

Summary Report

Aerial Photograph Anomaly APHO 42
Aerial Photograph Anomaly Program
Marine Corps Air Station, El Toro, California

15 December 1999

Prepared by
Southwest Division, Naval Facilities Engineering Command
BRAC Program Office
1420 Kettner Boulevard, Suite 501
San Diego, CA 92101-2404

Summary Report

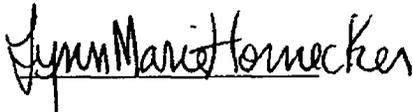
Aerial Photograph Anomaly APHO 42

Aerial Photograph Anomaly Program

Marine Corps Air Station, El Toro, California

15 December 1999

Prepared by:



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TRANSMITTAL

Date: 15 December 1999

From: Lynn Marie Hornecker 

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

Subj: Aerial Photograph Anomaly APHO 42 (SAIC 281)
Aerial Photograph Anomaly Program
Marine Corps Air Station, El Toro

Provided for your review as the attachment is the Summary Report for Aerial Photograph Anomaly APHO 42, also known as Science Applications International Corporation (SAIC) 281, in the southeastern section of the Marine Corps Air Station (MCAS), El Toro. SAIC identified this anomaly as wet soil or a burned area located east of Building 457 on a black and white photograph taken in December 1974. The anomaly encompasses an abandoned picnic area that includes several large trees and shrubs. The anomaly encompasses an area approximately 150 feet long by 150 feet wide.

We evaluated historical aerial photographs, Station maps and plans, Station property records, environmental program management plans, and the results of previous environmental restoration program investigations, and we conducted a visual inspection of the APHO 42 vicinity in December 1999. No wet soils or burned areas were observed during the visual inspection. It is possible that routine irrigation or storm water runoff at APHO 42 caused the appearance of wet soils or burned areas on the 1974 photograph.

Based upon the review of the historical information and the absence of stains, wet soils, burned areas, or other evidence of potential releases of hazardous substances at APHO 42, it is recommended that *no further action status* be designated for APHO 42 (SAIC 281) in the next Base Realignment and Closure Cleanup Plan (BCP) Update.

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File: aph42ltr

If we do not receive comments from you within sixty days of receipt of this document, then we will assume that you concur with our conclusions and we will continue our evaluation of historical aerial photograph anomalies. A formal transmittal letter may follow.

If you have questions, please do not hesitate to contact me at (619) 532-4162. Thank you very much.

Attachment

- Summary Report, Aerial Photograph Anomaly APHO 42 (SWDIV, December 1999)

CF: w/attachment
Glenn Kistner (USEPA)
Patricia Hannon (RWQCB Santa Ana Region)
Dean Gould (MCAS El Toro)
Project File (MCAS El Toro)

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Section 1

Introduction

The purpose of this Summary Report is to present information pertaining to the aerial photograph anomaly, designated as APHO 42 in the Base Realignment and Closure Cleanup Plan (BCP) at the Marine Corps Air Station, El Toro. APHO 42 is located east of Building 457 at an abandoned picnic area in the southeast section of the Station. APHO 42 was identified by Science Applications International Corporation (SAIC) as SAIC 281 on a black and white photograph taken in December 1974. The anomaly is described as wet soil or a burned area approximately 100 feet east of Building 457. The anomaly encompasses an area approximately 150 feet long by 150 feet wide.

The Marine Corps Air Station, El Toro, also known as the Station, comprises approximately 4,700 acres and is located in eastern Orange County approximately 45 miles southeast of Los Angeles, California. The APHO 42 vicinity is located northwest of Z Street and northwest of the Golf Course as shown on Figure 1.

The Station was closed on 2 July 1999 in accordance with the Base Realignment and Closure Act of 1993 (BRAC III). APHO 42 is located within a parcel tentatively designated for future public facilities according to *The Airport and Open Space Plan, Year 2020, Concept B* (County of Orange, August 1999).

This Summary Report includes an evaluation of historical records, a description of information collected during the investigation of nearby Environmental Locations of Concern, and the results of the visual inspection of the site. No wet soils or burned areas were observed at APHO 42 during the recently completed visual inspection. It is possible that routine irrigation of the trees and shrubs at the abandoned picnic area or accumulation of storm water runoff on the east side of Building 457 caused the appearance of wet soil or a burned area on the 1974 black and white photograph.

Based upon the review of the historical information and the absence of stains, wet soils, burned areas, or other evidence of potential releases of hazardous substances at APHO 42, it is recommended that *no further action status* be designated for APHO 42 (SAIC 281) in the next Base Realignment and Closure Cleanup Plan (BCP) Update.

Section 2

Field Inspections and Historical Records

APHO 42 (SAIC 281), identified on a black and white photograph dated 9 December 1974, is described by SAIC as follows:

SAIC 281: *There is wet soil (WS) or a burned area about 100 feet east of Building 457, near S 4th Street and East Marine Way. Verification that the area was the site of a grass fire may be advisable.*

2.1 Field Inspections

APHO 42 Vicinity

The APHO 42 vicinity was visually inspected by the Navy in December 1999. The APHO 42 vicinity encompasses an abandoned picnic area located east of Building 457. The area is relatively level, unpaved, and landscaped with grasses, shrubs, and large trees. Playground equipment and horseshoe pits were observed during the visual inspection. No wet soils, stains, or burned areas were observed during the inspection.

It is possible that routine irrigation of the trees and shrubs at the abandoned picnic area at APHO 42 caused the appearance of wet soil or a burned area on the 1974 photograph. The 1974 photograph is described in Appendix D of the SAIC report as a black and white photograph. It is possible that that wet soils caused by irrigation of the trees and shrubs or storm water accumulation or a recently burned area could have caused a dark area on the photograph.

Aerial photographs of the Building 457 vicinity that were included in the SAIC report from other years were reviewed. The 1973 photograph shows a landscaped area east of Building 457, and this area appears gray on the photograph (the photograph in the SAIC report is a black and white copy of the original color photograph). Tree-like features or other vegetation are visible east of Building 457 on the 1980, 1981, 1984, and 1988 photographs.

Additionally, the SAIC study identifies wet soils or liquids at several locations on the 9 December 1974 photograph. Since rainy weather is not uncommon in December, it is possible that accumulation of storm water runoff caused the appearance of wet soils at these locations.

Photographs of the APHO 42 vicinity and a check list form documenting observations from the visual inspection are presented in the Appendix.

2.2 Environmental Program Records

Records of previously completed environmental restoration program investigations were acquired and reviewed, and selected Environmental Locations of Concern located near the APHO 42 vicinity are shown on Figure 1. A description of the types of data collected near the APHO 42 vicinity at adjacent Environmental Locations of Concern is presented in Table 1.

Table 1. Sampling Activities at or near the APHO 42 Vicinity.

Location of Concern Identification Number	Status	NFA or other Decision Document(s)	Comments
<i>Vicinity of APHO 42</i>			
SWMU 244 (PCB Spill Area on southwest side (south end) of Building 457)	NFA.	DTSC letter dated 17 December 1998	Soil samples were collected during the RFA Sampling Visit and following the removal of the contaminated soils.
UST 457 (Southeast side of Building 457)	NFA.	Orange County Health Care Agency (OCHCA) letter dated 9 December 1996	Soil samples were collected following the removal of the tank.
<i>Ground Water Data</i>			
Wells at IRP Site 6 (approximately 1,000 feet west of APHO 42)	Several sampling events were completed.		Monitoring data has been routinely submitted to the BRAC Cleanup Team members.

Resource Conservation and Recovery Act Facility Assessment (RFA)

One (1) Solid Waste Management Unit (SWMU) requiring remediation was identified near APHO 42 during the Resource Conservation and Recovery Act Facility Assessment (RFA). Results of the RFA are published in the *Installation Restoration Program, Final Resource Conservation and Recovery Act Facility Assessment Report for Marine Corps Air Station, El Toro, California* (Jacobs Engineering Group, 1993) and the *Final Addendum to the RCRA Facility Assessment, MCAS El Toro, California (Volume 6 of the Final RFA Report)* (Bechtel, 1996). Extracts from the RFA documentation are presented in the Appendix.

SWMU 244 was identified as a polychlorinated biphenyl (PCB) spill area adjacent to a pad-mounted electrical transformer near the southwest corner of Building 457. During the RFA Sampling Visit, PCBs were identified in the near-surface soils. The PCB-contaminated soils were excavated and removed from the site in 1997.

Underground Storage Tank (UST) Program

One (1) UST was located near APHO 42. UST 457 on the southeast side of Building 457 was removed in 1993.

BRAC Cleanup Plan (BCP) Information

The BCP (Tables 3-1a, 3-1b, and 3-2) describe the aerial photograph anomaly sites. Extracts from the BCP are presented in the Appendix. Table 3-2 includes a description of APHO 42 in the *Comments* column that is not consistent with the SAIC description.

The BCP table 3-2 indicates that EPA identified APHO 42 as a drum storage area. The map of EPA Anomaly Sites does not show an anomaly on the north, northeast, or east sides of Building 457, and no anomalies were described as drum storage areas by either SAIC or EPA in the immediate vicinity of APHO 42.

It is recommended that the *Comments* section of Table 3-2 be revised for consistency with the SAIC description of APHO 42 (SAIC 281) as follows:

"APHO 42, identified on a 1974 photograph as SAIC 281, is described as wet soil or a burned area approximately 100 feet east of Building 457."

Hazardous Waste/Hazardous Materials Management Plan

The Station's Hazardous Materials/Hazardous Waste Management Plan (HM/HWMP) was reviewed and extracts pertaining to the vicinity of APHO 42 are presented in the Appendix. The HM/HWMP does not identify temporary storage of hazardous materials or wastes at APHO 42. A warehouse (Building 901) for storage of hazardous materials is located more than 300 feet southeast of Building 457, southeast of Z Street.

Storm Water Pollution Prevention Plan

The Station's Storm Water Pollution Prevention Plan (SWPPP) was reviewed and extracts from the SWPPP for the vicinity of APHO 42 are presented in the Appendix of this report. The SWPPP does not identify temporary storage of hazardous materials or wastes at the APHO 42 vicinity, however the SWPPP does identify equipment storage at Building 457.

Surface water from the APHO 42 vicinity discharges to Agua Chinon Wash. The drainage channels, including Agua Chinon Wash, were investigated during the Remedial Investigation of Installation Restoration Program Site 25 – the Major Drainages. A Comprehensive Environmental Response, Compensation, and Liability Act Record of Decision identifying no action for IRP Site 25 was signed in 1997. Surface water quality in Agua Chinon Wash is monitored under the Station's National Pollutant Discharge Elimination System (NPDES) Permit for Storm Water. The permit was issued by the California Regional Water Quality Control Board, Santa Ana Region.

2.3 Historical Property Records

Property records including the Station's plant account data base were acquired and reviewed, and information pertaining to structures located in the APHO 42 vicinity is summarized in Table 2.

**Table 2. MCAS El Toro Property Records.
 APHO 42 Vicinity Buildings.**

Building Identification Number	Approximate year of acquisition or construction	Type of Use	Comments
457	1960	Group Headquarters	<p>APHO 42 is located along the northeast side of Building 457.</p> <p>Property record indicates that building was improved in 1985. Building Guide of 1997 indicates that Building 457 included the group headquarters office (21,838 square feet (SF)), the mess hall (2,500 SF), the barber shop (168 SF), and the branch dental clinic (494 SF). The Building Guide of 1997 also identifies the location of the branch dental clinic at the medical/dental clinic at Building 439.</p> <p>Building and adjacent parking areas were vacant at the time of the visual inspection.</p>
901	1993	Warehouse	<p>Hazardous Materials Storage Warehouse</p> <p>The building was vacant at the time of the visual inspection.</p>

2.4 Ground Water Conditions

Ground water conditions have been investigated in the APHO 42 vicinity during the investigation of Installation Restoration Program (IRP) Site 6 – the Drop Tank Drainage Area Number 1. IRP Site 6 is located more than 1,000 feet west of APHO 42. Ground water is located approximately 135 feet below ground surface based upon measurements from well 06_UGMW28, and the gradient is approximately west-northwest. Selected ground water information is presented in the Appendix, and a conceptual site model is shown on Figure 2.

Section 3

Findings and Recommendations

The following findings are based upon information collected during the record search activities and from observations during the visual inspection of the APHO 42 vicinity:

- SAIC identified APHO 42 (also known as SAIC 281) as wet soil or a burned area located east of Building 457 on a black and white photograph taken in 1974.
- The description in Table 3-2 in the BCP is not consistent with the SAIC description of the anomaly, and it is recommended that the description in the BCP update be revised as follows: "APHO 42, identified on a 1974 photograph as SAIC 281, is described as wet soil or a burned area approximately 100 feet east of Building 457."
- The Hazardous Material/Hazardous Waste Management Plan and the Storm Water Pollution Prevention Plan do not identify storage of hazardous substances at APHO 42.
- The APHO 42 vicinity was visually inspected by Navy representatives in December 1999, and no wet soils or burned areas were observed. APHO 42 encompasses an abandoned picnic area. It is possible that routine irrigation of the trees and shrubs or that storm water runoff accumulated at APHO 42 and caused the appearance of wet soils or burned areas on the 1974 photograph.

Based upon the results of the evaluation of historical records, the results of the visual inspection, and the absence of evidence of storage of hazardous materials or wastes at APHO 42, it is recommended that *no further action status* be designated for APHO 42 (SAIC 281) and that *no further action status* be documented in the next BCP update.

Section 4

References and/or Sources of Information

Bechtel National, Incorporated. 1996. Final Addendum to the RCRA Facility Assessment, MCAS El Toro, California (Volume 6 of the Final RFA Report). May. [Navy Contract N68711-92-D-4670, Contract Task Order 65]

California Environmental Protection Agency, Department of Toxic Substances Control. 1999. Correspondence. Letter to Marine Corps Air Station, El Toro dated May 12, 1999 with Comments on Technical Memorandum, Aerial Photograph Anomalies, Marine Corps Air Station, El Toro.

California Environmental Protection Agency, Department of Toxic Substances Control. 1998. Correspondence. Letter to Marine Corps Air Station, El Toro dated December 17, 1998. [Subject: Approval of Closure Report for SWMU 244]

CDM Federal Programs Corporation. 1998. Final Groundwater Monitoring Report, October 1997 Sampling Round, Groundwater Monitoring Program for Marine Corps Air Station, El Toro. [Navy Contract N68711-96-D-2029, Delivery Order 5]

County of Orange, Health Care Agency. 1993. Field inspector's notes from removal of UST 457, MCAS El Toro.

County of Orange, Health Care Agency. 1996. Letter to Lt. Katcharian dated 9 December 1996. [Subject: Completion of Tank Removal Project, UST 457, MCAS El Toro.]

County of Orange. 1998. The Airport and Open Space Plan, Year 2020, Concept C. August. [prepared by the MCAS El Toro Local Redevelopment Authority]

County of Orange. 1999. The Airport and Open Space Plan, Year 2020, Concept B. [prepared by the MCAS El Toro Local Redevelopment Authority]

Integrated Environmental Management (IEM). 1997. Storm Water Pollution Prevention Plan (SWPPP) for Marine Corps Air Station, El Toro, El Toro, California. July. [Contract No. N68711-96-D-2059, Delivery Order Number 0002]
{*Annotation: The IEM planning document included the acquisition and review of historical and current plans of facilities and utilities. Extracts from the IEM report are presented in the Appendix.*}

Jacobs Engineering Group (JEG). 1993. Installation Restoration Program, Final Resource Conservation and Recovery Act Facility Assessment Report for Marine Corps Air Station, El Toro, California. [Navy Contract N68711-89-D-9296, Contract Task Order 193]

Jacobs Engineering Group (JEG). 1995. Marine Corps Air Station, El Toro, El Toro, California, Final Environmental Baseline Survey Report. April. [Navy Contract N68711-89-D-9296, Contract Task Order 284]

OHM Remediation Services Corporation. 1999. Technical Information – LOC Maps, Marine Corps Air Station, El Toro, California.

Science Applications International Corporation (SAIC). 1993. Final Report, Aerial Photograph Assessment, MCAS El Toro, Contract N68711-91-D-4658, Delivery Order 0002, SAIC Project No. 01-0892-0817.

Southwest Division, Naval Facilities Engineering Command. 1999. Technical Memorandum, Aerial Photograph Anomalies, Marine Corps Air Station, El Toro, California. April.

United States Environmental Protection Agency. 1991. Site Analysis, El Toro MCAS, Orange County, California.

United States Marine Corps Air Station, El Toro. 1999. Base Realignment and Closure (BRAC) Cleanup Plan.

U.S. Marine Corps Air Station, El Toro. 1997. Draft Final Record of Decision, Operable Units 2A and 3A, No Action Sites, Marine Corps Air Station, El Toro, California. September.

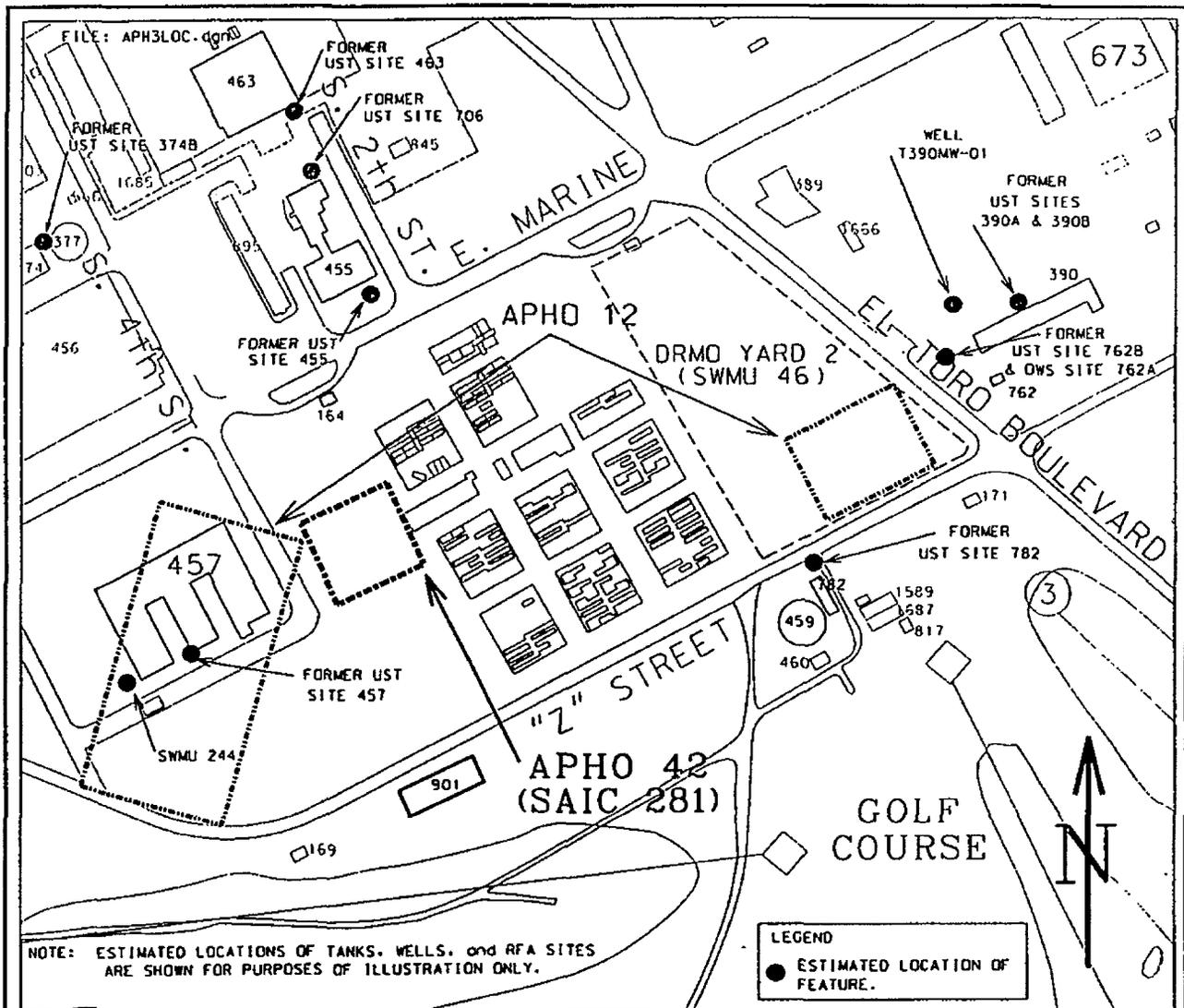
United States Marine Corps Air Station, El Toro. 1997. Building Guide.

United States Marine Corps Air Station, El Toro. 1994. Aerial Photograph of MCAS El Toro.

United States Marine Corps Air Station, El Toro, Public Works Department. 1954. Master Plot Plan, Proposed Additional Aircraft Parking Facilities in Tactical Area III and Proposed Relocation of Existing Stables. [Alternate drawing identification number *Public Works drawing PS-1236*]

United States Marine Corps Air Station, El Toro. Circa 1946-1999. Station Property Records.

Figures



APPROXIMATE SCALE:
1 inch = 240 feet

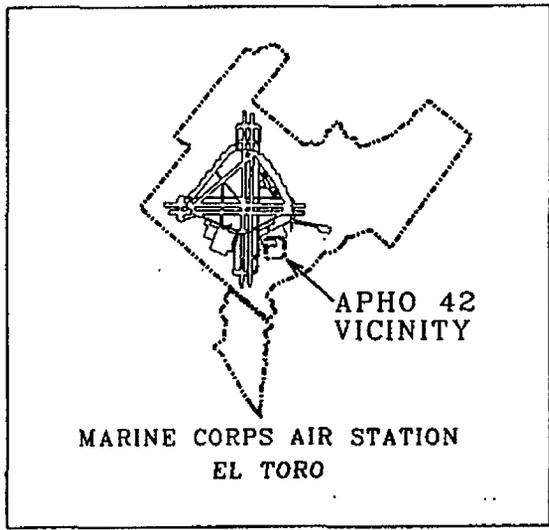
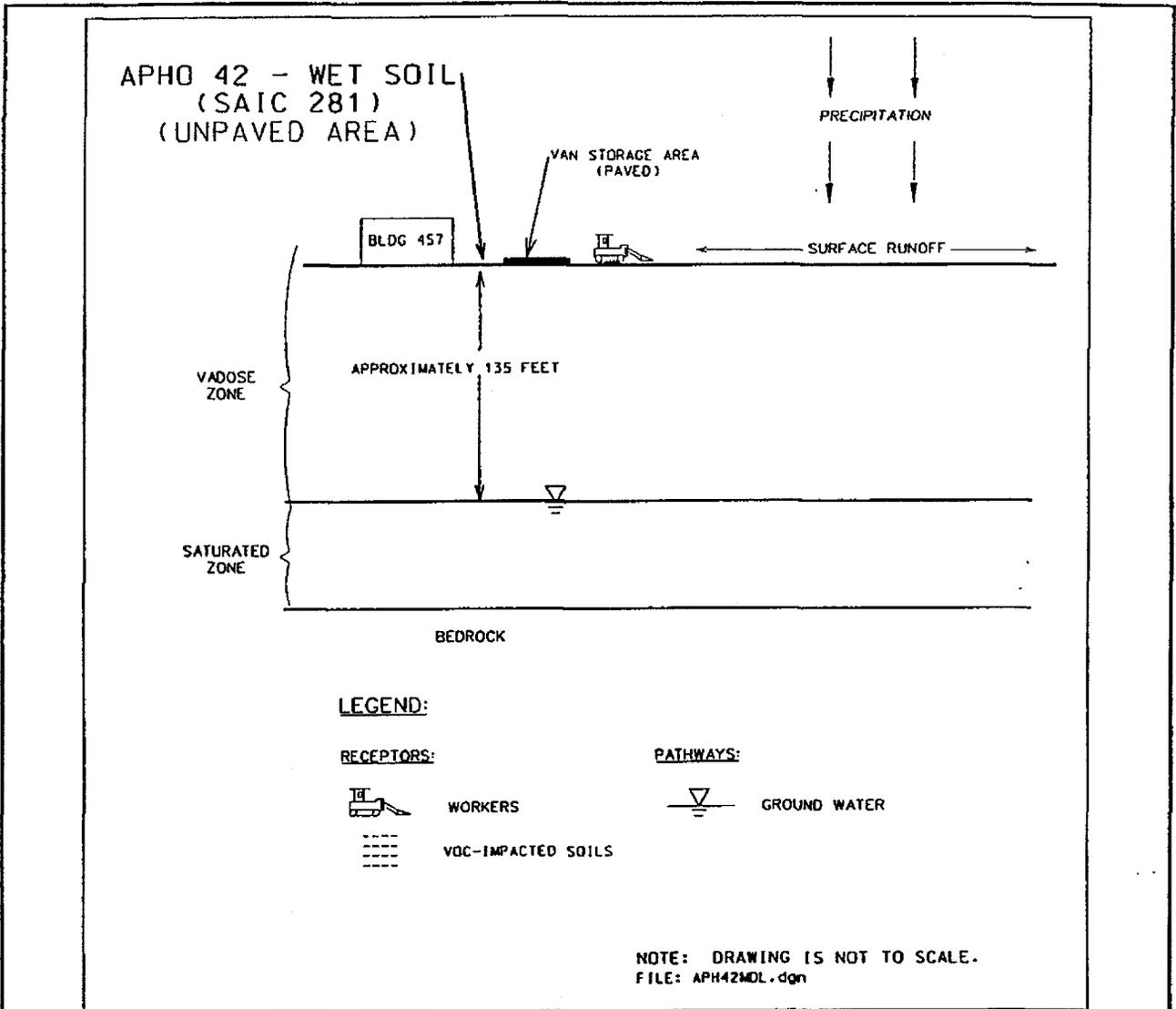


Figure 1.
AERIAL PHOTOGRAPH ANOMALY PROGRAM
APHO 42 VICINITY MAP
MARINE CORPS AIR STATION, EL TORO



Water Level Measurements at Nearby Well 06_UGMW28

Well ID	Measurement Date	Depth to Water (feet below ground surface)
06_UGMW28	Friday, January 12, 1996	139.36
06_UGMW28	Friday, February 16, 1996	138.91
06_UGMW28	Wednesday, February 28, 1996	138.85
06_UGMW28	Wednesday, March 27, 1996	138.51
06_UGMW28	Thursday, October 31, 1996	137.5
06_UGMW28	Tuesday, November 26, 1996	137.04
06_UGMW28	Thursday, December 26, 1996	137.32
06_UGMW28	Thursday, January 23, 1997	136.78
06_UGMW28	Wednesday, February 26, 1997	136.52
06_UGMW28	Thursday, March 27, 1997	136.9
06_UGMW28	Thursday, June 26, 1997	136.2
06_UGMW28	Monday, August 11, 1997	136.04

SOURCE OF GROUND WATER DATA: CDM, 1996-1998.

Figure 2.
AERIAL PHOTOGRAPH ANOMALY PROGRAM
APHO 42 CONCEPTUAL SITE
MODEL
MARINE CORPS AIR STATION, EL TORO

Appendix

Site Photographs and Other Documentation

Site Photographs

Check List Form

Exhibits

Extracts from Base Realignment and Closure Cleanup Plan (BCP)

Extracts from SAIC Study

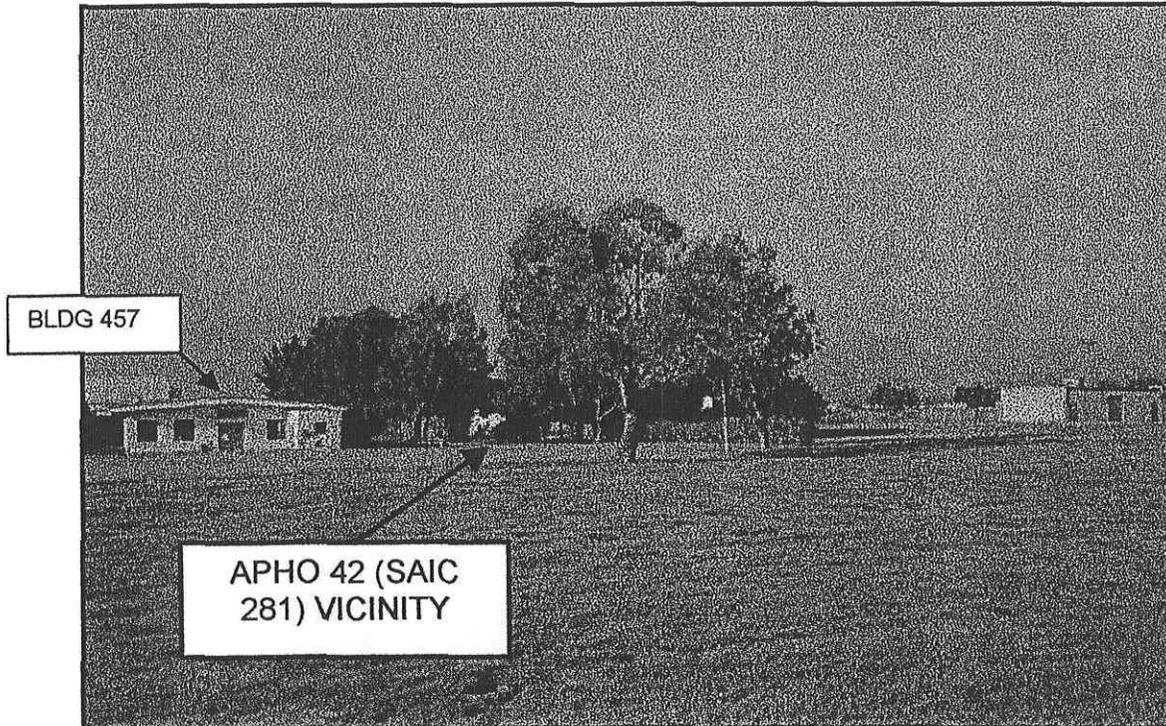
Extracts from SWPPP

Extracts from HM/HWMP

No Further Action Documents and Background Documentation for Nearby
Environmental Locations of Concern and Ground Water Information

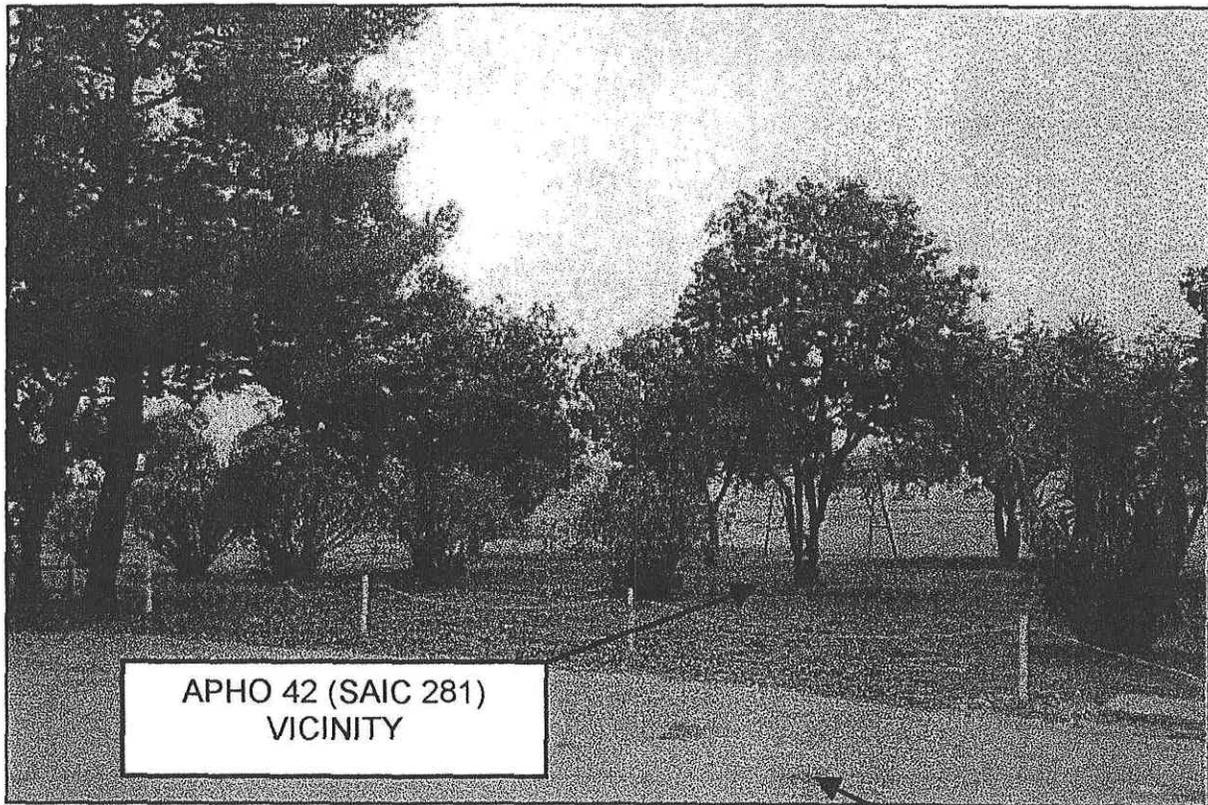
Photograph 1. APHO 42 (SAIC 281) Vicinity.
Looking Approximately North.
Aerial Photograph Anomaly Program
Marine Corps Air Station, El Toro

Date of Photograph: 1 December 1999



Photograph 2. APHO 42 (SAIC 281) Vicinity.
Looking Approximately Northeast.
Aerial Photograph Anomaly Program
Marine Corps Air Station, El Toro

Date of Photograph: 1 December 1999

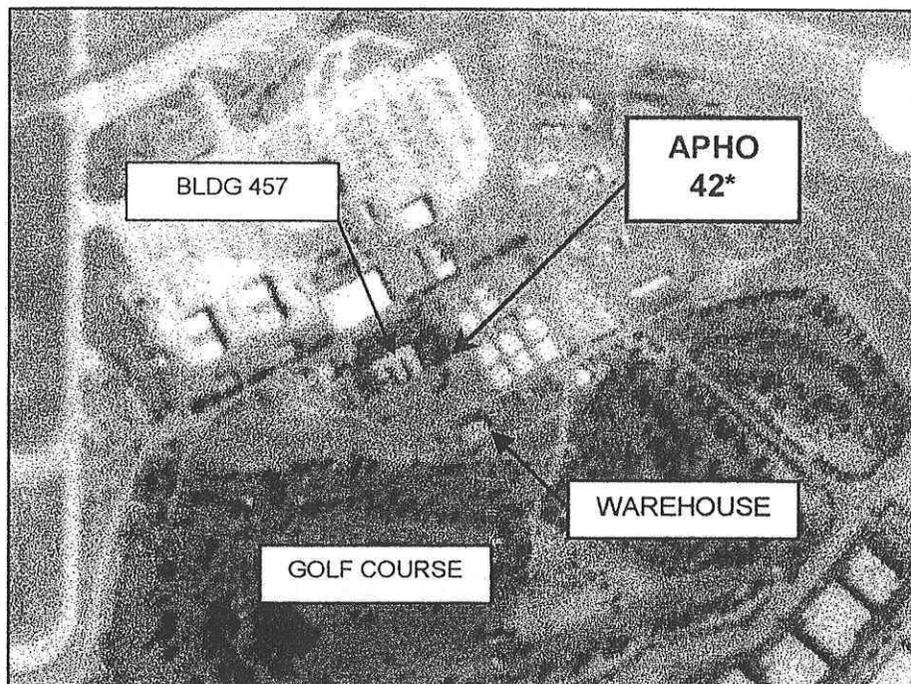


APHO 42 (SAIC 281)
VICINITY

BLDG 457
ACCESS ROAD

Photograph 3. APHO 42 (SAIC 281) Vicinity.
Aerial Photograph Anomaly Program
Marine Corps Air Station, El Toro

Date of Photograph: 1994



*NOTE: The APHO 42 Vicinity consists of a park with playground equipment and several large trees and shrubs.

CHECK LIST

Aerial Photograph Anomaly Program, Marine Corps Air Station, El Toro

Anomaly Identification Information:

Date of Photograph: 9 December 1974

APHO (from the BRAC Cleanup Plan)	SAIC	EPA
42	281	

Recommendation: *No Further Action Status*

Anomaly Description (from source document(s) *Site Analysis, El Toro MCAS (EPA, 1991) or Final Report, Aerial Photograph Assessment (SAIC, 1993)*):

SAIC 281: *There is wet soil (WS) or a burned area about 100 feet east of Building 457, near S 4th Street and East Marine Way. Verification that the area was the site of a grass fire may be advisable.*

Visual Inspection Date (s): **1 December 1999.**

Participant(s) (with affiliation(s)) in inspection(s): *Lynn Marie Homecker
US Navy*

Current Site Conditions: *APHO 42 is located along northeast side of Building 457 in an unpaved, relatively level area. The area is landscaped with grasses, shrubs, and large trees. Playground equipment and horseshoe pits were observed, and the area has the appearance of an abandoned picnic area. No evidence of wet soil or burned areas was observed during the visual inspection.*

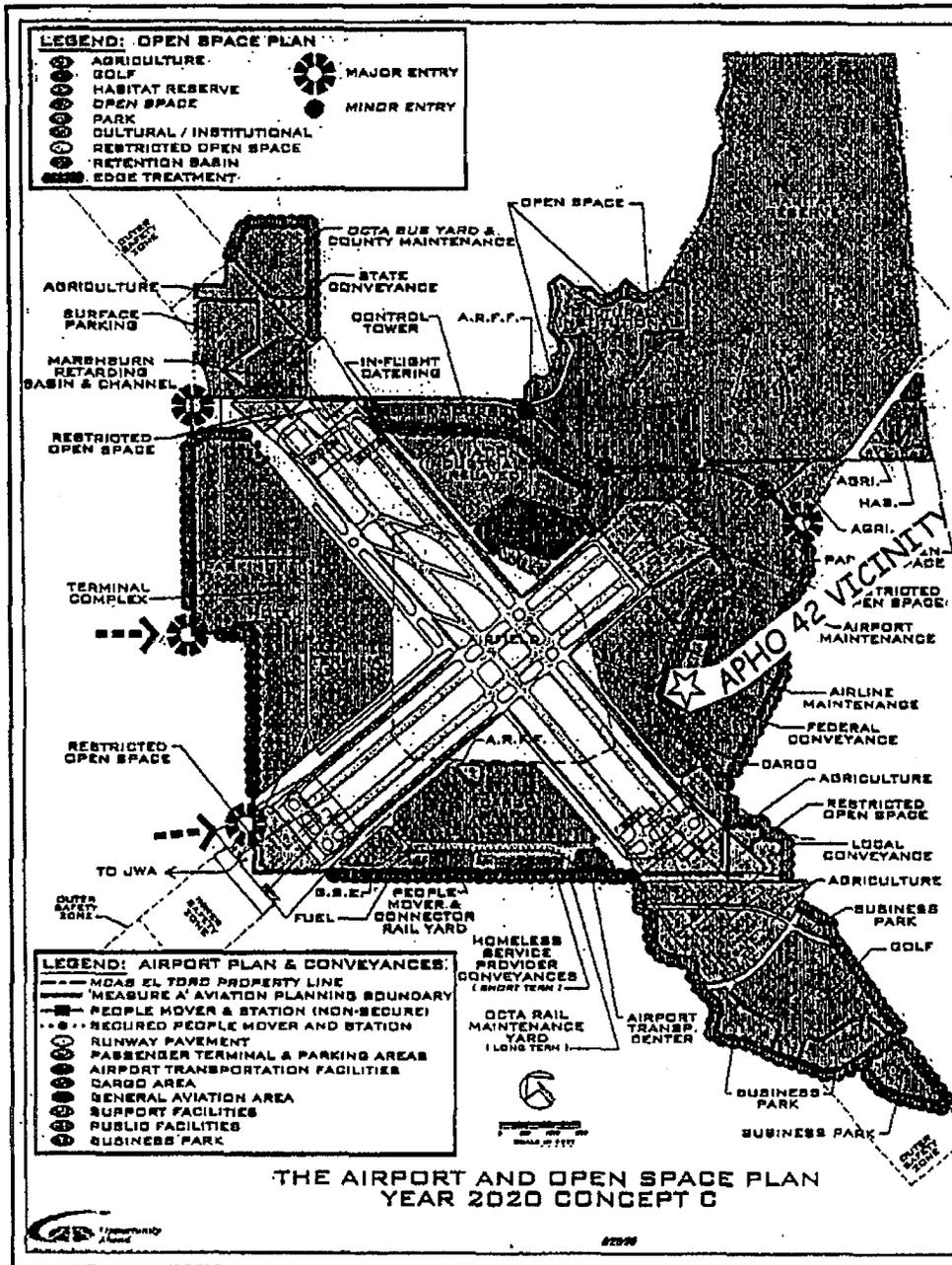
Is there visual evidence of the anomaly identified in the photograph present at the site?
No.

Is there evidence of past releases? *No.*

Are there indications of potential or current releases? *No.*

Description of photograph(s): *Photographs of APHO 42 vicinity and the adjacent Building 457.*

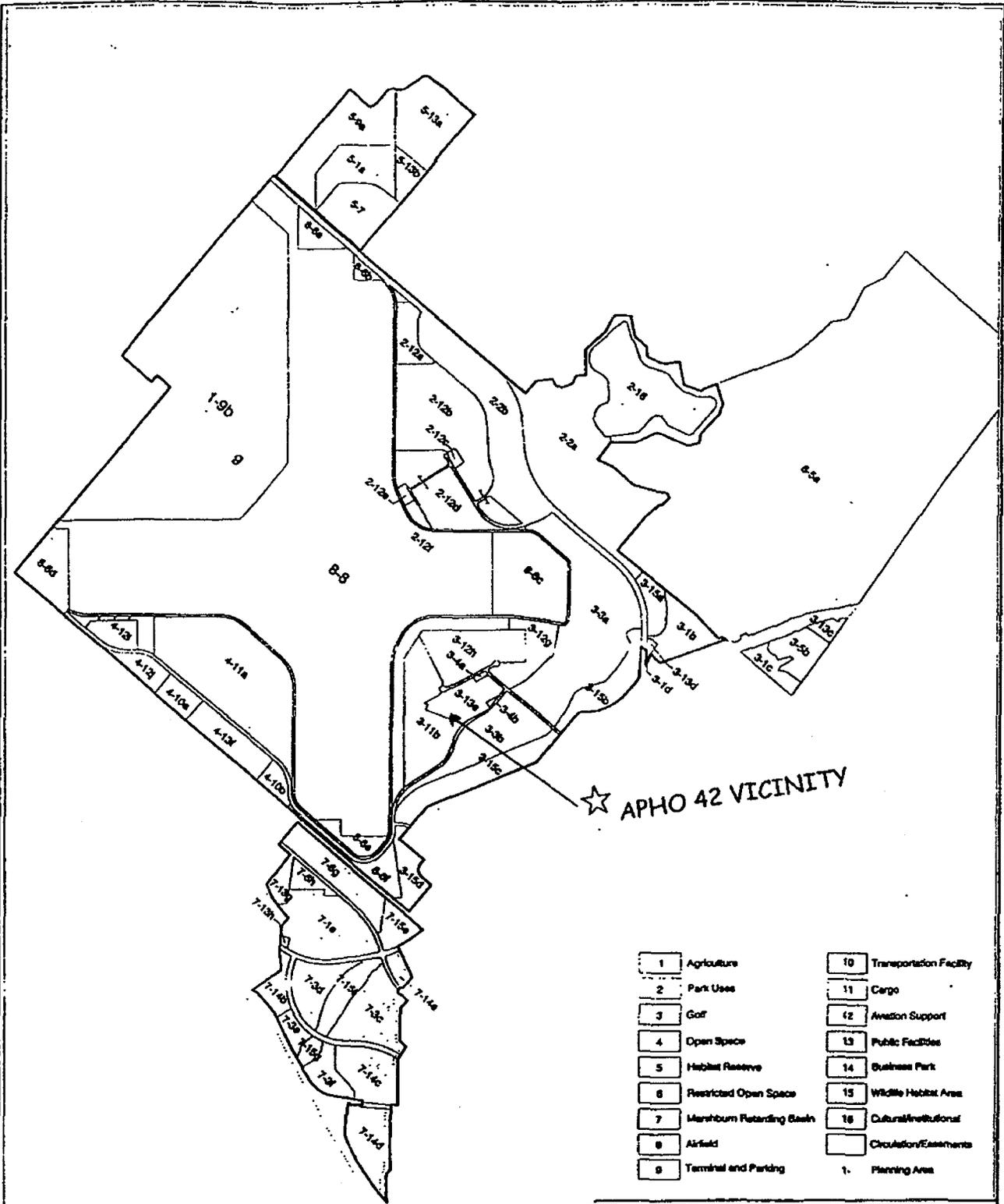
Date of preparation of check list: *2 December 1999*



NOTE: ANNOTATIONS MADE BY THE WRITER OF THE APHO 42 REPORT ARE IDENTIFIED WITH AN ARROW OR A STAR SYMBOL: ☆

Exhibit 1.
 AERIAL PHOTOGRAPH ANOMALY PROGRAM
Tentative Reuse Plan
 The Airport and Open Space Plan, Year 2020, Concept C
 MARINE CORPS AIR STATION, EL TORO

Witzel-Yonez Design 11/20/99 3:13 PM 182921.02.dwg



NOTE: ANNOTATIONS MADE BY THE WRITER OF THE APHO 42 REPORT ARE IDENTIFIED WITH AN ARROW OR A STAR SYMBOL: ☆

1	Agriculture	10	Transportation Facility
2	Park Uses	11	Cargo
3	Golf	12	Aviation Support
4	Open Space	13	Public Facilities
5	Habitat Reserve	14	Business Park
6	Restricted Open Space	15	Wildlife Habitat Area
7	Marsh/Burn Retarding Basin	16	Cultural/Institutional
8	Airfield	17	Circulation/Esplanades
9	Terminal and Parking	18	Planning Area

Exhibit 3A.
AERIAL PHOTOGRAPH ANOMALY PROGRAM
Tentative Reuse Plan
 The Airport and Open Space Plan, Year 2020, Concept B
MARINE CORPS AIR STATION, EL TORO

MCAS El Toro
Preferred Land Use Plan
(8/26/99)

LAND USE	CODE	ACRES
Agriculture	5-1a	37.17
Agriculture	3-1b	27.01
Agriculture	3-1c	13.03
Agriculture	3-1d	0.37
Agriculture	7-1e	60.43
Agriculture Total		138.01

Park Uses	2-2a	191.79
Park Uses	2-2b	73.34
Park Uses Total		265.13

Golf Course (North)	3-3a	135.26
Golf Course (North)	3-3b	51.25
Golf Course (South)	7-3c	43.18
Golf Course (South)	7-3d	28.44
Golf Course (South)	7-3e	8.80
Golf Course (South)	7-3f	17.24
Golf Course Total		284.17

Open Space	3-4a	0.78
Open Space	3-4b	0.53
Open Space Total		1.31

Habitat Reserve	6-5a	970.45
Habitat Reserve	3-5b	20.64
Habitat Reserve Total		991.09

Restricted Open Space	8-6a	12.98
Restricted Open Space	8-6b	4.64
Restricted Open Space	8-6c	68.83
Restricted Open Space	8-6d	32.45
Restricted Open Space	8-6e	11.42
Restricted Open Space	8-6f	16.29
Restricted Open Space	7-6g	38.02
Restricted Open Space	7-6h	9.14
Restricted Open Space Total		193.78

Marshburn Detention Basin	5-7	38.87
Detention Basin Total		38.87

Airfield Total	8-8	1,126.94
Airfield Total		1,126.94

Parking	5-9a	63.65
Terminal and Parking	1-9b	481.10
Terminal and Parking Total		544.75

People Mover Rail Yard	4-10a	12.53
Airport Transportation Center	4-10b	9.34
Transportation Facility Total		21.87

LAND USE	CODE	ACRES
Cargo (west)	4-11a	137.59
Cargo (east)	3-11b	56.08
Cargo Total		193.67

In-flight Catering	2-12a	17.07
Aviation/Industrial Related	2-12b	101.19
Potential Control Tower	2-12c	2.03
FBO/Corporate Aviation	2-12d	52.44
ARFF	2-12e	2.15
Potential Control Tower	2-12f	3.96
Airport Maintenance	3-12g	25.71
Airline Maintenance	3-12h	46.41
Ground Service Equipment	4-12i	13.54
Fuel Storage	4-12j	14.30
Aviation Support Total		278.80

Vehicle Maintenance Yard	5-13a	53.84
Food Distribution Warehouse	5-13b	11.75
IRWD Reservoir and Pumping	3-13c	5.73
Fire Station	3-13d	1.20
California Air National Guard	3-13e	24.05
Homeless Service Providers	4-13f	28.29
IRWD Facility	7-13g	9.00
Fire Station	7-13h	0.92
Public Facilities Total		134.78

Business Park	7-14a	6.24
Business Park	7-14b	13.41
Business Park	7-14c	34.07
Business Park	7-14d	33.05
Business Park Total		86.77

Wildlife Habitat Area	3-15a	13.09
Wildlife Habitat Area	3-15b	29.09
Wildlife Habitat Area	3-15c	42.96
Wildlife Habitat Area	3-15d	18.57
Wildlife Habitat Area	7-15e	14.15
Wildlife Habitat Area	7-15f	20.22
Wildlife Habitat Area	7-15g	5.56
Wildlife Habitat Area Total		143.64

Cultural Institutional	2-16	81.53
Cultural Institutional Total		81.53

Roads and Easements		167.30
Roads and Easements Total		167.30

Exhibit 3B.

AERIAL PHOTOGRAPH ANOMALY PROGRAM

Parcel Descriptions

The Airport and Open Space Plan, Year 2020, Concept B

MARINE CORPS AIR STATION, EL TORO

United States Marine Corps

EXTRACTS

Base Realignment and Closure Cleanup Plan (BCP)



**For
Marine Corps Air Station
El Toro, CA**

March 1999

Table 3-1a
Site Summary
(Sheet 4 of 34)

Seq No.	Database Tracking	LRA Reuse Parcel	Description	Material Disposed	Date of Operation	Status	Risk to Human Health and the Environment [†]	Regulatory Mechanism	NFA	Comments	ECP Area Type [*]
55	APHO 31	7	Disturbed ground, mounded material dark-toned, unidentified object							See Table 3-2	7
56	APHO 32	32	Stain							See Table 3-2	7
57	APHO 33	32	Open storage							See Table 3-2	7
58	APHO 34	32	Stain, unidentified object, vertical tank							See Table 3-2	7
59	APHO 35	42	Open storage							See Table 3-2	7
60	APHO 36	42	Wet soil							See Table 3-2	7
61	APHO 37	43	Stain							See Table 3-2	7
62	APHO 38	7	Excavation							See Table 3-2	7
63	APHO 39	23	Wet soil, stain, horizontal tank							See Table 3-2	7
64	APHO 40	32	Drum							See Table 3-2	7
65	APHO 41	32	Stain, wet soil							See Table 3-2	7
66	APHO 42	8	Wet soil							See Table 3-2	7
67	APHO 43	7	Excavation							See Table 3-2	7
68	APHO 44	1	Disturbed ground, mounded material							See Table 3-2	7
69	APHO 45	40	Wet soil, stain, liquid, drum							See Table 3-2	7
70	APHO 46	7	Impoundment, fill area, excavation							See Table 3-2	7
71	APHO 47	40	Open storage, B, debris							See Table 3-2	7
72	APHO 48	40	Open storage, drum							See Table 3-2	7
73	APHO 49	23	Wet soil, liquid							See Table 3-2	7
74	APHO 50	40	Trench							See Table 3-2	7
75	APHO 51	7	Stain							See Table 3-2	7
76	APHO 52	32	Stain							See Table 3-2	7
77	APHO 53	32	Stain							See Table 3-2	7
78	UST 1A	32	500 gal.	Diesel (stored)	Inst. 1943	Closed		RWQCB	X	See Table 3-7	4*
79	UST 1B	32	500 gal.	Diesel (stored)	Inst. 1943	Removed		R/O		See Table 3-7	2
80	UST 6B	32	500 gal.	Fuel oil (stored)	Inst. 1943	Closed		OCHCA	X	See Table 3-7	4*
81	UST 11	32	500 gal.	Diesel (stored)	Inst. 1943	Closed		RWQCB	X	See Table 3-7	4*
82	UST 12	32	500 gal.	Diesel (stored)	Inst. 1943	Closed		RWQCB	X	See Table 3-7	4*
83	UST 13	32	500 gal.	Diesel (stored)	Inst. 1943	Closed		OCHCA	X	See Table 3-7	4*
84	UST 14	32	500 gal.	Diesel (stored)	Inst. 1943	Closed		RWQCB	X	See Table 3-7	4*
85	UST 24	32	500 gal.	Diesel (stored)	Inst. 1943	Closed		RWQCB	X	See Table 3-7	4*
86	UST 32	32	500 gal.	Diesel (stored)	Inst. 1943	Closed		RWQCB	X	See Table 3-7	4*

Table 3-2
Aerial Photograph Features/Anomalies
(Sheet 5 of 7)

Database Tracking	SAIC Anomaly ID No.	LRA Reuse Parcel	Point of Reference	Year	SAIC Observations ¹	SAIC Comments ²	Comments	ECP Area Type
APHO 35	238	42	B 137	1973	OS	C	Miscellaneous equipment is commonly stored adjacent to Bldgs. 137, 138, and 139. The activities that occur at these buildings is unknown. Also see anomaly 199.	7
APHO 36	239	42	B 291	1973	WS	C	In the 1970 U.S. EPA photograph, this area appears to be unpaved. No storage activities are identified in the U.S. EPA photograph.	7
APHO 37	241	43	B 115	1973	ST	C	SWMU 39 is located in this area. SWMU 39 was sampled and additional soil borings were recommended. Therefore, further investigation is recommended.	7
APHO 38	252	7	B 1789	1973	EX	C	Three pits are also identified in this general area in the 1970 U.S. EPA photograph. The use of the pits is unknown.	7
APHO 39	258	23	B 381	1973	WS, ST, HT	C	This structure appears to be B 381, former Crash Crew Station. According to the Station Building List, B 381 was demolished in 1986. Also see anomaly 449.	7
APHO 40	271	32	B 279	1974	D	C	The stain appears adjacent to B 281 (Admin./Class IV Package Store), which was demolished in 2/87. Currently, this area is an asphalt-paved parking lot.	7
APHO 41	272	32	B 287	1974	ST, WS	C	The stains appear in the vicinity of Tank Farm 3 where a former fuel bladder may have been located. Also see anomalies 7, 113, 173, 190, 227, and 235.	7
→ APHO 42	281	8	B 457	1974	WS	C	The 1970 U.S. EPA photographs also identified a few stains in this general area. U.S. EPA identified this area as an open storage area with drums. Currently, this area is a park. Also see anomalies 351 and 366.	7

A100050 000695

EXTRACTS

Final Report
Aerial Photograph Assessment
MCAS El Toro
Contract No. N68711-91-D-4658
Delivery Order 0002
SAIC Project No. 01-0892-02-0817

Submitted to:

Naval Facilities Engineering Command
Southwest Division
1220 Pacific Highway, Room 18
San Diego, CA 92132-5181

Submitted by:

Science Applications International Corporation
Engineering Sciences Division
10260 Campus Point Drive, MS F1
San Diego, CA 92121

October 25, 1993

and Plant Road. Expansion of the Sludge Drying Beds (Site 12) IR program field investigation to include these areas is recommended.

a 278. There are stains (ST) in the northwest corner of the aircraft parking apron, about 200 feet northeast of Tank 174. The stains appear very dark. Additional investigation is not recommended at this time. The current RI/FS investigation of the Crash Crew Pit No. 1 (Site 9) area appears to be adequate, relative to the features noted here.

c 279. There are stains (ST) in the central portion of Drop Tank Drainage Area No. 1 (Site 6). Additional investigation may be advisable.

c 280. Light-toned mounded material (MMLT) is located about 200 feet south-southeast of Building 453, near southwest corner of the aircraft parking apron. The features appear to be stockpiled soil. Additional investigation is not recommended at this time unless contamination is detected in area, or downgradient of the site, in areas of interest to the IR program.

→ c 281. There is wet soil (WS) or a burned area about 100 feet east of Building 457, near S 4th Street and East Marine Way. Verification that the area was the site of a grass fire may be advisable.

a 282. Light-toned mounded material (MMLT) and a fill area (FA) are observed about 800 feet east of Pumphouse / Water Reservoir, and 400 feet southwest of Perimeter Road. These features appear to be stockpiled soil. Additional investigation not recommended unless contamination is detected near site, or downgradient of the site, in areas of interest to the IR program.

a 283. There is wet soil (WS) or a stain (ST) about 600 feet southeast of Pumphouse / Water Reservoir, and 200 feet southwest of Perimeter Road. The features may be ponded rain water. Additional investigation not recommended unless contamination detected near site, or downgradient of the site, in areas of interest to the IR program.

c 284. There are probable drums (D) in the open storage (OS) area on the northerly side of Buildings 129 and 130. Investigation of the site's storage history is recommended.

c 285. Liquid (LQ) can be seen flowing southwest from the southwest side of Building 121, near N 8th Street and P Street. The northeast portion of parking area appears wet. Additional investigation is recommended.

c 286. An automobile race track and associated facilities are located between the railroad tracks and Interstate Highway 5. Included are an oval track, a road-type course, a motocross track, and a drag strip. There is a trench-like feature (TR) at the northwest corner, but this may be an overrun area for the dragsters. Stains (ST) are very common throughout the facility. The building (B) is probably a garage area. The square-shaped stained (ST) area may be a race track or skid pan. The vertical tank (VT) near the drag strip grand stands is probably for water. Fuel, oil, solvents, and other potential

Aerial Photographic Interpretation
 MCAS El Toro
 Santa Ana, California

1974

Figure 13

Sheet 1 of 1

December 9, 1974

Photo Number TG-7400-10-16

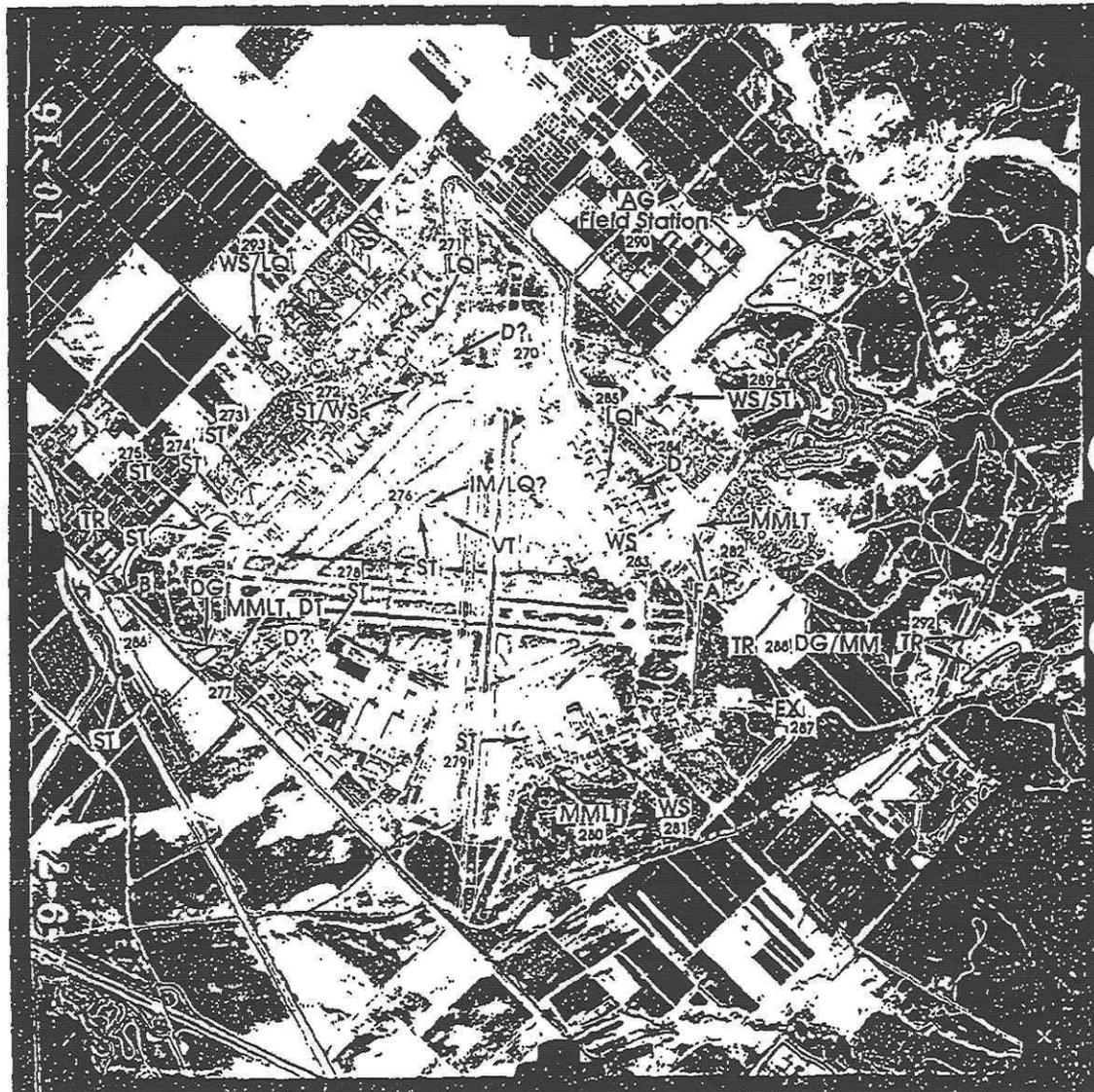
Source: Map and Imagery Library,
 University of California, Santa Barbara

Prepared for:

Southwest Division

Naval Facilities Engineering Command

Contract N68711-92-D-4658



LEGEND:

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
B	Building	IM	Impoundment
D	Drums	LQ	Liquid
DB	Debris	LT	Light-Toned
DG	Disturbed Ground	M	Material
DK	Dark-Toned	MM	Mounded Material
EX	Excavation	OS	Open Storage
EXT	Extraction	R	Refuse
FA	Fill Area	ST	Stain
FBR	Fuel Bladder	TR	Trench
	Revetment	UO	Unidentified Object
GR	Graded Area	VT	Vertical Tank
GS	Ground Scar	WS	Wet Soil
HT	Horizontal Tank		



2000' 0 2000' 4000'



1" = 2275'



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PLATE 2
LOCATION OF SITES AND AREAS OF
POTENTIAL CONCERN IDENTIFIED DURING
THE SAIC INVESTIGATION

MCAS El Toro
Santa Ana, California

Prepared for:

Southwest Division
Naval Facilities Engineering
Command
Contract N68711-92-D-4658

LEGEND:

(453)

Approximate location of site or area of
potential concern.

Note: The number refers to comments in
Section 2 and Appendix B that discuss or
identify the feature or area of concern.



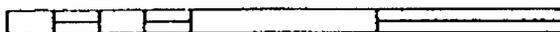
General Areas and Areas of Potential Concern
Discussed in Section 2 of this Report



SAP Amendment RI/FS Sites



600' 300' 0 600' 1200'

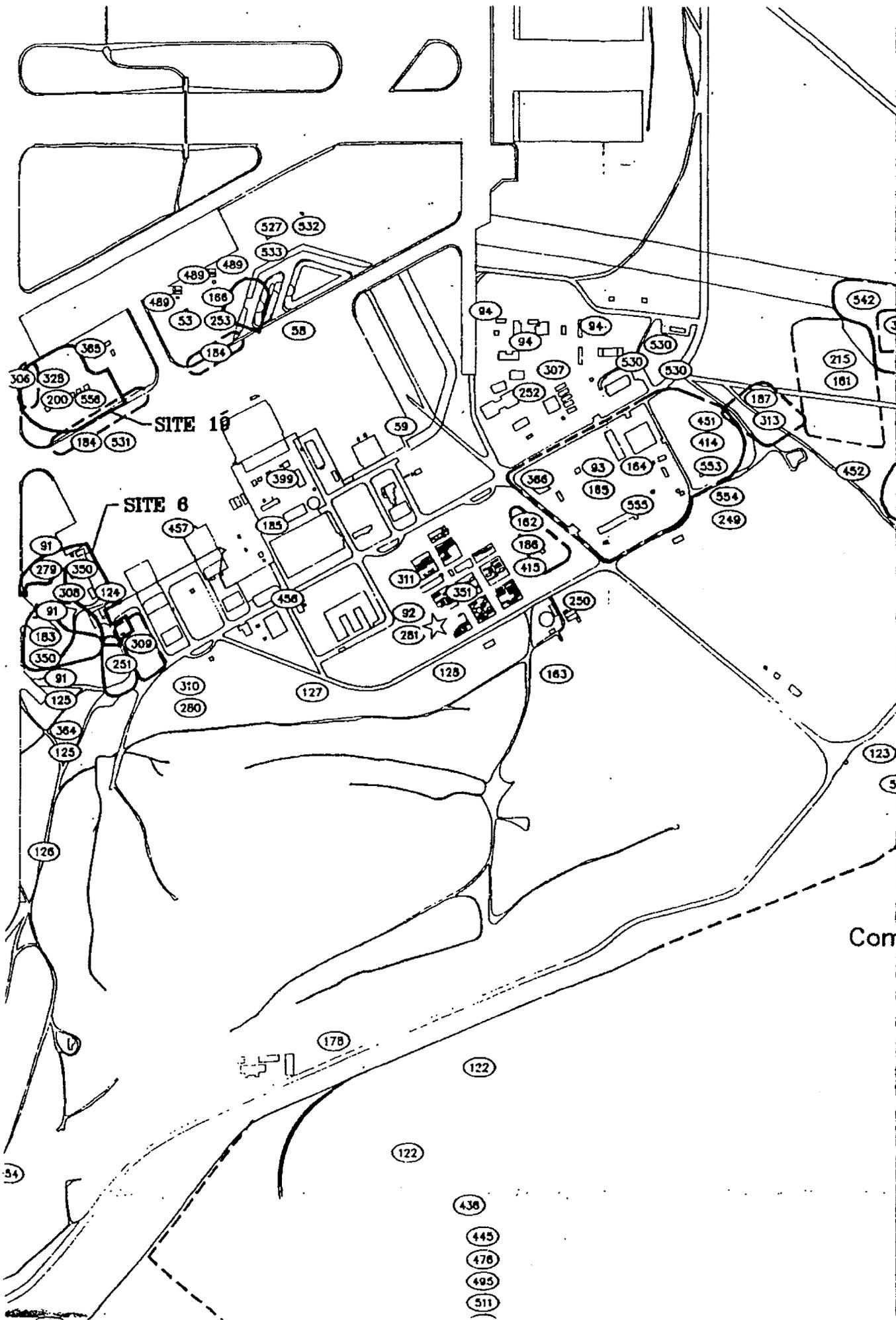


1" = 600'



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SITE 10

SITE 6

Com

- (430)
- (445)
- (476)
- (495)
- (511)

**STORM WATER POLLUTION PREVENTION PLAN
(SWPPP)**

FOR

EXTRACTS

**MARINE CORPS AIR STATION EL TORO
EL TORO, CALIFORNIA**

NOTE: ANNOTATIONS MADE BY THE
WRITER OF THE APHO 42 REPORT
ARE IDENTIFIED WITH AN ARROW OR
A STAR SYMBOL: ☆

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

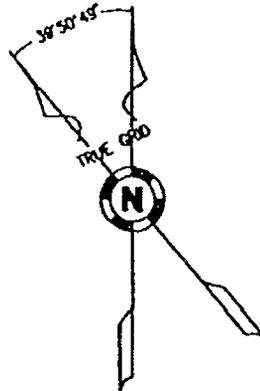
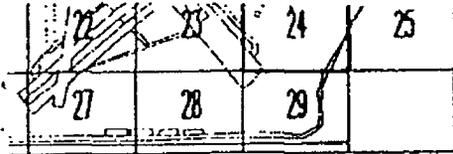
VOLUME 1

JULY, 1997

INTEGRATED ENVIRONMENTAL MANAGEMENT, INC.

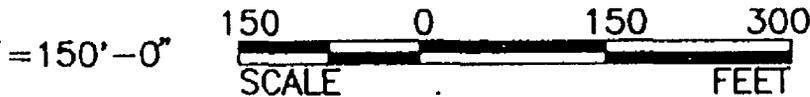
TABLE 7-1
 MCAS EL TORO MATERIALS INVENTORY

BLDG #	BASIN	BUILDING DESCRIPTION	TENANT	Concern Level	TRADE/Common Name	MAX. DAY	Ave. Day	CONT.
456	37	Organic Storage	MALS-11 HM Storage	Limited	Lubricating oil, 80/90W	110 gal	25 gal	55 gal
456	37	Organic Storage	MALS-11 HM Storage	Limited	Lubricating Oil, aircraft	5070 qt	1500 qt	1 qt
456	37	Organic Storage	MALS-11 HM Storage	Limited	Sulfuric acid	500 gal	50 gal	1 gal
456	37	Organic Storage	MALS-11 HM Storage	Limited	Thinner	70 gal	15 gal	1 gal
→ 457	37	Branch Dental Clinic	13 th Dental	Concern	N/A			
458	37	Haz/Flam Storehouse	HMM-164	Concern	Jet Fuel JP-5	N/A	N/A	N/A
458	37	Haz/Flam Storehouse	HMM-164	Concern	Waste Oil	N/A	N/A	N/A
461	37	Maint Hngr Space	HMM-164	Concern	Hydraulic Fluid	N/A	N/A	N/A
461	37	Maint Hngr Space	HMM-164	Concern	Jet Fuel JP-5	N/A	N/A	N/A
461	37	Maint Hngr Space	HMM-164	Concern	Waste Oil	N/A	N/A	N/A
462	37	Maint Hngr Space	HMM-165	Concern	Hydraulic Fluid	N/A	N/A	N/A
462	37	Maint Hngr Space	HMM-165	Concern	Jet Fuel JP-5	N/A	N/A	N/A
462	37	Maint Hngr Space	HMM-165	Concern	Waste Oil	N/A	N/A	N/A



KEY PLAN

SCALE: NONE



PLAN 22X34 IT IS A REDUCED PRINT SCALE ACCORDINGLY

IEM
ENVIRONMENTAL MANAGEMENT, INC.

DN, CALIFORNIA 92660

(714) 731-6977 • (714) 731-6976

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND

SOUTHWEST DIVISION

EL TORO

CALIFORNIA

MARINE CORPS AIR STATION

EL TORO, CA.

"MCAS" EL TORO

AREA 24 - STORM DRAINS

SIZE

CODE IDENT. NO.

NAVFAC. DRAWING NO.

D

CONT. CONTR. NO.

XXXXX

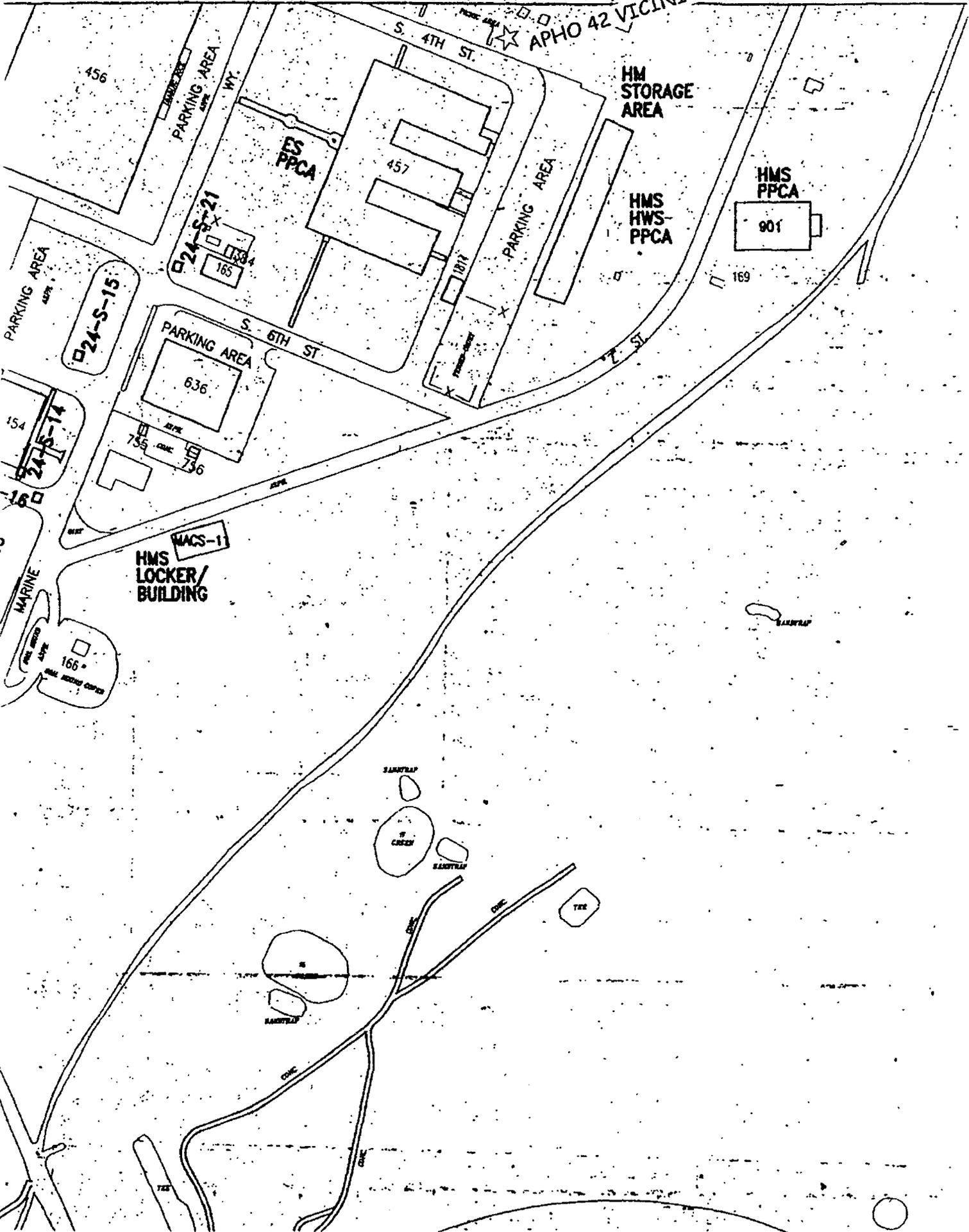
SCALE

SPEC.

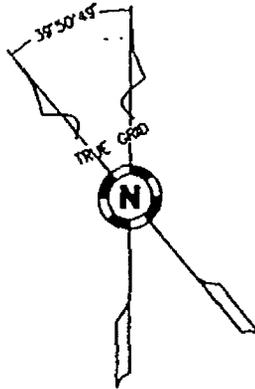
SHEET

OF

APHO 42 VICINITY

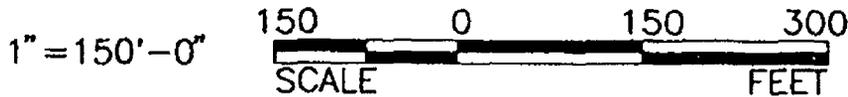


21	22	23	24	25
26	27	28	29	



KEY PLAN

SCALE: NONE



IS THAN 22X34 IT IS A REDUCED PRINT SCALE ACCORDINGLY

IEM
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• TUSTIN, CALIFORNIA 92680 (714) 731-6977 • (714) 731-6978

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND

SOUTHWEST DIVISION

EL TORO

CALIFORNIA

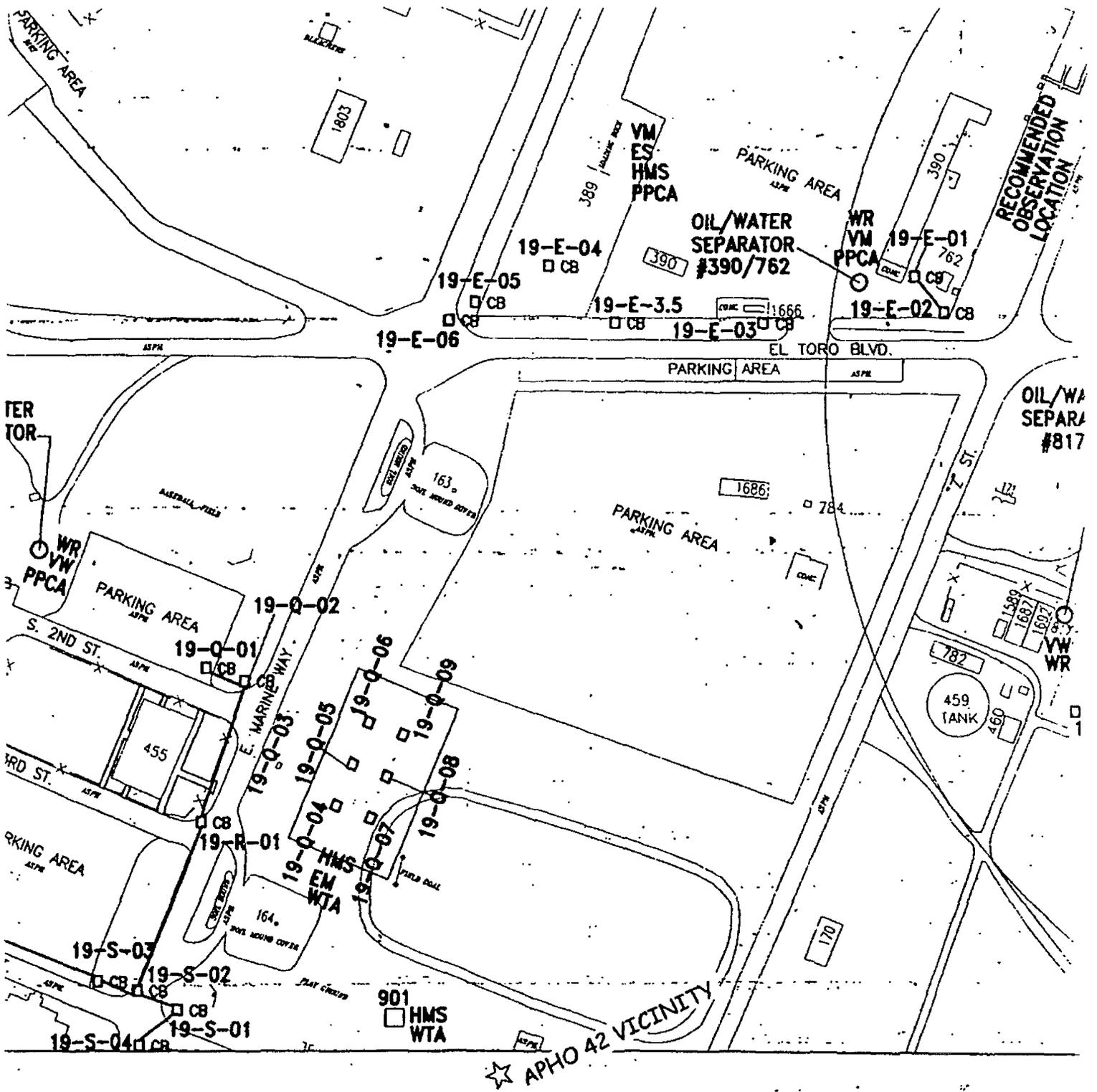
MARINE CORPS AIR STATION

EL TORO, CA.

"MCAS" EL TORO

AREA 19 - STORM DRAINS

SIZE	CODE IDENT. NO.	NAVFAC. DRAWING NO.
D		
SCALE	SPEC.	CONT. CONTR. NO. XXXXX
		SHEET OF



'MCAS' EL TORO - AREA 19

SCALE: 1" = 150'-0"

REVISIONS

SYMBOL	DESCRIPTION	PREP'D BY	DA

LEGENDS

- AST - ABOVE GROUND STORAGE TANK
- AM - AIRCRAFT MAINTENANCE
- AW - AIRCRAFT WASHING
- AF - AIRCRAFT FUELING
- AP - AIRCRAFT PAINTING
- CB - CATCH BASIN
- ES - EQUIPMENT STORAGE
- EM - EQUIPMENT MAINTENANCE
- HMS - HAZARDOUS MATERIAL STORAGE
- HWS - HAZARDOUS WASTE STORAGE
- HWTA - HAZARDOUS WASTE TRANSFER AREA
- MH - MANHOLE
- OWS - OIL/WATER SEPARATOR
- PCA - POLLUTANT CONTACT AREA
- PPCA - POTENTIAL POLLUTANT CONTACT AREA
- UGT - UNDERGROUND STORAGE TANK
- VP - VEHICLE PAINTING
- VF - VEHICLE FUELING
- VM - VEHICLE MAINTENANCE
- VW - VEHICLE WASHING
- WR - WASH RACK
- WTA - WASTE TRANSFER AREA



Final

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

August 1994

EXTRACTS

NOTE: ANNOTATIONS MADE BY THE
WRITER OF THE APHO 42 REPORT
ARE IDENTIFIED WITH AN ARROW OR
A STAR SYMBOL: ☆



Prepared for:

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

Prepared by:

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

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

- ▲ HAZARDOUS MATERIALS STORAGE .
- HAZARDOUS WASTE ACCUMULATION POINT
- ONE YEAR PERMITTED HAZARDOUS WASTE STORAGE AREA

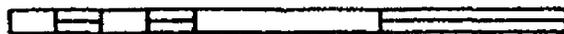
MCAS El Toro
Santa Ana, California

HAZARDOUS WASTE ACCUMULATION POINTS AND HAZARDOUS MATERIAL STORAGE LOCATIONS

NOVEMBER 5, 1993



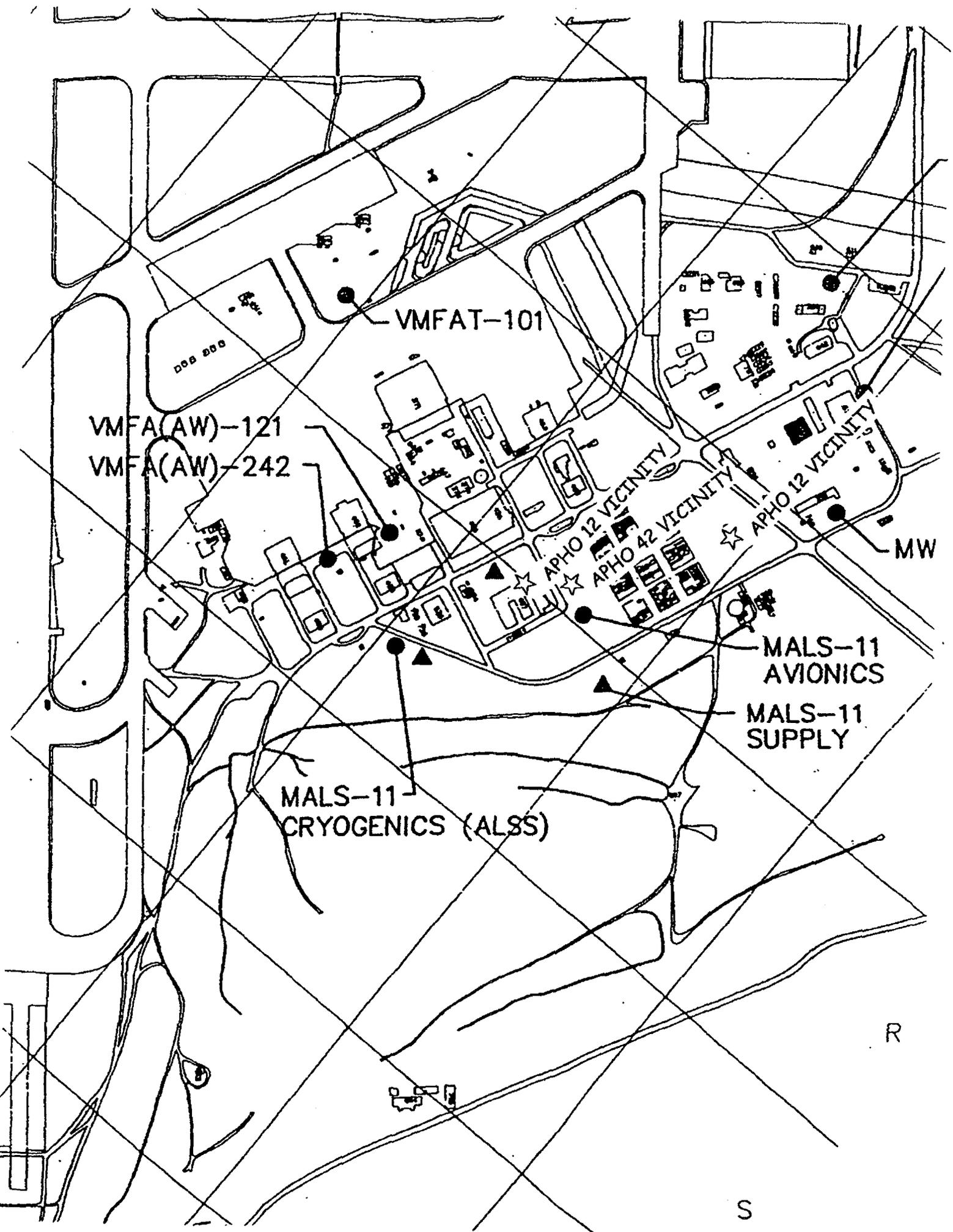
500' 250' 0 500' 1000'



1" = 500'



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VMFA(AW)-121

VMFA(AW)-242

VMFAT-101

D00 000

APHO 12 VICINITY
APHO 42 VICINITY
APHO 12 VICINITY

MW

MALS-11
AVIONICS

MALS-11
SUPPLY

MALS-11
CRYOGENICS (ALSS)

R

S

Hazardous Waste Accumulation Point Summary		
Unit	Bldg #	Coordinates
Aero Club	10	R5
Armory	744	O2
Auto Hobby Shop	626	M3
CSSD-14	388	U8
Environmental Above Ground Storage Tank	n/a	U6
FMD Shops, Bldg 1601	370	T6
Fuels Division	314	U9
H&HS 38	22	R4
MACG-38 MWCS 38	HGR 5	R4
MAG-46	51	O4
MAG-46 Fixed Wing	296	T9
MAG-46 Helo Mats-46	295	S8
MALS-11 Air Frames	130	M9
MALS-11 Avionics	856	Q12
MALS-11 Cryogenics (ALSS)	636	R12
MALS-11 GSE North	392	M9
MALS-11 Ordnance	673	P12
MALS-11 Power Plant	658	N10
MALS-11 Power Plant	634	N9
MALS-11 Supply	441	P12
Maytag Aircraft Corp	779	N10
MOD Team	115	N9
Motor Pool (G-4), Bldg 770	386	T7
MWHS-3	7	O5
MWR Auto #1	651	O2
MWR Golf Course	390	P13
MWSS-Utilities	31	S4
MWSS-373-HQ	800	U10
MWSS-373 Refuelers	671	U9
SOMS HQ	289	N5
SOMS Maintenance	HGR 2	O4
SOMS Recovery		
Supply	320	U7
VMFA (AW)-121	462	R11
VMFA (AW) 225	688	N9
VMFA (AW)-242	461	R11
VMFAT-101	371	Q10
VMFA-323	606	N8
VMGR-352	297	T8
VFMA-314	605	N7



NOTE: No HW Accumulation Area is located at APHO 42 or Building 457. Accumulation Areas at Buildings 636 (W of Building 457-MALS 11 CRYOGENICS) and at Building 856 (NE of Building 457 - MALS 11 AVIONICS) are being addressed under the RFA Program.

SOUTHWESTNAVFACENGCOM
CODE 5BME.LMH
SAN DIEGO, CA 92101

No Further Action Decision Documents and Background Documentation
for Nearby Environmental Locations of Concern (LOC) and Ground
Water Information



**COUNTY OF ORANGE
HEALTH CARE AGENCY**

**PUBLIC HEALTH
DIVISION OF ENVIRONMENTAL HEALTH**

TOM URAM
DIRECTOR

HUGH F. STALLWORTH, M.D.
HEALTH OFFICER

ROBERT E. MERRYMAN, REHS, MPH
DEPUTY DIRECTOR

MAILING ADDRESS
2009 EAST EDINGER AVENUE
SANTA ANA, CA 92705-4720

TELEPHONE: (714) 667-3600
FAX: (714) 972-0723

December 9, 1996

LT. Hope Katcharian
Director, Environmental Engineering Division
Commanding General
AC/S Environmental IAU
Marine Corps Air Station El Toro
P.O. Box 95001
Santa Ana, CA 92709-5001

Subject: Completion of Tank Removal Project

RE: Marine Corps Air Station El Toro
Tank #457
Santa Ana, CA 92709

Dear Lt. Katcharian:

This is in response to your request for a confirmation of the completion of the tank removal project. With the provision that the results for the soil samples obtained during the soil sampling activities on May 27, 1993, were accurate and representative of existing conditions, it is the position of this office that no significant soil contamination has occurred at the above noted tank location.

It should be pointed out that this letter does not relieve you of any responsibilities mandated under the California Health and Safety Code if additional or previously unidentified contamination is discovered at the subject site.

If you have any questions regarding this matter, please contact Arghavan Rashidi-Fard at (714) 667-3713.

Sincerely,

William J. Diekmann, M.S., REHS
Supervising Hazardous Waste Specialist
Hazardous Materials Management Section
Environmental Health Division

cc: Larry Vitale, Santa Ana Regional Water Quality Control Board



Department of Toxic Substances Control



Jesse R. Huff, Director
5796 Corporate Avenue
Cypress, California 90630

Pete Wilson
Governor

December 17, 1998

Peter M. Rooney
Secretary for
Environmental
Protection

Mr. Joseph Joyce
BRAC Environmental Coordinator
U.S. Marine Corps Air Station - El Toro
AC/S, Environmental (IAU), BRAC Building #899
P. O. Box 95001
Santa Ana, California 92709-5001

Dear Mr. Joyce:

CLOSURE REPORT APPROVAL: SOLID WASTE MANAGEMENT UNIT 244 AT MARINE CORPS AIR STATION (MCAS) EI TORO

The Department of Toxic Substances Control (DTSC) has reviewed the closure report for the above subject site dated October 28, 1998, prepared by OHM Remediation Services Corp. The report summarizes the results of the field remedial activities conducted at Solid Waste Management Unit (SWMU) 244, a Resource Conservation and Recovery Act (RCRA) Facility Assessment (RFA) site referred to as "Polychlorinated biphenyl (PCB) Spill Area" at MCAS El Toro. The SWMU 244 site is located in the southeast quadrant of the Station and was used for storage of a transformer; according to the Station's record, a PCB release occurred from the transformer into the surrounding soil.

Based on the report, impacted soils have been excavated and removed from the site. Also, confirmation sampling analytical results were below residential cleanup goals. DTSC, therefore concurs with the findings and conclusions of the closure report, and the report is hereby approved.

If you have any questions, please contact Mr. Tayseer Mahmoud, Remedial Project Manager, at (714) 485-5418.

Sincerely,

Sharon Fair
Unit Chief
Base Closure Unit
Office of Military Facilities

cc: See next page

California Environmental Protection Agency

♻️ Printed on Recycled Paper

Mr. Joseph Joyce
December 17, 1998
Page 2

cc: Mr. Glenn Kistner, SFD-8-2
Remedial Project Manager
U. S. Environmental Protection Agency
Region IX
Superfund Division
75 Hawthorne Street
San Francisco, California 94105-3901

Ms. Patricia Hannon
Remedial Project Manager
California Regional Water Quality Control Board
Santa Ana Region
3737 Main Street, Suite 500
Riverside, California 92501-3339

Mr. Gregory F. Hurley
Restoration Advisory Board Co-chair
620 Newport Center Drive, Suite 450
Newport Beach, California 92660-8019

Mr. Bill Sedlak
OHM Remediation Services Corp.
2031 Main Street
Irvine, California 92614

Ms. Lynn Hornecker
Remedial Project Manager
Naval Facilities Engineering Command
Southwest Division - Code SBME.LH
1220 Pacific Highway
San Diego, California 92132-5187

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SANTA ANA REGION
3737 MAIN STREET, SUITE 500
RIVERSIDE, CA 92501-3339
PHONE: (909) 782-4130
FAX: (909) 781-6268



April 11, 1997

Mr. Wayne D. Lee
Assistant Chief of Staff
Environment and Safety
Marine Corps Air Station El Toro
P.O. Box 95001
Santa Ana, CA 92709-5001

SUBJECT: CASE CLOSURES, FORMER UNDERGROUND STORAGE TANK SITES,
114A, 295, 296, 435, 455, 605A, AND 606A

Dear Mr. Lee:

This letter confirms the completion of site investigations and remedial actions for the subject underground storage tank sites. Based on the information provided in the Site Assessment Closure Report Former Underground Storage Tank Sites 114A, 295, 296, 435, 455, 605A, and 606A dated 3/21/97 and with the provision that the information provided to this agency was accurate and representative of site conditions, no further action related to the underground storage tank releases is required.

This notice is issued pursuant to a regulation contained in Title 23, Division 3, Chapter 16, Section 2721(e) of the California Code of Regulations.

If you have any questions regarding this matter, please contact Lawrence Vitale at (909) 782-4998.

Sincerely,

A handwritten signature in cursive script, appearing to read "Gerard J. Thibeault".

Gerard J. Thibeault
Executive Officer

cc: LT. Hope Katcharian, Marine Corps Air Station El Toro
Mr. Bill Diekman, Orange County Health Care Agency
Mr. John Adams Jr., State Water Resources Control Board, Division of Clean
Water Programs

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

SANTA ANA REGION

3737 MAIN STREET, SUITE 500

RIVERSIDE, CA 92501-3339

PHONE: (909) 782-4130

FAX: (909) 781-6288



October 2, 1997

Mr. Wayne D. Lee
Assistant Chief of Staff
Environment and Safety
Marine Corps Air Station El Toro
P.O. Box 95001
Santa Ana, CA 92709-5001

CASE CLOSURE, FORMER UNDERGROUND STORAGE TANK SITE 374B, MARINE
CORPS AIR STATION EL TORO

Dear Mr. Lee:

This letter confirms the completion of site investigations and remedial actions for the subject underground storage tank site. Based on the information provided in the Addendum Site Assessment Report, Former Underground Storage Tank Site 374B dated 9/10/97 and with the provision that the information provided to this agency was accurate and representative of site conditions, no further action related to the underground storage tank release is required.

This notice is issued pursuant to a regulation contained in Title 23, Division 3, Chapter 16, Section 2721(e) of the California Code of Regulations.

If you have any questions regarding this matter, please contact Lawrence Vitale at (909) 782-4998.

Sincerely,

K. J. Thibeault

for Gerard J. Thibeault
Executive Officer

cc: ✓LT. Hope Katcharian, Marine Corps Air Station El Toro
Mr. Bill Diekman, Orange County Health Care Agency
Mr. John Adams Jr., State Water Resources Control Board,
Division of Clean Water Programs

EXTRACTS

**DRAFT FINAL
RECORD OF DECISION
OPERABLE UNITS 2A AND 3A
NO ACTION SITES
MARINE CORPS AIR STATION
EL TORO, CALIFORNIA**

SEPTEMBER 1997

DECLARATION

DECLARATION

SITE NAME AND LOCATION

Marine Corps Air Station (MCAS) El Toro
Operable Unit-3A, Sites 4, 6, 9, 10, 13, 15, 19, 20, 21, and 22
Operable Unit-2A, Site 25
Orange County, California

STATEMENT OF BASIS AND PURPOSE

This decision document presents the selected remedial action for Sites 4, 6, 9, 10, 13, 15, 19, 20, 21, 22, and 25 at MCAS El Toro in Orange County, California. The document was developed in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 and, to the extent practicable, the National Oil and Hazardous Substances Pollution Contingency Plan. This decision is based on the administrative record file for these sites.

The State of California (through the California Environmental Protection Agency, Department of Toxic Substances Control, and Santa Ana Regional Water Quality Control Board) and the U.S. Environmental Protection Agency concur with the selected remedy.

DESCRIPTION OF THE SELECTED REMEDY: NO ACTION

The selected remedy for Sites 4, 6, 9, 10, 13, 15, 19, 20, 21, 22, and 25 is no action. In selecting the no action remedy for these sites, the Navy has determined that the existing condition of the sites is protective of human health and the environment.

Although no deed restrictions are required because of chemicals present in soils at the no action sites, shallow groundwater underlying Sites 9, 10, 13, 15, 21, 22, and portions of Site 25 is contaminated by trichloroethene and tetrachloroethene. Remedial investigations have shown that the contamination does not originate from these sites but from Site 24, the volatile organic compound source area. Use restrictions for several sites (including Site 24 and the no action sites listed above) prohibiting drilling of wells and/or extraction of groundwater and allowing access for groundwater monitoring and maintenance of equipment associated with groundwater remediation will be addressed in the Proposed Plan(s) and Record(s) of Decision for Operable Unit-1 and -2A regarding groundwater.

DECLARATION STATEMENT

Based on extensive field investigations, laboratory analyses, and a thorough assessment of potential human-health risks at each location and of potential ecological risks at Site 25, the Navy has determined that no remedial action is necessary to assure the protection of human health and the environment at Sites 4, 6, 9, 10, 13, 15, 19, 20, 21, 22, and 25. The Remedial Investigations of these sites show that contamination is limited to the shallow soil interval (Sites 4, 6, 9, 10, 13, 15, 19, 20, 21, and 22) and to sediment and

Date: 09/30/97

Declaration

surface water (Site 25). The human health and ecological risk assessments show that the chemicals present in these media do not present an unacceptable risk to human health or the environment. Therefore, no remedial action is required at these sites. Since hazardous substances are not present at concentrations above unacceptable levels, CERCLA Section 121 cleanup standards do not apply.

Signature: Joseph Joyce
Mr. Joseph Joyce
Base Closure and Realignment Environmental Coordinator
Marine Corps Air Station El Toro

Date: Sept 23, 1997

Signature: John E. Scandiffa
Mr. John E. Scandiffa, Chief
Southern California Operations
Office of Military Facilities
Department of Toxic Substances Control

Date: Sept. 26, 1997

Signature: Daniel D. Opalski
Mr. Daniel D. Opalski, Chief
Federal Facilities Cleanup Branch
United States Environmental Protection Agency, Region IX

Date: 9/29/97

Signature: Gerald J. Thiabault
Mr. Gerald J. Thiabault
Executive Officer
Regional Water Quality Control Board, Santa Ana Region

Date: 9/30/97

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Signature: _____
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Base Closure and Realignment Environmental Coordinator
Marine Corps Air Station El Toro

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Southern California Operations
Office of Military Facilities
Department of Toxic Substances Control

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Federal Facilities Cleanup Branch
United States Environmental Protection Agency, Region IX

Date: _____

Signature: _____
Mr. Gerald J. Thiebeault
Executive Officer
Regional Water Quality Control Board, Santa Ana Region

Date: _____

FINAL

EXTRACTS

GROUNDWATER MONITORING REPORT
OCTOBER 1997 SAMPLING ROUND

GROUNDWATER MONITORING PROGRAM
FOR
MARINE CORPS AIR STATION EL TORO
EL TORO, CALIFORNIA

Contract No. N68711-96-D-2029
Delivery Order 005

NOTE: ANNOTATIONS MADE BY THE
WRITER OF THE APHO 42 REPORT
ARE IDENTIFIED WITH AN ARROW OR
A STAR SYMBOL: ☆

Prepared for:

SOUTHWEST DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
1220 Pacific Highway
San Diego, California 92132

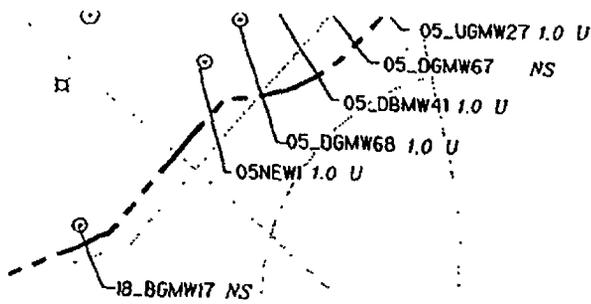
Prepared by:

CDM FEDERAL PROGRAMS CORPORATION
3760 Convoy Street, Suite 210
San Diego, California 92111

March 1998

Table B-1: WATER LEVEL MEASUREMENTS AND GROUNDWATER ELEVATIONS
MCAS El Toro Groundwater Monitoring Program

STATION ID	WELL TYPE	SCREEN INTERVAL (feet BGS)	TOP OF CASING ELEVATION (feet MSL)	MEASUREMENT DATE	DEPTH TO WATER (feet TOC)	WATER LEVEL ELEVATION (feet MSL)	CHANGE FROM PRIOR ELEVATION (+ or - feet)
06 UGMW28	WT	140 - 180	334.90	12-Jan-96	139.36	195.54	
			334.90	16-Feb-96	138.91	195.99	0.45
			334.90	28-Feb-96	138.85	196.05	0.06
			334.90	27-Mar-96	138.51	196.39	0.34
			334.90	31-Oct-96	137.50	197.40	1.01
			334.90	26-Nov-96	137.04	197.86	0.46
			334.90	26-Dec-96	137.32	197.58	-0.28
			334.90	23-Jan-97	136.78	198.12	0.54
			334.90	26-Feb-97	136.52	198.38	0.26
			334.90	27-Mar-97	136.90	198.00	-0.38
			334.90	26-Jun-97	136.20	198.70	0.70
			334.90	11-Aug-97	136.04	198.86	0.16
			334.90	25-Sep-97	135.26	199.64	0.78
			334.90	7-Nov-97	135.30	199.60	-0.04
07 DBMW100	WT	131 - 171	286.44	11-Jan-96	104.60	181.84	
			286.44	31-Jan-96	104.58	181.86	0.02
			286.44	27-Feb-96	104.52	181.92	0.06
			286.44	31-Oct-96	104.28	182.16	0.24
			286.44	26-Nov-96	103.60	182.84	0.68
			286.44	27-Dec-96	102.90	183.54	0.70
			286.44	26-Feb-97	103.36	183.08	-0.46
			286.44	27-Mar-97	102.63	183.81	0.73
			286.44	26-Jun-97	103.36	183.08	-0.73
			286.44	12-Aug-97	103.26	183.18	0.10
			286.44	25-Sep-97	103.12	183.32	0.14
			286.44	7-Nov-97	103.20	183.24	-0.08
07 DBMW43	WT	150 - 190	292.56	12-Jan-96	113.01	179.55	
			292.56	19-Feb-96	112.55	180.01	0.46
			292.56	27-Feb-96	111.41	181.15	1.14
			292.56	27-Mar-96	112.42	180.14	-1.01
			292.56	31-Oct-96	113.95	178.61	-1.53
			292.56	26-Nov-96	113.02	179.54	0.93
			292.56	26-Dec-96	112.60	179.96	-0.42
			292.56	23-Jan-97	111.96	180.60	0.64
			292.56	26-Feb-97	111.40	181.16	0.56
			292.56	27-Mar-97	112.08	180.48	-0.68
			292.56	26-Jun-97	112.84	179.72	-0.76
292.56	12-Aug-97	112.96	179.60	-1.58			
292.56	25-Sep-97	112.42	180.14	0.54			
			292.56	7-Nov-97	111.38	181.18	1.04
07 DBMW70	WT	125 - 165	293.44	12-Jan-96	122.38	171.06	
			293.44	13-Feb-96	122.04	171.40	0.34
			293.44	27-Feb-96	121.84	171.60	0.20
			293.44	27-Mar-96	121.60	171.84	0.24
			293.44	31-Oct-96	121.90	171.54	-0.30
			293.44	26-Nov-96	121.40	172.04	0.50
			293.44	26-Dec-96	121.46	171.98	-0.06
			293.44	23-Jan-97	120.92	172.52	0.54
			293.44	26-Feb-97	120.64	172.80	0.28
			293.44	27-Mar-97	120.44	173.00	0.20
			293.44	26-Jun-97	120.86	172.58	-0.42
293.44	12-Aug-97	120.92	172.52	-0.06			
293.44	25-Sep-97	120.58	172.86	0.34			
			293.44	7-Nov-97	120.47	172.97	0.11

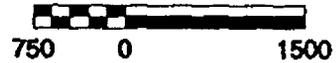


5 ug/L and
50 ug/L Contours

EXTRACTS



SCALE IN FEET



Marine Corps Air Station, El Toro, California

TCE Concentrations
in the Shallow Groundwater Unit
October 1997

MCAS El Toro Groundwater Monitoring Report

