.4	1.0
FORM	ND	5.4	.57
ETHANE	ND	5.4	.57
2-DICHLOROETHENE	ND	5.4	.5
CIS-1,3-DICHLOROPROPENE	ND	5.4	.43
DIBROMOCHLOROMETHANE	ND	5.4	.4
THYLBENZENE	ND	5.4	.5
ITBE	ND	11	.82
METHYLENE CHLORIDE	ND	11	3.3
STYRENE	ND	5.4	.37
ETRACHLOROETHENE	ND	5.4	.37
OLUENE	ND	5.4	.62
RANS-1,2-DICHLOROETHENE	ND	5.4	.51
TRANS-1,3-DICHLOROPROPENE	ND	5.4	.49
RICHLOROETHENE	ND	5.4	.66
INYL ACETATE	ND	54	.9
INYL CHLORIDE	ND	5.4	.63
XYLENES	ND	5.4	1.2

URROGATE PARAMETERS	% RECOVERY	QC LIMIT
,2-DICHLOROETHANE-D4	115	52-149
BROMOFLUOROBENZENE	110	65-135
OLUENE-D8	105	65-135

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

Client : IT CORPORATION	Date Collected: 08/07/00
Project : MCAS EL TORO/18609/D.O. 70	Date Received: 08/07/00
Batch No. : 00H055	Date Extracted: 08/16/00 22:15
Sample ID: 18609-3398	Date Analyzed: 08/16/00 22:15
Lab Samp ID: H055-09	Dilution Factor: 1
Lab File ID: RHK414	Matrix : SOIL
Ext Btch ID: VOH3952	% Moisture : 13.2
Calib. Ref.: RHK400	Instrument ID : T-052

PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.8	.39
1,1,2,2-TETRACHLOROETHANE	ND	5.8	.85
1,1,2-TRICHLOROETHANE	ND	5.8	.76
1,1-DICHLOROETHANE	ND	5.8	.6
1,1-DICHLOROETHENE	ND	5.8	.55
1,2-DICHLOROETHANE	ND	5.8	1.1
1,2-DICHLOROPROPANE	ND	5.8	.63
2-BUTANONE	ND	58	1.8
2-CHLOROETHYLVINYLETHER	ND	58	.85
2-HEXANONE	ND	58	1.7
4-METHYL-2-PENTANONE	ND	58	3.2
ACETONE	6.3J	58	3.3
BENZENE	ND	5.8	.61
BROMODICHLOROMETHANE	ND	5.8	.49
BROMOFORM	ND	5.8	.68
BROMOMETHANE	ND	5.8	4.1
CARBON DISULFIDE	ND	12	.38
CARBON TETRACHLORIDE	ND	5.8	.62
CHLOROBENZENE	ND	5.8	.53
CHLOROETHANE	ND	5.8	1.1
CHLOROFORM	ND	5.8	.6
CHLOROMETHANE	ND	5.8	.61
CIS-1,2-DICHLOROETHENE	ND	5.8	.53
CIS-1,3-DICHLOROPROPENE	ND	5.8	.46
DIBROMOCHLOROMETHANE	ND	5.8	.42
ETHYLBENZENE	ND	5.8	.53
MTBE	ND	12	.87
METHYLENE CHLORIDE	ND	12	3.5
STYRENE	ND	5.8	.39
TETRACHLOROETHENE	ND	5.8	.39
TOLUENE	ND	5.8	.66
TRANS-1,2-DICHLOROETHENE	ND	5.8	.55
TRANS-1,3-DICHLOROPROPENE	ND	5.8	.52
TRICHLOROETHENE	ND	5.8	.71
VINYL ACETATE	ND	58	.96
VINYL CHLORIDE	ND	5.8	.67
XYLENES	ND	5.8	1.3

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	110	52-149
BROMOFLUOROBENZENE	113	65-135
TOLUENE-D8	110	65-135

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

t : IT CORPORATION	Date Collected: 08/07/00
t : MCAS EL TORO/18609/D.O. 70	Date Received: 08/07/00
n No. : 00H055	Date Extracted: 08/17/00 23:46
Sample ID: 18609-3398RE	Date Analyzed: 08/17/00 23:46
ab Samp ID: H055-09R	Dilution Factor: 1
Lab File ID: RHK451	Matrix : SOIL
Ext Btch ID: VOH4252	% Moisture : 13.2
Calib. Ref.: RHK441	Instrument ID : T-052

PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.8	.39
1,1,2,2-TETRACHLOROETHANE	ND	5.8	.85
1,1,2-TRICHLOROETHANE	ND	5.8	.76
1,1-DICHLOROETHANE	ND	5.8	.6
1,1-DICHLOROETHENE	ND	5.8	.55
1,2-DICHLOROETHANE	ND	5.8	1.1
1,2-DICHLOROPROPANE	ND	5.8	.63
2-BUTANONE	ND	58	1.8
2-CHLOROETHYLVINYLETHER	ND	58	.85
2-HEXANONE	ND	58	1.7
4-METHYL-2-PENTANONE	ND	58	3.2
ACETONE	20J	58	3.3
BENZENE	ND	5.8	.61
BROMODICHLOROMETHANE	ND	5.8	.49
BROMOFORM	ND	5.8	.68
BROMOMETHANE	ND	5.8	4.1
CARBON DISULFIDE	ND	12	.38
CARBON TETRACHLORIDE	ND	5.8	.62
CHLOROBENZENE	ND	5.8	.53
CHLOROETHANE	ND	5.8	1.1
CHLOROFORM	ND	5.8	.6
CHLOROMETHANE	ND	5.8	.61
1,2-DICHLOROETHENE	ND	5.8	.53
CIS-1,3-DICHLOROPROPENE	ND	5.8	.46
DIBROMOCHLOROMETHANE	ND	5.8	.42
ETHYLBENZENE	ND	5.8	.53
MTBE	ND	12	.87
METHYLENE CHLORIDE	ND	12	3.5
STYRENE	ND	5.8	.39
TETRACHLOROETHENE	ND	5.8	.39
TOLUENE	ND	5.8	.66
TRANS-1,2-DICHLOROETHENE	ND	5.8	.55
TRANS-1,3-DICHLOROPROPENE	ND	5.8	.52
TRICHLOROETHENE	ND	5.8	.71
VINYL ACETATE	ND	58	.96
VINYL CHLORIDE	ND	5.8	.67
XYLENES	ND	5.8	1.3

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	121	52-149
BROMOFLUOROBENZENE	114	65-135
TOLUENE-D8	113	65-135

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

Client	: IT CORPORATION	Date Collected:	08/07/00
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	08/07/00
Batch No.	: 00H055	Date Extracted:	08/16/00 22:53
Sample ID:	18609-3400	Date Analyzed:	08/16/00 22:53
Lab Samp ID:	H055-11	Dilution Factor:	1
Lab File ID:	RHK415	Matrix :	SOIL
Ext Btch ID:	VOH3952	% Moisture :	4.8
Calib. Ref.:	RHK400	Instrument ID :	T-052

PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.3	.36
1,1,2,2-TETRACHLOROETHANE	ND	5.3	.78
1,1,2-TRICHLOROETHANE	ND	5.3	.69
1,1-DICHLOROETHANE	ND	5.3	.55
1,1-DICHLOROETHENE	ND	5.3	.5
1,2-DICHLOROETHANE	ND	5.3	1
1,2-DICHLOROPROPANE	ND	5.3	.58
2-BUTANONE	ND	53	1.6
2-CHLOROETHYLVINYLETHER	ND	53	.78
2-HEXANONE	ND	53	1.5
4-METHYL-2-PENTANONE	ND	53	3
ACETONE	ND	53	3
BENZENE	ND	5.3	.55
BROMODICHLOROMETHANE	ND	5.3	.44
BROMOFORM	ND	5.3	.62
BROMOMETHANE	ND	5.3	3.8
CARBON DISULFIDE	ND	11	.35
CARBON TETRACHLORIDE	ND	5.3	.56
CHLOROBENZENE	ND	5.3	.49
CHLOROETHANE	ND	5.3	.97
CHLOROFORM	ND	5.3	.55
CHLOROMETHANE	ND	5.3	.55
CIS-1,2-DICHLOROETHENE	ND	5.3	.48
CIS-1,3-DICHLOROPROPENE	ND	5.3	.42
DIBROMOCHLOROMETHANE	ND	5.3	.39
ETHYLBENZENE	ND	5.3	.48
MTBE	ND	11	.79
METHYLENE CHLORIDE	ND	11	3.2
STYRENE	ND	5.3	.36
TETRACHLOROETHENE	ND	5.3	.36
TOLUENE	ND	5.3	.61
TRANS-1,2-DICHLOROETHENE	ND	5.3	.5
TRANS-1,3-DICHLOROPROPENE	ND	5.3	.47
TRICHLOROETHENE	ND	5.3	.64
VINYL ACETATE	ND	53	.87
VINYL CHLORIDE	ND	5.3	.61
XYLENES	ND	5.3	1.2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	110	52-149
BROMOFLUOROBENZENE	97	65-135
TOLUENE-D8	106	65-135

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

: IT CORPORATION	Date Collected: 08/07/00
t : MCAS EL TORO/18609/D.O. 70	Date Received: 08/07/00
Batch No. : 00H055	Date Extracted: 08/16/00 23:32
Sample ID: 18609-3401	Date Analyzed: 08/16/00 23:32
Lab Samp ID: H055-12	Dilution Factor: 1
Lab File ID: RHK416	Matrix : SOIL
Ext Btch ID: VOH3952	% Moisture : 15.3
Calib. Ref.: RHK400	Instrument ID : T-052

PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.9	.4
1,1,2,2-TETRACHLOROETHANE	ND	5.9	.87
1,1,2-TRICHLOROETHANE	ND	5.9	.77
1,1-DICHLOROETHANE	ND	5.9	.62
1,1-DICHLOROETHENE	ND	5.9	.57
1,2-DICHLOROETHANE	ND	5.9	1.2
1,2-DICHLOROPROPANE	ND	5.9	.65
2-BUTANONE	ND	59	1.8
2-CHLOROETHYLVINYLETHER	ND	59	.87
2-HEXANONE	ND	59	1.7
4-METHYL-2-PENTANONE	ND	59	3.3
ACETONE	ND	59	3.4
BENZENE	ND	5.9	.62
BROMODICHLOROMETHANE	ND	5.9	.5
BROMOFORM	ND	5.9	.7
BROMOMETHANE	ND	5.9	4.2
CARBON DISULFIDE	ND	12	.39
CARBON TETRACHLORIDE	ND	5.9	.63
CHLOROBENZENE	ND	5.9	.55
CHLOROETHANE	ND	5.9	1.1
CHLOROFORM	ND	5.9	.62
CHLOROMETHANE	ND	5.9	.62
DIBROMOCHLOROMETHANE	ND	5.9	.54
ETHYLBENZENE	ND	5.9	.47
MTBE	ND	5.9	.43
METHYLENE CHLORIDE	ND	5.9	.54
STYRENE	ND	12	.89
TETRACHLOROETHENE	3.8J	12	3.6
TOLUENE	ND	5.9	.4
TRANS-1,2-DICHLOROETHENE	ND	5.9	.4
TRANS-1,3-DICHLOROPROPENE	ND	5.9	.68
TRICHLOROETHENE	ND	5.9	.56
VINYL ACETATE	ND	5.9	.53
VINYL CHLORIDE	ND	59	.72
XYLENES	ND	5.9	.98

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	111	52-149
BROMOFLUOROBENZENE	95	65-135
TOLUENE-D8	110	65-135

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

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METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

Client	: IT CORPORATION	Date Collected:	08/07/00
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	08/07/00
Batch No.	: 00H055	Date Extracted:	08/18/00 00:24
Sample ID:	18609-3401RE	Date Analyzed:	08/18/00 00:24
Lab Samp ID:	H055-12R	Dilution Factor:	1
Lab File ID:	RHK452	Matrix :	SOIL
Ext Btch ID:	VOH4252	% Moisture :	15.3
Calib. Ref.:	RHK441	Instrument ID :	T-052

PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.9	.4
1,1,2,2-TETRACHLOROETHANE	ND	5.9	.87
1,1,2-TRICHLOROETHANE	ND	5.9	.77
1,1-DICHLOROETHANE	ND	5.9	.62
1,1-DICHLOROETHENE	ND	5.9	.57
1,2-DICHLOROETHANE	ND	5.9	1.2
1,2-DICHLOROPROPANE	ND	5.9	.65
2-BUTANONE	ND	59	1.8
2-CHLOROETHYLVINYLETHER	ND	59	.87
2-HEXANONE	ND	59	1.7
4-METHYL-2-PENTANONE	ND	59	3.3
ACETONE	ND	59	3.4
BENZENE	ND	5.9	.62
BROMODICHLOROMETHANE	ND	5.9	.5
BROMOFORM	ND	5.9	.7
BROMOMETHANE	ND	5.9	4.2
CARBON DISULFIDE	ND	12	.39
CARBON TETRACHLORIDE	ND	5.9	.63
CHLOROBENZENE	ND	5.9	.55
CHLOROETHANE	ND	5.9	1.1
CHLOROFORM	ND	5.9	.62
CHLOROMETHANE	ND	5.9	.62
CIS-1,2-DICHLOROETHENE	ND	5.9	.54
CIS-1,3-DICHLOROPROPENE	ND	5.9	.47
DIBROMOCHLOROMETHANE	ND	5.9	.43
ETHYLBENZENE	ND	5.9	.54
MTBE	ND	12	.89
METHYLENE CHLORIDE	ND	12	3.6
STYRENE	ND	5.9	.4
TETRACHLOROETHENE	ND	5.9	.4
TOLUENE	ND	5.9	.68
TRANS-1,2-DICHLOROETHENE	ND	5.9	.56
TRANS-1,3-DICHLOROPROPENE	ND	5.9	.53
TRICHLOROETHENE	ND	5.9	.72
VINYL ACETATE	ND	59	.98
VINYL CHLORIDE	ND	5.9	.69
XYLENES	ND	5.9	1.3

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	122	52-149
BROMOFLUOROBENZENE	108	65-135
TOLUENE-D8	106	65-135

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

: IT CORPORATION		Date Collected:	NA
.t : MCAS EL TORO/18609/D.O. 70		Date Received:	08/16/00
Batch No. : 00H055		Date Extracted:	08/16/00 16:18
Sample ID: MBLK1W		Date Analyzed:	08/16/00 16:18
Lab Samp ID: VOH3952Q		Dilution Factor:	1
Lab File ID: RHK405		Matrix :	WATER
Ext Btch ID: VOH3952		% Moisture :	NA
Calib. Ref.: RHK400		Instrument ID :	T-052

PARAMETERS	RESULTS (ug/L)	PRL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	5	.91
1,1,2,2-TETRACHLOROETHANE	ND	5	1.1
1,1,2-TRICHLOROETHANE	ND	5	.83
,1-DICHLOROETHANE	ND	5	.65
,1-DICHLOROETHENE	ND	5	.86
,2-DICHLOROETHANE	ND	5	.95
1,2-DICHLOROPROPANE	ND	5	.73
2-BUTANONE	ND	50	6.7
2-CHLOROETHYLVINYLETHER	ND	50	1.3
2-HEXANONE	ND	50	5.6
4-METHYL-2-PENTANONE	ND	50	3.6
ACETONE	ND	50	9.6
BENZENE	ND	5	.77
BROMODICHLOROMETHANE	ND	5	.82
BROMOFORM	ND	5	.74
BROMOMETHANE	ND	5	1.9
CARBON DISULFIDE	ND	5	.61
CARBON TETRACHLORIDE	ND	5	.83
CHLOROBENZENE	ND	5	1.1
CHLOROETHANE	ND	5	1.7
FORM	ND	5	.67
ETHANE	ND	5	.67
,2-DICHLOROETHENE	ND	5	.79
CIS-1,3-DICHLOROPROPENE	ND	5	.79
DIBROMOCHLOROMETHANE	ND	5	.71
ETHYLBENZENE	ND	5	1
MTBE	ND	10	.77
METHYLENE CHLORIDE	2.9J	5	1.4
STYRENE	ND	5	.87
TETRACHLOROETHENE	ND	5	1.1
TOLUENE	ND	5	.99
TRANS-1,2-DICHLOROETHENE	ND	5	.73
TRANS-1,3-DICHLOROPROPENE	ND	5	.82
TRICHLOROETHENE	ND	5	.89
VINYL ACETATE	ND	50	1.4
VINYL CHLORIDE	ND	5	2.5
XYLENES	ND	5	3.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	103	62-139
BROMOFLUOROBENZENE	104	75-125
TOLUENE-D8	99	75-125

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: IT CORPORATION
PROJECT: MCAS EL TORO/18609/D.O. 70
BATCH NO.: 00H055
METHOD: METHOD 5030A/8260A

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	VOH3952Q	VOH3952L	VOH3952C		
LAB FILE ID:	RHK405	RHK402	RHK403		
DATE EXTRACTED:	08/16/0016:18	08/16/0014:22	08/16/0015:01	DATE COLLECTED:	NA
DATE ANALYZED:	08/16/0016:18	08/16/0014:22	08/16/0015:01	DATE RECEIVED:	08/16/00
PREP. BATCH:	VOH3952	VOH3952	VOH3952		
CALIB. REF:	RHK400	RHK400	RHK400		

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	19.7	99	20	20	100	2	75-125	20
Benzene	ND	20	20.5	102	20	20.4	102	0	75-125	20
Chlorobenzene	ND	20	20.6	103	20	19.7	99	4	75-125	20
Toluene	ND	20	21.9	109	20	21.5	107	2	74-125	20
Trichloroethene	ND	20	18.7	93	20	19.3	97	3	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-Dichlorethane-d4	50	47.5	95	50	48.9	98	62-139
Bromofluorobenzene	50	55.6	111	50	54.7	109	75-125
Toluene-d8	50	50.8	102	50	50.7	101	75-125

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

: IT CORPORATION	Date Collected: NA
t : MCAS EL TORO/18609/D.O. 70	Date Received: 08/16/00
Batch No. : 00H055	Date Extracted: 08/16/00 16:18
Sample ID: MBLK1S	Date Analyzed: 08/16/00 16:18
Lab Samp ID: VOH3952Q	Dilution Factor: 1
Lab File ID: RHK405	Matrix : SOIL
Ext Btch ID: VOH3952	% Moisture : NA
Calib. Ref.: RHK400	Instrument ID : T-052

PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5	.34
1,1,2,2-TETRACHLOROETHANE	ND	5	.74
1,1,2-TRICHLOROETHANE	ND	5	.66
1,1-DICHLOROETHANE	ND	5	.52
,1-DICHLOROETHENE	ND	5	.48
,2-DICHLOROETHANE	ND	5	.99
1,2-DICHLOROPROPANE	ND	5	.55
2-BUTANONE	ND	50	1.5
2-CHLOROETHYLVINYLETHER	ND	50	.74
2-HEXANONE	ND	50	1.5
4-METHYL-2-PENTANONE	ND	50	2.8
ACETONE	ND	50	2.9
BENZENE	ND	5	.53
BROMODICHLOROMETHANE	ND	5	.42
BROMOFORM	ND	5	.59
BROMOMETHANE	ND	5	3.6
CARBON DISULFIDE	ND	10	.33
CARBON TETRACHLORIDE	ND	5	.54
CHLOROBENZENE	ND	5	.46
CHLOROETHANE	ND	5	.92
CHLOROFORM	ND	5	.52
METHANE	ND	5	.53
2-DICHLOROETHENE	ND	5	.46
CIS-1,3-DICHLOROPROPENE	ND	5	.4
DIBROMOCHLOROMETHANE	ND	5	.37
ETHYLBENZENE	ND	5	.46
MTBE	ND	10	.76
METHYLENE CHLORIDE	ND	10	3
STYRENE	ND	5	.34
TETRACHLOROETHENE	ND	5	.34
TOLUENE	ND	5	.58
TRANS-1,2-DICHLOROETHENE	ND	5	.47
TRANS-1,3-DICHLOROPROPENE	ND	5	.45
TRICHLOROETHENE	ND	5	.61
VINYL ACETATE	ND	50	.83
VINYL CHLORIDE	ND	5	.58
XYLENES	ND	5	1.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	103	52-149
BROMOFLUOROBENZENE	104	65-135
TOLUENE-D8	99	65-135

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: IT CORPORATION
PROJECT: MCAS EL TORO/18609/D.O. 70
BATCH NO.: OOH055
METHOD: METHOD 5030A/8260A

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	VOH3952Q	VOH3952L	VOH3952C		
LAB FILE ID:	RHK405	RHK402	RHK403		
DATE EXTRACTED:	08/16/0016:18	08/16/0014:22	08/16/0015:01	DATE COLLECTED:	NA
DATE ANALYZED:	08/16/0016:18	08/16/0014:22	08/16/0015:01	DATE RECEIVED:	08/16/00
PREP. BATCH:	VOH3952	VOH3952	VOH3952		
CALIB. REF:	RHK400	RHK400	RHK400		

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	19.7	99	20	20	100	2	65-135	30
Benzene	ND	20	20.5	102	20	20.4	102	0	65-135	30
Chlorobenzene	ND	20	20.6	103	20	19.7	99	4	65-135	30
Toluene	ND	20	21.9	109	20	21.5	107	2	64-135	30
Trichloroethene	ND	20	18.7	93	20	19.3	97	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-Dichlorethane-d4	50	47.5	95	50	48.9	98	52-149
Bromofluorobenzene	50	55.6	111	50	54.7	109	65-135
Toluene-d8	50	50.8	102	50	50.7	101	65-135

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

: IT CORPORATION	Date Collected: NA
: MCAS EL TORO/18609/D.O. 70	Date Received: 08/17/00
Ba No. : 00H055	Date Extracted: 08/17/00 20:34
ample ID: MBLK2S	Date Analyzed: 08/17/00 20:34
ab Samp ID: VOH4252Q	Dilution Factor: 1
ab File ID: RHK446	Matrix : SOIL
Ext Btch ID: VOH4252	% Moisture : NA
alib. Ref.: RHK441	Instrument ID : T-052

PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
,1,1-TRICHLOROETHANE	ND	5	.34
,1,2,2-TETRACHLOROETHANE	ND	5	.74
1,1,2-TRICHLOROETHANE	ND	5	.66
,1-DICHLOROETHANE	ND	5	.52
1-DICHLOROETHENE	ND	5	.48
2-DICHLOROETHANE	ND	5	.99
1,2-DICHLOROPROPANE	ND	5	.55
-BUTANONE	ND	50	1.5
CHLOROETHYLVINYLETHER	ND	50	.74
HEXANONE	ND	50	1.5
4-METHYL-2-PENTANONE	ND	50	2.8
ACETONE	ND	50	2.9
ENZENE	ND	5	.53
ROMODICHLOROMETHANE	ND	5	.42
ROMOFORM	ND	5	.59
ROMOMETHANE	ND	5	3.6
ARBON DISULFIDE	ND	10	.33
ARBON TETRACHLORIDE	ND	5	.54
LOROBENZENE	ND	5	.46
CHLOROETHANE	ND	5	.92
H FORM	ND	5	.52
ETHANE	ND	5	.53
-DICHLOROETHENE	ND	5	.46
CIS-1,3-DICHLOROPROPENE	ND	5	.4
DIBROMOCHLOROMETHANE	ND	5	.37
THYLBENZENE	ND	5	.46
TBE	ND	10	.76
ETHYLENE CHLORIDE	ND	10	3
STYRENE	ND	5	.34
ETRACHLOROETHENE	ND	5	.34
OLUENE	ND	5	.58
RANS-1,2-DICHLOROETHENE	ND	5	.47
TRANS-1,3-DICHLOROPROPENE	ND	5	.45
RICHLOROETHENE	ND	5	.61
INYL ACETATE	ND	50	.83
INYL CHLORIDE	ND	5	.58
XYLENES	ND	5	1.1

JRROGATE PARAMETERS	% RECOVERY	QC LIMIT
,2-DICHLOROETHANE-D4	106	52-149
BROMOFLUOROBENZENE	97	65-135
OLUENE-D8	96	65-135

RL: Project Reporting Limit
* : Out side of QC Limit
: An estimated value between PRL and MDL
: Value exceed the upper level of the initial calibration
: Found in the associated blank
D : Value from dilution analysis

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: IT CORPORATION
PROJECT: MCAS EL TORO/18609/D.O. 70
BATCH NO.: OOH055
METHOD: METHOD 5030A/8260A

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2S				
LAB SAMP ID:	VOH4252Q	VOH4252L	VOH4252C		
LAB FILE ID:	RHK446	RHK443	RHK444		
DATE EXTRACTED:	08/17/0020:34	08/17/0018:38	08/17/0019:17	DATE COLLECTED:	NA
DATE ANALYZED:	08/17/0020:34	08/17/0018:38	08/17/0019:17	DATE RECEIVED:	08/17/00
PREP. BATCH:	VOH4252	VOH4252	VOH4252		
CALIB. REF:	RHK441	RHK441	RHK441		

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	104	20	21.1	106	1	65-135	30
Benzene	ND	20	20.7	104	20	21	105	1	65-135	30
Chlorobenzene	ND	20	20.8	104	20	19.2	96	8	65-135	30
Toluene	ND	20	21.4	107	20	21.4	107	0	64-135	30
Trichloroethene	ND	20	19.3	97	20	19.3	96	0	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-Dichlorethane-d4	50	49.3	99	50	50.2	100	52-149
Bromofluorobenzene	50	51.6	103	50	51.4	103	65-135
Toluene-d8	50	49	98	50	49.3	99	65-135

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: MCAS El Toro

Collection Date: June 13, 2000

LDC Report Date: July 25, 2000

Matrix: Soil

Parameters: Volatiles

Validation Level: NFESC Level C

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 00F058

Sample Identification

18609-3091
18609-3092
18609-3093
18609-3094
18609-3095
18609-3096
18609-3097
18609-3098
18609-3099
18609-3100
18609-3101
18609-3102
18609-3103
18609-3104
18609-3105
18609-3106
18609-3107
18609-3108
18609-3109
18609-3110
18609-3111
18609-3093MS
18609-3093MSD

Introduction

This data review covers 23 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260A for Volatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A table summarizing all data qualification is provided at the end of this report. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not 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.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for all calibration check compounds and less than or equal to 50.0% for all other compounds.

Average relative response factors (RRF) for all volatile target compounds and system performance check compounds (SPCCs) were within method and validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

All of the continuing calibration percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were less than or equal to 25.0% for all calibration check compounds and less than or equal to 50.0% for all other compounds.

All of the continuing calibration RRF values were within method and validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks.

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits.

XI. Target Compound Identifications

Raw data were not reviewed for this SDG.

XII. Compound Quantitation and CRQLs

Raw data were not reviewed for this SDG.

XIII. Tentatively Identified Compounds (TICs)

Raw data were not reviewed for this SDG.

XIV. System Performance

Raw data were not reviewed for this SDG.

XV. Overall Assessment of Data

Data flags have been summarized at the end of the report.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

XVII. Field Blanks

No field blanks were identified in this SDG.

MCAS El Toro
Volatiles - Data Qualification Summary - SDG 00F058

No Sample Data Qualified in this SDG

MCAS El Toro
Volatiles - Laboratory Blank Data Qualification Summary - SDG 00F058

No Sample Data Qualified in this SDG

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: MCAS El Toro

Collection Date: June 13, 2000

LDC Report Date: July 21, 2000

Matrix: Soil

Parameters: Total Petroleum Hydrocarbons as Gasoline

Validation Level: NFESC Level C

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 00F058

Sample Identification

18609-3091	18609-3111
18609-3092	18609-3093MS
18609-3093	18609-3093MSD
18609-3094	
18609-3095	
18609-3096	
18609-3097	
18609-3098	
18609-3099	
18609-3100	
18609-3101	
18609-3102	
18609-3103	
18609-3104	
18609-3105	
18609-3106	
18609-3107	
18609-3108	
18609-3109	
18609-3110	

Introduction

This data review covers 23 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015 modified for Total Petroleum Hydrocarbons (TPH) as Gasoline.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A table summarizing all data qualification is provided at the end of this report. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section III.

Field duplicates are summarized in Section IX.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not 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.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Calibration

a. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than or equal to 20.0% .

b. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 15.0% QC limits.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No total petroleum hydrocarbons as gasoline contaminants were found in the method blanks.

IV. Accuracy and Precision Data

a. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

b. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

c. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

V. Target Compound Identification

Raw data were not reviewed for this SDG.

VI. Compound Quantitation and CRQLs

Raw data were not reviewed for this SDG.

VII. System Performance

Raw data were not reviewed for this SDG.

VIII. Overall Assessment of Data

Data flags have been summarized at the end of this report.

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Field Blanks

No field blanks were identified in this SDG.

MCAS El Toro
Total Petroleum Hydrocarbons as Gasoline - Data Qualification Summary - SDG 00F058

No Sample Data Qualified in this SDG

MCAS El Toro
Total Petroleum Hydrocarbons as Gasoline - Laboratory Blank Data Qualification Summary - SDG 00F058

No Sample Data Qualified in this SDG

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: MCAS El Toro

Collection Date: June 13, 2000

LDC Report Date: July 24, 2000

Matrix: Soil

Parameters: Total Petroleum Hydrocarbons as Extractables

Validation Level: NFESC Level C

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 00F058

Sample Identification

18609-3091
18609-3092
18609-3093
18609-3094
18609-3095
18609-3096
18609-3097
18609-3098
18609-3099
18609-3100
18609-3101
18609-3102
18609-3103
18609-3104
18609-3105
18609-3106
18609-3107
18609-3108
18609-3109
18609-3110
18609-3111
18609-3110MS
18609-3110MSD

Introduction

This data review covers 23 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015 modified for Total Petroleum Hydrocarbons (TPH) as Extractables.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A table summarizing all data qualification is provided at the end of this report. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section III.

Field duplicates are summarized in Section IX.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not 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.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Calibration

a. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than or equal to 20.0% .

b. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 15.0% QC limits.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No total petroleum hydrocarbons as extractable contaminants were found in the method blanks.

IV. Accuracy and Precision Data

a. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. Surrogate recoveries (%R) were not within QC limits for sample 18609-3091. Since the sample was diluted out, no data were qualified.

b. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

c. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

V. Target Compound Identification

Raw data were not reviewed for this SDG.

VI. Compound Quantitation and CRQLs

Raw data were not reviewed for this SDG.

VII. System Performance

Raw data were not reviewed for this SDG.

VIII. Overall Assessment of Data

Data flags have been summarized at the end of this report.

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Field Blanks

No field blanks were identified in this SDG.

MCAS El Toro
Total Petroleum Hydrocarbons as Extractables - Data Qualification Summary - SDG 00F058

No Sample Data Qualified in this SDG

MCAS El Toro
Total Petroleum Hydrocarbons as Extractables - Laboratory Blank Data Qualification Summary - SDG 00F058

No Sample Data Qualified in this SDG

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: MCAS El Toro

Collection Date: June 13, 2000

LDC Report Date: July 17, 2000

Matrix: Soil

Parameters: Total Recoverable Petroleum Hydrocarbons

Validation Level: NFESC Level C

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 00F058

Sample Identification

18609-3093
18609-3094
18609-3095
18609-3096
18609-3097
18609-3098
18609-3099
18609-3100
18609-3101
18609-3102
18609-3103
18609-3104
18609-3105
18609-3106
18609-3107
18609-3108
18609-3109
18609-3110
18609-3111
18609-3110MS
18609-3110MSD

Introduction

This data review covers 21 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA Method 418.1 for Total Recoverable Petroleum Hydrocarbons (TRPH).

The review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (February 1994) as there are no current guidelines for the method stated above.

A table summarizing all data qualification flags is provided at the end of this report. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blanks results are summarized in Section III.

Field duplicates are summarized in Section VII.

Raw data were not reviewed for this SDG. The review was based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not 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.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Calibration

a. Initial Calibration

All criteria for the initial calibration were met.

b. Calibration Verification

Calibration verification frequency and analysis criteria were met.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No total recoverable petroleum hydrocarbon contaminants were found in the method blanks.

IV. Accuracy and Precision Data

a. Matrix Spike/(Matrix Spike) Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

b. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

V. Sample Result Verification

Raw data were not reviewed for this SDG.

VI. Overall Assessment of Data

Data flags have been summarized at the end of this report.

VII. Field Duplicates

No field duplicates were identified in this SDG.

VIII. Field Blanks

No field blanks were identified in this SDG.

MCAS El Toro
Total Recoverable Petroleum Hydrocarbons - Data Qualification Summary - SDG 00F058

No Sample Data Qualified in this SDG

MCAS El Toro
Total Recoverable Petroleum Hydrocarbons - Laboratory Blank Data Qualification Summary - SDG 00F058

No Sample Data Qualified in this SDG

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: MCAS El Toro

Collection Date: August 7, 2000

LDC Report Date: August 29, 2000

Matrix: Soil/Water

Parameters: Volatiles

Validation Level: NFESC Level C & D

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 00H055

Sample Identification

18609-3390
18609-3391
18609-3392
18609-3393
18609-3394
18609-3395**
18609-3396
18609-3397
18609-3398
18609-3398RE
18609-3400
18609-3401
18609-3401RE

**Indicates sample underwent NFESC Level D review

Introduction

This data review covers 11 soil samples and 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260A for Volatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A table summarizing all data qualification is provided at the end of this report. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

Samples indicated by a double asterisk on the front cover underwent a NFESC Level D review. A NFESC Level C review was performed on all of the other samples. Raw data were not evaluated for the samples reviewed by Level C criteria since this review is based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not 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.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for all calibration check compounds and less than or equal to 50.0% for all other compounds.

Average relative response factors (RRF) for all volatile target compounds and system performance check compounds (SPCCs) were within method and validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

All of the continuing calibration percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were less than or equal to 25.0% for all calibration check compounds and less than or equal to 50.0% for all other compounds.

All of the continuing calibration RRF values were within method and validation criteria.

V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks with the following exceptions:

Method Blank ID	Analysis Date	Compound TIC (RT in minutes)	Concentration	Associated Samples
MBLK1W	8/16/00	Methylene chloride	2.9 ug/L	All water samples in SDG 00H055

Sample concentrations were compared to concentrations detected in the method blanks. The sample concentrations were either not detected or were significantly greater (>10X for common contaminants, >5X for other contaminants) than the concentrations found in the associated method blanks with the following exceptions:

Sample	Compound TIC (RT in minutes)	Reported Concentration	Modified Final Concentration
18609-3390	Methylene chloride	3.7 ug/L	5U ug/L
18609-3396	Methylene chloride	4 ug/L	5U ug/L

VI. Surrogate Spikes

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

IX. Regional Quality Assurance and Quality Control

Not applicable.

X. Internal Standards

All internal standard areas and retention times were within QC limits with the following exceptions:

Sample	Internal Standards	Area (Limits)	Compound	Flag	A or P
18609-3398	1,2-Dichlorobenzene-d4	150204 (161970-647880)	1,1,2,2-Tetrachloroethane Bromoform	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A
18609-3401	1,4-Difluorobenzene Chlorobenzene-d5 1,2-Dichlorobenzene-d4	700418 (800601-3202402) 371710 (499976-1999902) 125359 (161970-647880)	All TCL compounds	J (all detects) UJ (all non-detects)	A
18609-3398RE	1,4-Difluorobenzene Chlorobenzene-d5 1,2-Dichlorobenzene-d4	672540 (768152-3072608) 344463 (472277-1889106) 92982 (171921-687682)	All TCL compounds	J (all detects) UJ (all non-detects)	A

Sample	Internal Standards	Area (Limits)	Compound	Flag	A or P
18609-3401RE	1,4-Difluorobenzene Chlorobenzene-d5 1,2-Dichlorobenzene-d4	686793 (768152-3072608) 388135 (472277-1889106) 113748 (171921-687682)	All TCL compounds	J (all detects) UJ (all non-detects)	A

XI. Target Compound Identifications

All target compound identifications were within validation criteria for samples on which a NFESC Level D review was performed. Raw data were not evaluated for the samples reviewed by Level C criteria.

XII. Compound Quantitation and CRQLs

All compound quantitation and CRQLs were within validation criteria for samples on which a NFESC Level D review was performed. Raw data were not evaluated for the samples reviewed by Level C criteria.

XIII. Tentatively Identified Compounds (TICs)

All tentatively identified compounds were within validation criteria for samples on which a NFESC Level D review was performed. Raw data were not evaluated for the samples reviewed by Level C criteria.

XIV. System Performance

The system performance was within validation criteria for samples on which a NFESC Level D review was performed. Raw data were not evaluated for the samples reviewed by Level C criteria.

XV. Overall Assessment of Data

Data flags have been summarized at the end of the report.

XVI. Field Duplicates

No field duplicates were identified in this SDG.

XVII. Field Blanks

Sample 18609-3390 was identified as a trip blank. No volatile contaminants were found in this blank with the following exceptions:

Trip Blank ID	Compound	Concentration (ug/L)
18609-3390	Methylene chloride	3.7

Sample 18609-3396 was identified as an equipment rinsate. No volatile contaminants were found in this blank with the following exceptions:

Equipment Rinsate ID	Compound	Concentration (ug/L)
18609-3396	Methylene chloride	4

MCAS El Toro
Volatiles - Data Qualification Summary - SDG 00H055

SDG	Sample	Compound	Flag	A or P	Reason
00H055	18609-3398	1,1,2,2-Tetrachloroethane Bromoform	J (all detects) UJ (all non-detects)	A	Internal standards (area)
00H055	18609-3401 18609-3398RE 18609-3401RE	All TCL compounds	J (all detects) UJ (all non-detects)	A	Internal standards (area)

MCAS El Toro
Volatiles - Laboratory Blank Data Qualification Summary - SDG 00H055

SDG	Sample	Compound TIC (RT in minutes)	Modified Final Concentration	A or P
00H055	18609-3390	Methylene chloride	5U ug/L	A
00H055	18609-3396	Methylene chloride	5U ug/L	A

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: MCAS El Toro

Collection Date: August 7, 2000

LDC Report Date: August 29, 2000

Matrix: Soil/Water

Parameters: Total Petroleum Hydrocarbons as Gasoline

Validation Level: NFESC Level C & D

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 00H055

Sample Identification

18609-3391
18609-3392
18609-3393
18609-3394
18609-3395**
18609-3396
18609-3397
18609-3398
18609-3400
18609-3401
18609-3395MS
18609-3395MSD

**Indicates sample underwent NFESC Level D review

Introduction

This data review covers 11 soil samples and one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015 modified for Total Petroleum Hydrocarbons (TPH) as Gasoline.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A table summarizing all data qualification is provided at the end of this report. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section III.

Field duplicates are summarized in Section IX.

Samples indicated by a double asterisk on the front cover underwent NFESC Level D review. NFESC Level C review was performed on all of the other samples. Raw data were not evaluated for the samples reviewed by NFESC Level C criteria since this review is based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not 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.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Calibration

a. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than or equal to 20.0% .

b. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 15.0% QC limits.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No total petroleum hydrocarbons as gasoline contaminants were found in the method blanks.

IV. Accuracy and Precision Data

a. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

b. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

c. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

V. Target Compound Identification

All target compound identifications were within validation criteria for samples on which NFESC Level D review was performed. Raw data were not evaluated for the samples reviewed by NFESC Level C criteria.

VI. Compound Quantitation and CRQLs

All compound quantitation and CRQLs were within validation criteria for samples on which NFESC Level D review was performed. Raw data were not evaluated for the samples reviewed by NFESC Level C criteria.

VII. System Performance

The system performance was within validation criteria for samples on which NFESC Level D review was performed. Raw data were not evaluated for the samples reviewed by NFESC Level C criteria.

VIII. Overall Assessment of Data

Data flags have been summarized at the end of this report.

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Field Blanks

Sample 18609-3396 was identified as an equipment rinsate. No total petroleum hydrocarbons as gasoline contaminants were found in this blank.

MCAS El Toro
Total Petroleum Hydrocarbons as Gasoline - Data Qualification Summary - SDG 00H055

No Sample Data Qualified in this SDG

MCAS El Toro
Total Petroleum Hydrocarbons as Gasoline - Laboratory Blank Data Qualification Summary - SDG 00H055

No Sample Data Qualified in this SDG

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: MCAS El Toro

Collection Date: August 7, 2000

LDC Report Date: August 29, 2000

Matrix: Soil/Water

Parameters: Total Petroleum Hydrocarbons as Extractables

Validation Level: NFESC Level C & D

Laboratory: EMAX Laboratories, Inc.

Sample Delivery Group (SDG): 00H055

Sample Identification

18609-3391
18609-3392
18609-3393
18609-3394
18609-3395**
18609-3396
18609-3397
18609-3398
18609-3400
18609-3401
18609-3391MS
18609-3391MSD

**Indicates sample underwent NFESC Level D review

Introduction

This data review covers 11 soil samples and one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015 modified for Total Petroleum Hydrocarbons (TPH) as Extractables.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (October 1999) as there are no current guidelines for the method stated above.

A table summarizing all data qualification is provided at the end of this report. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section III.

Field duplicates are summarized in Section IX.

Samples indicated by a double asterisk on the front cover underwent NFESC Level D review. NFESC Level C review was performed on all of the other samples. Raw data were not evaluated for the samples reviewed by NFESC Level C criteria since this review is based on QC data.

The following are definitions of the data qualifiers:

U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.

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R Quality control indicates the data is not usable.

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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.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Calibration

a. Initial Calibration

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than or equal to 20.0% .

b. Calibration Verification

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 15.0% QC limits.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No total petroleum hydrocarbons as extractable contaminants were found in the method blanks.

IV. Accuracy and Precision Data

a. Surrogate Recovery

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

b. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

c. Laboratory Control Samples

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

V. Target Compound Identification

All target compound identifications were within validation criteria for samples on which NFESC Level D review was performed. Raw data were not evaluated for the samples reviewed by NFESC Level C criteria.

VI. Compound Quantitation and CRQLs

All compound quantitation and CRQLs were within validation criteria for samples on which NFESC Level D review was performed. Raw data were not evaluated for the samples reviewed by NFESC Level C criteria.

VII. System Performance

The system performance was within validation criteria for samples on which NFESC Level D review was performed. Raw data were not evaluated for the samples reviewed by NFESC Level C criteria.

VIII. Overall Assessment of Data

Data flags have been summarized at the end of this report.

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Field Blanks

Sample 18609-3396 was identified as an equipment rinsate. No total petroleum hydrocarbons as extractable contaminants were found in this blank.

MCAS El Toro
Total Petroleum Hydrocarbons as Extractables - Data Qualification Summary - SDG 00H055

No Sample Data Qualified in this SDG

MCAS El Toro
Total Petroleum Hydrocarbons as Extractables - Laboratory Blank Data Qualification Summary - SDG 00H055

No Sample Data Qualified in this SDG

the group

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

CHAIN-OF-CUSTODY RECORD

LABORATORY COPY

A 12024

Site 823- Pipe Pull (UST67A/B)

FORM 0019 REV 9-99

PROJECT COORDINATOR: M. Concepcion	LAB COORDINATOR'S PHONE: 949-660-7550	LAB COORDINATOR'S FAX: 949-475-5433	LABORATORY SERVICE ID: FCST	LABORATORY CONTACT: EMAX	MAIL REPORT (COMPANY NAME): IT Corp
PROJECT NAME: El Toro - DO70	PROJECT LOCATION: MCAS El Toro, CA	PROJECT NUMBER: 918609	LABORATORY PHONE: 310-618-8889	LABORATORY FAX: 310-618-0818	RECIPIENT NAME: Wayne Shida
PROJECT CONTACT: M. Concepcion	PROJECT PHONE NUMBER: 949-451-1667	PROJECT FAX: 949-451-1672	LABORATORY ADDRESS: 1673 630 Maple Ave	ADDRESS: 3347 Michelson #200	
PROJECT ADDRESS:	CITY, STATE AND ZIP CODE:	CLIENT: SWDIV	CITY, STATE AND ZIP CODE: Torrance, CA	CITY, STATE AND ZIP CODE: Irvine, CA 92612	
PROJECT MANAGER: B. Sedlak	PROJECT MANAGER'S PHONE: 949-660-5446	PROJECT MANAGER'S FAX: 949-451-1672			

Item	Sample Identifier	Matrix	Date 2000	Time	Preserved	# of Cont.	QC Level	T.A.T.	Analyses: TPH-GRO	TPH-Diesel	TB PH (HPH)	8260					Comments
1	18609-3109 Borings	S	6-13	1220	4oc	1	3	5day	X	X	X	X					
2	18609-3110 Pipe	S	6-13	1225	4oc	1	3	5day	X	X	X	X					
3	18609-3111 Pipe	S	6-13	1230	4oc	1	3	5day	X	X	X	X					
4																	
5																	
6																	
7																	
8																	
9																	
10																	

W.S. 6-13-00

SAMPLES COLLECTED BY: W. Sellers

COURIER AND AIR BILL NUMBER: Courier

COOLER TEMPERATURE UPON RECEIPT

RELINQUISHED BY	RECEIVED BY	DATE	TIME	SAMPLE'S CONDITION UPON RECEIPT
Way-Lynn Jefferson				

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

Site 823 - Pipe Pull

Sample Point Location	G	C	F	QC
UST67A/B - Pipe 1 @ 4.5 ft	X			
(2) UST67A/B - Pipe 2 @ 4.5 ft	X			
(3) UST67A/B - Pipe 3 @ 1.5 ft	X			

Comments: due 6/21/00

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

METHOD 418.1
TOTAL RECOVERABLE PETROLEUN HYDROCARBONS
TRPH mg/kg

Client : IT CORPORATION
Project : MCAS EL TORO/18609/O.O. 70
Batch No. : 00F058

Matrix : SOIL
Instrument ID : T018

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
18609-3093	F058-03	490	10	13.6	116	48	06/15/0014:35	06/14/0017:30	TRF006S-8	TRF009C	TRF006S	06/13/00	06/13/00
18609-3094	F058-04	ND	1	13.9	11.6	4.82	06/15/0014:40	06/14/0017:30	TRF006S-9	TRF009C	TRF006S	06/13/00	06/13/00
18609-3095	F058-05	19	1	14.2	11.7	4.84	06/15/0014:45	06/14/0017:30	TRF006S-10	TRF009C	TRF006S	06/13/00	06/13/00
18609-3096	F058-06	37	1	11.2	11.3	4.67	06/15/0014:50	06/14/0017:30	TRF006S-11	TRF009C	TRF006S	06/13/00	06/13/00
18609-3097	F058-07	ND	1	12.8	11.5	4.76	06/15/0014:55	06/14/0017:30	TRF006S-12	TRF009C	TRF006S	06/13/00	06/13/00
18609-3098	F058-08	ND	1	16.6	12	4.98	06/15/0015:10	06/14/0017:30	TRF006S-15	TRF010C	TRF006S	06/13/00	06/13/00
18609-3099	F058-09	190	1	15.7	11.9	4.92	06/15/0015:15	06/14/0017:30	TRF006S-16	TRF010C	TRF006S	06/13/00	06/13/00
18609-3100	F058-10	ND	1	14.6	11.7	4.86	06/15/0015:20	06/14/0017:30	TRF006S-17	TRF010C	TRF006S	06/13/00	06/13/00
18609-3101	F058-11	ND	1	8.1	10.9	4.52	06/15/0015:25	06/14/0017:30	TRF006S-18	TRF010C	TRF006S	06/13/00	06/13/00
18609-3102	F058-12	ND	1	12.8	11.5	4.76	06/15/0015:30	06/14/0017:30	TRF006S-19	TRF010C	TRF006S	06/13/00	06/13/00
18609-3103	F058-13	ND	1	11.7	11.3	4.7	06/15/0015:35	06/14/0017:30	TRF006S-20	TRF010C	TRF006S	06/13/00	06/13/00
18609-3104	F058-14	46	1	12.4	11.4	4.74	06/15/0015:40	06/14/0017:30	TRF006S-21	TRF010C	TRF006S	06/13/00	06/13/00
18609-3105	F058-15	ND	1	13.5	11.6	4.8	06/15/0015:45	06/14/0017:30	TRF006S-22	TRF010C	TRF006S	06/13/00	06/13/00
18609-3106	F058-16	130	1	12.2	11.4	4.73	06/15/0015:50	06/14/0017:30	TRF006S-23	TRF010C	TRF006S	06/13/00	06/13/00
18609-3107	F058-17	ND	1	11.1	11.2	4.67	06/15/0015:55	06/14/0017:30	TRF006S-24	TRF010C	TRF006S	06/13/00	06/13/00
18609-3108	F058-18	45	1	9.5	11	4.59	06/15/0016:10	06/14/0017:30	TRF006S-27	TRF011C	TRF006S	06/13/00	06/13/00
18609-3109	F058-19	ND	1	4.6	10.5	4.35	06/15/0016:15	06/14/0017:30	TRF006S-28	TRF011C	TRF006S	06/13/00	06/13/00
18609-3110	F058-20	ND	1	7.0	10.8	4.46	06/15/0016:20	06/14/0017:30	TRF006S-29	TRF011C	TRF006S	06/13/00	06/13/00
18609-3110MS	F058-20M	155	1	7.0	10.8	4.46	06/15/0016:25	06/14/0017:30	TRF006S-30	TRF011C	TRF006S	06/13/00	06/13/00
18609-3110MSD	F058-20S	166	1	7.0	10.8	4.46	06/15/0016:30	06/14/0017:30	TRF006S-31	TRF011C	TRF006S	06/13/00	06/13/00
MBLK1S	TRF006SB	ND	1	NA	10	4.15	06/15/0014:10	06/14/0017:30	TRF006S-3	TRF009C	TRF006S	NA	06/15/00
LCS1S	TRF006SL	149	1	NA	10	4.15	06/15/0014:15	06/14/0017:30	TRF006S-4	TRF009C	TRF006S	NA	06/15/00
18609-3111	F058-21	17	1	7.3	10.8	4.48	06/15/0016:50	06/14/0018:00	TRF007S-35	TRF011S	TRF007S	06/13/00	06/13/00
MBLK2S	TRF007SB	ND	1	NA	10	4.15	06/15/0016:35	06/14/0018:00	TRF007S-32	TRF011S	TRF007S	NA	06/15/00
LCS2S	TRF007SL	149	1	NA	10	4.15	06/15/0016:40	06/14/0018:00	TRF007S-33	TRF011S	TRF007S	NA	06/15/00
LCD2S	TRF007SC	150	1	NA	10	4.15	06/15/0016:45	06/14/0018:00	TRF007S-34	TRF011S	TRF007S	NA	06/15/00

RL: Reporting Limit

METHOD 5030B/M8015
TOTAL PETROLEUM HYDROCARBONS BY PURGE & TRAP
TPH-G mg/kg

Client : IT CORPORATION
Project : MCAS EL TORO/18609/D.O. 70
Batch No. : 00F058

Matrix : SOIL
Instrument ID : GCT039

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	SURR (%)	DLF	MOIST	PRL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1S	VAF2639B	ND	89	1	NA	1	.02	06/14/0019:21	06/14/0019:21	EF09016A	EF09015A	VAF2639	NA	06/14/00
LCS1S	VAF2639L	2.71	113	1	NA	1	.02	06/14/0019:56	06/14/0019:56	EF09017A	EF09015A	VAF2639	NA	06/14/00
LCD1S	VAF2639C	2.43	116	1	NA	1	.02	06/14/0020:32	06/14/0020:32	EF09018A	EF09015A	VAF2639	NA	06/14/00
MBLK2S	VMF2739B	ND	88	10	NA	10	.2	06/15/0011:05	06/15/0011:05	EF09042A	EF09039A	VMF2739	NA	06/15/00
LCS2S	VMF2739L	28.9	110	10	NA	10	.2	06/15/0011:40	06/15/0011:40	EF09043A	EF09039A	VMF2739	NA	06/15/00
LCD2S	VMF2739C	28	109	10	NA	10	.2	06/15/0012:15	06/15/0012:15	EF09044A	EF09039A	VMF2739	NA	06/15/00
MBLK3S	VAF2839B	ND	89	1	NA	1	.02	06/15/0020:12	06/15/0020:12	EF09056A	EF09048A	VAF2839	NA	06/15/00
LCS3S	VAF2839L	2.41	102	1	NA	1	.02	06/15/0019:01	06/15/0019:01	EF09054A	EF09048A	VAF2839	NA	06/15/00
LCD3S	VAF2839C	2.57	109	1	NA	1	.02	06/15/0019:36	06/15/0019:36	EF09055A	EF09048A	VAF2839	NA	06/15/00
18609-3091	F058-01*	2800	82	1000	6.2	1070	21.3	06/15/0017:50	06/15/0017:50	EF09052A	EF09048A	VMF2739	06/13/00	06/13/00
18609-3092	F058-02	ND	71	1	9.2	1.1	.022	06/15/0003:32	06/15/0003:32	EF09030A	EF09027A	VAF2639	06/13/00	06/13/00
18609-3093	F058-03	ND	102	1	13.6	1.16	.0231	06/15/0004:07	06/15/0004:07	EF09031A	EF09027A	VAF2639	06/13/00	06/13/00
18609-3093MS	F058-03M	2.52	104	1	13.6	1.16	.0231	06/15/0023:41	06/15/0023:41	EF09062A	EF09059A	VAF2839	06/13/00	06/13/00
18609-3093MSD	F058-03S	3.13	114	1	13.6	1.16	.0231	06/16/0000:16	06/16/0000:16	EF09063A	EF09059A	VAF2839	06/13/00	06/13/00
18609-3094	F058-04	ND	92	1	13.9	1.16	.0232	06/15/0004:41	06/15/0004:41	EF09032A	EF09027A	VAF2639	06/13/00	06/13/00
18609-3095	F058-05	ND	88	1	14.2	1.17	.0233	06/15/0005:16	06/15/0005:16	EF09033A	EF09027A	VAF2639	06/13/00	06/13/00
18609-3096	F058-06	ND	85	1	11.2	1.13	.0225	06/15/0005:50	06/15/0005:50	EF09034A	EF09027A	VAF2639	06/13/00	06/13/00
18609-3097	F058-07	ND	84	1	12.8	1.15	.0229	06/15/0006:25	06/15/0006:25	EF09035A	EF09027A	VAF2639	06/13/00	06/13/00
18609-3098	F058-08	ND	105	1	16.6	1.2	.024	06/15/0007:00	06/15/0007:00	EF09036A	EF09027A	VAF2639	06/13/00	06/13/00
18609-3099	F058-09*	300	84	50	15.7	59.3	1.19	06/15/0017:15	06/15/0017:15	EF09051A	EF09048A	VMF2739	06/13/00	06/13/00
18609-3100	F058-10	ND	92	1	14.6	1.17	.0234	06/15/0009:19	06/15/0009:19	EF09040A	EF09039A	VAF2639	06/13/00	06/13/00
18609-3101	F058-11	ND	88	1	8.1	1.09	.0218	06/15/0009:53	06/15/0009:53	EF09041A	EF09039A	VAF2639	06/13/00	06/13/00
18609-3102	F058-12	ND	86	1	12.8	1.15	.0229	06/16/0003:43	06/16/0003:43	EF09069A	EF09059A	VAF2839	06/13/00	06/13/00
18609-3103	F058-13	ND	88	1	11.7	1.13	.0227	06/15/0020:47	06/15/0020:47	EF09057A	EF09048A	VAF2839	06/13/00	06/13/00
18609-3104	F058-14	ND	84	1	12.4	1.14	.0228	06/15/0021:22	06/15/0021:22	EF09058A	EF09048A	VAF2839	06/13/00	06/13/00
18609-3105	F058-15	ND	84	1	13.5	1.16	.0231	06/15/0022:32	06/15/0022:32	EF09060A	EF09059A	VAF2839	06/13/00	06/13/00
18609-3106	F058-16	ND	92	1	12.2	1.14	.0228	06/15/0023:06	06/15/0023:06	EF09061A	EF09059A	VAF2839	06/13/00	06/13/00
18609-3107	F058-17	ND	83	1	11.1	1.12	.0225	06/16/0000:50	06/16/0000:50	EF09064A	EF09059A	VAF2839	06/13/00	06/13/00
18609-3108	F058-18	ND	79	1	9.5	1.1	.0221	06/16/0001:25	06/16/0001:25	EF09065A	EF09059A	VAF2839	06/13/00	06/13/00
18609-3109	F058-19	ND	80	1	4.6	1.05	.021	06/16/0002:00	06/16/0002:00	EF09066A	EF09059A	VAF2839	06/13/00	06/13/00
18609-3110	F058-20	ND	79	1	7.0	1.08	.0215	06/16/0002:34	06/16/0002:34	EF09067A	EF09059A	VAF2839	06/13/00	06/13/00
18609-3111	F058-21	ND	82	1	7.3	1.08	.0216	06/16/0003:09	06/16/0003:09	EF09068A	EF09059A	VAF2839	06/13/00	06/13/00

SURR : Bromofluorobenzene (W)65-135 (S)60-140
PRL : Reporting Limit
E : Value exceed the upper level of the initial calibration
D : Value from dilution
* : Presence of hydrocarbon heavier than Gasoline.

METHOD M8015
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

TPH-D

Client : IT CORPORATION
Project : MCAS EL TORO/186C[illegible]5.0. 70
Batch No. : 00F058

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	DSF020SB	ND	79	87	1	NA	10	3.47	06/16/0021:31	06/14/0012:00	TF05013A	TF05035A	DSF020S	NA	06/14/00
LCS1S	DSF020SL	636	86	94	1	NA	10	3.47	06/16/0022:21	06/14/0012:00	TF05014A	TF05035A	DSF020S	NA	06/14/00
LCD1S	DSF020SC	620	86	94	1	NA	10	3.47	06/16/0023:11	06/14/0012:00	TF05015A	TF05035A	DSF020S	NA	06/14/00
MBLK2S	DSF021SB	ND	81	86	1	NA	10	3.47	06/17/0001:40	06/14/0015:45	TF05018A	TF05046A	DSF021S	NA	06/14/00
LCS2S	DSF021SL	585	89	98	1	NA	10	3.47	06/17/0002:29	06/14/0015:45	TF05019A	TF05046A	DSF021S	NA	06/14/00
MBLK3S	DSF024SB	ND	74	86	1	NA	10	3.47	06/16/0015:55	06/16/0014:40	TF05037A	TF05035A	DSF024S	NA	06/16/00
LCS3S	DSF024SL	666	89	100	1	NA	10	3.47	06/16/0019:52	06/16/0014:40	TF05041A	TF05035A	DSF024S	NA	06/16/00
LCD3S	DSF024SC	650	89	99	1	NA	10	3.47	06/16/0020:42	06/16/0014:40	TF05042A	TF05035A	DSF024S	NA	06/16/00
18609-3091	F058-01	5800	DO	DO	10	6.2	107	37	06/16/0012:35	06/14/0015:45	TF05033A	TF05024A	DSF021S	06/13/00	06/13/00
18609-3092	F058-02R **	59	89	99	1	9.2	11	3.82	06/17/0006:37	06/16/0014:40	TF05054A	TF05046A	DSF024S	06/13/00	06/13/00
18609-3093	F058-03R	ND	91	106	1	13.6	11.6	4.02	06/17/0007:27	06/16/0014:40	TF05055A	TF05046A	DSF024S	06/13/00	06/13/00
18609-3094	F058-04	ND	82	97	1	13.9	11.6	4.03	06/16/0013:25	06/14/0015:45	TF05034A	TF05024A	DSF021S	06/13/00	06/13/00
18609-3095	F058-05	ND	86	88	1	14.2	11.7	4.04	06/15/0020:53	06/14/0015:45	TF05014A	TF05013A	DSF021S	06/13/00	06/13/00
18609-3096	F058-06	ND	87	98	1	11.2	11.3	3.91	06/15/0021:43	06/14/0015:45	TF05015A	TF05013A	DSF021S	06/13/00	06/13/00
18609-3109	F058-19	ND	99	124	1	4.6	10.5	3.64	06/16/0011:45	06/14/0015:45	TF05032A	TF05024A	DSF021S	06/13/00	06/13/00
18609-3110	F058-20R	ND	88	104	1	7.0	10.8	3.73	06/17/0008:16	06/16/0014:40	TF05056A	TF05046A	DSF024S	06/13/00	06/13/00
18609-3110MS	F058-20U	631	94	110	1	7.0	10.8	3.73	06/17/0009:06	06/16/0014:40	TF05057A	TF05046A	DSF024S	06/13/00	06/13/00
18609-3110MSD	F058-20V	610	92	113	1	7.0	10.8	3.73	06/17/0011:34	06/16/0014:40	TF05060A	TF05058A	DSF024S	06/13/00	06/13/00
18609-3111	F058-21	ND	90	104	1	7.3	10.8	3.74	06/16/0015:05	06/14/0012:00	TF05036A	TF05035A	DSF020S	06/13/00	06/13/00

QC LIMIT : (SOIL) 60-140 55-150
QC LIMIT : (WATER) 65-135 60-145
SURR1 : Bromobenzene
SURR2 : Hexacosane
RL : Reporting Limit
** : Chromatogram shows a non-typical fuel pattern, calculated and reported as Diesel.

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

Client : IT CORPORATION	Date Collected: 06/13/00
Project : MCAS EL TORO/18609/D.O. 70	Date Received: 06/13/00
Batch No. : 00F058	Date Extracted: 06/15/00 08:26
Sample ID: 18609-3109	Date Analyzed: 06/15/00 08:26
Lab Samp ID: F058-19	Dilution Factor: 1
Lab File ID: RFV365	Matrix : SOIL
Ext Btch ID: VOF3301	% Moisture : 4.6
Calib. Ref.: RFV356	Instrument ID : T-001

PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.2	.36
1,1,2,2-TETRACHLOROETHANE	ND	5.2	.77
1,1,2-TRICHLOROETHANE	ND	5.2	.69
1,1-DICHLOROETHANE	ND	5.2	.55
1,1-DICHLOROETHENE	ND	5.2	.5
1,2-DICHLOROETHANE	ND	5.2	1
1,2-DICHLOROPROPANE	ND	5.2	.57
2-BUTANONE	ND	52	1.6
2-CHLOROETHYLVINYLETHER	ND	52	.78
2-HEXANONE	ND	52	1.5
4-METHYL-2-PENTANONE	ND	52	2.9
ACETONE	ND	52	3
BENZENE	ND	5.2	.55 U
BROMODICHLOROMETHANE	ND	5.2	.44
BROMOFORM	ND	5.2	.62
BROMOMETHANE	ND	5.2	3.8
CARBON DISULFIDE	ND	10	.35
CARBON TETRACHLORIDE	ND	5.2	.56
CHLOROBENZENE	ND	5.2	.49
CHLOROETHANE	ND	5.2	.97
CHLOROFORM	ND	5.2	.55
CHLOROMETHANE	ND	5.2	.55
CIS-1,2-DICHLOROETHENE	ND	5.2	.48
CIS-1,3-DICHLOROPROPENE	ND	5.2	.42
DIBROMOCHLOROMETHANE	ND	5.2	.38
ETHYLBENZENE	ND	5.2	.48 U
MTBE	ND	10	.79 U
METHYLENE CHLORIDE	ND	10	3.2
STYRENE	ND	5.2	.36
TETRACHLOROETHENE	ND	5.2	.35
TOLUENE	ND	5.2	.6 U
TRANS-1,2-DICHLOROETHENE	ND	5.2	.5
TRANS-1,3-DICHLOROPROPENE	ND	5.2	.47
TRICHLOROETHENE	ND	5.2	.64
VINYL ACETATE	ND	52	.87
VINYL CHLORIDE	ND	5.2	.61
XYLENES	ND	5.2	1.2 U

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	116	52-149
BROMOFLUOROBENZENE	92	65-135
TOLUENE-D8	102	65-135

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

Client	: IT CORPORATION	Date Collected:	06/13/00
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	06/13/00
Batch No.	: DDF058	Date Extracted:	06/15/00 09:00
Sample ID:	18609-3110	Date Analyzed:	06/15/00 09:00
Lab Samp ID:	F058-20	Dilution Factor:	1
Lab File ID:	RFV366	Matrix :	SOIL
Ext Btch ID:	VOF3301	% Moisture :	7.0
Calib. Ref.:	RFV356	Instrument ID :	T-001

PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.4	.37
1,1,2,2-TETRACHLOROETHANE	ND	5.4	.79
1,1,2-TRICHLOROETHANE	ND	5.4	.71
1,1-DICHLOROETHANE	ND	5.4	.56
1,1-DICHLOROETHENE	ND	5.4	.52
1,2-DICHLOROETHANE	ND	5.4	1.1
1,2-DICHLOROPROPANE	ND	5.4	.59
2-BUTANONE	ND	54	1.6
2-CHLOROETHYLVINYLETHER	ND	54	.8
2-HEXANONE	ND	54	1.6
4-METHYL-2-PENTANONE	ND	54	3
ACETONE	ND	54	3.1
BENZENE	ND	5.4	.57
BROMODICHLOROMETHANE	ND	5.4	.45
BROMOFORM	ND	5.4	.64
BROMOMETHANE	ND	5.4	3.9
CARBON DISULFIDE	ND	11	.36
CARBON TETRACHLORIDE	ND	5.4	.58
CHLOROBENZENE	ND	5.4	.5
CHLOROETHANE	ND	5.4	.99
CHLOROFORM	ND	5.4	.56
CHLOROMETHANE	ND	5.4	.57
CIS-1,2-DICHLOROETHENE	ND	5.4	.49
CIS-1,3-DICHLOROPROPENE	ND	5.4	.43
DIBROMOCHLOROMETHANE	ND	5.4	.39
ETHYLBENZENE	ND	5.4	.49
MTBE	ND	11	.81
METHYLENE CHLORIDE	ND	11	3.2
STYRENE	ND	5.4	.37
TETRACHLOROETHENE	ND	5.4	.36
TOLUENE	ND	5.4	.62
TRANS-1,2-DICHLOROETHENE	ND	5.4	.51
TRANS-1,3-DICHLOROPROPENE	ND	5.4	.48
TRICHLOROETHENE	ND	5.4	.66
VINYL ACETATE	ND	54	.89
VINYL CHLORIDE	ND	5.4	.63
XYLENES	ND	5.4	1.2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	125	52-149
BROMOFLUOROBENZENE	83	65-135
TOLUENE-D8	98	65-135

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

Client	: IT CORPORATION	Date Collected:	06/13/00
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	06/13/00
Batch No.	: 00F058	Date Extracted:	06/15/00 09:34
Sample ID:	18609-3111	Date Analyzed:	06/15/00 09:34
Lab Samp ID:	F058-21	Dilution Factor:	1
Lab File ID:	RFV367	Matrix :	SOIL
Ext Btch ID:	VOF3301	% Moisture :	7.3
Calib. Ref.:	RFV356	Instrument ID :	T-001

PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.4	.37
1,1,2,2-TETRACHLOROETHANE	ND	5.4	.8
1,1,2-TRICHLOROETHANE	ND	5.4	.71
1,1-DICHLOROETHANE	ND	5.4	.57
1,1-DICHLOROETHENE	ND	5.4	.52
1,2-DICHLOROETHANE	ND	5.4	1.1
1,2-DICHLOROPROPANE	ND	5.4	.59
2-BUTANONE	ND	54	1.6
2-CHLOROETHYLVINYLETHER	ND	54	.8
2-HEXANONE	ND	54	1.6
4-METHYL-2-PENTANONE	ND	54	3
ACETONE	ND	54	3.1
BENZENE	ND	5.4	.57
BROMODICHLOROMETHANE	ND	5.4	.46
BROMOFORM	ND	5.4	.64
BROMOMETHANE	ND	5.4	3.9
CARBON DISULFIDE	ND	11	.36
CARBON TETRACHLORIDE	ND	5.4	.58
CHLOROBENZENE	ND	5.4	.5
CHLOROETHANE	ND	5.4	.99
CHLOROFORM	ND	5.4	.57
CHLOROMETHANE	ND	5.4	.57
CIS-1,2-DICHLOROETHENE	ND	5.4	.5
CIS-1,3-DICHLOROPROPENE	ND	5.4	.43
DIBROMOCHLOROMETHANE	ND	5.4	.4
ETHYLBENZENE	ND	5.4	.5
MTBE	ND	11	.82
METHYLENE CHLORIDE	ND	11	3.3
STYRENE	ND	5.4	.37
TETRACHLOROETHENE	ND	5.4	.36
TOLUENE	ND	5.4	.62
TRANS-1,2-DICHLOROETHENE	ND	5.4	.51
TRANS-1,3-DICHLOROPROPENE	ND	5.4	.49
TRICHLOROETHENE	ND	5.4	.66
VINYL ACETATE	ND	54	.9
VINYL CHLORIDE	ND	5.4	.63
XYLENES	ND	5.4	1.2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	122	52-149
BROMOFLUOROBENZENE	86	65-135
TOLUENE-D8	100	65-135

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

the IT group

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

CHAIN-OF-CUSTODY RECORD

LABORATORY COPY

A 12024

FORM 0019 REV 9-99

Site 823- Pipe Pull (UST67A/B)

LAB COORDINATOR: M. Concepcion	LAB COORDINATOR'S PHONE: 949-660-7550	LAB COORDINATOR'S FAX: 949-475-5433	LABORATORY SERVICE ID: F058	LABORATORY CONTACT: EMAX	MAIL REPORT (COMPANY NAME): IT Corp
PROJECT NAME: El Toro - D070	PROJECT LOCATION: MCAS El Toro, CA	PROJECT NUMBER: 918609	LABORATORY PHONE: 310-618-8889	LABORATORY FAX: 310-618-0818	RECIPIENT NAME: Wayne Ishida
PROJECT CONTACT: M. Concepcion	PROJECT PHONE NUMBER: 949-451-1667	PROJECT FAX: 949-451-1672	LABORATORY ADDRESS: 1633 630 Maple Ave.		ADDRESS: 3347 Michelson #200
PROJECT ADDRESS: —	CITY, STATE AND ZIP CODE: —	CLIENT: SWDIV	CITY, STATE AND ZIP CODE: Torrance, CA		CITY, STATE AND ZIP CODE: Irvine, CA 92612
PROJECT MANAGER: B. Sedlak	PROJECT MANAGER'S PHONE: 949-660-5446	PROJECT MANAGER'S FAX: 949-451-1672			

Item	Sample Identifier	Matrix	Date 2000	Time	Preserved	# of Cont.	QC Level	T.A.T.	Analyses: TPH (GRO)	TPH-Diesel	TRPH (HFG)	8260					Comments
1	18609-3109	S	6-13	1220	4oc	1	3	5day	X	X	X	X					
2	18609-3110	S	6-13	1225	4oc	1	3	5day	X	X	X	X					
3	18609-3111	S	6-13	1230	4oc	1	3	5day	X	X	X	X					
4																	
5																	
6																	
7																	
8																	
9																	
10																	

W.S. 6-13-00

SAMPLES COLLECTED BY: W. Jefferson

COURIER AND AIR BILL NUMBER: Courier

COOLER TEMPERATURE UPON RECEIPT:

RELINQUISHED BY	RECEIVED BY	DATE	TIME	SAMPLE'S CONDITION UPON RECEIPT
Wayne Ishida / Jeffersen				

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

Site 823 - Pipe Pull

Sample Point Location	Sample Type: G	C	F	QC
UST 67A/B - Pipe 1 @ 45 ft	X			
(2) UST 67A/B - Pipe 2 @ 45 ft	X			
(3) UST 67A/B - Pipe 3 @ 16 ft	X			

Comments: due 6/21/00

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

NETHOD 418.1
TOTAL RECOVERABLE PETROLEUN HYDROCARBONS
TRPH mg/kg

Client : IT CORPORATION
Project : MCAS EL TORO/18609/0.0. 70
Batch No. : 00F058

Matrix : SOIL
Instrument ID : T018

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
18609-3093	F058-03	490	10	13.6	116	48	06/15/0014:35	06/14/0017:30	TRF006S-8	TRF009C	TRF006S	06/13/00	06/13/00
18609-3094	F058-04	ND	1	13.9	11.6	4.82	06/15/0014:40	06/14/0017:30	TRF006S-9	TRF009C	TRF006S	06/13/00	06/13/00
18609-3095	F058-05	19	1	14.2	11.7	4.84	06/15/0014:45	06/14/0017:30	TRF006S-10	TRF009C	TRF006S	06/13/00	06/13/00
18609-3096	F058-06	37	1	11.2	11.3	4.67	06/15/0014:50	06/14/0017:30	TRF006S-11	TRF009C	TRF006S	06/13/00	06/13/00
18609-3097	F058-07	ND	1	12.8	11.5	4.76	06/15/0014:55	06/14/0017:30	TRF006S-12	TRF009C	TRF006S	06/13/00	06/13/00
18609-3098	F058-08	ND	1	16.6	12	4.98	06/15/0015:10	06/14/0017:30	TRF006S-15	TRF010C	TRF006S	06/13/00	06/13/00
18609-3099	F058-09	190	1	15.7	11.9	4.92	06/15/0015:15	06/14/0017:30	TRF006S-16	TRF010C	TRF006S	06/13/00	06/13/00
18609-3100	F058-10	ND	1	14.6	11.7	4.86	06/15/0015:20	06/14/0017:30	TRF006S-17	TRF010C	TRF006S	06/13/00	06/13/00
18609 3101	F058-11	ND	1	8.1	10.9	4.52	06/15/0015:25	06/14/0017:30	TRF006S-18	TRF010C	TRF006S	06/13/00	06/13/00
18609-3102	F058-12	ND	1	12.8	11.5	4.76	06/15/0015:30	06/14/0017:30	TRF006S-19	TRF010C	TRF006S	06/13/00	06/13/00
18609-3103	F058-13	ND	1	11.7	11.3	4.7	06/15/0015:35	06/14/0017:30	TRF006S-20	TRF010C	TRF006S	06/13/00	06/13/00
18609-3104	F058-14	46	1	12.4	11.4	4.74	06/15/0015:40	06/14/0017:30	TRF006S-21	TRF010C	TRF006S	06/13/00	06/13/00
18609-3105	F058-15	ND	1	13.5	11.6	4.8	06/15/0015:45	06/14/0017:30	TRF006S-22	TRF010C	TRF006S	06/13/00	06/13/00
18609-3106	F058-16	130	1	12.2	11.4	4.73	06/15/0015:50	06/14/0017:30	TRF006S-23	TRF010C	TRF006S	06/13/00	06/13/00
18609-3107	F058-17	ND	1	11.1	11.2	4.67	06/15/0015:55	06/14/0017:30	TRF006S-24	TRF010C	TRF006S	06/13/00	06/13/00
18609-3108	F058-18	45	1	9.5	11	4.59	06/15/0016:10	06/14/0017:30	TRF006S-27	TRF011C	TRF006S	06/13/00	06/13/00
18609-3109	F058-19	ND	1	4.6	10.5	4.35	06/15/0016:15	06/14/0017:30	TRF006S-28	TRF011C	TRF006S	06/13/00	06/13/00
18609-3110	F058-20	ND	1	7.0	10.8	4.46	06/15/0016:20	06/14/0017:30	TRF006S-29	TRF011C	TRF006S	06/13/00	06/13/00
18609-3110MS	F058-20M	155	1	7.0	10.8	4.46	06/15/0016:25	06/14/0017:30	TRF006S-30	TRF011C	TRF006S	06/13/00	06/13/00
18609-3110MSD	F058-20S	166	1	7.0	10.8	4.46	06/15/0016:30	06/14/0017:30	TRF006S-31	TRF011C	TRF006S	06/13/00	06/13/00
MBLK1S	TRF006SB	ND	1	NA	10	4.15	06/15/0014:10	06/14/0017:30	TRF006S-3	TRF009C	TRF006S	NA	06/15/00
LCS1S	TRF006SL	149	1	NA	10	4.15	06/15/0014:15	06/14/0017:30	TRF006S-4	TRF009C	TRF006S	NA	06/15/00
18609 3111	F058-21	17	1	7.3	10.8	4.48	06/15/0016:50	06/14/0018:00	TRF007S-35	TRF011S	TRF007S	06/13/00	06/13/00
MBLK2S	TRF007SB	ND	1	NA	10	4.15	06/15/0016:35	06/14/0018:00	TRF007S-32	TRF011S	TRF007S	NA	06/15/00
LCS2S	TRF007SL	149	1	NA	10	4.15	06/15/0016:40	06/14/0018:00	TRF007S-33	TRF011S	TRF007S	NA	06/15/00
LCD2S	TRF007SC	150	1	NA	10	4.15	06/15/0016:45	06/14/0018:00	TRF007S-34	TRF011S	TRF007S	NA	06/15/00

RL: Reporting Limit

METHOD 5/M8015

TOTAL PETROLEUM HYDROCARBONS BY PURGE & TRAP

TPH-G mg/kg

Client : IT CORPORATION
Project : MCAS EL TORO/18609/D.O. 70
Batch No. : 00F058

Matrix : SOIL
Instrument ID : GCT039

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	SURR (%)	DLF	MOIST	PRL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1S	VAF2639B	ND	89	1	NA	1	.02	06/14/0019:21	06/14/0019:21	EF09016A	EF09015A	VAF2639	NA	06/14/00
LCS1S	VAF2639L	2.71	113	1	NA	1	.02	06/14/0019:56	06/14/0019:56	EF09017A	EF09015A	VAF2639	NA	06/14/00
LCD1S	VAF2639C	2.43	116	1	NA	1	.02	06/14/0020:32	06/14/0020:32	EF09018A	EF09015A	VAF2639	NA	06/14/00
MBLK2S	VMF2739B	ND	88	10	NA	10	.2	06/15/0011:05	06/15/0011:05	EF09042A	EF09039A	VMF2739	NA	06/15/00
LCS2S	VMF2739L	28.9	110	10	NA	10	.2	06/15/0011:40	06/15/0011:40	EF09043A	EF09039A	VMF2739	NA	06/15/00
LCD2S	VMF2739C	28	109	10	NA	10	.2	06/15/0012:15	06/15/0012:15	EF09044A	EF09039A	VMF2739	NA	06/15/00
MBLK3S	VAF2839B	ND	89	1	NA	1	.02	06/15/0020:12	06/15/0020:12	EF09056A	EF09048A	VAF2839	NA	06/15/00
LCS3S	VAF2839L	2.41	102	1	NA	1	.02	06/15/0019:01	06/15/0019:01	EF09054A	EF09048A	VAF2839	NA	06/15/00
LCD3S	VAF2839C	2.57	109	1	NA	1	.02	06/15/0019:36	06/15/0019:36	EF09055A	EF09048A	VAF2839	NA	06/15/00
18609-3091	F058-01*	2800	82	1000	6.2	1070	21.3	06/15/0017:50	06/15/0017:50	EF09052A	EF09048A	VMF2739	06/13/00	06/13/00
18609-3092	F058-02	ND	71	1	9.2	1.1	.022	06/15/0003:32	06/15/0003:32	EF09030A	EF09027A	VAF2639	06/13/00	06/13/00
18609-3093	F058-03	ND	102	1	13.6	1.16	.0231	06/15/0004:07	06/15/0004:07	EF09031A	EF09027A	VAF2639	06/13/00	06/13/00
18609-3093MS	F058-03M	2.52	104	1	13.6	1.16	.0231	06/15/0023:41	06/15/0023:41	EF09062A	EF09059A	VAF2839	06/13/00	06/13/00
18609-3093MSD	F058-03S	3.13	114	1	13.6	1.16	.0231	06/16/0000:16	06/16/0000:16	EF09063A	EF09059A	VAF2839	06/13/00	06/13/00
18609-3094	F058-04	ND	92	1	13.9	1.16	.0232	06/15/0004:41	06/15/0004:41	EF09032A	EF09027A	VAF2639	06/13/00	06/13/00
18609-3095	F058-05	ND	88	1	14.2	1.17	.0233	06/15/0005:16	06/15/0005:16	EF09033A	EF09027A	VAF2639	06/13/00	06/13/00
18609-3096	F058-06	ND	85	1	11.2	1.13	.0225	06/15/0005:50	06/15/0005:50	EF09034A	EF09027A	VAF2639	06/13/00	06/13/00
18609-3097	F058-07	ND	84	1	12.8	1.15	.0229	06/15/0006:25	06/15/0006:25	EF09035A	EF09027A	VAF2639	06/13/00	06/13/00
18609-3098	F058-08	ND	105	1	16.6	1.2	.024	06/15/0007:00	06/15/0007:00	EF09036A	EF09027A	VAF2639	06/13/00	06/13/00
18609-3099	F058-09*	300	84	50	15.7	59.3	1.19	06/15/0017:15	06/15/0017:15	EF09051A	EF09048A	VMF2739	06/13/00	06/13/00
18609-3100	F058-10	ND	92	1	14.6	1.17	.0234	06/15/0009:19	06/15/0009:19	EF09040A	EF09039A	VAF2639	06/13/00	06/13/00
18609-3101	F058-11	ND	88	1	8.1	1.09	.0218	06/15/0009:53	06/15/0009:53	EF09041A	EF09039A	VAF2639	06/13/00	06/13/00
18609-3102	F058-12	ND	86	1	12.8	1.15	.0229	06/16/0003:43	06/16/0003:43	EF09069A	EF09059A	VAF2839	06/13/00	06/13/00
18609-3103	F058-13	ND	88	1	11.7	1.13	.0227	06/15/0020:47	06/15/0020:47	EF09057A	EF09048A	VAF2839	06/13/00	06/13/00
18609-3104	F058-14	ND	84	1	12.4	1.14	.0228	06/15/0021:22	06/15/0021:22	EF09058A	EF09048A	VAF2839	06/13/00	06/13/00
18609-3105	F058-15	ND	84	1	13.5	1.16	.0231	06/15/0022:32	06/15/0022:32	EF09060A	EF09059A	VAF2839	06/13/00	06/13/00
18609-3106	F058-16	ND	92	1	12.2	1.14	.0228	06/15/0023:06	06/15/0023:06	EF09061A	EF09059A	VAF2839	06/13/00	06/13/00
18609-3107	F058-17	ND	83	1	11.1	1.12	.0225	06/16/0000:50	06/16/0000:50	EF09064A	EF09059A	VAF2839	06/13/00	06/13/00
18609-3108	F058-18	ND	79	1	9.5	1.1	.0221	06/16/0001:25	06/16/0001:25	EF09065A	EF09059A	VAF2839	06/13/00	06/13/00
18609-3109	F058-19	ND	80	1	4.6	1.05	.021	06/16/0002:00	06/16/0002:00	EF09066A	EF09059A	VAF2839	06/13/00	06/13/00
18609-3110	F058-20	ND	79	1	7.0	1.08	.0215	06/16/0002:34	06/16/0002:34	EF09067A	EF09059A	VAF2839	06/13/00	06/13/00
18609-3111	F058-21	ND	82	1	7.3	1.08	.0216	06/16/0003:09	06/16/0003:09	EF09068A	EF09059A	VAF2839	06/13/00	06/13/00

SURR : Bromofluorobenzene (W)65-135 (S)60-140
PRL : Reporting Limit
E : Value exceed the upper level of the initial calibration
D : Value from dilution
* : Presence of hydrocarbon heavier than Gasoline.

METHOD M8015
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

TPH-D

Client : IT CORPORATION
Project : MCAS EL TORO/186[illegible]5.0. 70
Batch No. : 00F058

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	DSF020SB	ND	79	87	1	NA	10	3.47	06/16/0021:31	06/14/0012:00	TF05013A	TF05035A	DSF020S	NA	06/14/00
LCS1S	DSF020SL	636	86	94	1	NA	10	3.47	06/16/0022:21	06/14/0012:00	TF05014A	TF05035A	DSF020S	NA	06/14/00
LCD1S	DSF020SC	620	86	94	1	NA	10	3.47	06/16/0023:11	06/14/0012:00	TF05015A	TF05035A	DSF020S	NA	06/14/00
MBLK2S	DSF021SB	ND	81	86	1	NA	10	3.47	06/17/0001:40	06/14/0015:45	TF05018A	TF05046A	DSF021S	NA	06/14/00
LCS2S	DSF021SL	585	89	98	1	NA	10	3.47	06/17/0002:29	06/14/0015:45	TF05019A	TF05046A	DSF021S	NA	06/14/00
MBLK3S	DSF024SB	ND	74	86	1	NA	10	3.47	06/16/0015:55	06/16/0014:40	TF05037A	TF05035A	DSF024S	NA	06/16/00
LCS3S	DSF024SL	666	89	100	1	NA	10	3.47	06/16/0019:52	06/16/0014:40	TF05041A	TF05035A	DSF024S	NA	06/16/00
LCD3S	DSF024SC	650	89	99	1	NA	10	3.47	06/16/0020:42	06/16/0014:40	TF05042A	TF05035A	DSF024S	NA	06/16/00
18609-3091	F058-01	5800	DO	DO	10	6.2	107	37	06/16/0012:35	06/14/0015:45	TF05033A	TF05024A	DSF021S	06/13/00	06/13/00
18609-3092	F058-02R **	59	89	99	1	9.2	11	3.82	06/17/0006:37	06/16/0014:40	TF05054A	TF05046A	DSF024S	06/13/00	06/13/00
18609-3093	F058-03R	ND	91	108	1	13.6	11.6	4.02	06/17/0007:27	06/16/0014:40	TF05055A	TF05046A	DSF024S	06/13/00	06/13/00
18609-3094	F058-04	ND	82	97	1	13.9	11.6	4.03	06/16/0013:25	06/14/0015:45	TF05034A	TF05024A	DSF021S	06/13/00	06/13/00
18609-3095	F058-05	ND	86	88	1	14.2	11.7	4.04	06/15/0020:53	06/14/0015:45	TF05014A	TF05013A	DSF021S	06/13/00	06/13/00
18609-3096	F058-06	ND	87	98	1	11.2	11.3	3.91	06/15/0021:43	06/14/0015:45	TF05015A	TF05013A	DSF021S	06/13/00	06/13/00
18609-3109	F058-19	ND	99	124	1	4.6	10.5	3.64	06/16/0011:45	06/14/0015:45	TF05032A	TF05024A	DSF021S	06/13/00	06/13/00
18609-3110	F058-20R	ND	88	104	1	7.0	10.8	3.73	06/17/0008:16	06/16/0014:40	TF05056A	TF05046A	DSF024S	06/13/00	06/13/00
18609-3110MS	F058-20U	631	94	110	1	7.0	10.8	3.73	06/17/0009:06	06/16/0014:40	TF05057A	TF05046A	DSF024S	06/13/00	06/13/00
18609-3110MSD	F058-20V	610	92	113	1	7.0	10.8	3.73	06/17/0011:34	06/16/0014:40	TF05060A	TF05058A	DSF024S	06/13/00	06/13/00
18609-3111	F058-21	ND	90	104	1	7.3	10.8	3.74	06/16/0015:05	06/14/0012:00	TF05036A	TF05035A	DSF020S	06/13/00	06/13/00

QC LIMIT : (SOIL) 60-140 55-150
QC LIMIT : (WATER) 65-135 60-145
SURR1 : Bromobenzene
SURR2 : Hexacosane
RL : Reporting Limit
** : Chromatogram shows a non-typical fuel pattern, calculated and reported as Diesel.

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

Client	: IT CORPORATION	Date Collected:	06/13/00
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	06/13/00
Batch No.	: 00F058	Date Extracted:	06/15/00 08:26
Sample ID:	18609-3109	Date Analyzed:	06/15/00 08:26
Lab Samp ID:	F058-19	Dilution Factor:	1
Lab File ID:	RFV365	Matrix :	SOIL
Ext Btch ID:	VOF3301	% Moisture :	4.6
Calib. Ref.:	RFV356	Instrument ID :	T-001

PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.2	.36
1,1,2,2-TETRACHLOROETHANE	ND	5.2	.77
1,1,2-TRICHLOROETHANE	ND	5.2	.69
1,1-DICHLOROETHANE	ND	5.2	.55
1,1-DICHLOROETHENE	ND	5.2	.5
1,2-DICHLOROETHANE	ND	5.2	1
1,2-DICHLOROPROPANE	ND	5.2	.57
2-BUTANONE	ND	52	1.6
2-CHLOROETHYLVINYLETHER	ND	52	.78
2-HEXANONE	ND	52	1.5
4-METHYL-2-PENTANONE	ND	52	2.9
ACETONE	ND	52	3
BENZENE	ND	5.2	.55 U
BROMODICHLOROMETHANE	ND	5.2	.44
BROMOFORM	ND	5.2	.62
BROMOMETHANE	ND	5.2	3.8
CARBON DISULFIDE	ND	10	.35
CARBON TETRACHLORIDE	ND	5.2	.56
CHLOROBENZENE	ND	5.2	.49
CHLOROETHANE	ND	5.2	.97
C[illegible]OFORM	ND	5.2	.55
[illegible]METHANE	ND	5.2	.55
[illegible]2-DICHLOROETHENE	ND	5.2	.48
CIS-1,3-DICHLOROPROPENE	ND	5.2	.42
DIBROMOCHLOROMETHANE	ND	5.2	.38
ETHYLBENZENE	ND	5.2	.48 U
MTBE	ND	10	.79 U
METHYLENE CHLORIDE	ND	10	3.2
STYRENE	ND	5.2	.36
TETRACHLOROETHENE	ND	5.2	.35
TOLUENE	ND	5.2	.6 U
TRANS-1,2-DICHLOROETHENE	ND	5.2	.5
TRANS-1,3-DICHLOROPROPENE	ND	5.2	.47
TRICHLOROETHENE	ND	5.2	.64
VINYL ACETATE	ND	52	.87
VINYL CHLORIDE	ND	5.2	.61
XYLENES	ND	5.2	1.2 U

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	116	52-149
BROMOFLUOROBENZENE	92	65-135
TOLUENE-D8	102	65-135

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

Client	: IT CORPORATION	Date Collected:	06/13/00
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	06/13/00
Batch No.	: 00F058	Date Extracted:	06/15/00 09:00
Sample ID:	18609-3110	Date Analyzed:	06/15/00 09:00
Lab Samp ID:	F058-20	Dilution Factor:	1
Lab File ID:	RFV366	Matrix :	SOIL
Ext Btch ID:	VOF3301	% Moisture :	7.0
Calib. Ref.:	RFV356	Instrument ID :	T-001

PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.4	.37
1,1,2,2-TETRACHLOROETHANE	ND	5.4	.79
1,1,2-TRICHLOROETHANE	ND	5.4	.71
1,1-DICHLOROETHANE	ND	5.4	.56
1,1-DICHLOROETHENE	ND	5.4	.52
1,2-DICHLOROETHANE	ND	5.4	1.1
1,2-DICHLOROPROPANE	ND	5.4	.59
2-BUTANONE	ND	54	1.6
2-CHLOROETHYLVINYLETHER	ND	54	.8
2-HEXANONE	ND	54	1.6
4-METHYL-2-PENTANONE	ND	54	3
ACETONE	ND	54	3.1
BENZENE	ND	5.4	.57
BROMODICHLOROMETHANE	ND	5.4	.45
BROMOFORM	ND	5.4	.64
BROMOMETHANE	ND	5.4	3.9
CARBON DISULFIDE	ND	11	.36
CARBON TETRACHLORIDE	ND	5.4	.58
CHLOROBENZENE	ND	5.4	.5
CHLOROETHANE	ND	5.4	.99
CHLOROFORM	ND	5.4	.56
CHLOROMETHANE	ND	5.4	.57
CIS-1,2-DICHLOROETHENE	ND	5.4	.49
CIS-1,3-DICHLOROPROPENE	ND	5.4	.43
DIBROMOCHLOROMETHANE	ND	5.4	.39
ETHYLBENZENE	ND	5.4	.49
MTBE	ND	11	.81
METHYLENE CHLORIDE	ND	11	3.2
STYRENE	ND	5.4	.37
TETRACHLOROETHENE	ND	5.4	.36
TOLUENE	ND	5.4	.62
TRANS-1,2-DICHLOROETHENE	ND	5.4	.51
TRANS-1,3-DICHLOROPROPENE	ND	5.4	.48
TRICHLOROETHENE	ND	5.4	.66
VINYL ACETATE	ND	54	.89
VINYL CHLORIDE	ND	5.4	.63
XYLENES	ND	5.4	1.2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	125	52-149
BROMOFLUOROBENZENE	83	65-135
TOLUENE-D8	98	65-135

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

METHOD 5030A/8260A
VOLATILE ORGANICS BY GC/MS

Client	: IT CORPORATION	Date Collected:	06/13/00
Project	: MCAS EL TORO/18609/D.O. 70	Date Received:	06/13/00
Batch No.	: 00F058	Date Extracted:	06/15/00 09:34
Sample ID:	18609-3111	Date Analyzed:	06/15/00 09:34
Lab Samp ID:	F058-21	Dilution Factor:	1
Lab File ID:	RFV367	Matrix	: SOIL
Ext Btch ID:	VOF3301	% Moisture	: 7.3
Calib. Ref.:	RFV356	Instrument ID	: T-001

PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.4	.37
1,1,2,2-TETRACHLOROETHANE	ND	5.4	.8
1,1,2-TRICHLOROETHANE	ND	5.4	.71
1,1-DICHLOROETHANE	ND	5.4	.57
1,1-DICHLOROETHENE	ND	5.4	.52
1,2-DICHLOROETHANE	ND	5.4	1.1
1,2-DICHLOROPROPANE	ND	5.4	.59
2-BUTANONE	ND	54	1.6
2-CHLOROETHYLVINYLETHER	ND	54	.8
2-HEXANONE	ND	54	1.6
4-METHYL-2-PENTANONE	ND	54	3
ACETONE	ND	54	3.1
BENZENE	ND	5.4	.57
BROMODICHLOROMETHANE	ND	5.4	.46
BROMOFORM	ND	5.4	.64
BROMOMETHANE	ND	5.4	3.9
CARBON DISULFIDE	ND	11	.36
CARBON TETRACHLORIDE	ND	5.4	.58
CHLOROBENZENE	ND	5.4	.5
CHLOROETHANE	ND	5.4	.99
CHLOROFORM	ND	5.4	.57
METHANE	ND	5.4	.57
1,2-DICHLOROETHENE	ND	5.4	.5
CIS-1,3-DICHLOROPROPENE	ND	5.4	.43
DIBROMOCHLOROMETHANE	ND	5.4	.4
ETHYLBENZENE	ND	5.4	.5
MTBE	ND	11	.82
METHYLENE CHLORIDE	ND	11	3.3
STYRENE	ND	5.4	.37
TETRACHLOROETHENE	ND	5.4	.36
TOLUENE	ND	5.4	.62
TRANS-1,2-DICHLOROETHENE	ND	5.4	.51
TRANS-1,3-DICHLOROPROPENE	ND	5.4	.49
TRICHLOROETHENE	ND	5.4	.66
VINYL ACETATE	ND	54	.9
VINYL CHLORIDE	ND	5.4	.63
XYLENES	ND	5.4	1.2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	122	52-149
BROMOFLUOROBENZENE	86	65-135
TOLUENE-D8	100	65-135

PRL: Project Reporting Limit
* : Out side of QC Limit
J : An estimated value between PRL and MDL
E : Value exceed the upper level of the initial calibration
B : Found in the associated blank
D : Value from dilution analysis

Appendix H
Soil Boring Logs

Geologic Log/Well Construction SB-01

Project **MCAS/EL TORO**		Drilling Company BC2 ENVIRONMENTAL CO.	
Project Number **918609**		Drill Rig CME95	Begin Drilling 8/7/00
Client SWDIV		Driller DIEGO	End Drilling 8/7/00
Location **EL TORO-UST 67 A&B** VERTICAL BORING		Drill Method HOLLOW STEM AUGER	Well Completion Date 8/7/00
Geologist J. Erickson	Checked By L. Changkuon	Date Drilled 8/7/00	
Borehole Diameter 2 INCHES	Total Depth of Borehole 61 FEET bgs	Depth to Water NA	

LITHOLOGICAL DESCRIPTION	Depth (feet)	Soil Group	Graphic Log	Samples	PID/FID (ppm)	Blows/6 in.	Recovery (inches)
Apparent fill material. Silty SAND (SM) and Sandy Silt (ML): Brown (10YR 4/3), 50% sand (very fine), 45% silt, 5% gravel, probable fill, medium dense, no odor.	0–6	SM-ML			0	6 9 13	6 6 6
18609-3391 Sample collected at 15.0-15.5 feet bgs. Sandy Silt (ML): Brown (10YR 4/3), 60% silt, 40% fine sand, caliche, slighty moist, low plasticity, very stiff, no odor.	14–16	ML			0	10 13 15	6 6 6
	18–22	ML			0	10 14 17	6 6 6
18609-3392 Sample collected at 30.0-30.5 feet bgs. Silty Clay (CL): Dark yellowish brown (10YR 4/4), 60% clay, 40% silt, mediuim plasticity, infilled root holes, slightly moist, very stiff, no odor.	30	CL			0	12 15 18	6 6 6
	36–38	SM					

WELL DETAIL: GROUT (CEMENT-BENTONITE MIXTURE)

OHM Remediation Services Corp.

NOTE: This summary applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.

Oct 26, - 13:23:10 I:\OHM CORP\PROJECTS\18609\LOGS\Ust67A&B\SB-01-1.dwg

Geologic Log/Well Construction SB-01

Project **MCAS-EL TORO-UST 67 A&B** Project No. **918609**

DESCRIPTION	Depth (feet)	Soil Group	Graphic Log	Samples	PID/FID (ppm)	Blows/6 In.	Recovery (6 inches)	WELL DETAIL
18609-3393 Sample collected at 40.5-41 feet bgs. Silty SAND (SM): Yellowish brown (10YR 5/4), slightly moist, low plasticity, 80% fine sand, 20% silt, no odor, medium dense.	40	SM			0	13 13 19	6 6 6	GROUT (CEMENT-BENTONITE MIXTURE)
	42							
	44							
	46							
	48							
	50							
	52							
	54							
	56	CL						
18609-3395 Sample collected at 59.5-60.0 feet bgs. (Duplicate sample)	58							
18609-3394 Sample collected at 60-60.5 feet bgs. Sandy CLAY (CL): Dark yellowish brown (10YR 4/4), high plasticity, 90% clay, 5% silt, 5% very fine sand, no odor, very stiff.	60				0	15 19 24	6 6 6	
End of boring at 61.0 feet.	62							
	64							
	66							
	68							
	70							
	72							
	74							
	76							
	78							
	80							

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Oct 26, 2000

OHM Remediation Services Corp.

Geologic Log/Well Construction ASB-02

Project **MCAS/EL TORO**		Drilling Company BC2 ENVIRONMENTAL CO.	
Project Number **918609**		Drill Rig CME95	Begin Drilling 8/7/00
Client SWDIV		Driller DIEGO	End Drilling 8/7/00
Location **EL TORO-UST 67 A&B** ANGLE BORING		Drill Method HOLLOW STEM AUGER	Well Completion Date 8/7/00
Geologist J. Erickson	Checked By L. Changkuon	Date Drilled 8/7/00	
Borehole Diameter 2 INCHES	Total Depth of Borehole 50.5 FEET bgs	Depth to Water NA	

LITHOLOGICAL DESCRIPTION	Depth (feet)	Soil Group	Graphic Log	Samples	PID/FID (ppm)	Blows/6 in.	Recovery (inches)	WELL DETAIL
Silty SAND (SM): Brown (10YR 4/3), 50% sand, 50% silt, disturbed, low plasticity, no odor.	0–6	SM			0	- - -	6 6 6	GROUT (CEMENT-BENTONITE MIXTURE)
18609-3397 Sample collected at 15.0-15.5 feet bgs. Silty SAND (SM): Pale brown (10YR 6/3), 60% very fine sand, 40% silt, low plasticity, no odor.	14–16	SM			0	- - -	6 6 6	
18609-3398 Sample collected at 23-23.5 feet bgs. Sandy SILT (ML): Brown (10YR 4/3), 60% silt, 40% sand, low plasticity, no odor.	22–24	ML			0	- - -	6 6 6	
18609-3399 Sample collected at 32-32.5 feet bgs. Silty Clay (CL): Yellowish brown (10YR 5/4), 60% clay, 40% silt, medium plasticity, no odor, slightly moist.	32	CL			0	- - -	6 6 6	
	40	SM				-	6	

OHM Remediation Services Corp.

NOTE: This summary applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.

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Geologic Log/Well Construction ASB-02

Project **MCAS-EL TORO-UST 67 A&B** Project No. **918609**

DESCRIPTION	Depth (feet)	Soil Group	Graphic Log	Samples	PID/FID (ppm)	Blows/6 In.	Recovery (6 inches)	WELL DETAIL
18609-3400 Sample collected at 40-40.5 feet bgs. Silty SAND (SM): Yellowish brown (10YR 5/4), slightly moist, low plasticity, 80% fine sand, 20% silt, no odor, medium dense.	40	SM			0	- -	6 6	GROUT (CEMENT-BENTONITE MIXTURE)
	42							
	44							
	46	ML						
18609-3401 Sample collected at 50-50.5 feet bgs. Fine sandy SILT (ML): Dark yellowish brown (10YR 4/6), 60% silt, 40% sand, medium plasticity, no odor, slightly moist.	48					-	6	
	50				0	- -	6 6	
End of boring at 50.5 feet.	52							
	54							
	56							
	58							
	60							
	62							
	64							
	66							
	68							
	70							
	72							
	74							
	76							
	78							
	80							

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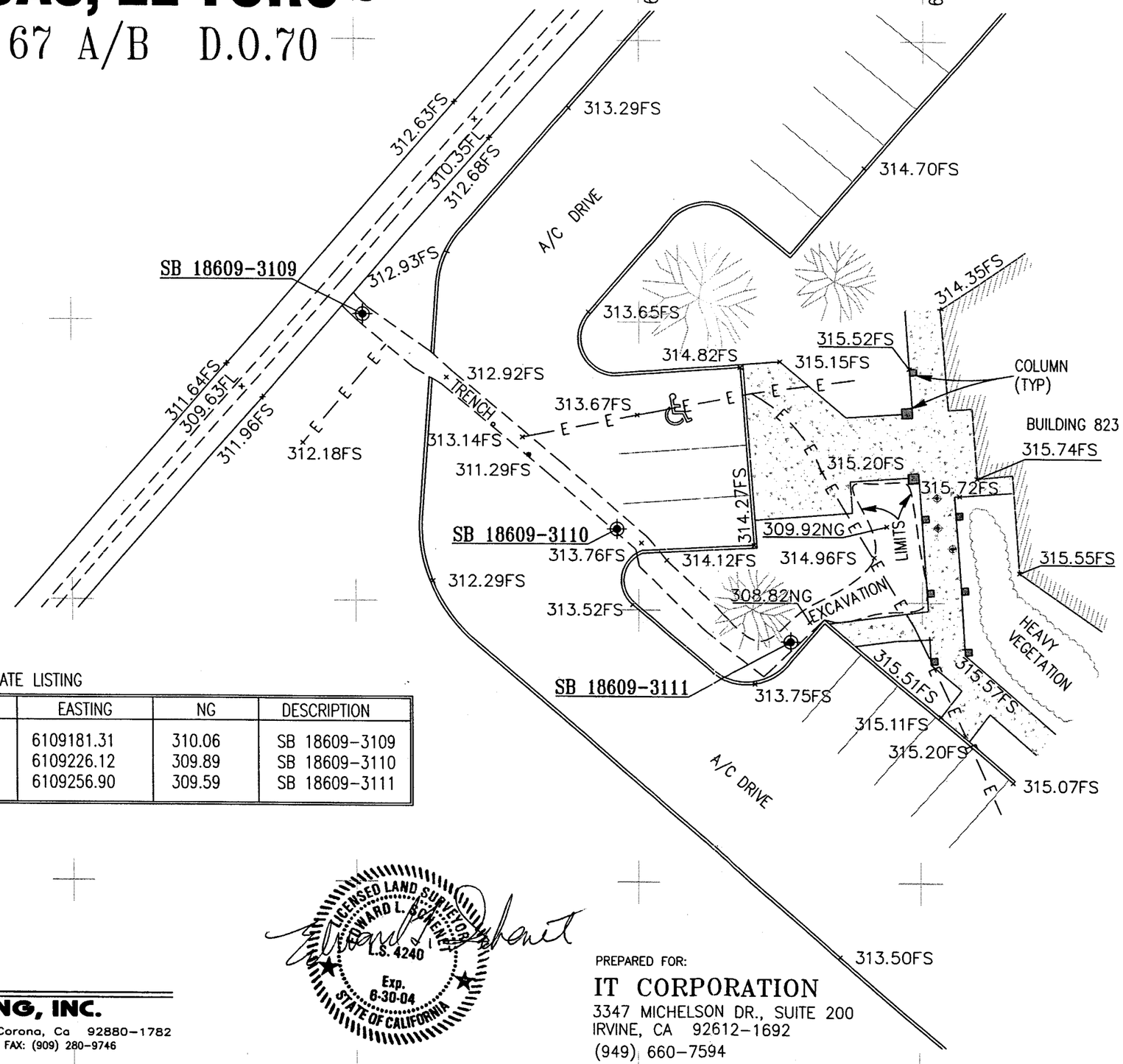
Appendix I
Land Survey Data

MCAS, EL TORO

UST 67 A/B D.0.70



Graphic Scale

20 0 10 20

(In Feet)

1 inch = 20 ft.

SAMPE COORDINATE LISTING

NORTHING	EASTING	NG	DESCRIPTION
2195521.21	6109181.31	310.06	SB 18609-3109
2195482.93	6109226.12	309.89	SB 18609-3110
2195462.86	6109256.90	309.59	SB 18609-3111

LEGEND

SAMPLE POINTS

NG NATURAL GROUND

CONCRETE

LICENSED LAND SURVEYOR EDWARD L. BOWENS L.S. 4240 Exp. 6-30-04 STATE OF CALIFORNIA

PREPARED FOR:

IT CORPORATION
3347 MICHELSON DR., SUITE 200
IRVINE, CA 92612-1692
(949) 660-7594

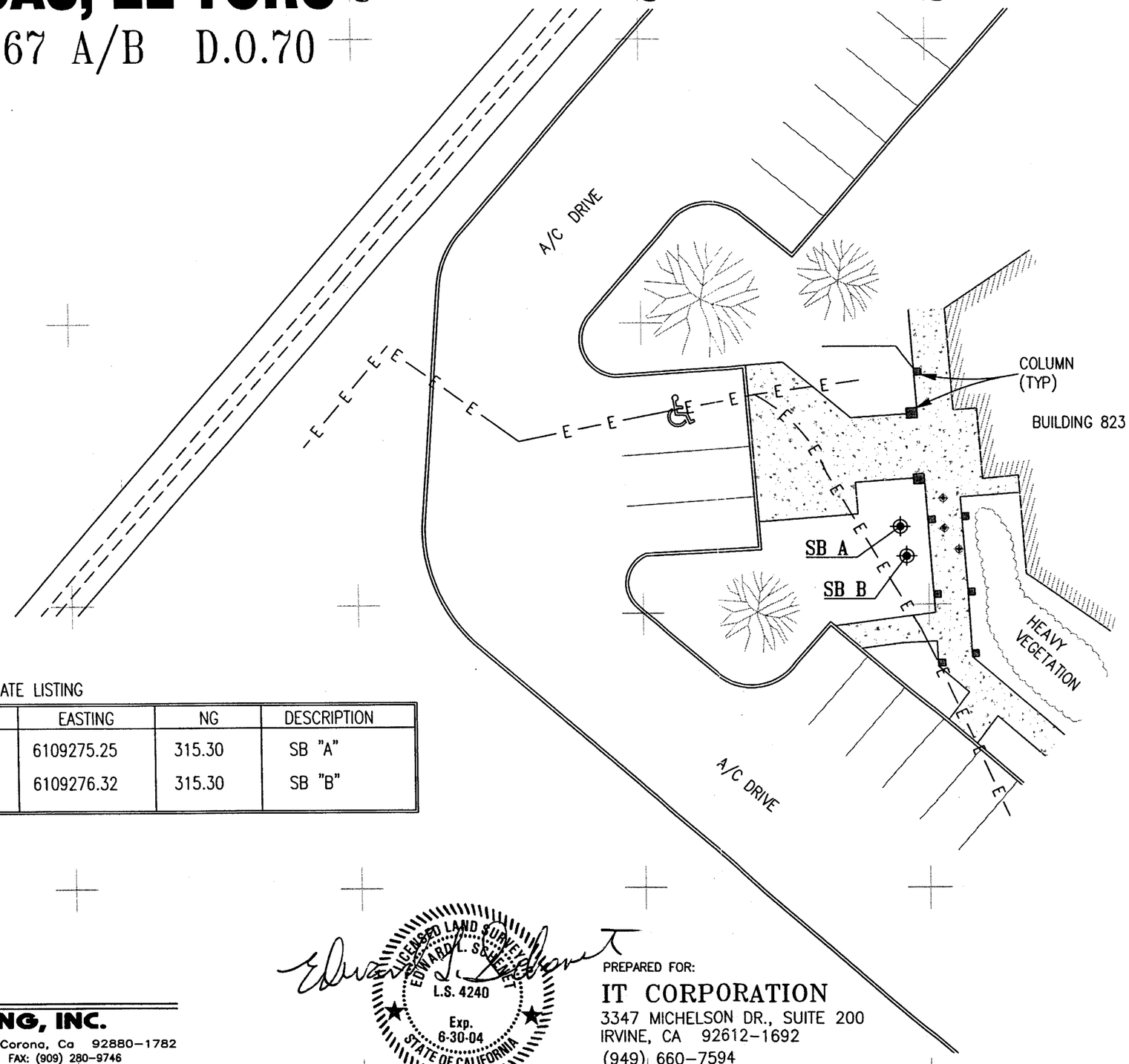
CAL VADA SURVEYING, INC.
Business Center Dr, Corona, Ca 92880-1782
PHONE: (909) 280-9960 FAX: (909) 280-9746

JOB NO. 97102-UST67A/B

DATE OF SURVEY: 6-19-00

MCAS, EL TORO

UST 67 A/B D.0.70



SAMPE COORDINATE LISTING

NORTHING	EASTING	NG	DESCRIPTION
2195483.79	6109275.25	315.30	SB "A"
2195478.55	6109276.32	315.30	SB "B"

Graphic Scale

20 0 10 20

(In Feet)

1 inch = 20 ft.

LEGEND

SAMPLE POINTS

NG NATURAL GROUND

CONCRETE

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

JOB NO. 97102-UST67A/B-2

LICENSED LAND SURVEYOR
EDWARD L. SCHMIDT
L.S. 4240
Exp. 6-30-04
STATE OF CALIFORNIA

PREPARED FOR:

IT CORPORATION
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IRVINE, CA 92612-1692
(949) 660-7594

DATE OF SURVEY: 8-10-00