



OHM Remediation Services Corp.

3347 Michelson Drive, Suite 200

Irvine, CA 92612-1692

Tel. 949.261.6441

Fax. 949.474.8309

A Member of The IT Group

M60050.000235
MCAS EL TORO
SSIC #5090.3

October 19, 1999

Ms. Bozier H. Demaree, Code 02R.BD
Contracting Officer
Naval Facilities Engineering Command, Southwest Division
1220 Pacific Highway
San Diego, California 92132-5187

Attn: Ms. Lynn Marie Hornecker

**Re: Tank Closure Report
Underground Storage Tank (UST) 155 at
Marine Corps Air Station El Toro, California
SWDIV Contract No. N68711-93-D-1459
DCN SW 7256, Delivery Order No. 70**

This Tank Closure Report summarizes the field activities conducted and associated with the removal of underground storage tank (UST) at Building 155. OHM Remediation Services Corp. (OHM) removed one UST designated as UST 155 from the Building 155 site at Marine Corps Air Station, El Toro, California (hereinafter referred to as "the Station"). The location of the Station is shown on Figure 1-1, Facility Location Map.

Building 155 is located in the southwest quadrant of the Station, south of Bee Canyon Wash near the cross section of South Marine Way and "L" street. An unpaved fenced area surrounds Building 155 and most recently was used as Grounds Equipment Storage shed. Building 155 was a pump house for the former water distribution system. The UST 155 was located approximately nine feet south of Building 155 in an unpaved area. Building 155 and the UST 155 locations are shown on Figure 1-2, Location Map.

Summary of Field Activities

Field activities were conducted in accordance with the approved *Draft Work Plan, Remediation of Various Underground Tanks at the Marine Corps Air Station El Toro, California, OHM 1995*. Details of the UST 155 field activities are described below.

Review of Station Maps

OHM consulted with Station Resident Officer in Charge of Construction (ROICC) for Building 155-construction map. Station ROICC provided following maps for Building 155



OHM Remediation Services Corp.

A Subsidiary of OHM Corporation

OHM TRANSMITTAL/DELIVERABLE RECEIPT

CONTRACT N68711-93-D-1459

DOCUMENT CONTROL NO: SW7256

TO: Contracting Officer
Naval Facilities Engineering Command
Southwest Division
Bozier H. Demaree, Code 02R1.BD
1220 Pacific Highway
San Diego, California 92132-5190

Date: 20-Oct-99

D.O.: 70

Location: MCAS EL TORO

FROM:

James Franklin FOR
Stewart Bornhoft, Program Manager

Edwin G. Bond, Contracts Manager

DESCRIPTION OF ENCLOSURE: *Tank Closure Report, Underground Storage Tank (UST) 155, dated October 19, 1999*

TYPE: Contract Deliverable () D. O. Deliverable (X) Request for Change () Other ()
(\$) (Tech)

VERSION: N/A

REVISION: 0

ADMIN RECORD: Yes (X) No () Category () Confidential ()

SCHEDULED DELIVERY DATE: 20-Oct-99 **ACTUAL DELIVERY DATE:** 20-Oct-99

NUMBER OF COPIES SUBMITTED TO THE NAVY: 1/O, 4/C, 4/E

[AS REQUIRED/DIRECTED BY THE (SOW)]

COPIES TO:

SWDIV

OHM

OTHER

Name, Code

Name, Location

Name, Company, Location

L. Holloway, 3EN.LLH (1C/1E)

File (1C/1E)

El Toro Environ. Dept 3E

L. Hornecker, 5BME.LH (1C/1E)

Chron (1C)

D. Silva, 04N.DS (AR/2E)

W. Sedlak, Irv (1C/1E)

G. Tinker, 05BM.GT (1C)

D. Rawal, Irv (1C/1E)

Date/Time Received: 10/20/99

Silva, Diane C

From: Hornecker, Lynn M
Sent: Monday, October 25, 1999 10:46 AM
To: Silva, Diane C
Subject: ADMIN RECORD-EL TORO

Hello Diane,

I recommended that the OHM Closure Report for UST 155 be placed in the Admin Record because UST 155 was located within the investigation boundary of Installation Restoration Program Site 24 - the VOC Source Area, MCAS El Toro.

The UST 155 Closure Report was sent to the Orange County Health Care Agency (the oversight agency) last week. I can provide a copy of the SWDIV cover letter if necessary. In the past, I have just submitted agency responses to our cover letters for tanks and RCRA sites. Thank you very much.

V/R
Lynn Marie Hornecker
(619) 532-4162/Fax (619) 532-4160
25Oct99

- Water Supply Key Plan – Building 155 (5, Nov 1942), Drawing No. 224411
- Site Plan Reservoirs No. 1 and 2. Pumping Plant No. 1 Standby Unit, Drawing No. 224412
- Standby Unit Mechanical Details, Drawing No. 224416

OHM reviewed these drawings and confirmed that UST 155 was a steel, 280 gallon UST used for storage of fuel for standby units associated with Building 155 for a water distribution system. OHM used these drawing to further investigate location of UST 155 and associated utilities. Copies of these drawings are included in Appendix A, Station Drawings.

Permitting and Utility Investigation

Prior to initiating field activities, OHM completed an Orange County Health Care Agency (OCHCA) Facility Modification Application and received approval (Plan Check No. 99-PM-066) for the removal of UST 155. The OCHCA Facility Modification Application and approval form is provided as Appendix B.

A geophysical survey of the UST 155 site was conducted by OHM subcontractor, Spectrum Geophysical Services Inc., to locate the underground utilities in the area. The Geophysical Survey report is provided in Appendix C.

Site Inspection

OHM personnel conducted a site inspection on April 20, 1999 to visually inspect the UST 155 area. UST 155 location was observed adjacent to the south side of Building 155. No visible stains were observed on the surrounding soil. OHM observed a former sand blast unit inside Building 155 and grit/sand most likely generated from the sand blast unit was observed on the surrounding soil in the vicinity of UST 155. A copy of the Site Inspection Log is included in Appendix D, Site Inspection Log.

UST Gauging and Removal

Per Station drawings UST 155 was located and identified as a 280-gallon steel UST used for storage of fuel. UST 155 was gauged on April 21, 1999. OHM observed that there was no manhole cover or fill port associated with UST 155. In addition, investigation using a field probe revealed that UST 155 was most likely filled with sand/soil and the UST may have deteriorated over the years and might not be intact.

OHM removed UST 155 on July 22, 1999 in the presence of an OCHCA field inspector. UST 155 was not intact and pieces of steel (mainly one big piece and three other small pieces) were dug out with soil. The bottom of the excavation was at a depth of approximately 6 feet below ground surface (bgs). Approximately 18 cubic yards (yd³) of soil were excavated to remove UST 155. No visual stains, spills, smell of fuel or

discolored soil were observed at the bottom of the excavation

Therefore, per OCHCA field inspector guidance, one confirmation soil sample from the bottom of the excavation was collected. Based on the visual field inspection of the excavated area after the removal of the UST and the observed non-impacted excavated soil condition, no further excavation was conducted or required.

During the removal of the UST, the top 8-12 inches of soil, including sandblast grit mixed with soil was removed using a backhoe. This sandblast grit containing soil was placed in two separate roll-off bins for off-site disposal. Approximately 30 yd³ of sandblast grit containing soil was removed from UST 155 area. Details on the management of the UST pieces and excavated soil are described in the Waste Management section. Photographs of the field activities are included in Appendix E, Site Photographs.

Sampling, Analysis, and Results

Following the removal of UST 155, one confirmation soil sample was collected on July 22, 1999 from the bottom of the excavation in the presence of an OCHCA field inspector. The confirmation soil sample location is shown in Figure 1-3, Site Plan.

The confirmation soil sample was analyzed for following analysis as approved by OCHCA field inspector.

- Total petroleum hydrocarbons purgable and extractable (TPH) by CA LUFT Method 8015 modified.
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX) and methyl tertiary butyl ether (MTBE) compounds were analyzed by EPA method 8260.
- Total recoverable petroleum hydrocarbons (TRPH) by EPA Method 418.1.

The analytical results of the confirmation soil sample are presented in Table 1-1, Confirmation Soil Sample Analytical Results – UST 155. TPH and BTEX compounds (including MTBE) were not detected above the laboratory reporting limits. TRPH was detected at 110 mg/kg. Laboratory analytical reports provided by OHM's subcontracted laboratory APCL, are included in Appendix F.

Land Surveying

After completing the confirmation soil sampling, the limits of excavation and soil sample location 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 the UST 155 are presented as Appendix G.

Waste Management

Both the UST 155 content soil and the excavated soil (approximately 18 yd³) were removed and stored in one roll-off bin. Sandblast grit containing soil (approximately 30 yd³) was placed in two separate roll-off bins. One soil sample from each of the two bins and one composite soil sample from the third bin were analyzed for following analysis;

- TPH by CA LUFT Method 8015
- TRPH by EPA Method 418.1
- BTEX and MTBE using EPA Method 8260
- Title 22 Metals using EPA Method 6010/7471
- STLC and TCLP using EPA Method 6010

Review of the analytical results confirmed that soil from all three bins was classified as "Non-Hazardous". Therefore, all three roll-off bins (approximately 48 yd³ of soil) were transported off-site on September 23, 1999 by Ecology Control Industries (ECI) to an American Remedial Technologies designated facility in Lynwood, California. Laboratory analytical reports for waste roll-off bins are included in Appendix H. Copies of the waste manifest are included in Appendix I.

One large steel piece of UST 155 was decontaminated using steam and Alconox™ detergent. The UST remains were then added to a roll-off bin being used to collect recyclable scrap metal from another UST removal. The metal UST fragments were then disposed off-site on August 2, 1999 for recycling as a scrap metal with piping and valves from UST 651 site. A copy of the Waste Management of Orange County Service Order Invoice for disposal of the scrap metal is included as Appendix J.

Site Restoration

The UST 155 excavation was backfilled on July 23, 1999 using Non-Hazardous, clean stockpiled soil from the Station's central treatment facility. The site was restored to original grade. Compaction was accomplished using a compaction wheel and backhoe.

Conclusions and Recommendations

Based on the information presented in this report and a review of the analytical results, the following conclusions have been reached:

- UST 155 was removed in the presence of an OCHCA field inspector and recycled off-site.
- There was no evidence of spillage or areas of heavy stains observed in the excavation.

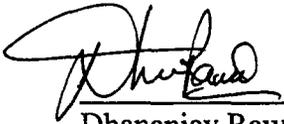
- There was no groundwater encountered in the excavation. The depth to the groundwater in the vicinity of UST 155 is estimated to be approximately 110 feet bgs based on the water level data from nearest monitoring well 18_PS6.
- The analytical results of the one confirmation soil sample collected from the bottom of the excavation indicated the maximum concentrations of TRPH at 110 mg/kg. In addition, BTEX, MTBE, and TPH compounds were not detected, eliminating the threat to human health from exposure to the surface and shallow soils.

Based on the information provided in this report, OHM, on behalf of the Station, recommends that a closure of UST 155 (Plan Check No. 99-PM-066) be granted by OCHCA.

Should you have any questions or comments, please feel free to contact either of the undersigned at (949) 261-6441.

Sincerely,

OHM Remediation Services Corporation

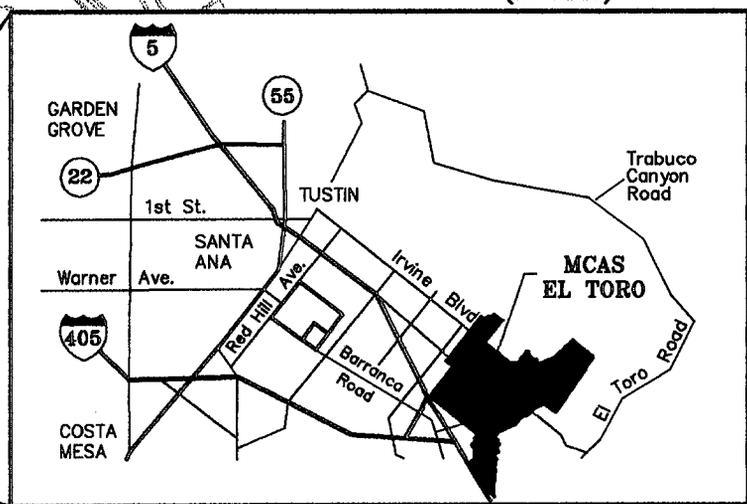
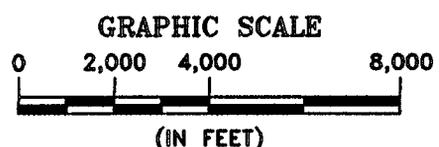
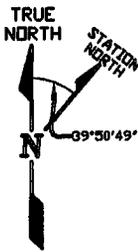
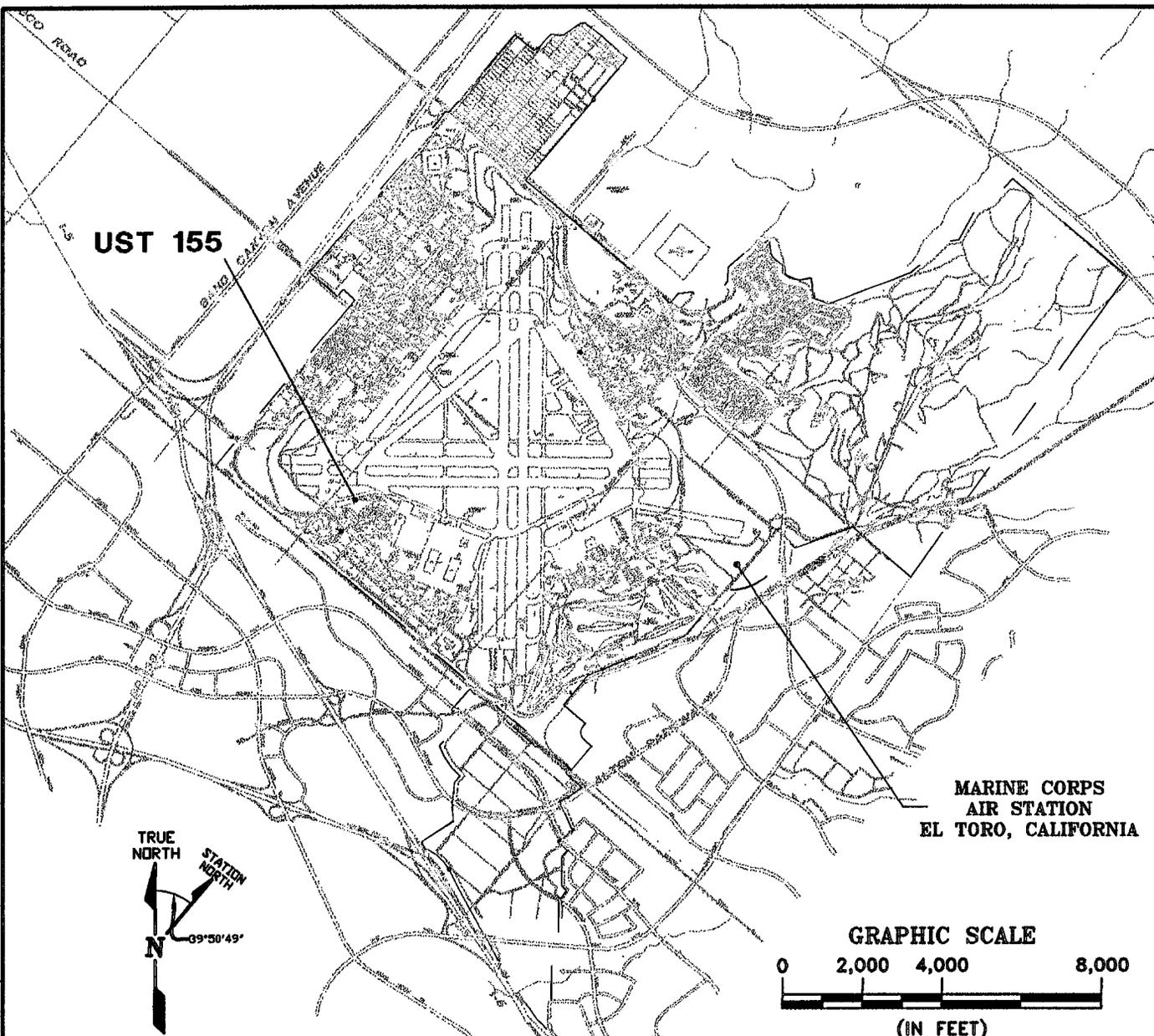

Dhananjay Rawal
Project Engineer


William Sedlak, P.E.
Project Manager

Attachments:

Table 1-1	Analytical Results
Figure 1-1	Facility Location Map
Figure 1-2	Location Map
Figure 1-3	Site Plan
Appendix A	Station Drawings
Appendix B	OCHCA Facility Modification Application
Appendix C	Geophysical Survey Data
Appendix D	Site Inspection Log
Appendix E	Site Photographs
Appendix F	Laboratory Analytical Results
Appendix G	Land Survey Data
Appendix H	Waste Bin Analytical Data
Appendix I	Waste Manifest

Figures



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OHM Remediation Services Corp.
 A Subsidiary of OHM Corporation
 SAN DIEGO, CA

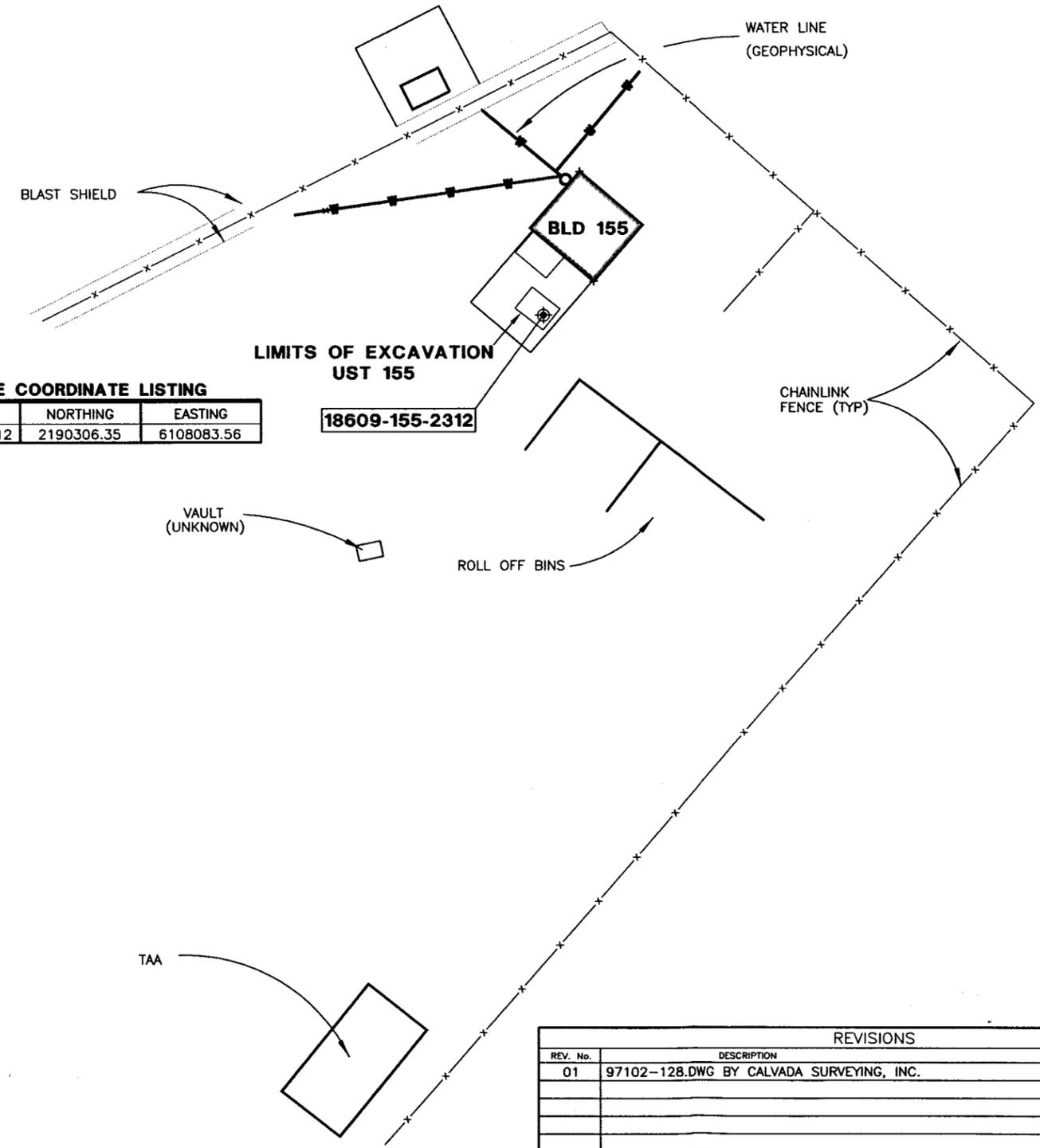
DRAWN BY **R. PRIMRADIAN** DATE **10/19/99**
 CHECKED BY **DR** DATE **10/19/99**
 APPROVED BY _____ DATE _____
 PROJECT MANAGER **W. Sell** DATE **10/19/99**

FACILITY LOCATION MAP
USCT 155

MARINE CORPS AIR STATION
EL TORO, CALIFORNIA

CONTRACT NAME SWDIV		SCALE 1"=4,000'	DOCUMENT CONTROL No. SW7256	OHM PROJECT No. 18609	FIGURE No. FIG 1-1	REVISION 0
AUTOCAD FILE No. 18609261.DWG	PLLOT SCALE 1=1	SHEET OF 1 1				

TAXIWAY



SAMPLE COORDINATE LISTING

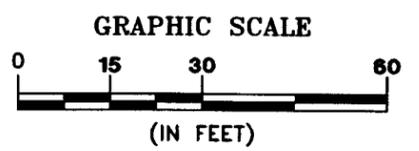
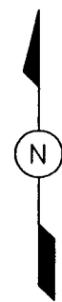
DESCRIPTION	NORTHING	EASTING
18609-155-2312	2190306.35	6108083.56

18609-155-2312

EXPLANATION:

-  CONFIRMATION SOIL SAMPLE
- NG NATURAL GROUND
- FS FINISH SURFACE

DATE OF SURVEY: 4-14-99



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REVISIONS			
REV. No.	DESCRIPTION	DATE	APPROVED
01	97102-128.DWG BY CALVADA SURVEYING, INC.	4/14/99	

CONTRACT NAME SWDIV		 OHM Remediation Services Corp. A Subsidiary of OHM Corporation IRVINE, CA	
DRAWN BY R. PIRMORADIAN	DATE 10/19/99	SITE PLAN UST 155 MARINE CORPS AIR STATION EL TORO, CALIFORNIA	
CHECKED BY <i>DR</i>	DATE 10/19/99		
APPROVED BY	DATE		
PROJECT MANAGER <i>[Signature]</i>		DATE 10/19/99	
AUTOCAD FILE No. 18609263.DWG			
SCALE 1"=30'	SHEET 1	OF 1	DOCUMENT CONTROL No. SW7256
			OHM PROJECT No. 18609
			DRAWING No. FIG 1-3

Table

OHM Remediation Services Corp.

Table 1 - 1
Summary of Analytical Results for Soil Samples — UST 155

Sample Identification		18609-155-2312
Location Code		UST-155-EX-1 Floor
Date Sampled		07/22/99
Depth (feet below ground surface)		6.0
	Unit	
<i>CA LUFT 8015M</i>		
TPH as Diesel	mg/kg	10 U
TPH as Motor Oil	mg/kg	2 J
<i>EPA 418.1</i>		
Total Recoverable Petroleum Hydrocarbon	mg/kg	110
<i>EPA 8020</i>		
Benzene	µg/kg	5.2 U
Ethylbenzene	µg/kg	5.2 U
Methyl tert-butyl ether (MTBE)	µg/kg	26 U
Toluene	µg/kg	5.2 U
Xylenes (total)	µg/kg	1 J

OHM Remediation Services Corp.

Table 1 - 1

Summary of Analytical Results for Soil Samples — UST 155

CA LUFT - California leaking underground fuel tank

EPA - US Environmental Protection Agency

J - estimated value

M - modified

mg/kg - milligrams per kilogram

OHM - OHM Remediation Services Corp.

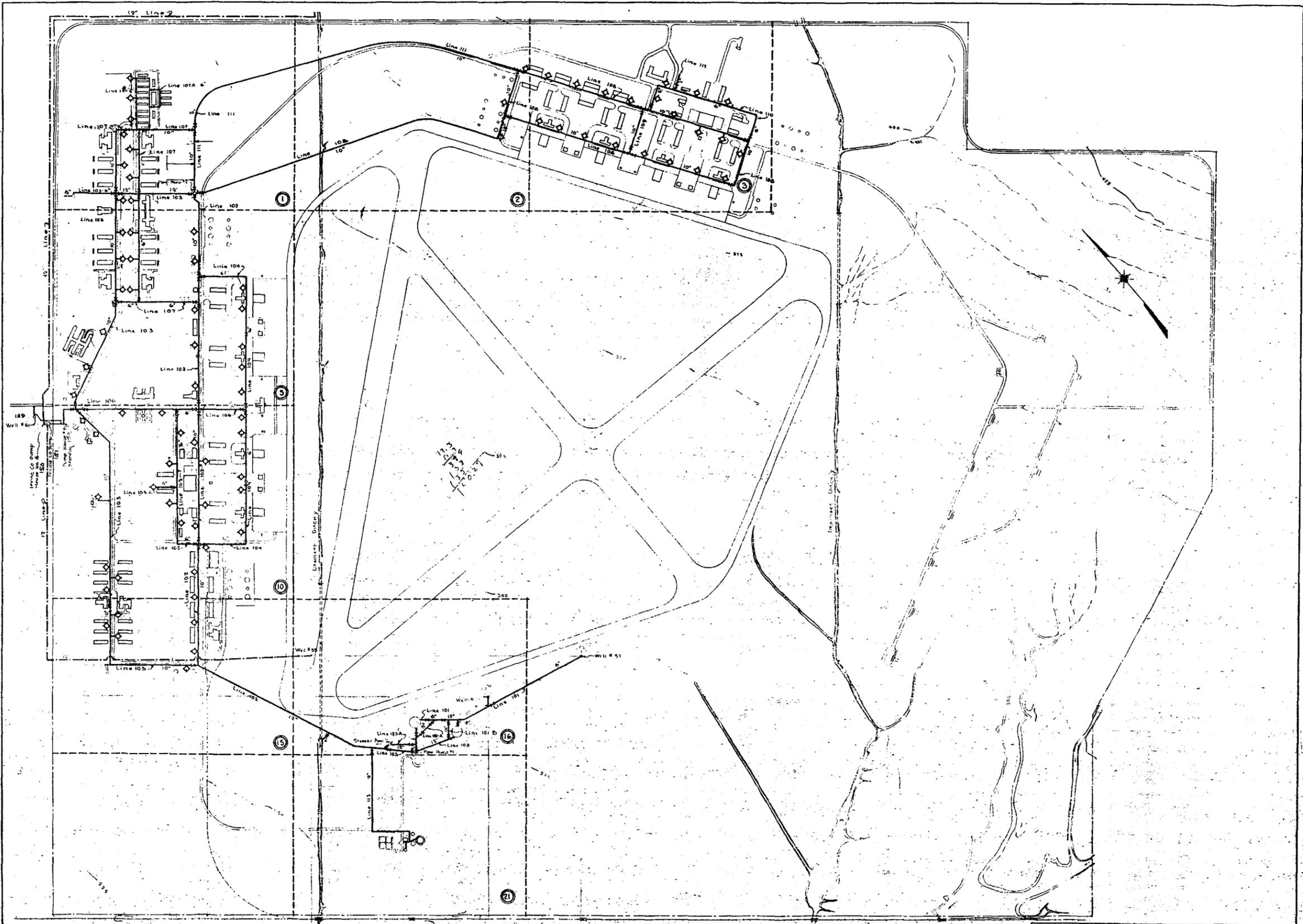
TPH - total petroleum hydrocarbons

U - not detected at or above the stated reporting limit

UST - underground storage tank

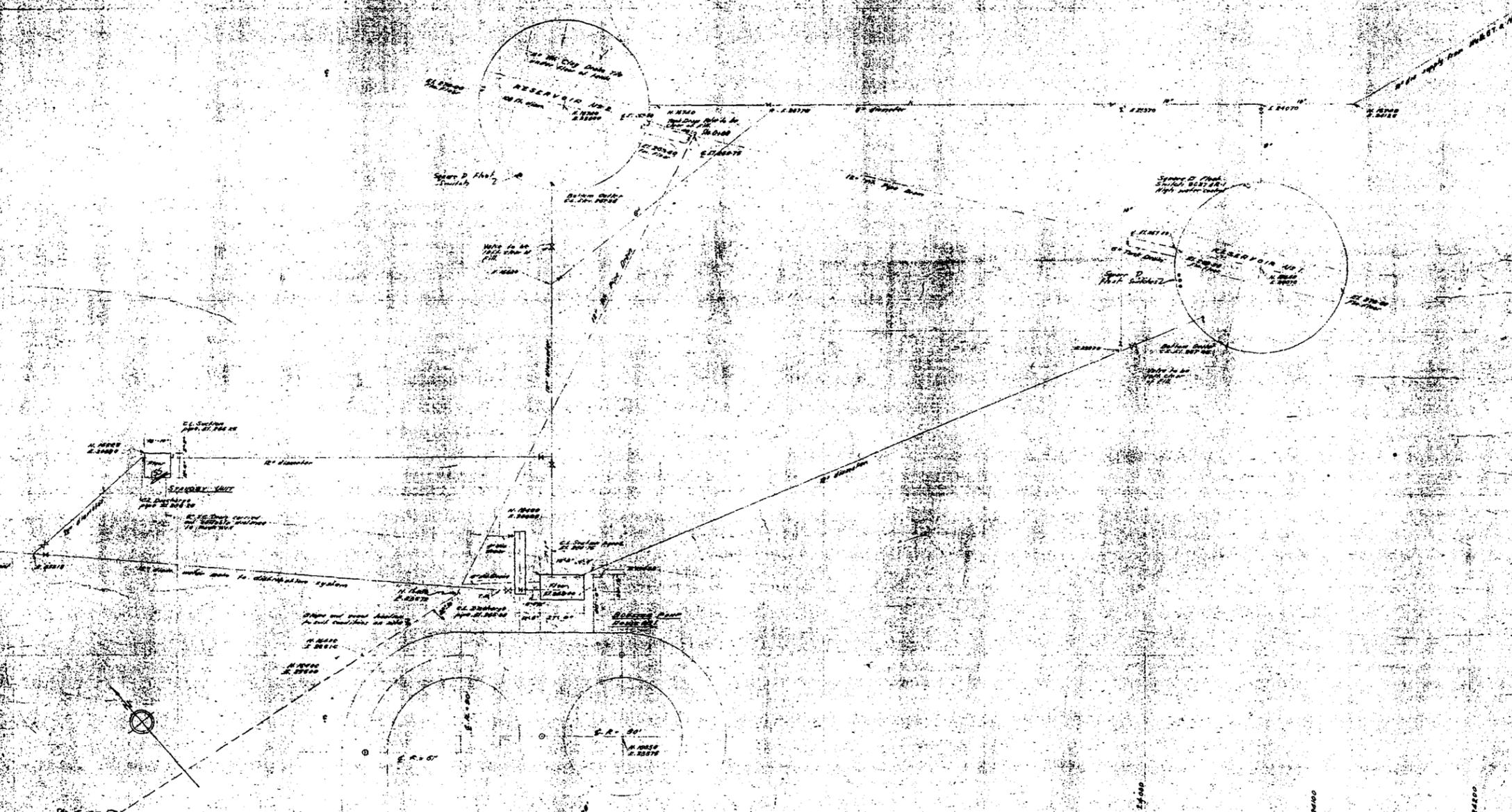
µg/kg - micrograms per kilogram

Appendix A
Station Drawings



KEY TO SYMBOLS
 FIRE HYDRANTS SHOWN THUS 
 VALVES SHOWN THUS 
 IRVING CO. LINES SHOWN THUS 
 AIR STATION LINES SHOWN THUS 

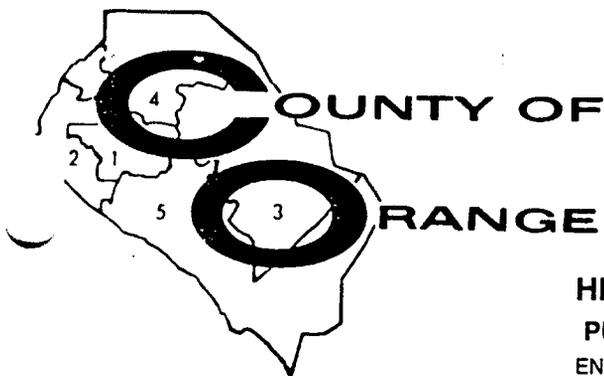
Drawn by W. C. Wright	ELEVENTH NAVAL DISTRICT SAN DIEGO, CALIF. MARINE CORPS AIR STATION EL TORO, CALIF. WATER SUPPLY KEY PLAN
Traced by W. C. Wright	
Checked by W. C. Wright	
Chief Officer Planning Coordination W. C. Wright	
Sheet 1 of 23 Accompanying NOY 5421	Approved <i>M. E. 1942</i> BY <i>[Signature]</i> Public Works Officer
KISTER, CURTIS & WRIGHT Architects & Engineers SCALE: 1" = 400'	DRAWING NO. 224411



Drawn by	1920
Checked by	
Approved by	
Scale	
Notes	

ELEVENTH NAVAL DISTRICT, SAN DIEGO, CALIF.
 MARINE CORPS AIR STATION
 EL TORO, CALIF.
WATER SUPPLY SYSTEM
 174 SITE PLAN
 RESERVOIRS NO. 1 & 2
 PUMPING STATION - STAND BY UNIT

Appendix B
OCHCA Facility Modification Application



TOM URAM
DIRECTOR

HUGH F. STALLWORTH, M.D.
HEALTH OFFICER

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

DOTO / UST 155

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

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

DATE: 7/21/99

FACILITY INFORMATION

NAME: MARINE CORPS AIR STATION ELTORO
STREET ADDRESS: P O BOX 950001
CITY: SANTA ANA CALIFORNIA 92709

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

TYPE OF BUSINESS:

- GASOLINE STATION
- GOVERNMENT
- FARM
- OTHER

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

MCAS ELTORO BLDG. 155
STREET ADDRESS: South Mainway & L' Street
CITY: Santa Ana, Building 155
STATE: CA ZIP 92701
TELEPHONE NO: 949-726-2506

BILLING ADDRESS INFORMATION

BILL TO NAME: ITCORPORATION/OHM
BILL TO ADDRESS: 3347 Michelson dr #200
CITY: IRVINE
STATE: CA ZIP 92614
TELEPHONE NO.: 949-261-6441

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.

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)/RELINING(S) TO USTs
- CLOSURE(S)/REMOVAL(S) one UST
- SYSTEM MODIFICATION (E.G. REPIPE, REPAIR TO PIPING)
- OTHER (SPECIFY)

24 HOUR EMERGENCY CONTACT PERSON

DAYS: SCOTT KEHE 949-726-2506
NAME TELEPHONE
NIGHTS: OHM - 1-800-537-9540
ELTORO 949-726-9911
NAME TELEPHONE

APPLICANT

NAME: Dharmraj Raval
PLEASE PRINT
SIGNATURE: [Signature]

COMPANY NAME: ITCORP/OHM
TELEPHONE NO: 949-660-7576

FACILITY OPERATOR (CONTACT PERSON)

NAME: MCAS ELTORO / ROICC SCOTT KEHE
BUSINESS TELEPHONE NO.: 949-726-2506

OFFICE USE ONLY

PLAN CHECK NO.: 99PM66
PLAN APPROVAL DATE: 7/22/99
FEES PAID: \$187.00
BY: NR

RCVD. BY: _____
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.

UST155

TANK I.D.		#1	#2	#3	#4	
MATERIAL STORED	CURRENTLY	SOIL				
	PROPOSED	NONE				
	PREVIOUSLY	Fuel oil				
FUEL TYPE, I.E., UNLEADED		unleaded				
CONTAINER	TYPE (TANK, SUMP, OTHERS)		UST			
	DOUBLE WALL/SINGLE WALL		SINGLE			
	UL NUMBER		N/A			
	YEAR INSTALLED		APR 1960's			
	VAULTED/NOT VAULTED		NOT VAULT			
	PRIMARY	MANUFACTURER		N/A	APPROVED ORANGE COUNTY HEALTH CARE AGENCY ENVIRONMENT HEALTH DIVISION HAZARDOUS MATERIALS MANAGEMENT SECTION THIS APPROVAL IS VALID FOR 12 MONTHS FROM THE APPROVAL DATE	
		CAPACITY (GALLONS)		500 gal		
		CONSTRUCTION MATERIAL		Steel		
		THICKNESS (UNITS)		N/A		
		INTERIOR LINING		N/A		
	SECONDARY	MANUFACTURER			OR	7/22/99
		CAPACITY (GALLONS)			Plan reviewed by	Date
		CONSTRUCTION MATERIAL				99PN66
		THICKNESS (UNITS)				Plan #
	CORROSION PROTECTION			This approval shall not be construed to permit the violation of any laws, 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.		
TYPE OF LEAK DETECTION FOR USTs (LIQUID, PROBE, ETC.)			In addition to this approval, all applicable permits required by the local fire department, bonding department, and the Air Quality Management District must be obtained.			
MANUFACTURER OF LEAK DETECTOR						
PIPING	LOCATION (UNDER/ABOVE GROUND)		Underground	Underground leak installation, removal, and repair inspections are required and must be scheduled 48 hours in advance. Contact (714) 807-3600 for an appointment.		
	SUCTION/PRESSURE GRAVITY/UNKNOWN		Not Known			
	PRIMARY	CONSTRUCTION MATERIAL	Steel	A copy of these approved plans must be available at the site at all times.		
		MANUFACTURER	N/A			
	SECONDARY	CONSTRUCTION MATERIAL				
		MANUFACTURER		All piping associated with underground storage tanks shall be removed and properly disposed		
	TYPE OF LEAK DETECTION FOR PIPING (PRESSURE LOSS DEVICE, ETC.)					
MANUFACTURER OF LEAK DETECTOR						
OVERFILL PROTECTION (TYPE)						
PILL CONTAINMENT (TYPE)						

APPROVED

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

Plan Reviewed By NR Date 7/22/99 Plan # 99 PM 166

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.

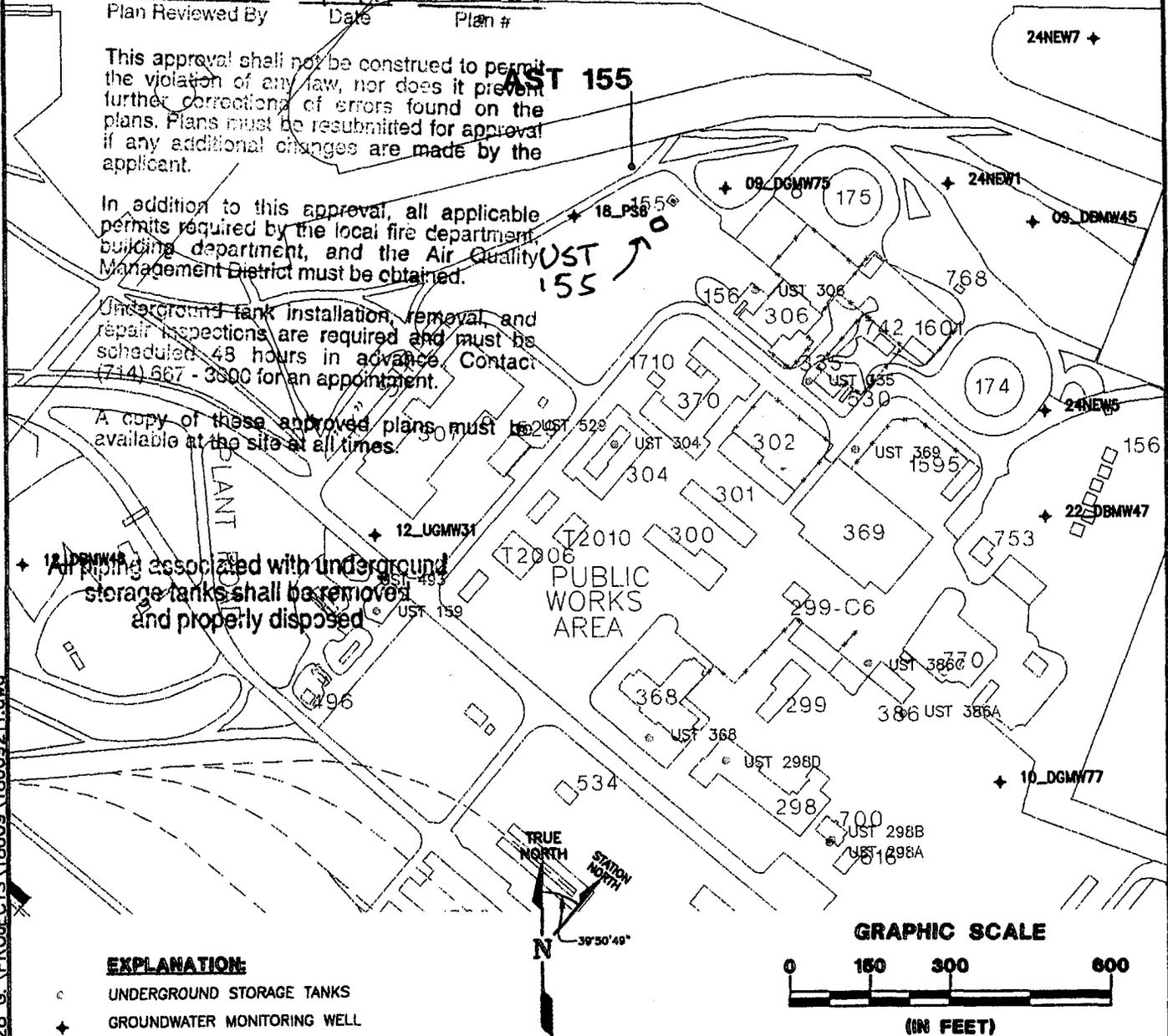
In addition to this approval, all applicable permits required by the local fire department, building department, and the Air Quality Management District must be obtained.

Underground tank installation, removal, and repair inspections are required and must be scheduled 48 hours in advance. Contact (714) 567-3800 for an appointment.

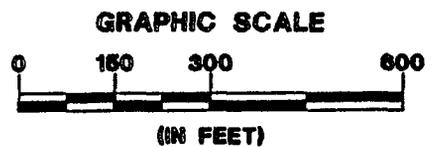
A copy of these approved plans must be available at the site at all times.

Any piping associated with underground storage tanks shall be removed and properly disposed.

gv 27, 1999 - 16:21:28 G:\PROJECTS\18609\18609211.dwg



- EXPLANATION:**
- UNDERGROUND STORAGE TANKS
 - ✦ GROUNDWATER MONITORING WELL



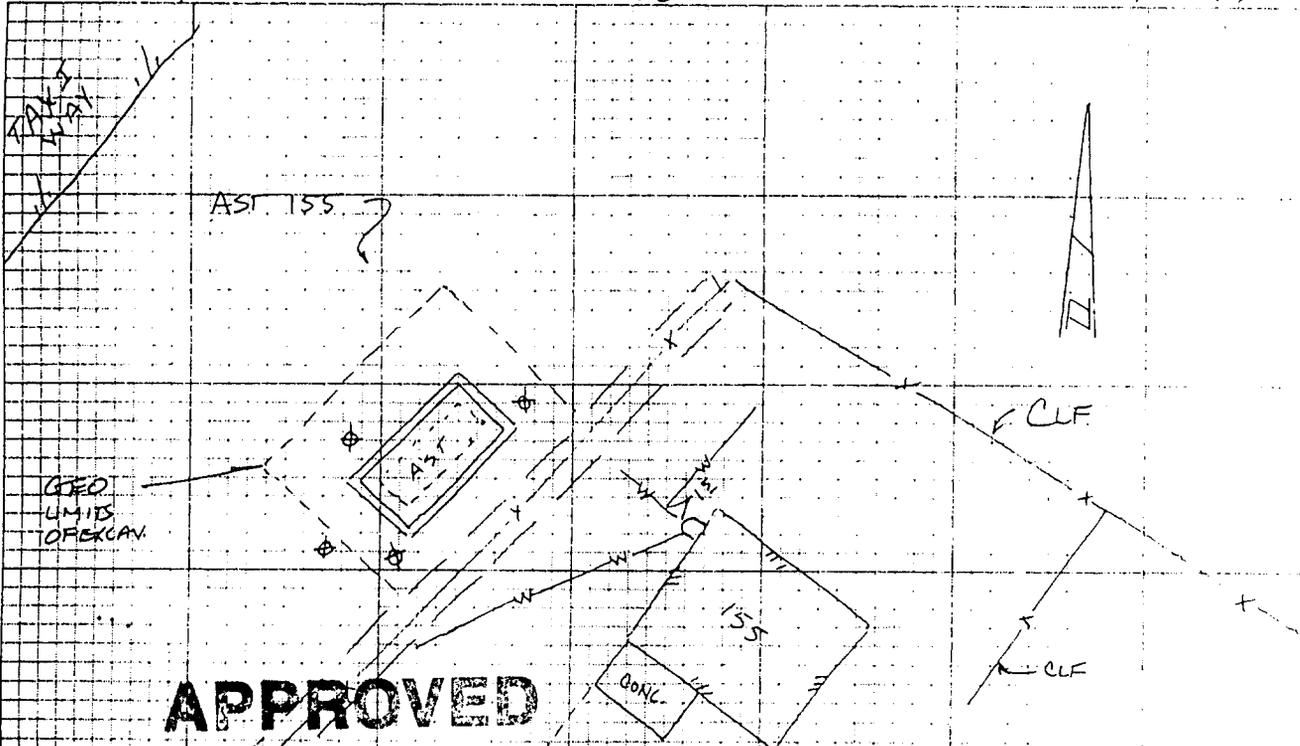
OHM Remediation Services Corp. A Subsidiary of OHM Corporation SAN DIEGO, CA		DRAWN BY R. PIRMORADIAN	DATE 05/27/99	LOCATION MAP AST 155		
CONTRACT NAME SWDIV		CHECKED BY DR	DATE 5/27/00			
AUTOCAD FILE No. 18609211.DWG		APPROVED BY [Signature]	DATE 6/1/99	MARINE CORPS AIR STATION EL TORO, CALIFORNIA		
SHEET OF 1 1	PLOT SCALE 1=1	SCALE 1"=300'	DOCUMENT CONTROL No. SW6816	OHM PROJECT No. 18609	FIGURE No. FIG 1-2	REVISION 0

TITLE: AST 155

J. LUGO / D. MARIOTT

DO 112

4-14-99



APPROVED

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

Plan Reviewed By: NR Date: 7/22/96 Plan #: 99PRL
 GEO LIMITS OF EXCAV

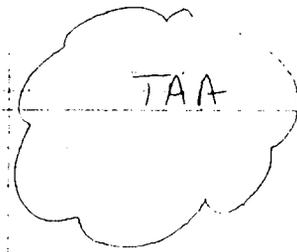
This approval shall not be construed to permit the violation of any law, nor does it prevent further correction of errors found on the plans. Plans must be re-submitted for approval if any additional changes are made by the applicant.

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) 667-4300 for an appointment.

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

All piping associated with underground storage tanks shall be removed and properly disposed



Appendix C
Geophysical Survey Data

Results of Subsurface Investigation

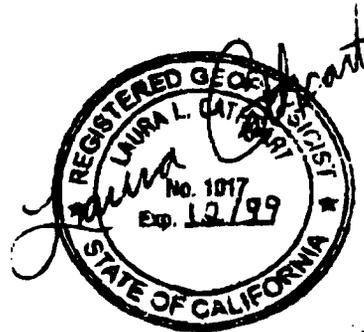
Site 155
Marine Corps Air Station El Toro
Irvine, California

Prepared for: OHM Remediation Corporation
Irvine, California

Date of Investigation: March 10, 1999

Prepared by:

Jim Foser
Project Manager
Spectrum-Gasch Geophysics
15260 Sky High Road
Escondido, CA 92025



Laura Cathcart
Registered Geophysicist No. 1017

Warranty:

Spectrum-Gasch Geophysics was retained to conduct a subsurface investigation of the above facility to characterize the shallow subsurface. Our findings are subject to certain limitations due to site conditions and the instruments employed. We conducted this investigation in a manner consistent with our profession using similar methods. No other warranty as to the performance or deliverables is expressed or implied.

San Diego Los Angeles Irvine Sacramento
www.spectrum-geophysics.com

Contents

Introduction

Methods

Results and Conclusions

Figure 1 **Area of Subsurface Investigation,
Site 155, MCAS El Toro, Irvine,
California**

Appendix A **Base Utility Maps for Site 155**

**Results of Subsurface Investigation
Site 155
MCAS El Toro
Irvine, California**

Introduction

On March 10, 1999 Spectrum-Gasch Geophysics conducted a subsurface investigation of Site 155 at MCAS El Toro in Irvine, California. The purpose was to investigate two areas, approximately 15 by 20 feet each, within Site 155 for detectable subsurface utilities.

Methods

The equipment used in this investigation consisted of a Fisher TW-6 shallow-focus terrain conductivity meter, Dynatel 500A cable locator, Radiodetection RD400 utility locator, and a GSSI SIR-3 ground penetrating radar (GPR) unit coupled to a 500 MHz antenna.

GPR and EM utility-locating methods were used in the areas of interest to delineate the surface trace of detectable conduits and to identify buried objects having no surface expression. The following paragraphs discuss the methods used.

- 1.) Each area was investigated for detectable subsurface utilities or other buried features. Utilities which were exposed above ground in the vicinity of each area were directly connected to, traced out, and mapped on a site map (Figure 1).
- 2.) Each area was investigated with a passive electromagnetic receiver tuned to 50/60 Hz, radio, and audio frequencies to detect buried utilities that might reradiate an electromagnetic field.
- 3.) Each area was investigated with two operators in conjunction with a matched frequency transmitter and receiver. We conducted bi-directional traverses to detect increases in signal strength which might suggest subsurface utilities. Each suspected signal increase was further investigated to discern a signal-propagating utility.

4.) GPR data from 11 traverses were collected. A map of these traverses is presented in Figure 1. GPR data were produced in the form of vertical cross sections and interpreted in the field for anomalies whose signatures might indicate the presence of subsurface conduits or other features of interest.

Results and Conclusions

The surface trace of detected utilities was marked on the ground with spray paint using a color code established by the American Public Works Association. A site map with geophysical interpretation is presented in Figure 1. Drilling and excavation activities should be kept a minimum of two feet away from detected utilities.

The penetration depth of the GPR signal was approximately 1-2 feet in all areas investigated. As a consequence, some subsurface utilities may not have been detected due to the shallow penetration of the GPR. Because of this limitation, Spectrum cannot guarantee that all nonmetallic conduits, such as sewers and pvc water lines, have been identified within the areas of investigation.

Base utility maps for this area are included in Appendix A.

FIGURE 1

AREA OF SURFACE INVESTIGATION , SITE 155,
MCAS EL TORO, IRVINE, CALIFORNIA

DATED 19 OCTOBER 1999

BLOG 55

AREA 27 MAPS

C99031



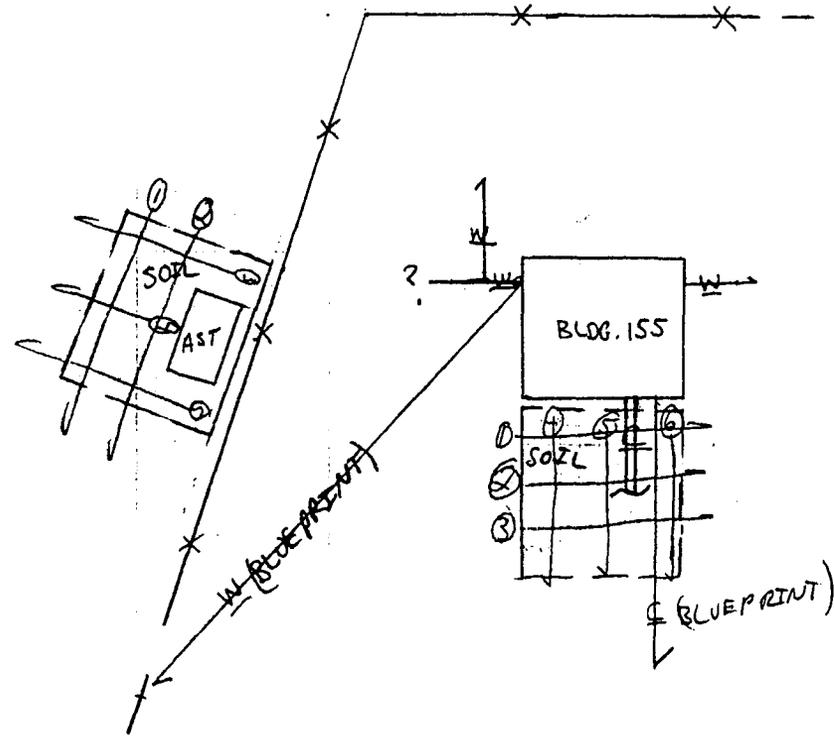
1" = 20'

[- -] = AREA OF INVESTIGATION

W = WATER

E = CONDUIT

⊙ = GPR TRAVERSE



M60050.000235
MCAS EL TORO
SSIC #5090.3

APPENDIX A

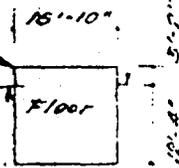
BASE UTILITY MAPS FOR SITE 155

DATED 19 OCTOBER 1999

16600

N. 16625
E. 26380

CL. Suction
pipe El. 250.25



12" diam.

STANDEY UNIT

CL. Dischs. - 98
pipe El. 265.26

5" VC Disch. carried
out suitable distance
to Ret. Well

12" diameter

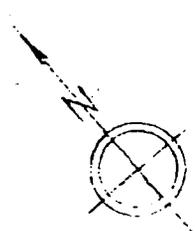
16500

E. 23512

12" diam. water main to district

To next Tangent
Point -
N. 17520
E. 21445

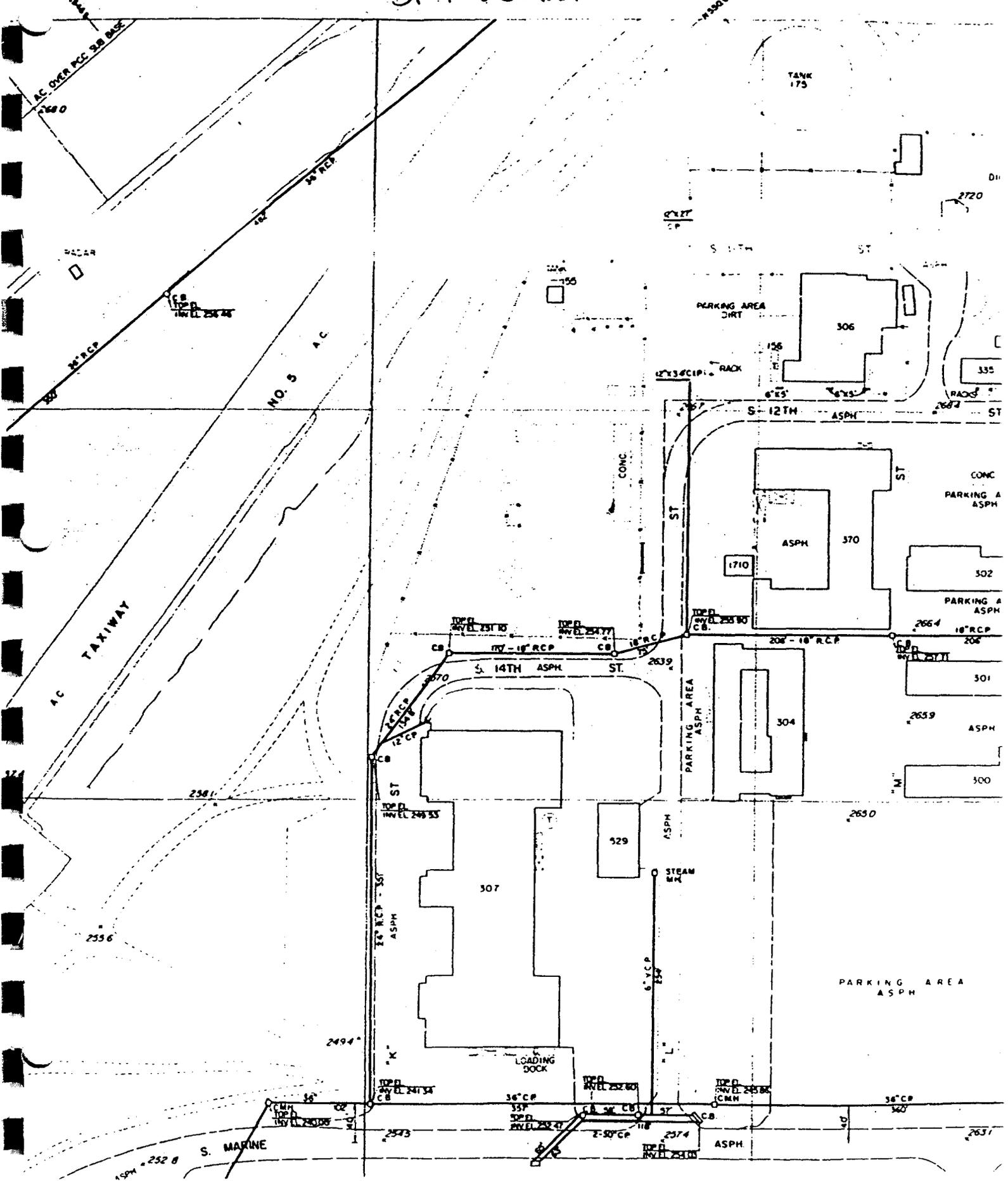
16400



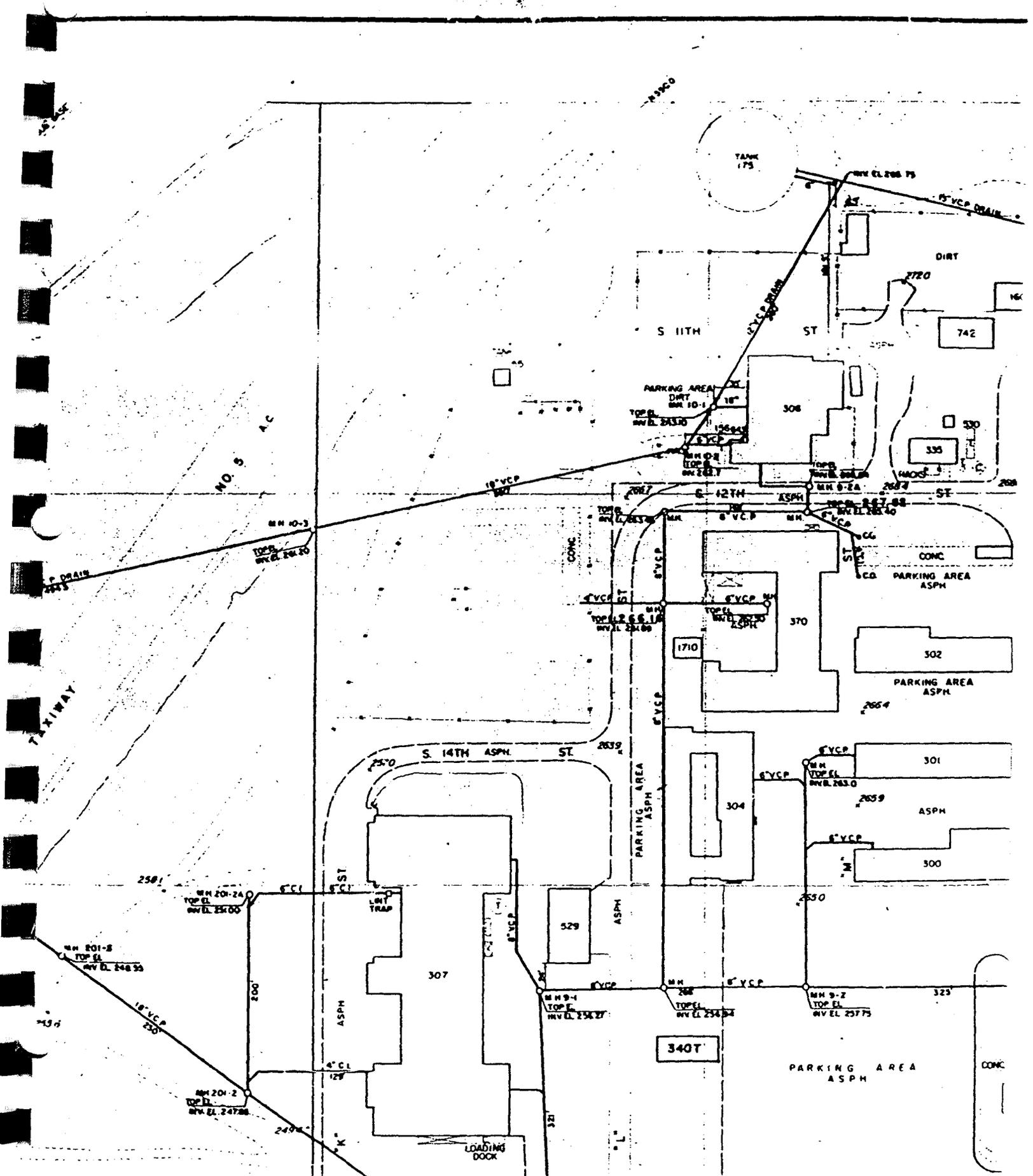
Sta. 5+87.5

16300

BLOG. 155 STORM SEWERS

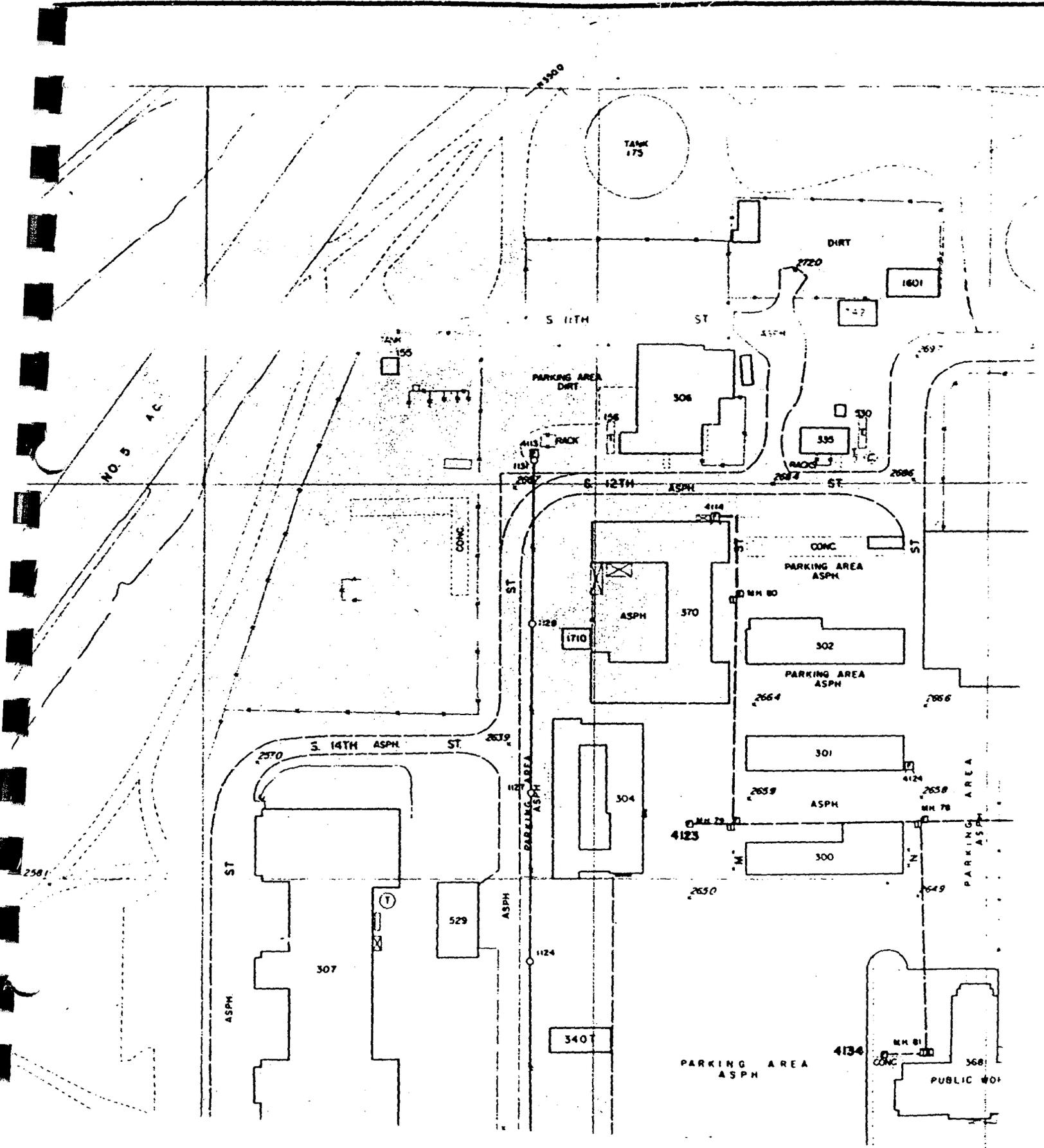


B-00-155
SANITARY SEWER



TOP EL.

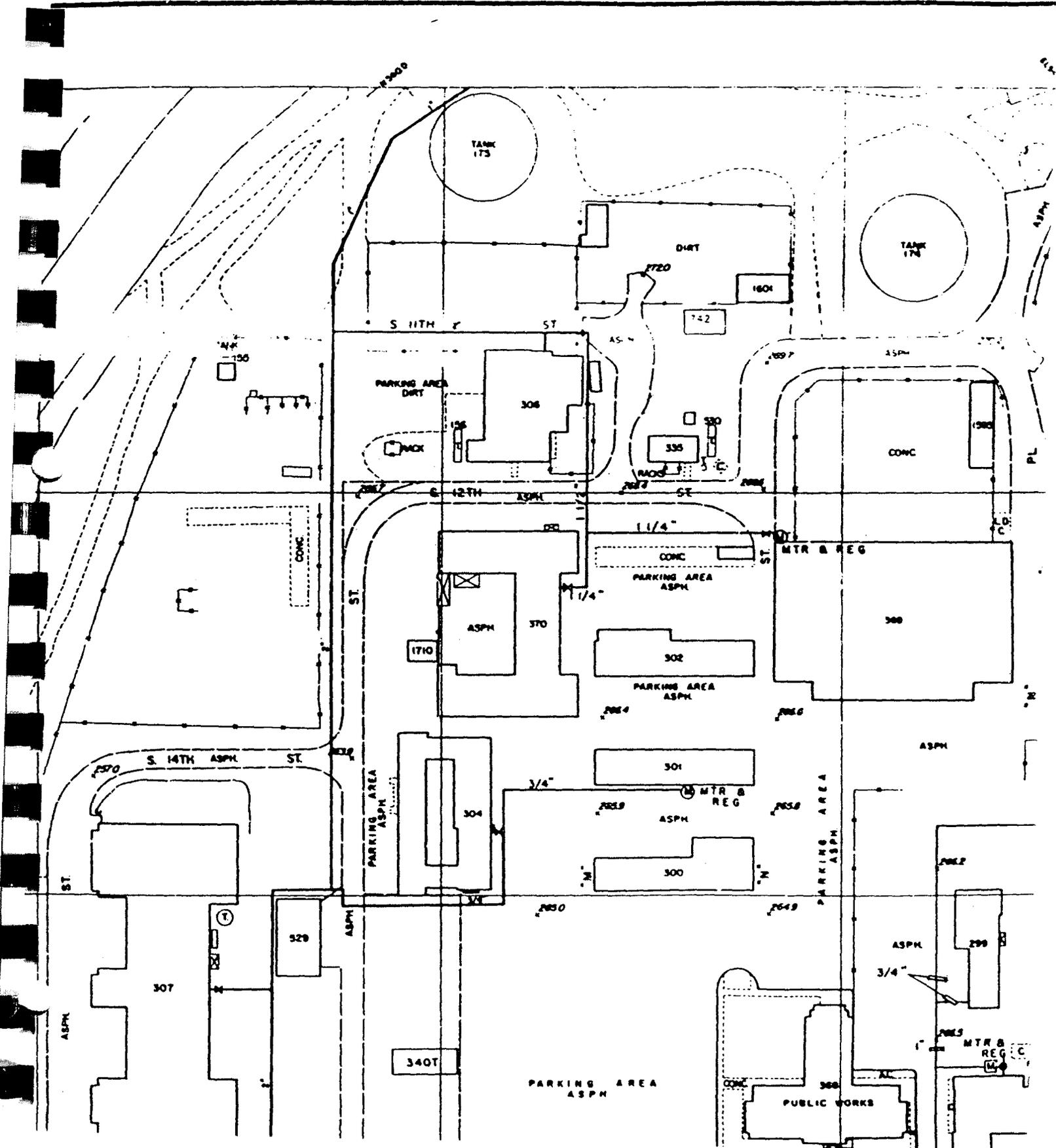
Area 27
Bldg. 155
Comm. & Fire Alarm



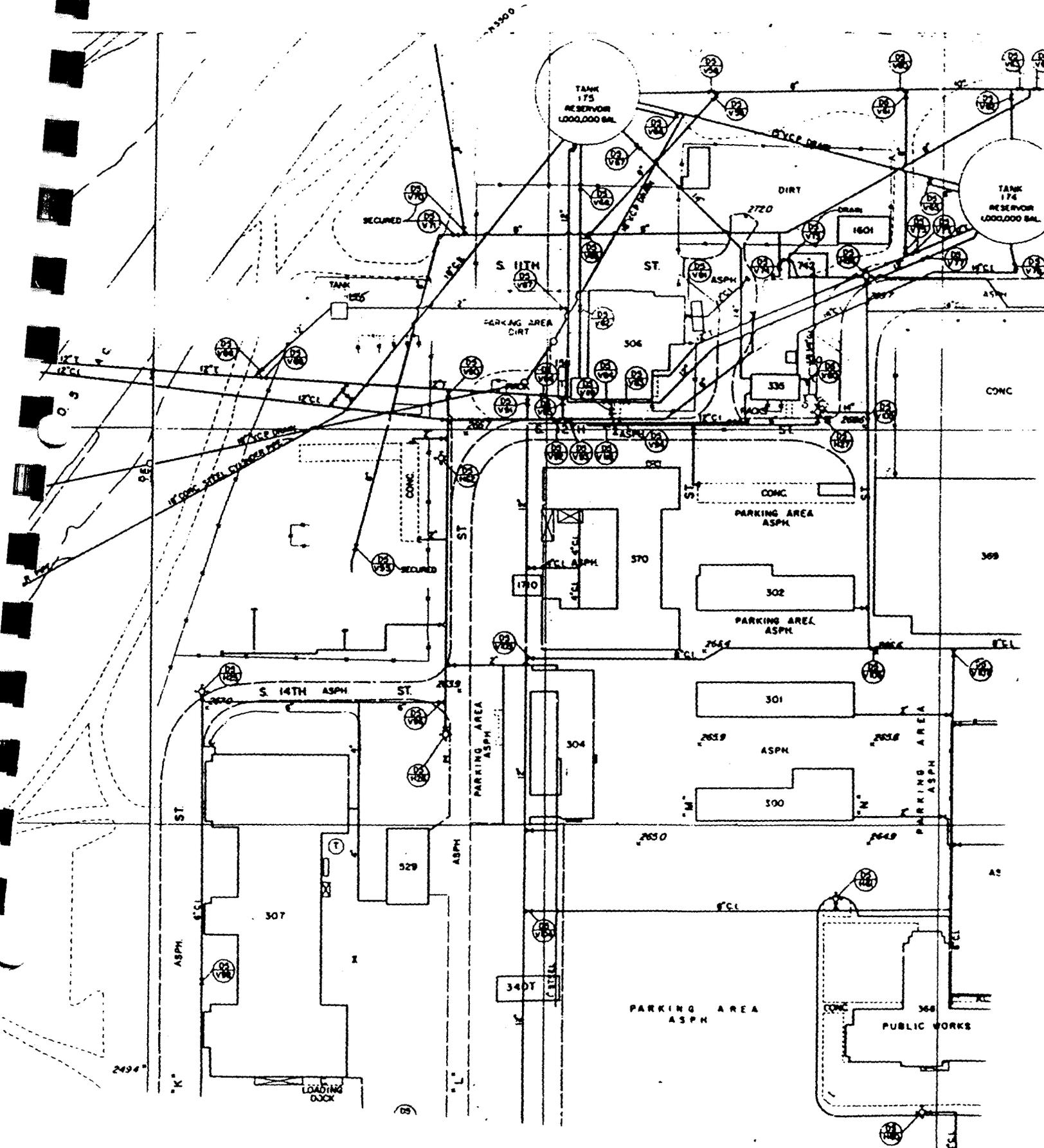
Area 27

Bldg. 155

Nat. Gas Dist.



Area 27
Bldg. 155
Water Dist.



Appendix D
Site Inspection Log

SITE ASSESSMENT LOG
MCAS El Toro
REMEDIATION OF VARIOUS UST SITES
20242, D.O. 112, Do 70.

UST SITE: 155

Field Observations by: D. Rawal

Date: April 20, 1999

Former UST area: Paved or Unpaved

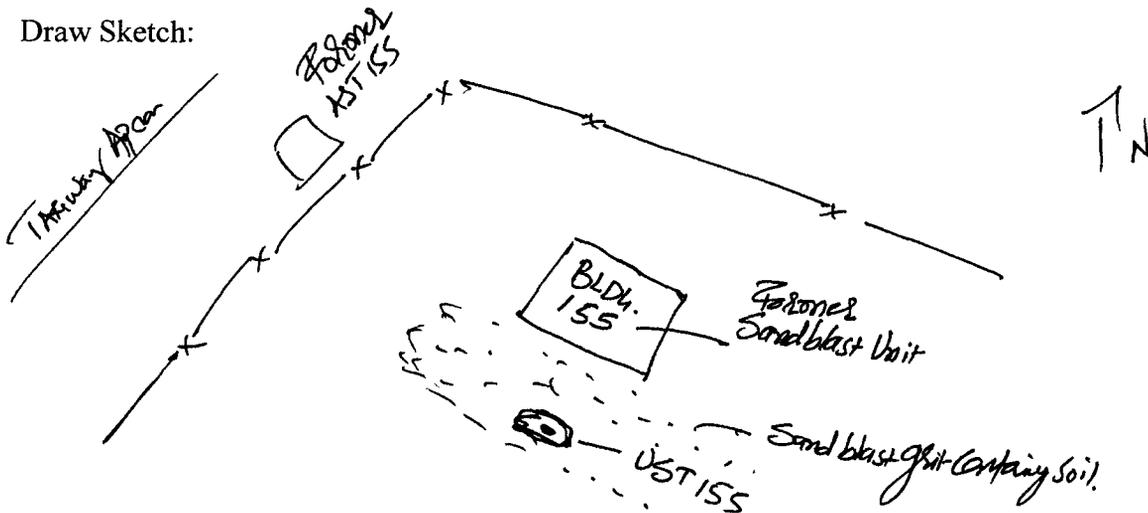
Paved: Concrete or Asphalt NA

Unpaved: Open dirt area → Open dirt unpaved area

Any Visible Sprinkler System: Yes/ No

- Nearest Building or Structure Distance: Building 155, approx. 9 feet, North of UST 155.
Former Pump house for water distribution system, unpaved vehicle pad.
- Any Underground Piping/Lines, or Transformer Observed: None. Utilities were marked by geophysical survey.
- Overhead Utility Lines/Poles: None
- Site Setup Constrains: None.

Draw Sketch:



Additional Field Notes:

UST 155 seems to be filled with sand/soil. No manhole cover observed or any fill part visible. Sandblast grit mixed with surrounding soil within UST 155 area. No visible stains on surrounding soil. Also field probe investigation revealed that most likely UST may not be intact or in one piece UST could be 300 gallons. During excavation entire UST may not come out of ground.

Appendix E
Site Photographs



Photograph No. 1 and 2: UST 155 Removal Field Work and Excavation.

Appendix F
Laboratory Analytical Results

Applied P & Ch Laboratory
Organic Analysis Results for Method 8020

Client Name: OHM Remediation Services (Irvine)	Project No: 18609	Collection Date: 07/22/1999
Project ID: El Toro	Service ID: 994934	Collected by: Lisa
Sample ID: 18609-051-2312 155 18609-051-2312	Lab Sample ID: 99-4934-17	Received Date: 07/22/1999
Sample Type: Field Sample	Sample Matrix: Soil	Moisture %: 4.6
Anal. Method: 8020	Prep. Method: 5030	Instrument ID: GC: U
Batch No: 99G3668	Prep. Date: 07/24/99	Anal. Date: 07/24/99
Data File Name: 4934.017	Prep. No: -	Anal. Time: 06:45
Methanol Vol: -	Sample Amount: 5.0 g	Dilution Factor: 1
Test Level: Low	Sparge Size: 5 mL	Heated Purge: (Y/N) Y

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	BENZENE	71-43-2	µg/kg	5.2	< 5.2	U
2	ETHYLBENZENE	100-41-4	µg/kg	5.2	< 5.2	U
3	TOLUENE	108-88-3	µg/kg	5.2	< 5.2	U
4	METHYL TERT-BUTYL ETHER	1634-04-4	µg/kg	26	< 26	U
5	XYLENES (TOTAL)	1330-20-7	µg/kg	16	1	J

Surrogates		Control Limit, %	Surro. Rec.%	
1	4-BROMO-FLUOROBENZENE (PID)	460-00-4	60-129	96
# of out-of-control			0	

Internal Standard		Control Limit, %	IS Rec.%	
1	α, α, α-TRIFLUOROTOLUENE	98-08-8	50-200	113
# of out-of-control			0	

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
 J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
 E - Exceed calibration range
 B - A positive value was found in the method blank
 D - Diluted

166890

Applied P & Ch Laboratory
Organic Analysis Results for Method M8015E

Client Name: OHM Remediation Services (Irvine)	Project No: 18609	Collection Date: 07/22/1999
Project ID: El Toro	Service ID: 994934	Collected by: Lisa
Sample ID: ¹⁵⁵ 18609-051 -2312	Lab Sample ID: 99-4934-17	Received Date: 07/22/1999
Sample Type: Field Sample	Sample Matrix: Soil	Moisture %: 4.6
Anal. Method: M8015E	Prep. Method: 3550	Instrument ID: GC: H
Batch No: 99G3657	Prep. Date: 07/22/99	Anal. Date: 07/23/99
Data File Name: 4934.017	Prep. No: 1 of 1	Anal. Time: 08:26
Extract Vol. 1.0 mL	Sample Amount: 20.0 g	Dilution Factor: 1

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	TPH AS DIESEL	68334-30-5	mg/kg	10	< 10	U
2	TPH AS MOTOR OIL	TBD-0002	mg/kg	10	2	J
Surrogates				Control Limit, %	Surro. Rec.%	
1	OCTACOSANE, C ₂₈	630-02-4		50-146	81	
# of out-of-control					0	

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL	E - Exceed calibration range
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)	B - A positive value was found in the method blank
	D - Diluted

167029

Applied P & Ch Laboratory
Wet Analysis Results for Method 418.1

Client Name: OHM Remediation Services (Irvine) Project No: 18609 Anal. Method 418.1
Project ID: El Toro Service ID: 994934 Collected by: Lisa

Component Name: **TRPH**
CAS No: **9999-148**

Lab ID	Sample ID	Matrix	Coll. Date	Rcv Date	Anal. Date	Batch	Unit	RL	Result	Q
99-4934-17	18609- 85 ¹⁵⁵ -2312	Soil	07/22/99	07/22/99	07/22/99	99W5147	mg/kg	10	110	
99W5147-MB-01	99W5147-MB-01	Soil	07/22/99	07/22/99	07/22/99	99W5147	mg/kg	10	<10	U

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Note: Q - Qualifier.

Qualifier: U - Not Detected or less than MDL

B - Less than RL (PQL, EQL or CRDL), but greater than MDL.

167177

Applied P & Ch Laboratory
Organic Analysis Results for Method M8015V

Client Name: OHM Remediation Services (Irvine)	Project No: 18609	Collection Date: 07/23/1999
Project ID: El Toro	Service ID: 994934	Collected by:
Sample ID: 99G3668-MB-01	Lab Sample ID: 99G3668-MB-01	Received Date: 07/23/1999
Sample Type: Method Blank	Sample Matrix: Soil	Moisture %:
Anal. Method: M8015V	Prep. Method: 5030	Instrument ID: GC: U
Batch No: 99G3668	Prep. Date: 07/23/99	Anal. Date: 07/23/99
Data File Name: 3668G.K01	Prep. No: -	Anal. Time: 17:43
Methanol Vol. -	Sample Amount: 5.0 g	Dilution Factor: 1
Test Level: Low	Sparge Size: 5 mL	Heated Purge: (Y/N) Y

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	TPH AS GASOLINE	8006-61-9	mg/kg	1	<1	U
2	BENZENE	71-43-2	µg/kg	5	<5	U
3	ETHYLBENZENE	100-41-4	µg/kg	5	<5	U
4	TOLUENE	108-88-3	µg/kg	5	<5	U
5	METHYL TERT-BUTYL ETHER	1634-04-4	µg/kg	25	<25	U
6	XYLENES (TOTAL)	1330-20-7	µg/kg	15	<15	U

Surrogates		Control Limit, %	Surro. Rec.%	
1	4-BROMO-FLUOROBENZENE (FID)	460-00-4	52-149	86
2	4-BROMO-FLUOROBENZENE (PID)	460-00-4	60-129	94
# of out-of-control			0	

Internal Standard		Control Limit, %	IS Rec.%	
1	α, α, α-TRIFLUOROTOLUENE	98-08-8	50-200	93
# of out-of-control			0	

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL	E - Exceed calibration range
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)	B - A positive value was found in the method blank
	D - Diluted

166853

FORM-2D

Applied P & Ch Laboratory

Surrogate Recovery Summary for Method M8015V

Client Name: OHM Remediation Services (Irvine) Contract No: Lab Code: APCL
 Case No: SAS No: Service ID: 994934
 Project ID: El Toro Project No: 18609 Sample Matrix: Soil
 Batch No: 99G3668

#	Client Sample No	Lab Sample ID	S1 % #	S2 % #	TOT OUT
1	99G3668-MB-01	99G3668-MB-01	86	94	0
2	99G3668-LCS-01	99G3668-LCS-01	92	85	0
3	99G3668-LSD-01	99G3668-LSD-01	93	76	0
4	18609-651-2299MS	99-4934-4MS	104	83	0
5	18609-651-2299MSD	99-4934-4MSD	94	75	0
6	18609-651-2297	99-4934-2	90	91	0
7	18609-651-2298	99-4934-3	98	98	0
8	18609-651-2299	99-4934-4	83	95	0
9	18609-651-2306	99-4934-11	90	94	0
10	18609-651-2307	99-4934-12	86	97	0
11	18609-651-2308	99-4934-13	100	96	0
12	18609-651-2309	99-4934-14	85	96	0
13	18609-651-2310	99-4934-15	100	97	0
14	18609-651-2311	99-4934-16	101	84	0
15	18609-651-2312	99-4934-17	100	96	0
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

QC Control Limit

S1 = 4-BROMO-FLUOROBENZENE (FID) 52-149
 S2 = 4-BROMO-FLUOROBENZENE (PID) 60-129

Column to be used to flag recovery values:

* - Values outside of contract required QC Limits D - Surrogate diluted out I - Matrix Interference

166893

FORM-3B

Applied P & Ch Laboratory

Lab Control Spike/Lab Control Spike Duplicate Recovery for Method M8015V

Client Name: OHM Remediation Services (Irvine)	Contract No:	Lab Code: APCL
Case No:	SAS No:	Service ID: 994934
Project ID: El Toro	Project No: 18609	Sample Matrix: Soil
	Batch No: 99G3668	
LCS Filename: 3668G.L01	Date Analyzed: 072399	Time Analyzed: 18:14
LCSD Filename: 3668G.J01	Date Analyzed: 072399	Time Analyzed: 18:44

Spiked Components	Unit	Spike Added	Concentration		LCS Rec% #	QC Limit, % REC
			Unspiked	LCS		
TPH AS GASOLINE	mg/kg	1	0	0.887	89	72-124
BENZENE	µg/kg	20.0	0	15.7	79	70-129
ETHYLBENZENE	µg/kg	19	0	16.2	85	72-129
TOLUENE	µg/kg	80.0	0	71.5	89	69-118
O-XYLENE	µg/kg	27.0	0	23.5	87	72-128
M/P-XYLENE	µg/kg	82.0	0	64.1	78	70-118
METHYL TERT-BUTYL ETHER	µg/kg	100	0	113	113	77-129
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	LCSD Concentration	LCSD Rec% #	RPD% #	QC Limit, % RPD REC	
TPH AS GASOLINE	mg/kg	1	1.11	111	22	28	72-124
BENZENE	µg/kg	20.0	20.2	101	24	34	70-129
ETHYLBENZENE	µg/kg	19	18.9	99	15	35	72-129
TOLUENE	µg/kg	80.0	79.0	99	11	19	69-118
O-XYLENE	µg/kg	27.0	26.9	100	14	34	72-128
M/P-XYLENE	µg/kg	82.0	73.8	90	14	24	70-118
METHYL TERT-BUTYL ETHER	µg/kg	100	117	117	3	32	77-129
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* - Values outside of contract required QC Limits

D - Spiked components diluted out

Comments: _____

166913

FORM-3B

Applied P & Ch Laboratory

Matrix Spike/Matrix Spike Duplicate Recovery for Method M8015V

Client Name: OHM Remediation Services (Irvine)	Contract No:	Lab Code: APCL
Case No:	SAS No:	Service ID: 994934
Project ID: El Toro	Project No: 18609	Sample Matrix: Soil
	Batch No: 99G3668	
MS Filename: 3668G.M02	Date Analyzed: 072399	Time Analyzed: 20:08
MSD Filename: 3668G.N02	Date Analyzed: 072399	Time Analyzed: 20:33
MS Sample No: 18609-651-2299	Sample Lab ID: 99-4934-4	Moisture, % 9.0

Spiked Components	Unit	Spike Added	Concentration		MS Rec% #	QC Limit, % REC
			Unspiked	MS		
TPH AS GASOLINE	mg/kg	1.10	0	1.19	108	71-127
BENZENE	µg/kg	22.0	0	18.8	85	61-129
ETHYLBENZENE	µg/kg	20.9	0	20.5	98	60-129
TOLUENE	µg/kg	87.9	0	85.5	97	75-112
O-XYLENE	µg/kg	29.7	0	29.0	98	60-129
M/P-XYLENE	µg/kg	90.1	0	79.9	89	69-117
METHYL TERT-BUTYL ETHER	µg/kg	110	0	118	107	62-127
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, %	
						RPD	REC
TPH AS GASOLINE	mg/kg	1.10	1.24	113	5	28	71-127
BENZENE	µg/kg	22.0	22.9	104	20	34	61-129
ETHYLBENZENE	µg/kg	20.9	21.3	102	4	35	60-129
TOLUENE	µg/kg	87.9	87.8	100	3	19	75-112
O-XYLENE	µg/kg	29.7	29.8	100	2	34	60-129
M/P-XYLENE	µg/kg	90.1	82.4	91	2	24	69-117
METHYL TERT-BUTYL ETHER	µg/kg	110	135	123	14	32	62-127
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* - Values outside of contract required QC Limits

D - Spiked components diluted out

Comments: _____

166914

Method Blank Summary for Method M8015V

Client Name: OHM Remediation Services (Irvine)	Contract No:	Lab Code: APCL
Case No:	SAS No:	Service ID: 994934
Project ID: El Toro	Project No: 18609	Analysis Date: 07/23/99
Sample ID: 99G3668-MB-01	Sample Matrix: Soil	Analysis Time: 17:43
Lab Sample ID: 99G3668-MB-01	Batch No: 99G3668	Instrument ID: GC: U
	Data File Name: 3668G.K01	GC Column: DB-1
	Heated Purge: (Y/N) Y	Column ID: 0.53 mm

This Method Blank applies to the following samples and QC samples:

#	Client Sample No	Lab Sample ID	Sample Type	Data Filename	Analysis Date	Analysis Time
1	99G3668-LCS-01	99G3668-LCS-01	Lab Control Spike	3668G.L01	07/23/99	18:14
2	99G3668-LSD-01	99G3668-LSD-01	Lab Control Spike Duplicate	3668G.J01	07/23/99	18:44
3	18609-651-2299MS	99-4934-4MS	Matrix Spike	3668G.M02	07/23/99	20:08
4	18609-651-2299MSD	99-4934-4MSD	Matrix Spike Duplicate	3668G.N02	07/23/99	20:33
5	18609-651-2297	99-4934-2	Field Sample	4934.002	07/24/99	01:12
6	18609-651-2298	99-4934-3	Field Sample	4934.003	07/24/99	01:38
7	18609-651-2299	99-4934-4	Field Sample	4934.004	07/24/99	02:03
8	18609-651-2306	99-4934-11	Field Sample	4934.011	07/24/99	03:20
9	18609-651-2307	99-4934-12	Field Sample	4934.012	07/24/99	03:46
10	18609-651-2308	99-4934-13	Field Sample	4934.013	07/24/99	04:11
11	18609-651-2309	99-4934-14	Field Sample	4934.014	07/24/99	04:37
12	18609-651-2310	99-4934-15	Field Sample	4934.015	07/24/99	05:54
13	18609-651-2311	99-4934-16	Field Sample	4934.016	07/24/99	06:19
14	18609-651-2312	99-4934-17	Field Sample	4934.017	07/24/99	06:45
15	155 (6)					
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

166918

Applied P & Ch Laboratory
Organic Analysis Results for Method M8015E

Client Name: OHM Remediation Services (Irvine)	Project No: 18609	Collection Date: 07/22/1999
Project ID: El Toro	Service ID: 994934	Collected by:
Sample ID: 99G3657-MB-01	Lab Sample ID: 99G3657-MB-01	Received Date: 07/22/1999
Sample Type: Method Blank	Sample Matrix: Soil	Moisture %:
Anal. Method: M8015E	Prep. Method: 3550	Instrument ID: GC: H
Batch No: 99G3657	Prep. Date: 07/22/99	Anal. Date: 07/23/99
Data File Name: 3657G.K01	Prep. No: 1 of 1	Anal. Time: 01:43
Extract Vol. 1.0 mL	Sample Amount: 20.0 g	Dilution Factor: 1

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	TPH AS DIESEL	68334-30-5	mg/kg	10	<10	U
2	TPH AS MOTOR OIL	68334-30-5	mg/kg	10	<10	U
Surrogates				Control Limit, %	Surro. Rec.%	
1	OCTACOSANE, C ₂₈	630-02-4		50-146	108	
# of out-of-control					0	

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL	E - Exceed calibration range
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)	B - A positive value was found in the method blank
	D - Diluted

167026

FORM-2D

Applied P & Ch Laboratory

Surrogate Recovery Summary for Method M8015E

Client Name: OHM Remediation Services (Irvine) Contract No: Lab Code: APCL
 Case No: SAS No: Service ID: 994934
 Project ID: El Toro Project No: 18609 Sample Matrix: Soil
 Batch No: 99G3657

#	Client Sample No	Lab Sample ID	S1 % #	TOT OUT
1	99G3657-MB-01	99G3657-MB-01	108	0
2	99G3657-LCS-01	99G3657-LCS-01	101	0
3	99G3657-LSD-01	99G3657-LSD-01	104	0
4	18609-651-2300	99-4934-5	87	0
5	18609-651-2312	99-4934-17	81	0
6	777775-346MS	99-4917-2MS	94	0
7	777775-346MSD	99-4917-2MSD	95	0
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				

QC Control Limit
50-146

S1 = OCTACOSANE, C₂₈

Column to be used to flag recovery values:

* - Values outside of contract required QC Limits D - Surrogate diluted out I - Matrix Interference

167031

FORM-3D

Applied P & Ch Laboratory

Lab Control Spike/Lab Control Spike Duplicate Recovery for Method M8015E

Client Name: OHM Remediation Services (Irvine)	Contract No:	Lab Code: APCL
Case No:	SAS No:	Service ID: 994934
Project ID: El Toro	Project No: 18609	Sample Matrix: Soil
	Batch No: 99G3657	
LCS Filename: 3657G.L01	Date Analyzed: 072399	Time Analyzed: 02:10
LCSD Filename: 3657G.J01	Date Analyzed: 072399	Time Analyzed: 02:36

Spiked Components	Unit	Spike Added	Concentration		LCS Rec% #	QC Limit, % REC
			Unspiked	LCS		
TPH AS DIESEL	mg/kg	50	0	57.3	115	65-134
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	LCSD Concentration	LCSD Rec% #	RPD% #	QC Limit, %	
						RPD	REC
TPH AS DIESEL	mg/kg	50	59.4	119	3	35	65-134
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* - Values outside of contract required QC Limits D - Spiked components diluted out

Comments: _____

167032

FORM-3D

Applied P & Ch Laboratory

Matrix Spike/Matrix Spike Duplicate Recovery for Method M8015E

Client Name: OHM Remediation Services (Irvine)	Contract No:	Lab Code: APCL
Case No:	SAS No:	Service ID: 994934
Project ID: El Toro	Project No: 18609	Sample Matrix: Soil
	Batch No: 99G3657	
MS Filename: 3657G.M03	Date Analyzed: 072399	Time Analyzed: 14:40
MSD Filename: 3657G.N03	Date Analyzed: 072399	Time Analyzed: 15:07
MS Sample No: 777775-346	Sample Lab ID: 99-4917-2	Moisture, % 10.7

Spiked Components	Unit	Spike Added	Concentration		MS Rec% #	QC Limit, % REC
			Unspiked	MS		
TPH AS DIESEL	mg/kg	56.0	20	70.9	91	65-134
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, %	
						RPD	REC
TPH AS DIESEL	mg/kg	56.0	71.5	92	1	30	65-134
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* - Values outside of contract required QC Limits

D - Spiked components diluted out

Comments: _____

167033

FORM-4B

Applied P & Ch Laboratory

Method Blank Summary for Method M8015E

Client Name: OHM Remediation Services (Irvine)	Contract No:	Lab Code: APCL
Case No:	SAS No:	Service ID: 994934
Project ID: El Toro	Project No: 18609	Analysis Date: 07/23/99
Sample ID: 99G3657-MB-01	Sample Matrix: Soil	Analysis Time: 01:43
Lab Sample ID: 99G3657-MB-01	Batch No: 99G3657	Instrument ID: GC: H
	Data File Name: 3657G.K01	GC Column: DB-1
		Column ID: 0.32 mm

This Method Blank applies to the following samples and QC samples:

#	Client Sample No	Lab Sample ID	Sample Type	Data Filename	Analysis Date	Analysis Time
1	99G3657-LCS-01	99G3657-LCS-01	Lab Control Spike	3657G.L01	07/23/99	02:10
2	99G3657-LSD-01	99G3657-LSD-01	Lab Control Spike Duplicate	3657G.J01	07/23/99	02:36
3	18609-651-2300	99-4934-5	Field Sample	4934.005	07/23/99	07:59
4	18609-651-2312	99-4934-17	Field Sample	4934.017	07/23/99	08:26
5	777775-346MS	99-4917-2MS	Matrix Spike	3657G.M03	07/23/99	14:40
6	777775-346MSD	99-4917-2MSD	Matrix Spike Duplicate	3657G.N03	07/23/99	15:07
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

167034

FORM-3

Applied P & Ch Laboratory

Lab Control Spike/Lab Control Spike Duplicate Recovery for Method 418.1

Client Name: OHM Remediation Services (Irvine)	Contract No:	Lab Code: APCL
Case No:	SAS No:	Service ID: 994934
Project ID: El Toro	Project No: 18609	Sample Matrix: Soil
	Batch No: 99W5147	
LCS Filename: -	Date Analyzed: 072299	Time Analyzed: 18:13
LCSD Filename: -	Date Analyzed: 072299	Time Analyzed: 18:13

Spiked Components	Unit	Spike Added	Concentration		LCS Rec% #	QC Limit, % REC
			Unspiked	LCS		
TRPH	mg/kg	1000	0	945	95	84-107
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	LCSD Concentration	LCSD Rec% #	RPD% #	QC Limit, %	
						RPD	REC
TRPH	mg/kg	1000	954	95	0	21	84-107
# of Out-of-control					0	0	

Column to be used to flag recovery and RPD values:

* - Values outside of contract required QC Limits

D - Spiked components diluted out

Comments: _____

167179

FORM-3

Applied P & Ch Laboratory

Matrix Spike/Matrix Spike Duplicate Recovery for Method 418.1

Client Name: OHM Remediation Services (Irvine) Contract No: Lab Code: APCL
 Case No: SAS No: Service ID: 994934
 Project ID: El Toro Project No: 18609 Sample Matrix: Soil
 Batch No: . 99W5147
 MS Filename: - Date Analyzed: 072299 Time Analyzed: 18:13
 MSD Filename: - ^{OK!} Date Analyzed: 072299 Time Analyzed: 18:13
 MS Sample No: 18609-~~651~~-2291 Sample Lab ID: 99-4935-4 Moisture, % 11.2

Spiked Components	Unit	Spike Added	Concentration		MS Rec% #	QC Limit, % REC
			Unspiked	MS		
TRPH	mg/kg	1130	182	1260	95	76-118
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, %	
						RPD	REC
TRPH	mg/kg	1130	1270	96	1	21	76-118
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* - Values outside of contract required QC Limits

D - Spiked components diluted out

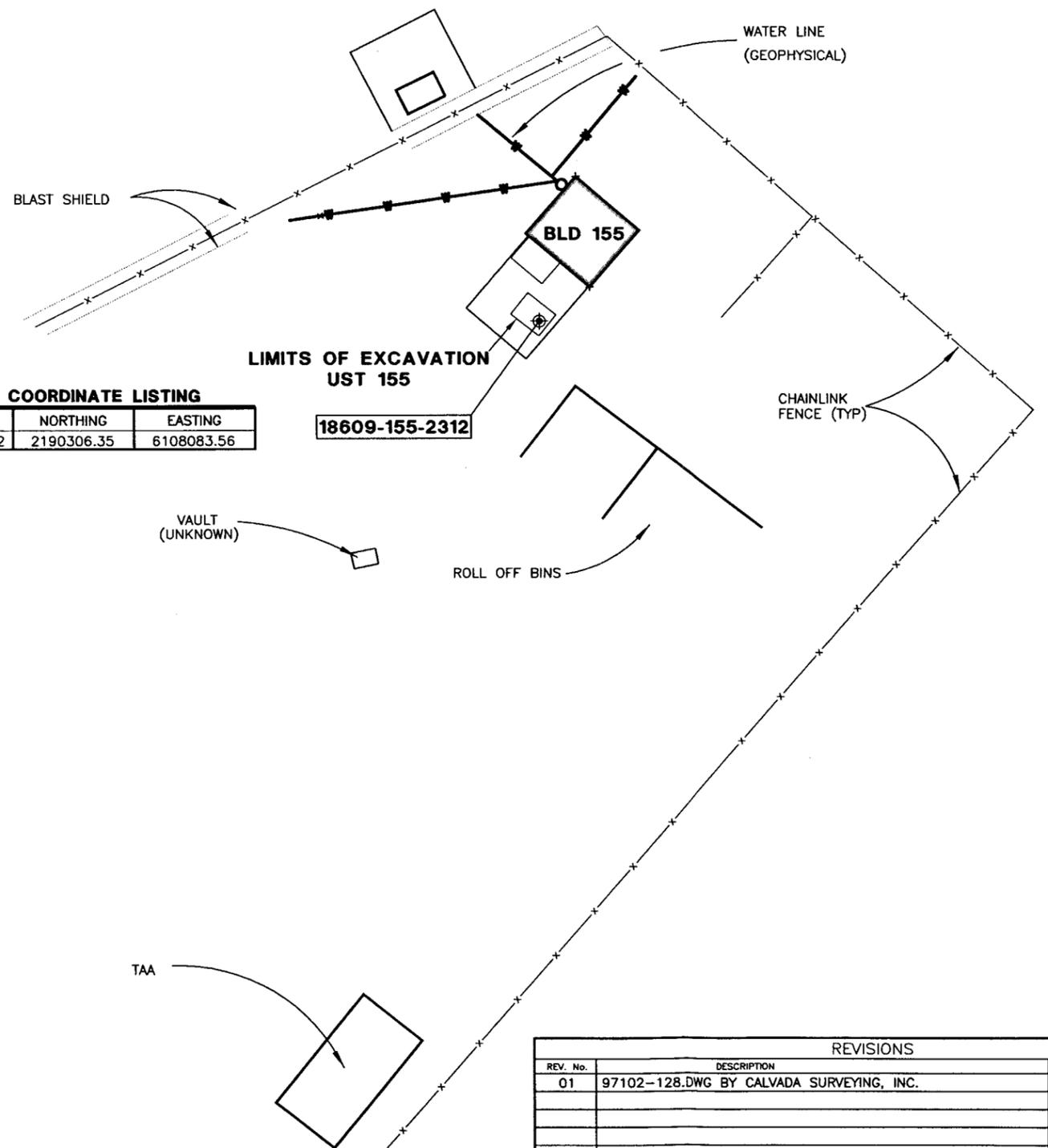
Comments: _____

167180

Appendix G
Land Survey Data

Oct 19, 1999 - 15:00:55 I:\OHM CORP\PROJECTS\18609\18609263.dwg

TAXIWAY



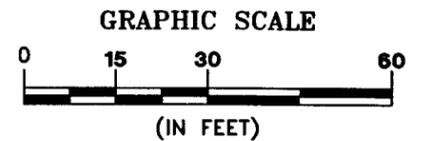
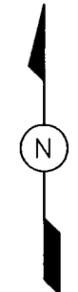
SAMPLE COORDINATE LISTING

DESCRIPTION	NORTHING	EASTING
18609-155-2312	2190306.35	6108083.56

EXPLANATION:

- CONFIRMATION SOIL SAMPLE
- NG NATURAL GROUND
- FS FINISH SURFACE

DATE OF SURVEY: 4-14-99



REVISIONS

REV. No.	DESCRIPTION	DATE	APPROVED
01	97102-128.DWG BY CALVADA SURVEYING, INC.	4/14/99	

CONTRACT NAME SWDIV		OHM Remediation Services Corp. A Subsidiary of OHM Corporation IRVINE, CA	
DRAWN BY R. PIRMORADIAN	DATE 10/19/99	SITE PLAN UST 155	
CHECKED BY	DATE		
APPROVED BY	DATE		
PROJECT MANAGER		DATE	
AUTOCAD FILE No. 18609263.DWG		MARINE CORPS AIR STATION EL TORO, CALIFORNIA	
SCALE 1"=30'	SHEET OF 1 1		
DOCUMENT CONTROL No. SW7256	OHM PROJECT No. 18609	DRAWING No. FIG 1-3	

Appendix H
Waste Bins Analytical Data

COMPLETED *lu*
9/27



OHM Remediation Services Corp.
Subsidiary of OHM Corporation
U.S. Route 224 East • Findlay, Ohio 45840 • (419) 423-3526

CHAIN-OF-CUSTODY RECORD

PROJECT DATA MANAGER'S COPY

(99-5457)
994998

UST-155-bin Sampling

217092

FORM 0019 REV. 2-97

OHM LAB COORDINATOR <i>L. Bronkowsky</i>	LAB COORDINATOR'S PHONE <i>949-1660-7537</i>	LAB COORDINATOR'S FAX <i>949-475-6433</i>	LABORATORY SERVICE ID <i>994989</i>	LABORATORY CONTACT <i>APCL</i>	MAIL REPORT (COMPANY NAME) <i>IT Group</i>
PROJECT NAME <i>FT Toro - 0070</i>	PROJECT LOCATION <i>FT Toro, CA</i>	PROJECT NUMBER <i>18609</i>	LABORATORY PHONE <i>707-570-1828</i>	LABORATORY FAX	RECIPIENT NAME <i>Dwayne Ishida</i>
PROJECT CONTACT <i>L. Bronkowsky</i>	PROJECT PHONE NUMBER <i>949-451-1667</i>	PROJECT FAX	LABORATORY ADDRESS <i>13760 Magnolia Dr.</i>	ADDRESS <i>3347 Michelson Dr.</i>	
PROJECT ADDRESS	CITY, STATE AND ZIPCODE	CLIENT <i>SWAIV</i>	CITY, STATE AND ZIPCODE <i>Chino, CA</i>	CITY, STATE AND ZIPCODE <i>Irvine, CA</i>	
PROJECT MANAGER <i>R. Sedlak</i>	PROJECT MANAGER'S PHONE <i>949-261-1661</i>	PROJECT MANAGER'S FAX	<i>Analyses</i> <i>Asst. I</i> <i>2015 Diesel</i> <i>PEX + MIRA</i> <i>THV AD Metals</i> <i>Chromium</i> <i>SILC Nickel</i> <i>ICAP Chromium</i>		

Item	Sample Identifier	Matrix	Date	Time	Preserved	# of Cont.	QC Level	T.A.T.	Analyses										Comments			
									Asst. I	2015 Diesel	PEX + MIRA	THV AD Metals	Chromium	SILC Nickel	ICAP Chromium							
1	18609-155-2313	S	7-26	0824	4°C	1	III	5day	X	X	X	X										
2	18609-155-2314	S	7-26	0823	4°C	1	III	5day	X	X	X	X		X	X	X						
3	18609-155-2315	S	7-26	0812	4°C	1	III	5day	X			X										
4	18609-155-2316	S	7-26	0813	4°C	1	III	5day	X			X										
5	18609-155-2317	S	7-26	0814	4°C	1	III	5day	X			X										
6	18609-155-2318	S	7-26	0815	4°C	1	III	5day														
7	18609-155-2319	S	7-26	0815	4°C	-	II	5day	X		X	X	X	X	X	X						Com. Out Sample 2315, 2316, 2317, 2318
8																						
9																						
10																						

SAMPLES COLLECTED BY: <i>WJ</i>	COURIER AND AIR BILL NUMBER: <i>61000</i>	COOLER TEMPERATURE UPON RECEIPT:
RELINQUISHED BY: <i>WJ</i>	RECEIVED BY: <i>WJ</i>	SAMPLE'S CONDITION UPON RECEIPT:
DATE: <i>7/26/09</i>	TIME: <i>10:00</i>	

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

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

UST-155-Bin Sampling

Sample Point Location	Sample Type			
	G	C	F	QC
1. Bin # 3-15-039	X			
2. Bin # 3-20-122	X			
3. Bin # 3-15-035	X			
4. Bin # 3-15-035	X			
5. Bin # 3-15-035	X			
6. Bin # 3-15-035	X			
7. Composite of standard material				
Comments				

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

99-5457

Applied P & Ch Laboratory

13780 Magnolia Ave. Chino CA 91710

Tel: (909) 590-1828 Fax: (909) 590-1498

Submitted to:

OHM Remediation Services (Irvine)

Attention: Dwayne Ishida

3347 Michelson Dr. Ste 200

Irvine CA 92612-1692

Tel: (949) 660-7594 Fax: (949) 475-5433

APCL Analytical Report

Service ID #: 801-994990

Received: 07/26/99

Collected by: Way-Lynn Jefferson

Extracted: 07/28-08/05/99

Collected on: 07/26/99

Tested: 07/27-08/27/99

Reported: 08/27/99

Sample Description: Soil from DO 70

Project Description: 18609 El Toro

Analysis of Soil Samples

Component Analyzed	Method	Unit	PQL	Analysis Result		
				18609-155-2313 99-04990-1	18609-155-2314 99-04990-2	18609-155-2319 99-04990-7 (d)
MOISTURE	ASTM-D2216	%Moisture	0.5	7.1	4.7	3.9
TRPH	418.1	mg/kg	10	243	785	716

Component Analyzed	Method	Unit	PQL	Analysis Result	
				18609-155-2313 99-04990-1	18609-155-2314 99-04990-2
BTXE + MTBE					
Dilution Factor				1	1
BENZENE	8020	µg/kg	5	< 5.4	< 5.2
ETHYLBENZENE	8020	µg/kg	5	< 5.4	< 5.2
TOLUENE	8020	µg/kg	5	< 5.4	< 5.2
O-XYLENE	8020	µg/kg	5	< 5.4	< 5.2
M/P-XYLENE	8020	µg/kg	10	< 11	< 10
METHYL TERT-BUTYL ETHER	8020	µg/kg	25	< 27	< 26
Dilution Factor				1	5
TPH AS DIESEL	M8015E	mg/kg	10	66 (a)	31J
Dilution Factor				1	5
TPH AS MOTOR OIL	M8015E	mg/kg	10	140	210

Component Analyzed	Method	Unit	PQL	Analysis Result
				18609-155-2319 99-04990-7 (d)
TTLIC 17 METALS				
ANTIMONY	6010	mg/kg	5	2.9J
ARSENIC	6010	mg/kg	0.3	3.3
BARIUM	6010	mg/kg	1	70.5
BERYLLIUM	6010	mg/kg	0.2	< 0.21
CADMIUM	6010	mg/kg	0.2	0.52
CHROMIUM	6010	mg/kg	0.5	299 STLC/TELP
COBALT	6010	mg/kg	0.5	8.5
COPPER	6010	mg/kg	0.5	19.5
LEAD	6010	mg/kg	0.3	44.1
MERCURY	7471	mg/kg	0.2	0.041J
MOLYBDENUM	6010	mg/kg	0.2	0.32
NICKEL	6010	mg/kg	0.3	204 STLC
SELENIUM	6010	mg/kg	0.5	0.97

APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result 18609-155-2319 99-04990-7
SILVER	6010	mg/kg	0.5	< 0.52
THALLIUM	6010	mg/kg	5	< 5.2
VANADIUM	6010	mg/kg	0.5	24.3
ZINC	6010	mg/kg	0.5	255
Dilution Factor				2
TCLP CHROMIUM ^(b)	6010	µg/L	5	21.3
Dilution Factor				5
STLC CHROMIUM ^(b)	6010	µg/L	5	1,650
Dilution Factor				5
STLC NICKEL ^(b)	6010	µg/L	5	4,780

Component Analyzed	Method	Unit	PQL	Analysis Result	
				18609-155-2313 99-04990-1	18609-155-2314 99-04990-2
TTLC 17 METALS ^(c)					
ANTIMONY	6010	mg/kg	5	< 5.4	< 5.2
ARSENIC	6010	mg/kg	0.3	2.2	2.7
BARIUM	6010	mg/kg	1	90.2	75.1
BERYLLIUM	6010	mg/kg	0.2	< 0.22	< 0.21
CADMIUM	6010	mg/kg	0.2	0.46	0.38
CHROMIUM	6010	mg/kg	0.5	74.3	226 <i>STLC + TCLP</i>
COBALT	6010	mg/kg	0.5	5.2	10.2
COPPER	6010	mg/kg	0.5	7.6	9.9
LEAD	6010	µg/kg	0.3	13.5	30.2
MERCURY	7471	mg/kg	0.2	< 0.22	< 0.21
MOLYBDENUM	6010	mg/kg	0.2	0.052J	0.083J
NICKEL	6010	mg/kg	0.3	39.6	463 <i>STLC</i>
SELENIUM	6010	mg/kg	0.5	< 0.54	< 0.52
SILVER	6010	mg/kg	0.5	< 0.54	< 0.52
THALLIUM	6010	mg/kg	5	< 5.4	< 5.2
VANADIUM	6010	mg/kg	0.5	27.6	24.6
ZINC	6010	mg/kg	0.5	151	156

PQL: Practical Quantitation Limit. MDL: Method Detection Limit. CRDL: Contract Required Detection Limit
 N.D.: Not Detected or less than the practical quantitation limit. "-": Analysis is not required.

J: Reported between PQL and MDL.

† All results are reported on dry basis for soil samples.

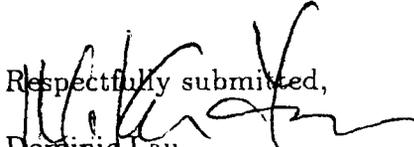
Listed Dilution Factors (DF) are relative to the method default DF. All unlisted DFs are 1.0

(a) Sample chromatogram contained some unknown peaks in Jet Fuel range.

(b) Additional analysis requested on 08/02/99.

(c) Additional analysis requested on 08/03/99.

(d) Composite of 18609-155-2315 through 2318.

Respectfully submitted,

 Dominic Lau
 Laboratory Director
 Applied P & Ch Laboratory

Applied P & Ch Laboratory

13760 Magnolia Ave. Chino CA 91710

Tel: (909) 590-1828 Fax: (909) 590-1498

Submitted to:

OHM Remediation Services (Irvine)

Attention: Dwayne Ishida

3347 Michelson Dr. Ste 200

Irvine CA 92612-1692

Tel: (949) 660-7594 Fax: (949) 475-5433

APCL Analytical Report

Service ID #: 801-995657

Received: 07/26/99

Collected by: Way-Lynn Jefferson

Extracted: 09/02-04/99

Collected on: 07/26/99

Tested: 09/03-05/99

Reported: 09/08/99

Sample Description: Soil from El Toro

Project Description: 18609 DO70 VST 155-bin sampling

Analysis of Soil Samples^(a)

Component Analyzed	Method	Unit	PQL	Analysis Result
				18609-155-2314 99-05657-1
Dilution Factor				2
TCLP CHROMIUM, CR	6010	µg/L	5	< 10
Dilution Factor				5
STLC CHROMIUM, CR	6010	µg/L	5	1,030
STLC NICKEL	6010	µg/L	5	1,820

PQL: Practical Quantitation Limit. MDL: Method Detection Limit. CRDL: Contract Required Detection Limit

N.D.: Not Detected or less than the practical quantitation limit.

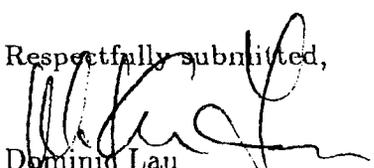
"-": Analysis is not required.

J: Reported between PQL and MDL.

Listed Dilution Factors (DF) are relative to the method default DF. All unlisted DFs are 1.0

^(a) Additional analysis for 99-4990, requested on 09/01/99.

Respectfully submitted,


Dominic Lau

Laboratory Director

Applied P & Ch Laboratory

Appendix I
Waste Manifests

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. CA 6170023208		Manifest Document No. 187001/55-2	2. Page 1 of 1
3. Generator's Name and Mailing Address MCAS El Toro Contract Site Office, P.O. Box 444 San Bruno CA 94066				A. State Transporter's ID HAHQ3603891	
4. Generator's Phone (415) 577-1102					
5. Transporter 1 Company Name Ecology Control Industries, Inc.		6. US EPA ID Number CA10002020173		B. Transporter 1 Phone (510) 235-1393	
7. Transporter 2 Company Name		8. US EPA ID Number		C. State Transporter's ID	
9. Designated Facility Name and Site Address American National Technologies 7681 Seminole Ave. Lynwood CA 94762		10. US EPA ID Number		D. Transporter 2 Phone	
				E. State Facility's ID	
				F. Facility's Phone (323) 357-1900	
11. WASTE DESCRIPTION a. Non-regulated waste			12. Containers		13. Total Quantity
			No.	Type	Unit Wt./Vol.
b.			1	GM	18
c.					
d.					
G. Additional Descriptions for Materials Listed Above Bin # 1-20-039				H. Handling Codes for Wastes Listed Above	
15. Special Handling instructions and Additional Information IN CASE OF EMERGENCY CONTACT: Chem-Tek Inc. at 1-800-255-2921					
16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.					
Printed/Typed Name [Signature]				Signature [Signature]	
				Date Month Day Year	
17. Transporter 1 Acknowledgement of Receipt of Materials					
Printed/Typed Name [Signature]				Signature [Signature]	
				Date Month Day Year	
18. Transporter 2 Acknowledgement of Receipt of Materials					
Printed/Typed Name				Signature	
				Date Month Day Year	
19. Discrepancy Indication Space					
20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.					
Printed/Typed Name				Signature	
				Date Month Day Year	

NON-HAZARDOUS WASTE GENERATOR TRANSPORTER FACILITY

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST	1. Generator's US EPA ID No. 040170023200	Manifest Document No. 17-1122-1	2. Page 1 of 1
3. Generator's Name and Mailing Address MCAO El Toro California State Office, P.O. Box 444 East Irvine CA 92614		4. Generator's Phone (949) 677-4402	
5. Transporter 1 Company Name Ecology Control Industries, Inc.	6. US EPA ID Number CAD982020173	A. State Transporter's ID 44193603891	B. Transporter 1 Phone (510) 235-1393
7. Transporter 2 Company Name	8. US EPA ID Number	C. State Transporter's ID	D. Transporter 2 Phone
9. Designated Facility Name and Site Address American Remedial Technologies 7630 Semble Ave. Lynnwood CA 94026	10. US EPA ID Number	E. State Facility's ID	
11. WASTE DESCRIPTION		F. Facility's Phone (415) 857-1800	

a.	12. Containers		13. Total Quantity	14. Unit Wt./Vol.
	No.	Type		
Nonaqueous waste	2	CM	1	Y
b.	2		#30	
c.				
d.				
G. Additional Descriptions for Materials Listed Above			H. Handling Codes for Wastes Listed Above	
<p>17. ARET received M.C.D.C. from applicant with verbal photography of 17.01 gpm. material in waste box at ARET. Shipped under 17.02 instructions. CA State Office. 17.03.</p>				

15. Special Handling Instructions and Additional Information
3-15-035 / 3-20-12

Caution: Wear appropriate protective clothing and respiratory protection when handling.

IN CASE OF EMERGENCY CONTACT: Chem-Tel, Inc. at 1-800-255-392498

Site pick up address: **MCAO El Toro, CA 92614**

16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.

Printed/Typed Name [Signature]	Signature [Signature]	Date Month Day Year
17. Transporter 1 Acknowledgement of Receipt of Materials		
Printed/Typed Name [Signature]	Signature [Signature]	Date Month Day Year
18. Transporter 2 Acknowledgement of Receipt of Materials		
Printed/Typed Name	Signature	Date Month Day Year
19. Discrepancy Indication Space		
20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.		
Printed/Typed Name	Signature	Date Month Day Year

NON-HAZARDOUS WASTE GENERATOR

TRANSPORTER FACILITY