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# Information Package

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## Solid Waste Management Unit (SWMU) 110
## Former Wash Rack
## Former Marine Corps Air Station, El Toro

*Prepared by:*
Southwest Division
Naval Facilities Engineering Command

27 June 2003

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# Transmittal

Date: 27 June 2003

From: Lynn Marie Hornecker

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

Subj: Solid Waste Management Unit (SWMU) 110 (Former Wash Rack)
Former Marine Corps Air Station, El Toro

Transmitted in the attached Information Package is additional information pertaining to SWMU 110 at the former Marine Corps Air Station, El Toro. SWMU 110, a former wash rack, is located within the investigation boundary of Installation Restoration Program (IRP) Site 24 - the Volatile Organic Compound Source Area. Repairs were made to the cracks in the wash rack surface in late 1998 in accordance with the recommendation of the Final Resource Conservation and Recovery Act (RCRA) Facility Assessment Report of 1993, and a Summary Report dated 1999 documented the completion of the repairs. The Regional Water Quality Control Board, Santa Ana Region concurred with the Navy's recommendation for no further action status in their letter dated 6 November 2000. The California Department of Toxic Substances Control (DTSC) provided comments to the Navy on 30 March 2001 on the SWMU 110 documentation. DTSC requested field sampling to assess potential releases along the sewer pipeline from the wash rack drain to the adjacent Oil/Water Separator (OWS) 386B.

The Summary Report dated 1999 did not included a detailed map showing the locations of the RFA borings relative to the location of the wash rack drain and sewer pipeline. The attached Information Package includes an exhibit that shows the sewer pipeline that conveyed wash water from SWMU 110 to the nearby OWS 386B and the locations of RFA borings relative to the location of the sewer. The Information Package also includes excerpts from various historical documents that pertain to SWMU 110 and the SWMU 110 vicinity.

Based upon the information provided in the Information Package, we believe that potential releases from the SWMU 110 drain and the sewer pipeline to OWS 386B were satisfactorily investigated during the RFA sampling visit in 1992 and the confirmation sampling activities during the removal of OWS 386B and UST 386C in 1999. No significant releases were identified during the previous sampling activities, and consequently, the Navy recommends no further action for SWMU 110 with Environmental Condition of Property (ECP) category 3.

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If we do not receive comments from your office by 4 September 2003, we will assume that you concur with our recommendations to designate no further action status and ECP category 3 for SWMU 110. We will also plan to incorporate these recommendations in the next BRAC Business Plan update.

Please do not hesitate to contact me if you have questions pertaining to this transmittal. A formal transmittal letter may follow.

Atch
Information Package (SWDIV June 2003)

CF:
Andy Piszkin (BRAC Environmental Coordinator)
Nicole Moutoux (USEPA)
John Broderick (RWQCB)
CSO El Toro
Project File (El Toro)

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File: eltoroar.doc

# TRANSMITTAL

Date: 1 JULY 2003

From: Lynn Marie Hornecker LMH
MCAS El Toro

To: Diane Silva
Code ~~011S.DS~~ 05G.DS

**Subj: CERCLA Administrative Record Materials**
Marine Corps Air Station, El Toro

***Installation***: Marine Corps Air Station, El Toro

***UIC Number***: M60050

***Document Title (or subject)***: SWMU 110

***Author***: Lynn Marie Hornecker, Navy

***Recipient***: Rafat Abbasi, DTSC

***Record Date***: 27 June 2003

***Approximate Number of Pages***: 50

***EPA Category***: 01.1

***Sites***: SWMU 110

***Key Words***: SWMU, RFA

***Contract***: N/A

***CTO Number***: N/A

Note: SWMU 110 is located within the boundary of IRP Site 24.

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# Information Package Contents

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# Summary

Solid Waste Management Unit (SWMU) 110, a former vehicle wash rack, was identified and investigated during the Resource Conservation and Recovery Act Facility Assessment (RFA). SWMU 110 is located on the northeastern side of Building 386 in the public works area in the southwestern section of Former Marine Corps Air Station, El Toro. Building 386, constructed in approximately 1955, was a heavy equipment maintenance facility. SWMU 110, constructed of Portland cement concrete, was approximately 60 feet long by 42 feet wide, and the wash rack surface slopes downward toward a drain at the center of the concrete slab. SWMU 110 was taken out of service in 1999, prior to the removal of Oil/Water Separator (OWS) 386B and Underground Storage Tank (UST) 386C. OWS 386B and UST 386C, located adjacent to the northwestern side of SWMU 110, were removed in August 1999.

SWMU 110 is located within the investigation boundary of Installation Restoration Program (IRP) Site 24 - the Volatile Organic Compound (VOC) Source Area - and southeast of IRP Site 10 (Petroleum Disposal Area), Unit 4.

A visual site inspection of SWMU 110 was conducted on 23 April 1991. A sampling visit, with four (4) shallow soil borings, was completed in 1992. Samples were collected at depths of 2 feet and 5 feet below ground surface (bgs) from each boring (110H1, 110H2, 110H3, and 110H4). Additionally, soil samples were collected at ten-foot intervals from 112A1, a 60-foot angle boring (at a 30-degree angle), adjacent to OWS 386B during the sampling visit of 1992; the angle boring was advanced from the northwestern side of OWS 386B toward the wash rack (SWMU 110). The inspection and sampling visit results are documented in the "Final Resource Conservation and Recovery Act (RCRA) Facility Assessment Report" (Jacobs Engineering Group (JEG) 16 July 1993). The Final RFA Report recommended repairs to the cracks in the wash rack surface at SWMU 110, and these repairs were completed in 1998. A summary report was submitted in 1999 to document the completion of the repairs and to recommend no further action status for SWMU 110.

The Regional Water Quality Control Board (RWQCB), Santa Ana Region concurred with the recommendation for no further action on 6 November 2000.

The California Department of Toxic Substances Control submitted comments dated 30 March 2001 that requested additional information pertaining to the wash rack drain and the sewer pipeline from the wash rack drain to OWS 386B.

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*Visual inspections of May and June 2003*

During May and June 2003, SWMU 110 was visually inspected and the locations of the RFA sample borings were measured and compared to the location of the sewer. Building 386 and the adjacent buildings in the public works compound were vacant during the inspections. Exhibits 1 and 2 in this information package show the location of SWMU 110 relative to nearby locations of concern and the locations of the catch basin (wash rack drain) and the sewer pipeline relative to the locations of the RFA borings. One of the plans from contract N62474-80-C-9175 shows a 6-inch vitrified clay pipe (VCP) from the catch basin to OWS 386B. The invert to the sewer at the catch basin (wash rack drain) is approximately 2.5 feet below ground surface and the sewer is estimated to have been approximately 6 feet below ground surface at the entrance to OWS 386B.

*Overview of historical field sampling activities*

RFA boring 110H1 is located on the wash rack, approximately 5 feet southwest of the sewer pipeline between the catch basin (wash rack drain) and OWS 386B. RFA boring 110H2 is located on the wash rack, adjacent to the catch basin (wash rack drain).

Soil samples were collected at depths of 2 feet and 5 feet below ground surface from borings 110H1 and 110H2, and samples were analyzed for Total Recoverable Petroleum Hydrocarbons (TRPH) by USEPA Method 418.1 and for Volatile Organic Compounds. The maximum TRPH concentration of 680 milligrams per kilogram was detected in a 2-foot sample from boring 110H2. The maximum xylene, ethylbenzene, 2-butanone, and tetrachloroethylene (PCE) concentrations were also detected in samples from boring 110H2. Maximum reported concentrations in soil samples from boring 110H2 are summarized in the following table.

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## Table 1. Maximum Contaminant Concentrations at SWMU 110. RFA Sampling Visit of 1992.

| Sample Identifier | Maximum Contaminant Concentration | Comments |
|---|---|---|
| Boring 110H2 2-foot sample (near wash rack drain) | TRPH: 680 milligrams per kilogram (mg/kg) | Petroleum corrective action program sites at former MCAS El Toro with residual petroleum hydrocarbon concentrations of 680 mg/kg have been closed by the RWQCB. A concentration of 680 mg/kg is not anticipated to pose a significant threat to ground water quality. |
| Boring 110H2 2-foot sample (near wash rack drain) | Xylene: 62 micrograms per kilogram (ug/kg) "J" (qualified as an estimated value) | USEPA Region 9 Residential PRG (2002) for xylene: 2.7E+02 milligrams per kilogram nc. The measured concentration of 62 ug/kg "J" is less than 1% of the PRG of 270,000 ug/kg. |
| Boring 110H2 2-foot sample (near wash rack drain) | Ethylbenzene: 5 ug/kg "J" (qualified as an estimated value) | USEPA Region 9 Residential PRG (2002) for ethylbenzene: 8.9 milligrams per kilogram ca. The measured concentration of 5 ug/kg "J" is less than 1% of the PRG of 8,900 ug/kg. |
| Boring 110H2 2-foot sample (near wash rack drain) | Tetrachloroethylene (PCE): 11 ug/kg "J" (qualified as an estimated value) | USEPA Region 9 Residential PRG (2002) for PCE: 1.5 milligrams per kilogram ca. The measured concentration of 11 ug/kg "J" is less than 1% of the PRG of 1,500 ug/kg. |
| Boring 110H2 2-foot sample (near wash rack drain) | 2-butanone (also known as MEK): 5 ug/kg "J" (qualified as an estimated value) | USEPA Region 9 Residential PRG (2002) for 2-butanone: 7.3E+03 milligrams per kilogram nc. The measured concentration of 5 ug/kg "J" is less than 1% of the PRG of 7,300,000 ug/kg. |

OWS 386B and UST 386C, adjacent to SWMU 110, were removed with oversight by the Orange County Health Care Agency (OCHCA) in August 1999. Confirmation soil samples were collected at depths of 9 and 10 feet below ground surface in the excavation. Petroleum hydrocarbons and volatile organic compounds were not detected at or above reporting limits.

Soil samples that were collected at depths of 40, 50, and 60 feet from the RFA angle boring, 112A1, for OWS 386B, were located beneath OWS 386B/UST 386C and the sewer line from SWMU 110. Petroleum hydrocarbons and volatile organic compounds were not detected at or above reporting limits.

Soil samples and soil gas samples have been collected in the vicinity of SWMU 110 during the remedial investigation of IRP Site 24. Remedial actions for the vadose zone at IRP Site 24 have been completed and a copy of the DTSC letter of concurrence is included in the Appendix.

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Historical information pertaining to SWMU 110 and selected nearby locations of concern is summarized in Table 2.

## Table 2. Historical Information for SWMU 110 and the SWMU 110 Vicinity

| Item | Historical Events | Comments |
|---|---|---|
| SWMU 110 | RFA Visual Site Inspection: 23 April 1991<br>RFA Sampling Visit: 1992<br>RFA Recommendation to Repair Cracks: 1993<br>Repair of Cracks: December 1998<br>Completion of Summary Report: February 1999<br>RWQCB concurrence on NFA status: 6 November 2000<br>DTSC comments: 30 March 2001<br>Additional Visual Inspections, Preparation of Information Package: May - June 2003 | The maximum TRPH concentration of 680 milligrams per kilogram was detected in the 2-foot sample from 110H2. |
| OWS 386B (SWMU 112)/ UST 386C (SWMU 113) | Soil samples were collected from an angle boring adjacent to OWS 386B during the sampling visit in 1992.<br>OWS 386B and UST 386C were removed in August 1999, and soil samples were collected from the base of the tank excavation.<br>OCHCA concurred on no further action status for OWS 386B and UST 386C on 3 January 2000. | No petroleum hydrocarbons or volatile organic compounds were detected at or above reporting limits in OWS386B-T-9' and UST386C-T-10'. |
| IRP Site 24 | Soil gas samples were collected near SWMU 110 during the Phase I and Phase II Remedial Investigations of IRP Site 24. The nearest sample locations are shown on Exhibit 1. A sample was collected at a depth of 15 feet bgs from 24SG83 in 1994, and 24SG83 is located approximately 100 feet northwest of SWMU 110. Volatile organic compounds were not detected at or above reporting limits in the sample from 24SG83. | Samples were also collected from 24CPT51 in 1995, and 24CPT51 is located more than 100 feet north of SWMU 110. DTSC concurred with completion of the vadose zone remediation of IRP Site 24 on 15 July 2002. |
| APHO 7 (SAIC 46) | Aerial photograph anomaly APHO 7 (described as wet soil or stains on 1946 aerial photograph) was inspected and evaluated during the Summer 1999. DTSC concurred with no further action status in August 1999. | APHO 7 (SAIC 46) coincides approximately with the location of APHO 121 (SAIC 528). The anomalies are located approximately north of SWMU 110. |
| TAA 770 (SWMU 223) | Identified as SWMU 223 during the RFA, and samples were collected during the 1992 sampling visit and during 2002. Closure report was submitted to DTSC on 10 January 2003. | DTSC review of closure documentation is in progress as of June 2003. |
| IRP Site 10 (Petroleum Disposal Area), Unit 4 | Record of Decision for No Action at IRP Site 10 was signed in September 1997. | IRP Site 10, Unit 4 is located northwest of SWMU 110. The nearest sample locations are more than 100 feet northwest of SWMU 110. |
| Hydraulic lifts at Building 386 | Former hydraulic lifts at Building 386 (vehicle maintenance service bays) were evaluated during 2002 and 2003. Transmittal with recommendation for no further action for ASTs 386A & B (former hydraulic fluid tanks) was submitted to DTSC on 31 January 2003. | Evaluation is in progress as of June 2003. |

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*Findings*

- Visual inspections and field sampling activities were conducted at SWMU 110 and at the adjacent OWS 386B (SWMU 112) in 1991 and 1992 during the RFA.
- Low levels of petroleum hydrocarbons and volatile organic compounds were detected in boring 110H2, near the wash rack drain.
- Petroleum hydrocarbons and volatile organic compounds were not detected at or above reporting limits in soil samples collected from angle boring 112A1, that was advanced beneath OWS 386B and the wash rack sewer pipeline.
- Cracks in the SWMU 110 wash rack surface were repaired in 1998, and the wash rack was taken out of service in 1999.
- Wash water from SWMU 110 was discharged through the sewer and through the OWS 386B/UST 386C system. OWS 386B and UST 386C were removed in August 1999, and Orange County Health Care Agency closed the tank sites on 3 January 2000.
- Visual inspections were conducted during May and June 2003 in order to measure the distances from the RFA borings and the sewer pipeline at SWMU 110 in response to DTSC comments dated 30 March 2001. Two of the RFA borings, 110H1 and 110H2, are located near the wash rack drain and sewer.

*Recommendations*

- No further action is recommended for SMWU 110 based upon the completion of the repairs to cracks in the wash rack surface, the presence of low levels of petroleum hydrocarbons, and the presence of xylene, ethylbenzene, 2-butanone, and PCE at levels significantly lower than the associated USEPA Region 9 Residential Preliminary Remediation Goals (USEPA Region 9 2002).

- Environmental Condition of Property (ECP) category 3 is recommended due to the presence of petroleum hydrocarbons, xylene, ethylbenzene, 2-butanone, and PCE.

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**References and/or Sources of Information**

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]

Naval Facilities Engineering Command, Western Division. ~1980. Military construction drawing, N62474-80-C-9175 (Building 386 wash rack).

Southwest Division, Naval Facilities Engineering Command. 1999. Summary Report, Repairs to Vehicle Washrack at Building 386, Solid Waste Management Unit (SWMU) Number 110, Petroleum Corrective Action Program, Marine Corps Air Station, El Toro. February.

Southwest Division, Naval Facilities Engineering Command. 1999. Summary Report, Aerial Photograph Anomaly APHO 7, Marine Corps Air Station, El Toro. July.

United States Environmental Protection Agency (USEPA) Region 9. 2002. Preliminary Remediation Goals.

United States Marine Corps Air Station, El Toro. Various dates. Regulatory correspondence for environmental compliance program, environmental compliance program closure documents, historical building guides, facility maps and plans, and property records.

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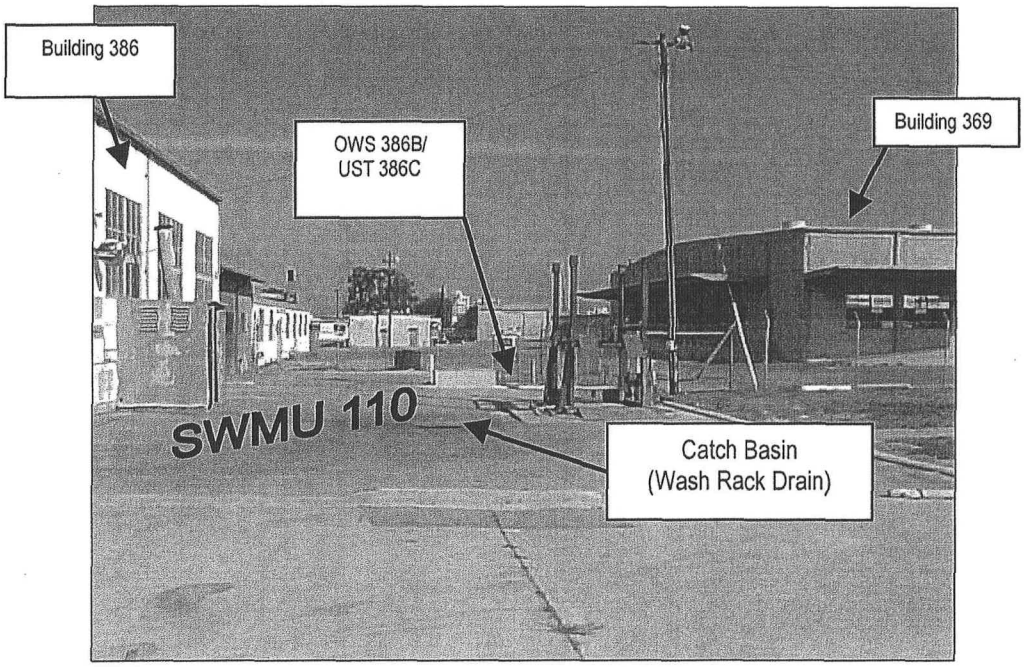
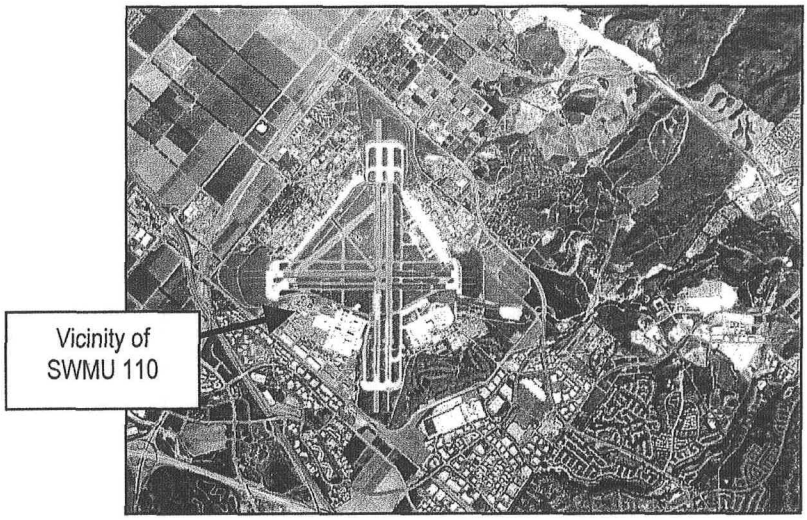
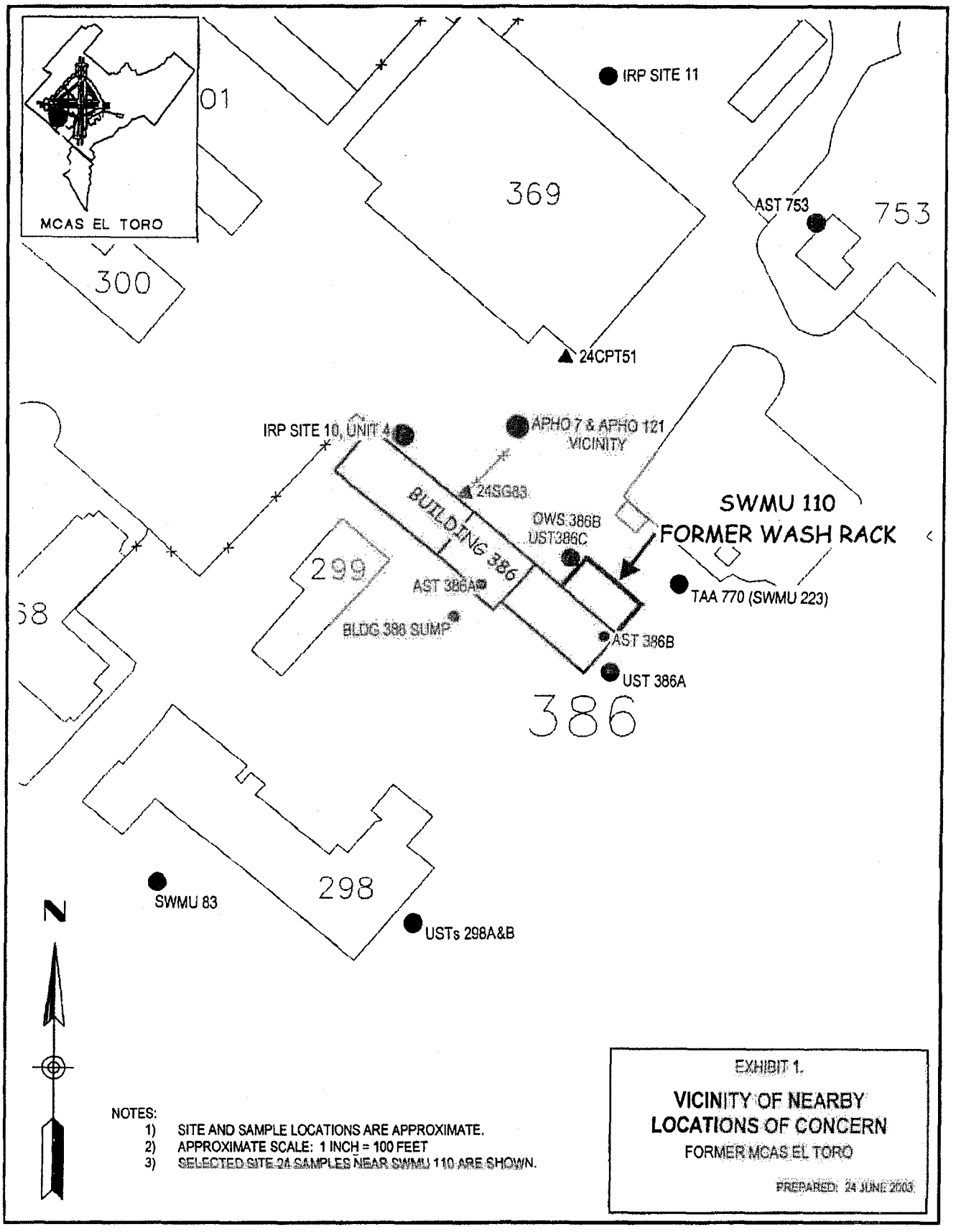
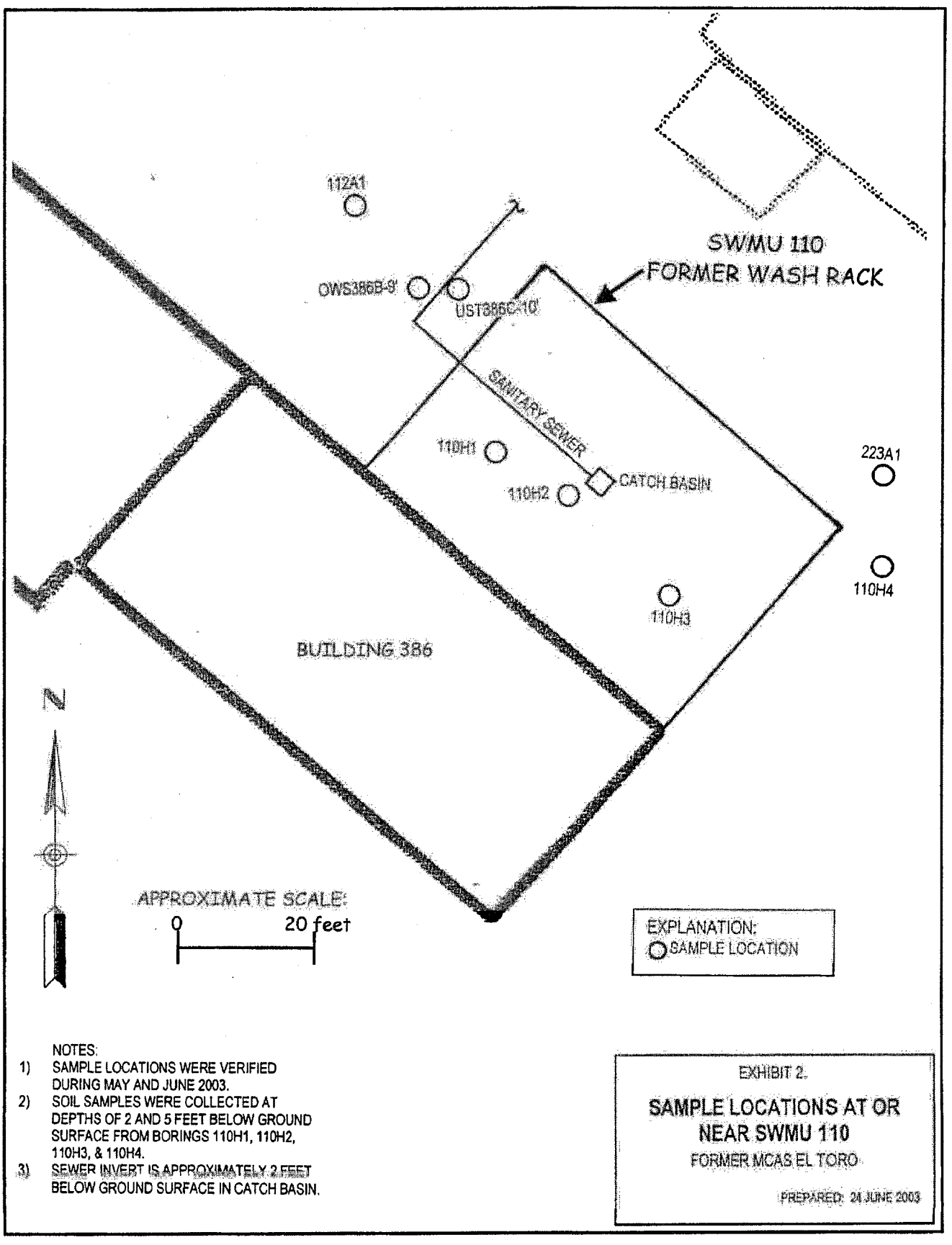
Photograph 1. Solid Waste Management Unit (SWMU) 110 at Center with Building 386 at Left.
Looking Northwest from Southeastern Side of SWMU 110.
Former Marine Corps Air Station, El Toro
Date of Photograph: July 1999




Photograph 2. Aerial Photograph Showing Vicinity of SWMU 110
Former Marine Corps Air Station, El Toro
Date of photograph: 1997 (Source: County of Orange)




MCAS EL TORO
01
300
369
IRP SITE 11
AST 753
753
24CPT51
IRP SITE 10, UNIT 4
APHO 7 & APHO 121
VICINITY
24SG83
BUILDING 386
OWS 386B
UST386C
SWMU 110
FORMER WASH RACK
299
AST 386A
TAA 770 (SWMU 223)
BLDG 386 SUMP
AST 386B
UST 386A
386
68
298
SWMU 83
USTs 298A&B
N
NOTES:
1) SITE AND SAMPLE LOCATIONS ARE APPROXIMATE.
2) APPROXIMATE SCALE: 1 INCH = 100 FEET
3) SELECTED SITE 24 SAMPLES NEAR SWMU 110 ARE SHOWN.
EXHIBIT 1.
VICINITY OF NEARBY
LOCATIONS OF CONCERN
FORMER MCAS EL TORO
PREPARED: 24 JUNE 2003




NOTES:

1) SAMPLE LOCATIONS WERE VERIFIED DURING MAY AND JUNE 2003.
2) SOIL SAMPLES WERE COLLECTED AT DEPTHS OF 2 AND 5 FEET BELOW GROUND SURFACE FROM BORINGS 110H1, 110H2, 110H3, & 110H4.
3) SEWER INVERT IS APPROXIMATELY 2 FEET BELOW GROUND SURFACE IN CATCH BASIN.

EXHIBIT 2.

**SAMPLE LOCATIONS AT OR NEAR SWMU 110**

FORMER MCAS EL TORO

PREPARED: 24 JUNE 2003

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# APPENDIX

Regulatory Correspondence

Field Notes

Excerpt from Sanitary Sewer Utility Map

Excerpt from Contract N62474-80-C-9175

Other Historical Information

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# Regulatory Correspondence

# California Regional Water Quality Control Board

## Santa Ana Region

Winston H. Hickox
*Secretary for Environmental Protection*

Internet Address: http://www.swrcb.ca.gov/rwqcb8
3737 Main Street, Suite 500, Riverside, California 92501-3348
Phone (909) 782-4130 - FAX (909) 781-6288

Gray Davis
*Governor*


November 6, 2000

Mr. Dean Gould
BRAC Environmental Coordinator
MCAS El Toro
P O Box 51718
Irvine, CA 92619 -1718

**COMMENTS ON SUMMARY REPORT, REPAIRS TO VEHICLE WASHRACK AT BUILDING 386 AND SUPPLEMENTARY TECHNICAL INFORMATION, SWMU NUMBER 110, MARINE CORPS AIR STATION, EL TORO**

Dear Mr. Gould:

We have completed our review of the above-referenced documents, dated February 4, 1999, and September 21, 2000, which we received on February 26, 1999, and September 27, 2000. We do not have significant comments on these reports, and concur with the recommendation for no further action.

For any questions on this review or related matters, please call me at (909) 782-4494.

Sincerely,

John Broderick
SLIC/DoD/AGT Section

cc: Ms. Triss Chesney, Department of Toxic Substances Control, OMF
Mr. Gregory F. Hurley, El Toro RAB Co-Chair
Ms. Lynn Hornecker, Naval Facility Engineering Command, SWDIV
Mr. Glenn Kistner, U.S. EPA, Region IX



received
9 Nov 00

# Department of Toxic Substances Control

Edwin F. Lowry, Director
5796 Corporate Avenue
Cypress, California 90630

Winston H. Hickox
Agency Secretary
California Environmental
Protection Agency

Gray Davis
Governor

March 30, 2001

Mr. Dean Gould
BRAC Environmental Coordinator
Marine Corps Air Station El Toro
Base Realignment and Closure
P.O. Box 51718
Irvine, California 92619-1718

SUMMARY REPORT AND SUPPLEMENTARY TECHNICAL INFORMATION, REPAIRS TO VEHICLE WASH RACK AT BUILDING 386, SOLID WASTE MANAGEMENT UNIT (SWMU) 110, PETROLEUM CORRECTIVE ACTION PROGRAM, MARINE CORPS AIR STATION (MCAS) EL TORO

Dear Mr. Gould:

The Department of Toxic Substances Control (DTSC) reviewed the following documents for repairs to the vehicle wash rack at Building 386, also known as SWMU 110:

- Summary Report, dated February 4, 1999 and received by this office on July 19, 2000.
- Supplementary Technical Information dated September 21, 2000 and received by this office on September 27, 2000.

The Summary Report presents information pertaining to the repairs to the concrete surface of the vehicle wash rack as recommended in the *Final Resource Conservation and Recovery Act [RCRA] Facility Assessment* (Jacobs Engineering Group, 1993) (RFA). Following review of the Summary Report, DTSC requested additional information regarding sampling locations, volatile organic compound analysis and the status of the associated oil/water separator (OWS) 386B (also referenced as SWMU 112 in the RFA). Subsequently, the Department of the Navy forwarded the Supplementary Technical Information in response to the request.

Based on the information provided in the Supplementary Technical Information document, DTSC understands that Orange County Health Care Agency issued a

confirmation letter on January 3, 2000 that the tank removal project for OWS 386B/UST 386C was completed.

After review of the documents, DTSC has the following comment:

1. As part of the sampling visit associated with the RFA, shallow soil samples were collected from three locations through the washrack and one location adjacent to the washrack. Nine soil samples were collected from four borings at approximate depths of 2 and 5 feet below ground surface. However, sampling was not conducted to target the drain of the wash rack and the storm drain extending to OWS 386B/UST 386C.

   Please submit a work plan to conduct an assessment of the wash rack drain and the storm drain extending from the wash rack drain to OWS 386B. If chemical constituents are detected in the samples, further investigation may be required to determine the nature and extent of contamination, if any, and to check for releases around the perimeter of the wash rack.

The Summary Report recommends a status of no further action be designated for SWMU 110 based upon the absence of evidence of a significant release of petroleum hydrocarbons and completion of repairs as recommended in the RFA. DTSC does not concur with the recommendation for no further action at SWMU 110. Please provide information as requested in the above comment.

If you have any questions, please contact me at (714) 484-5395.

Sincerely,

Triss M. Chesney, P.E.
Remedial Project Manager
Southern California Branch
Office of Military Facilities

cc: Ms. Nicole Moutoux
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Santa Ana Region
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Restoration Advisory Board Co-chair
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Newport Beach, California 92660-8019

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Santa Ana, California 92701

Mr. Steven Sharp
Orange County Health Care Agency
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Santa Ana, California 92705

Ms. Lynn Hornecker
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Naval Facilities Engineering Command
Southwest Division - Code 06CC.LH
1220 Pacific Highway
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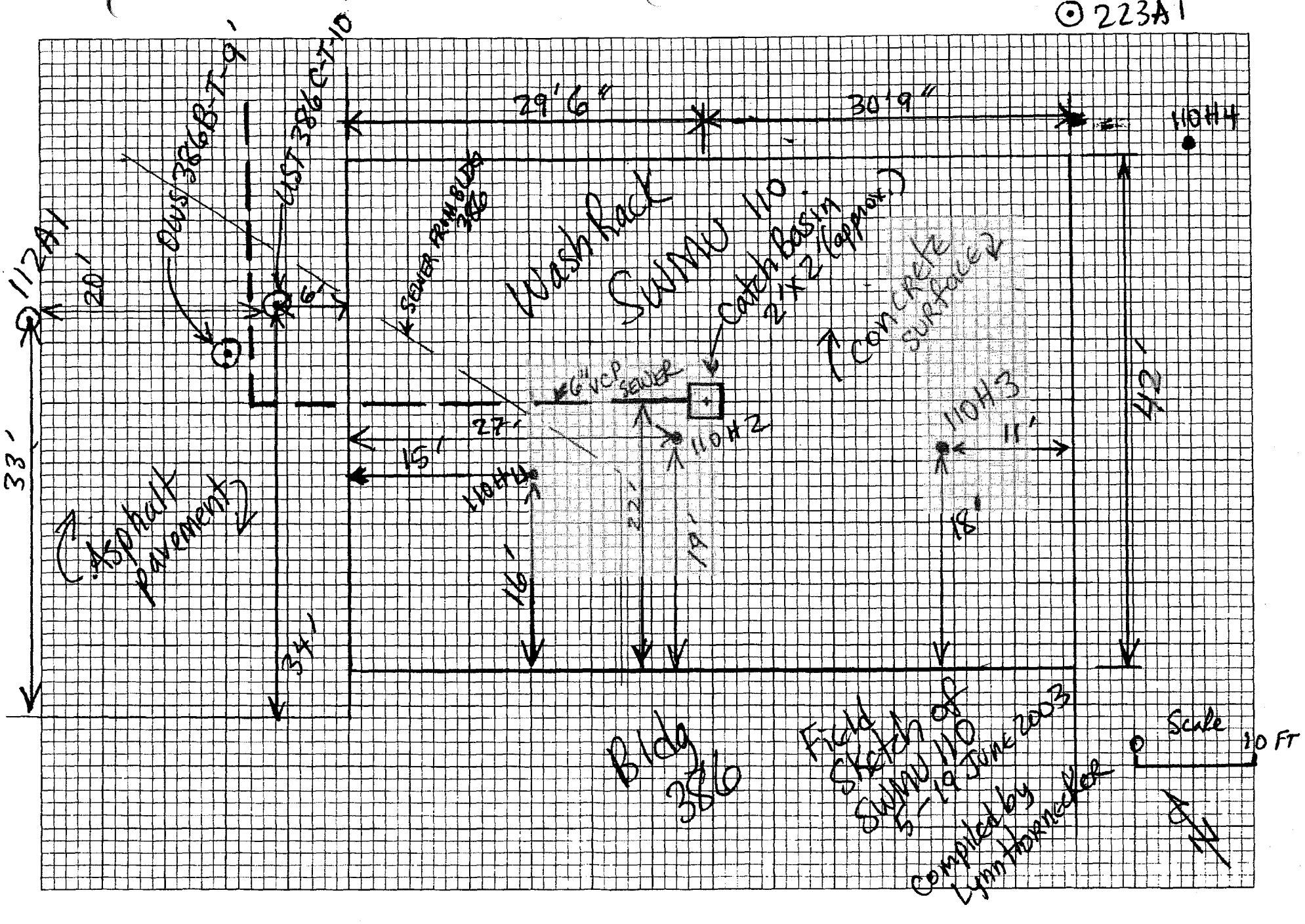
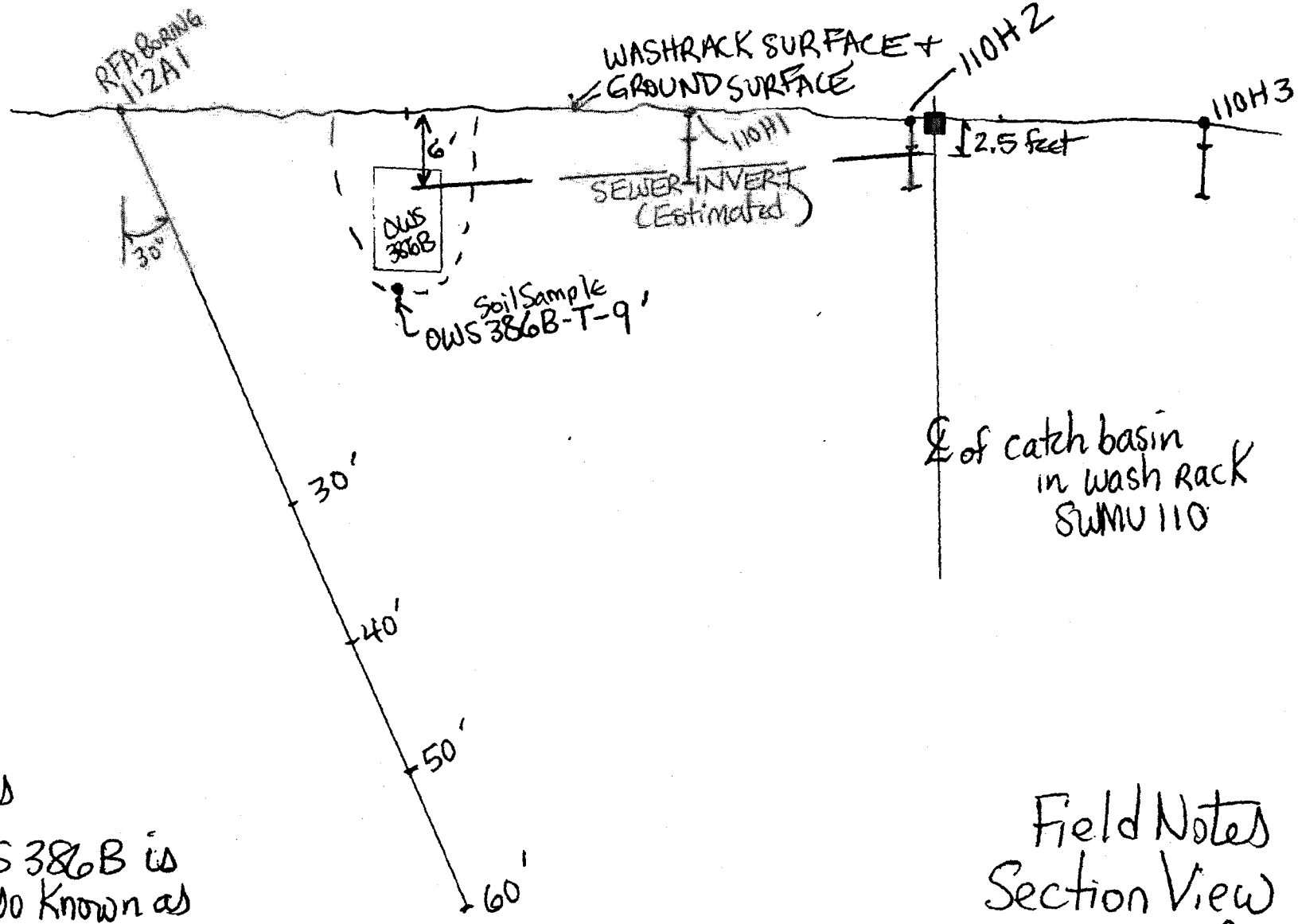
# Field Notes






Notes

1) OWS 386B is also known as SWMU 112

2) Borings 110H1, 110H2, + 110H3 are through the wash rack.

Field Notes
Section View
SWMU 110
Approximate Scale: 1" = 10'

0 10'

Compiled 6/25/2003 LMH

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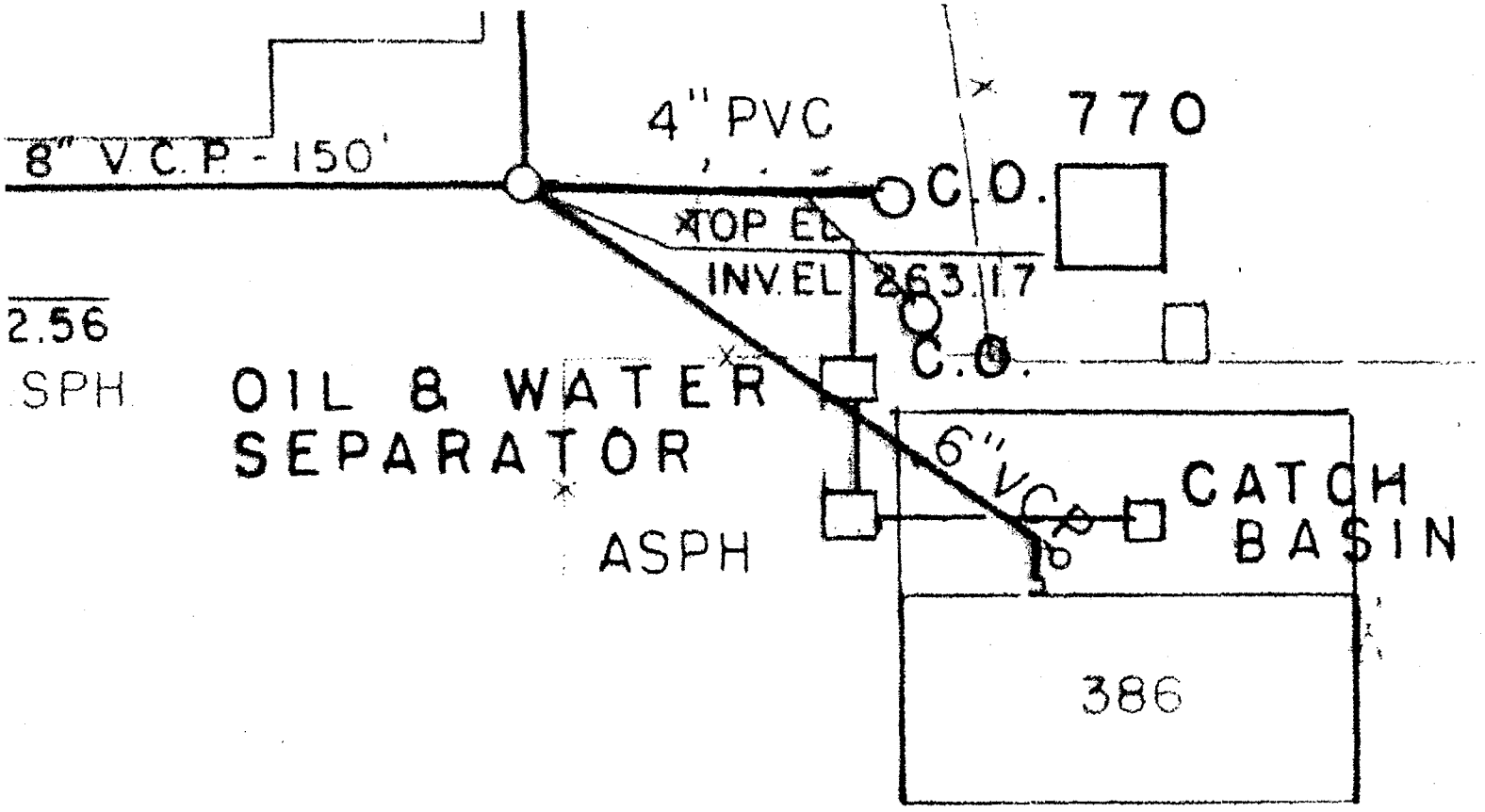
# Excerpt from Sanitary Sewer Utility Map (Building 386 and SWMU 110 Vicinity)


8" V.C.P - 150'
4" PVC
770
C.O.
TOP EL
INV.EL 263.17
C.O.
2.56
SPH
OIL & WATER
SEPARATOR
6" VCP
CATCH
BASIN
ASPH
386

2662

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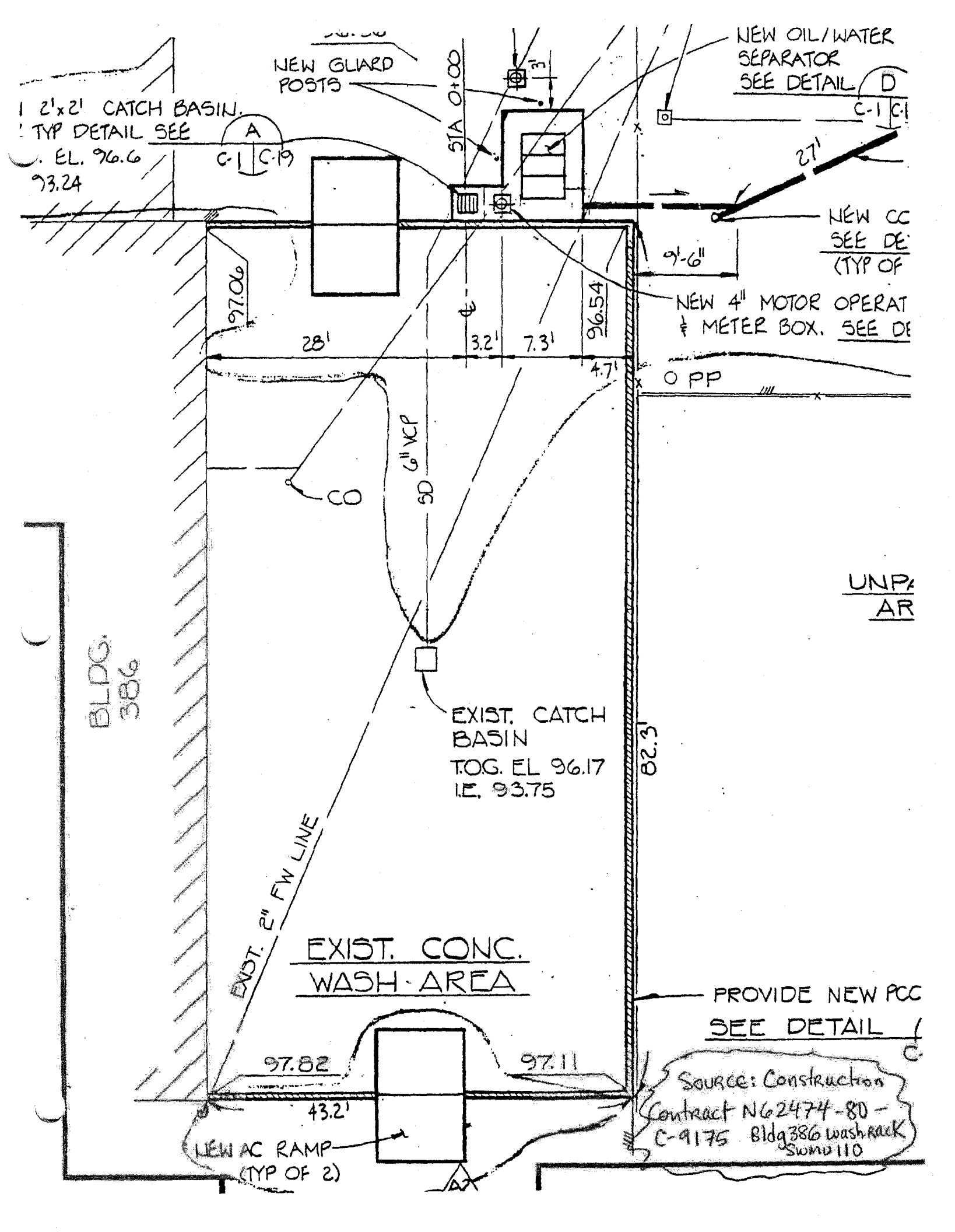
Telephone: (619) 532-0783/Fax (619) 532-0780

File: etswtr27June2003WMU110.doc

# Excerpt from Contract N62474-80-C-9175 (Building 386 and SWMU 110 Vicinity)


NEW GUARD POSTS
STA 0+00
NEW OIL/WATER SEPARATOR SEE DETAIL D
C-1 C-19
2'x2' CATCH BASIN. TYP DETAIL SEE A
C-1 C-19
EL. 96.6
93.24
27'
NEW CC
SEE DE
(TYP OF
9'-6"
NEW 4" MOTOR OPERAT
& METER BOX. SEE DE
97.06
96.54
28'
3.2'
7.3'
4.7'
O PP
6" VCP
5D
CO
UNP
AR
BLDG. 386
EXIST. CATCH BASIN
T.O.G. EL 96.17
I.E. 93.75
82.3'
EXIST. 2" FW LINE
EXIST. CONC. WASH AREA
PROVIDE NEW PCC
SEE DETAIL
97.82
97.11
43.2'
NEW AC RAMP (TYP OF 2)
Source: Construction Contract N62474-80-C-9175 Bldg 386 wash rack SWND 110

SOUTHWESTNAVFACENGCOM
Code 06CC.LMH
Telephone: (619) 532-0783/Fax (619) 532-0780

File: etswtr27June2003WMU110.doc

# Other Historical Information

COUNTY OF ORANGE
HEALTH CARE AGENCY

REGULATORY HEALTH SERVICES
ENVIRONMENTAL HEALTH

MICHAEL SCHUMACHER, Ph.D.
DIRECTOR

MIKE SPURGEON
DEPUTY AGENCY DIRECTOR
REGULATORY HEALTH SERVICES

JACK MILLER, REHS
DIRECTOR
ENVIRONMENTAL HEALTH

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

TELEPHONE: (714) 667-3600
FAX: (714) 972-0749
E-MAIL: environhealth@hca.co.orange.ca.us

January 3, 2000

Mr. Dean Gould
Base Realignment and Closure
Environmental Coordinator
Naval Facilities Engineering Command
Southwest Division-Code 5MBE.LMH
1220 Pacific Highway
San Diego, CA 92132-5190

Subject: **Completion of Tank Removal Project**

RE: Marine Corps Air Station El Toro
Tank #386C and Oil/Water Separator 386B
Santa Ana, CA 92709

Dear Mr. Gould:

This is a 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 tank removal on August 5, 1999 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 facility location.

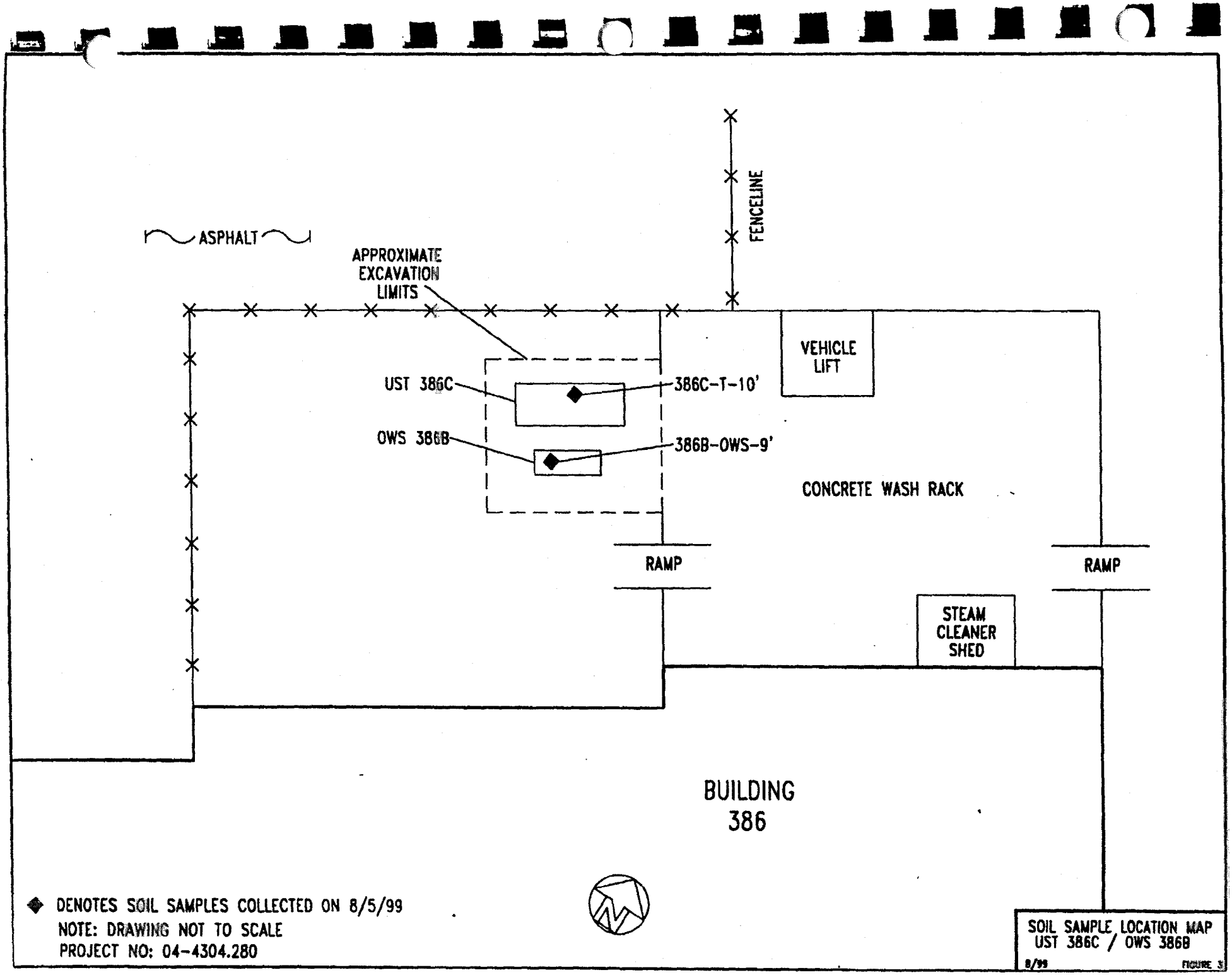
It should be pointed out that this letter does not relieve you of any responsibilities mandated under the California Health and Safety Code if additional or previously unidentified contamination is discovered at the subject site.

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

Sincerely,

Seth J. Daugherty
Supervising Hazardous Waste Specialist
Hazardous Materials Management Section
Environmental Health Division

cc: Lynn Hornecker, SWDIV


FENCELINE
ASPHALT
APPROXIMATE EXCAVATION LIMITS
VEHICLE LIFT
UST 386C
386C-T-10'
OWS 386B
386B-OWS-9'
CONCRETE WASH RACK
RAMP
RAMP
STEAM CLEANER SHED
BUILDING 386
◆ DENOTES SOIL SAMPLES COLLECTED ON 8/5/99
NOTE: DRAWING NOT TO SCALE
PROJECT NO: 04-4304.280
SOIL SAMPLE LOCATION MAP
UST 386C / OWS 386B
8/99
FIGURE 3

# TABLE 1 - UST 386C / OWS 386B

## Summary of Laboratory Analytical Data

| UST 386C and OWS 386B Excavation Soil Sampling | | | | | |
|---|---|---|---|---|---|
| Chemical Analyte | EPA Method | PQL | Date Sampled | Sample ID 386C-T-10' | Sample ID 386B-OWS-9' |
| TPH-G ($C_4$ - $C_{11}$) | 8015 | 1 mg/kg | 8/5/99 | ND | ND |
| TPH-D ($C_{11}$- $C_{23}$) | 8015 | 10 mg/kg | 8/5/99 | ND | ND |
| TPH-HC ($C_{23+}$) | 8015 | 10 mg/kg | 8/5/99 | ND | ND |
| TRPH | 418.1 | 10 mg/kg | 8/5/99 | ND | ND |
| Benzene | 8260B | 10 µg/kg | 8/5/99 | ND | ND |
| Toluene | 8260B | 10 µg/kg | 8/5/99 | ND | ND |
| Ethylbenzene | 8260B | 10 µg/kg | 8/5/99 | ND | ND |
| (total) Xylenes | 8260B | 10 µg/kg | 8/5/99 | ND | ND |
| MtBE | 8260B | 10 µg/kg | 8/5/99 | ND | ND |
| All Other VOCs | 8260B | (Varies) ug/kg | 8/5/99 | ND | ND |

Note: Analyte concentrations are in the same units as the PQL

TPH-G = Total Petroleum Hydrocarbons as Gasoline

TPH-D = Total Petroleum Hydrocarbons as Diesel

TPH-HC = Total Petroleum Hydrocarbons as Heavy Chains

386C-T-10' also referred to as UST386C-S-1-10'

mg/kg = Milligrams per Kilogram

µg/kg = Micrograms per Kilogram

MtBE = Methly tertiary Butyl Ether

386B-OWS-9' also referred to as OWS386B-S-2-9'

GEOFON
INCORPORATED

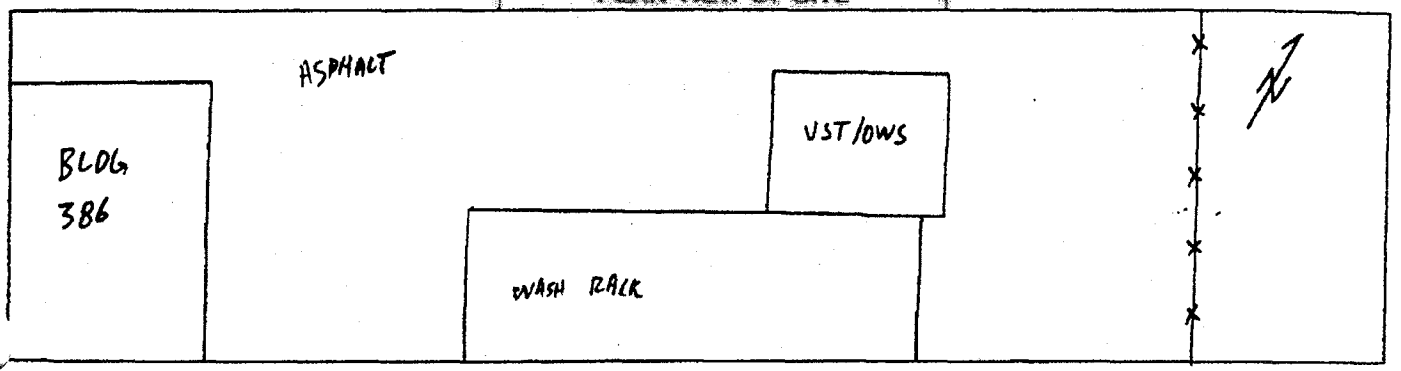
# UST REMOVAL SUMMARY

PROJECT LOCATION: MCAS-ELTORO DELIVERY ORDER NO: .280 PROJECT NO: 04-4304.280
TANK NO: 386 B&C

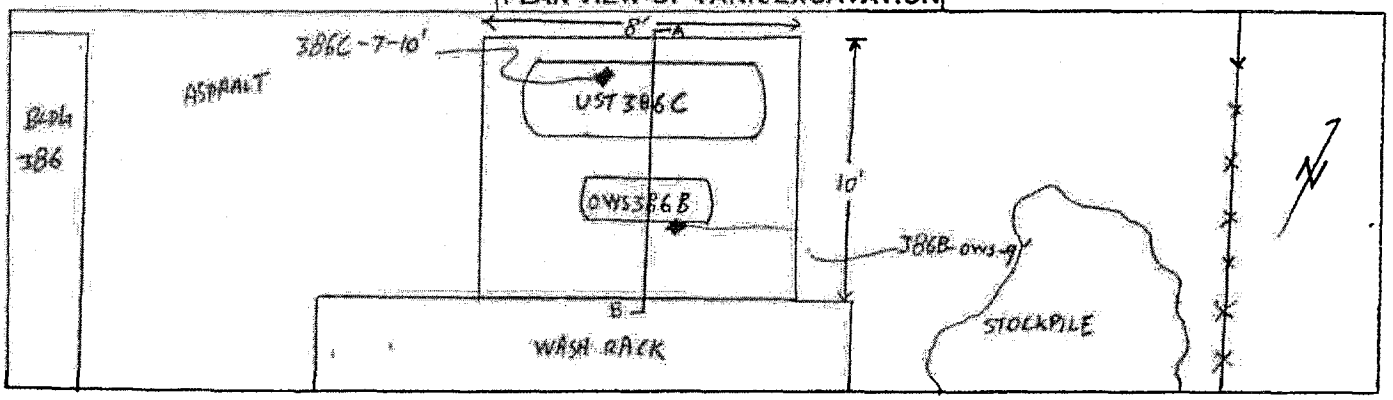
*B: 44" x 15" x 28"
C: 51" x 38"

1) TANK CONTENT (gl): Oil-Water NO. OF TESTS (ea): 1
2) EX. DIMENSISION (lf): 8'x10'x10' EX. VOLUME (cu yd): ____
3) UST DIMENSIONS (lf): * UST VOLUME (gl): B-110 C-500 UST VOLUME (cu yd): 28
4) VOLUME EX. SOIL (cu yd): ____ EX. SOIL UNDER UST (cu yd): ____ TOTAL EX. SOIL (cu yd): 30
6) TRENCH (lf): ____ NO. OF PIPE IN TRENCH (ea): 2 TOTAL PIPE REMOVED (lf): 10'
7) NO. OF TESTS STK PILE (ea): Ø NO. OF TESTS IN TRENCH(ea): Ø
5) MISC WORK: ____

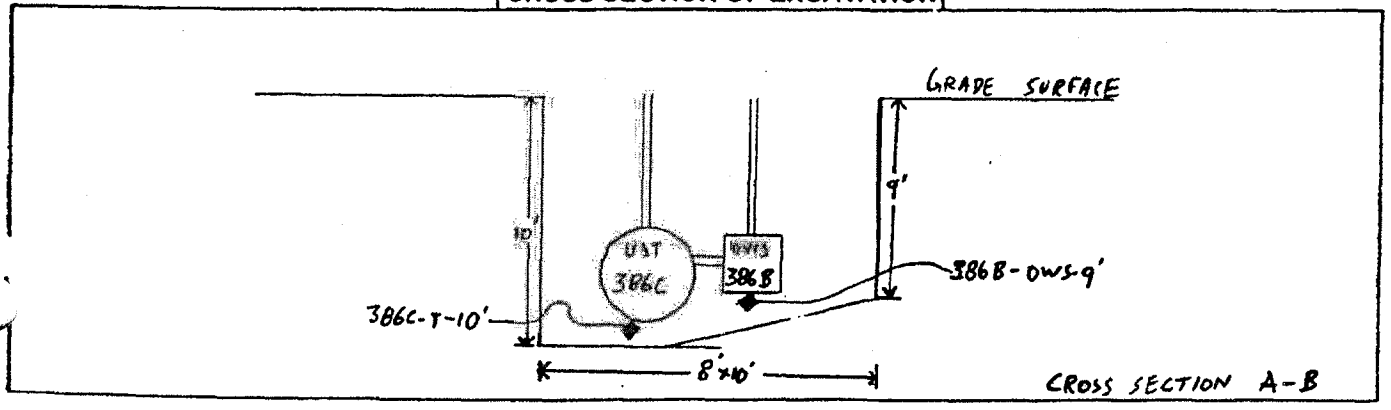
PLAN VIEW OF SITE




PLAN VIEW OF TANK/EXCAVATION




CROSS SECTION OF EXCAVATION



# Department of Toxic Substances Control

Edwin F. Lowry, Director
5796 Corporate Avenue
Cypress, California 90630

Winston H. Hickox
Agency Secretary
California Environmental
Protection Agency

Gray Davis
Governor

July 15, 2002

Mr. Dean Gould
BRAC Environmental Coordinator
Marine Corps Air Station El Toro
Base Realignment and Closure
P.O. Box 51718
Irvine, California 92619-1718

DRAFT FINAL SITE CLOSURE REPORT, VADOSE ZONE REMEDIATION, OPERABLE UNIT (OU) 2A, INSTALLATION RESTORATION PROGRAM (IRP) SITE 24, VOLATILE ORGANIC COMPOUND (VOC) SOURCE AREA, MARINE CORPS AIR STATION (MCAS) EL TORO

Dear Mr. Gould:

The Department of Toxic Substances Control (DTSC) reviewed the referenced document dated June 2002. The closure report presents the results of the vadose zone remediation conducted at Site 24. Site 24 consists of approximately 200 acres in the southwest quadrant of MCAS El Toro that includes two large aircraft hangars (designated as hangars 296 and 297) and several small buildings used for aircraft and vehicle maintenance. During the associated remedial investigation, two VOC source areas in the vadose zone were identified, one for trichloroethene (TCE) and the other for tetrachloroethene (also referenced as perchloroethene (PCE)). To address these source areas, soil vapor extraction (SVE) was the selected remedy documented in the *Draft Final Interim Record of Decision, OU-2A, Site 24 VOC Source Area, Vadose Zone* (Bechtel National, Incorporated, 1997). Subsequently, a SVE system was installed in April and May 1999. The report recommends that the remedial action objectives (RAOs) for Site 24 have been attained and requests closure of the vadose zone remediation.

DTSC comments, dated August 13, 2002, on the draft report, have been adequately addressed and incorporated into the draft final report. DTSC remains concerned that volatilization from contaminated groundwater and/or diffusion from fine-grained soil may cause a rebound of VOC concentrations in the vadose zone. However, this rebound will likely be addressed by the active groundwater remedy that will be implemented at Site 24. This remedy was recently documented in the *Final Record of Decision, Sites 18 and 24, Former Marine Corps Air Station, El Toro, California*, dated June 2002. Additionally, DTSC agrees with the recommendation to evaluate the use of the SVE system to complement the Site 24 groundwater remedy prior to decommissioning the system.

The RAOs stated in the Interim ROD are as follows:

> Reduce concentrations of VOCs in the VOC source areas to prevent or minimize further degradation of the shallow groundwater unit above the maximum contaminant levels (MCLs) for drinking water.
> Continue vadose zone remediation until VOC soil gas concentrations are below the established threshold concentrations (concentrations capable of contaminating the shallow groundwater unit above MCLs).

Based upon review of the draft final document, these RAOs have been achieved. As a result, DTSC concurs with the recommendation for closure of the Site 24 vadose zone remediation. Please contact Ms. Triss M. Chesney, Remedial Project Manager, at (714) 484-5395 if you have any questions.

Sincerely,

Manuel J. Alonzo, Chief
Base Closure and Reuse Unit
Southern California Branch
Office of Military Facilities

cc: Ms. Nicole Moutoux
Remedial Project Manager
U. S. Environmental Protection Agency Region IX
Superfund Division (SFD-8-1)
75 Hawthorne Street
San Francisco, California 94105-3901

M60050.002988
MCAS EL TORO
SSIC # 5090.3

# CONFIDENTIAL RECORD

PORTIONS OF THIS RECORD ARE CONSIDERED CONFIDENTIAL AND ARE NOT FOR PUBLIC VIEWING

PRIVATE CITIZENS' HOME ADDRESSES HAVE BEEN REDACTED IN ACCORDANCE WITH THE PRIVACY ACT

QUESTIONS MAY BE DIRECTED TO:

**DIANE C. SILVA**
**RECORDS MANAGEMENT SPECIALIST**
**SOUTHWEST DIVISION**
**NAVAL FACILITIES ENGINEERING COMMAND**
**1220 PACIFIC HIGHWAY**
**SAN DIEGO, CA 92132**

**TELEPHONE: (619) 532-3676**

cc: 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. Jerry Werner
Restoration Advisory Board Co-chair

Ms. Marcia Rudolph
Restoration Advisory Board Subcommittee Chair

Ms. Polin Modanlou
County of Orange
Planning and Development Services Department
300 North Flower Street, 3rd Floor
Santa Ana, California 92703

Mr. Steven Sharp
Orange County Health Care Agency
2009 East Edinger Avenue
Santa Ana, California 92705

Ms. Lynn Hornecker
Remedial Project Manager
Naval Facilities Engineering Command
Southwest Division - Code 06CC.LH
1220 Pacific Highway
San Diego, California 92132-5187

Department of Toxic Substances Control

Edwin F. Lowry, Director
5796 Corporate Avenue
Cypress, California 90630

Winston H. Hickox
Secretary for
Environmental
Protection

Gray Davis
Governor

August 20, 1999

Mr. Dean Gould
BRAC Environmental Coordinator
U.S. Marine Corps Air Station - El Toro
P. O. Box 51718
Irvine, California 92619-1718

**SUMMARY REPORT FOR AERIAL PHOTOGRAPH ANOMALY (APHO) 7, MARINE CORPS AIR STATION (MCAS) El TORO**

Dear Mr. Gould:

The Department of Toxic Substances Control (DTSC) has reviewed the above report dated July 14, 1999 and the Addendum inspection checklist dated July 20, 1999. The Report presents the results of the record search activities and a visual inspection of the APHO 7 (Also known as Science Applications International Corporation (SAIC) 46). The anomaly is described as wet soil or stains in the vicinity of Building 386 and Building 369 within the boundary of IRP Site 24. APHO 7 was identified on an aerial photograph dated December 1946, and the surface area of the anomaly is approximately 300 feet in diameter.

The report recommends a no further action status for APHO 7 based on evaluation of historical aerial photographs, Station maps and plans, Station property records, environmental program management plans, the results of previous environmental restoration program investigations, and visual site inspections conducted in July 1999.

DTSC concurs with the proposed no further action status designation for the APHO 7. The no further action status can be documented in the next BRAC Cleanup Plan updated. If you have any questions, please contact me at (714) 484-5418.

Sincerely,

Tayseer Mahmoud
Remedial Project Manager
Southern California Operations
Office of Military Facilities

cc: See next page

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
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Newport Beach, California 92660-8019

Ms. Polin Modanlou
MCAS El Toro Local Redevelopment Authority
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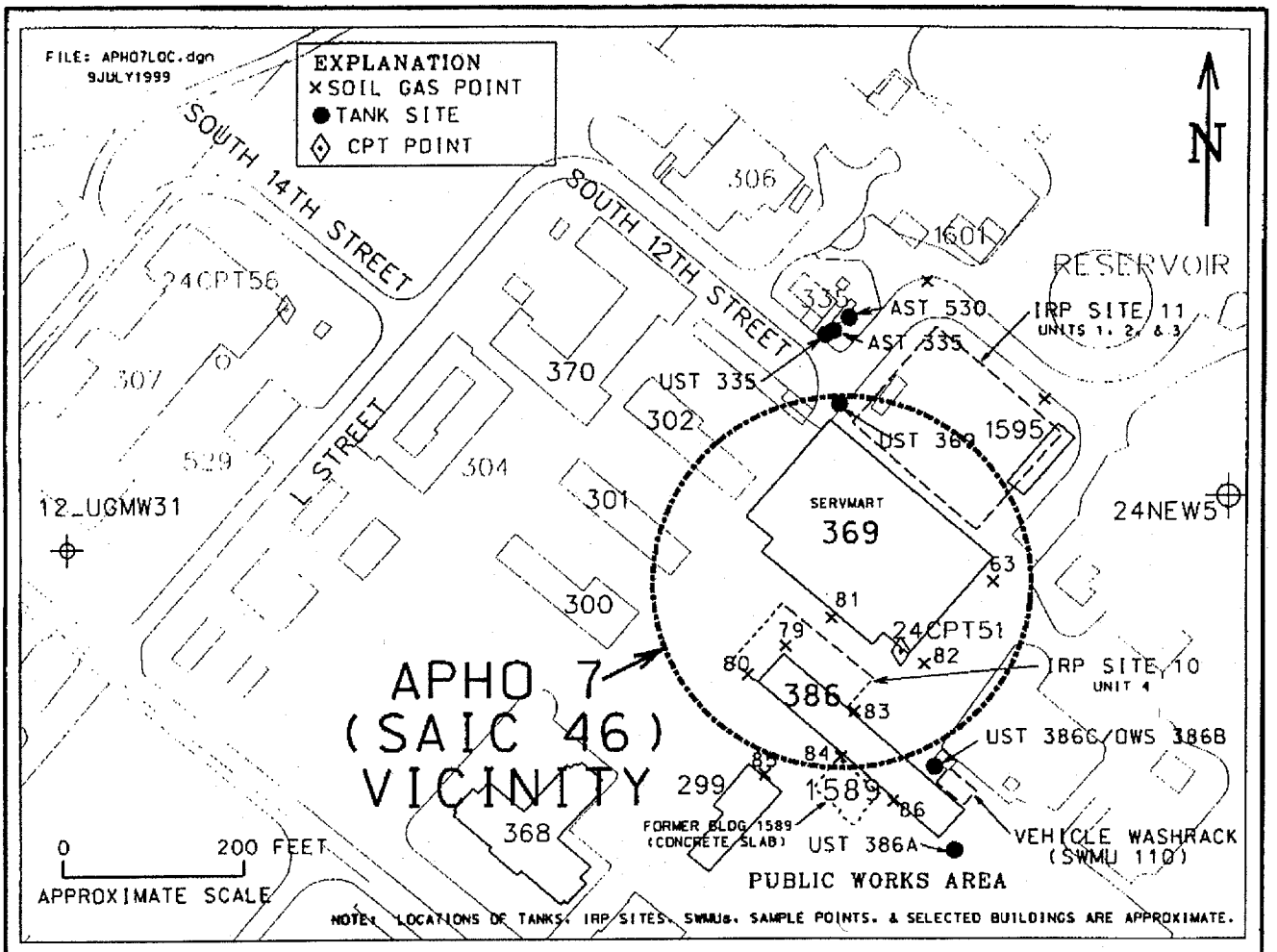
Santa Ana, California 92703

Ms. Lynn Hornecker
Remedial Project Manager
Naval Facilities Engineering Command
Southwest Division - Code 5BME.LH
1220 Pacific Highway
San Diego, California 92132-5187



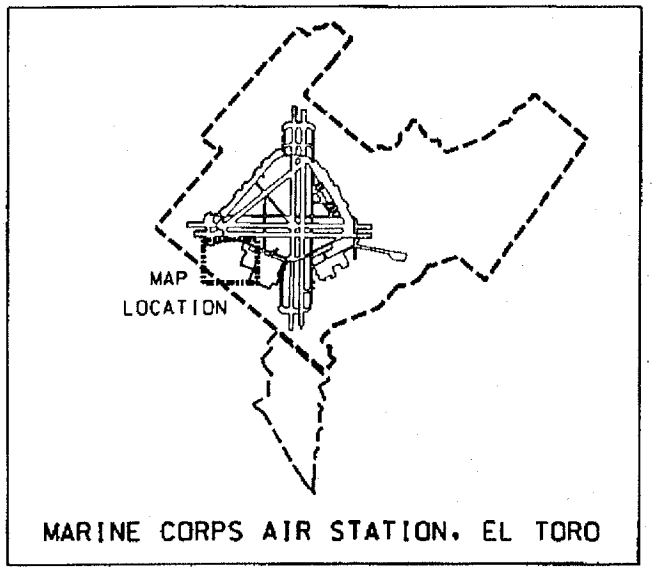




Figure 1.

AERIAL PHOTOGRAPH ANOMALY PROGRAM

**APHO 7 VICINITY MAP**

MARINE CORPS AIR STATION, EL TORO

EXCERPTS

# Summary Report

---

Repairs to Vehicle Washrack at Building 386
Solid Waste Management Unit (SWMU) Number 110
Petroleum Corrective Action Program
Marine Corps Air Station, El Toro, California

**4 February 1999**

*Prepared by*
Southwest Division, Naval Facilities Engineering Command
BRAC Operations Office
1420 Kettner Boulevard, San Diego, CA 92101

SOUTHWESTNAVFACENGCOM
CODE 5BME.LMH
SAN DIEGO, CA 92101

# Section 1
## *Introduction*

The purpose of this Summary Report is to present information pertaining to the repairs to the concrete surface of the vehicle washrack located adjacent to Building 386 at the Marine Corps Air Station (MCAS), El Toro. Petroleum hydrocarbons were identified in the shallow soils beneath the washrack during the Resource Conservation and Recovery Act (RCRA) Facility Assessment (RFA), and the washrack was designated Solid Waste Management Unit (SWMU) Number 110 in the RFA reports. Cracks in the surface of the washrack were also identified, and the RFA reports included the recommendation that the cracks be repaired in order to reduce the migration of residual petroleum hydrocarbons. The Base Realignment and Closure Cleanup Plan also includes this recommendation. The repairs to the cracks in the washrack surface were the primary objectives of this project. This report also includes a brief discussion of the information collected during the RFA and other previous investigations and a recommendation that no further action status be requested for this site.

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. Building 386 and the adjacent vehicle washrack, SWMU 110, are located in the southwest section of the Station within the Public Works compound near South Marine Way as shown on Figure 1.

SWMU 110 is also located within the boundary of Installation Restoration Program (IRP) Site 24 (Volatile Organic Compound (VOC) Source Area). Chlorinated solvents, including trichloroethylene (TCE), have been detected in the vadose zone and in the ground water beneath IRP Site 24.

The Station is preparing for closure in July 1999 in accordance with the Base Closure and Realignment Act of 1993 (BRAC III). SWMU 110 is located within a 53-acre parcel tentatively identified as a cargo area according to the El Toro Community Reuse Plan, 1997 Working Map (County of Orange, 1997) as shown on Figure 2. The Airport and Open Space Plan, Year 2020, Concept C (County of Orange, August 1998) indicates that SWMU 110 is located within a cargo area.

# Section 2
# *Field Activities and Previous Investigations*

SWMU 110, the vehicle washrack located adjacent to Building 386, was visually inspected by representatives from Southwest Division, Naval Facilities Engineering Command (SWDIV) in July 1998 in order to prepare for the field activities. The washrack is constructed of portland cement concrete and is located on the northeast side of Building 386. The washrack surface area is approximately 3,200 square feet (JEG, 1993), and the surface is sloped toward the drain at the center of the slab. A concrete berm, approximately 3 inches high, surrounds the washrack slab and prevents the flow of water onto the adjacent asphalt pavement parking area. No significant stains were observed on the washrack surface.

## 2.1 Repairs to Cracks

Repairs to the cracks in the surface of SWMU 110 were implemented in December 1998 by GEOFON, Incorporated under Navy Contract N68711-97-D-8702, Delivery Order 19. Photographs of the washrack and field notes are provided in Appendix A. Most of the surface cracks were one-half inch to one inch deep.

GEOFON prepared the washrack slab surface by removing dust and vegetation. Surface cracks were filled with a joint sealant. Information pertaining to the sealant is presented in Appendix A.

The sealed cracks will reduce the infiltration of surface waters through the washrack slab and will reduce the potential migration of subsurface residual petroleum hydrocarbons beneath the slab.

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

SWMU 110 was inspected and samples were collected during the RFA. The results of the RFA Sampling Visit 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 (JEG), 1993).

The RFA Visual Site Inspection of SWMU 110 was conducted in April 1991. Cracks in the surface of the washrack and stains on the washrack surface were documented during the inspection, and the recommendation to conduct a Sampling Visit was presented.

During the Sampling Visit, nine (9) soil samples were collected from four (4) five-foot deep borings through or near the washrack surface. Samples were collected at depths of 2 and 5 feet below ground surface from borings 110H1, 110H2, 110H3, and 110H4. Samples were analyzed by Environmental Protection Agency (EPA) Method 418.1 (Total Recoverable Petroleum Hydrocarbons (TRPH)) and EPA Method 8240 (Volatile Organic Compounds (VOCs)). TRPH was not detected in samples from three of the four borings (110H1, 110H3, and 110H4). TRPH was detected at concentrations from 440 to 680 milligrams per kilogram in boring 110H2 that was located in close proximity to the washrack drain. Benzene was not detected in samples collected from borings 110H1, 110H2, 110H3, or 110H4. Acetone and methylene chloride were reported in some of the samples, however, the results are qualified due to the presence of the analytes in the blanks. Toluene and tetrachloroethylene (PCE) are reported as estimated values (qualified with "J" qualifier) in some of the samples.

Subsurface soils consist primarily of silty sand and sandy silt according to a boring log for a 62-foot deep boring at SWMU 223 which is located approximately 40 feet from the washrack.

Extracts from the RFA documentation are presented in Appendix B.

## 2.3 Remedial Investigation Soil Gas Survey

During the Phase I Remedial Investigation of IRP Site 24, a soil gas survey was conducted that included the vicinity of Building 386. Samples were collected from depths of 20 feet or less for analysis of Volatile Organic Compounds (VOCs) and Total Petroleum Hydrocarbons (TPH). The results of the survey are published in the *Marine Corps Air Station, El Toro, El Toro, California, Installation Restoration Program, Remedial Investigation/Feasibility Study, Final Soil Gas Survey, Technical Memorandum, Sites 24 and 25* (Jacobs Engineering Group (JEG), 1994).

The nearest sampling points, 24_SG83 and 24_SG89, were located within approximately 100 feet of SWMU 110. Samples were collected at a depth of 15 feet from each point, and no petroleum hydrocarbons or volatile organic compounds were detected in the soil gas samples from these points. Results from the Soil Gas Survey are presented in Appendix B.

### 2.4 Ground Water Conditions

Ground water conditions have been investigated in the vicinity of SWMU 110 during the Remedial Investigation of IRP Site 24 (the VOC Source Area) and IRP Site 10 (Petroleum Disposal Area). The nearest monitoring well, 10_DGMW77, is located approximately 150 feet southeast of and upgradient of SWMU 110. The screened interval of well 10_DGMW77 is from 130 to 170 feet below ground surface. The water level is approximately 104 feet below ground surface, and the gradient is northwest. Water samples collected from well 07_DGMW77 contained trichloroethylene (TCE) and other chlorinated solvents during sampling activities conducted during the period from 1991 through 1997 (CDM, 1997). The maximum TCE concentration in a water sample from well 07_DGMW77 was 107 micrograms per liter measured in March 1997. Additional ground water information is presented in Appendix B.

The nearest agricultural production well, TIC-55, is located approximately 2,000 feet north-northwest of SWMU 110.

SWMU 110 is located above the VOC plume in the shallow aquifer at IRP Site 24 as shown in Figure 3, the conceptual site model. The presence of TCE and other volatile organic compounds is believed to be associated with the sources identified in IRP Site 24 rather than with the residual petroleum hydrocarbons located beneath SWMU 110. The ground water conditions in the vicinity of SWMU 110 will be addressed in the Record of Decision for IRP Site 24 and Operable Unit 1.

## Section 3
## *Conclusions and Recommendations*

The following conclusions are based upon existing information from previous field investigations and the recently completed repairs to the washrack surface:

- The surface of the vehicle washrack - SWMU 110 - at Building 386 has been repaired by filling the cracks in accordance with the recommendations of the RFA Report. The repairs to the cracks will reduce the potential for water from the washrack to contact residual petroleum hydrocarbons located beneath the washrack slab and to cause migration of the residual petroleum hydrocarbons to ground water.

- Residual petroleum hydrocarbons, reported as Total Recoverable Petroleum Hydrocarbons, were identified in boring 110H2 at depths of 2 and 5 feet below ground surface at a maximum concentration of 680 milligrams per kilogram. Benzene was not detected at or above laboratory reporting limits. The residual petroleum hydrocarbon release does not appear to be laterally or vertically extensive, and the residual concentrations are not anticipated to pose a significant threat to ground water which is located approximately 100 feet below ground surface.

- SWMU 110 is located within the boundary of IRP Site 24 - the VOC Source Area. The ground water beneath SWMU 110 has been impacted by chlorinated solvents believed to originate from the primary sources identified within IRP Site 24. Ground water conditions beneath SWMU 110 will be addressed during the development of the Records of Decision for IRP Site 24 - the VOC Source Area and for Operable Unit 1 – Regional Groundwater.

Based upon the absence of evidence of a significant release of petroleum hydrocarbons at SWMU 110 and the completion of the repairs to the cracks in the washrack surface, it is recommended that the Station request *no further action* status for this site from the Regional Water Quality Control Board, Santa Ana Region.

# Section 4
# *References*

Airborne Systems, Incorporated. 1990. Topographic survey of Marine Corps Air Station, El Toro.

Bechtel National, Incorporated. 1997. Draft Final Phase II Remedial Investigation Report, Operable Unit 2A-Site 24, Marine Corps Air Station, El Toro, California. [Navy Contract N68711-92-D-4670, Contract Task Order 73]

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

County of Orange. 1997. Alternative A, El Toro Community Reuse Plan, 1997 Working Map, Land Uses/Conveyances, Gross Acres. [Prepared by P&D Consultants for the County of Orange, March 1997.]

County of Orange. 1998. The Airport and Open Space Plan, Year 2020, Concept C. August.

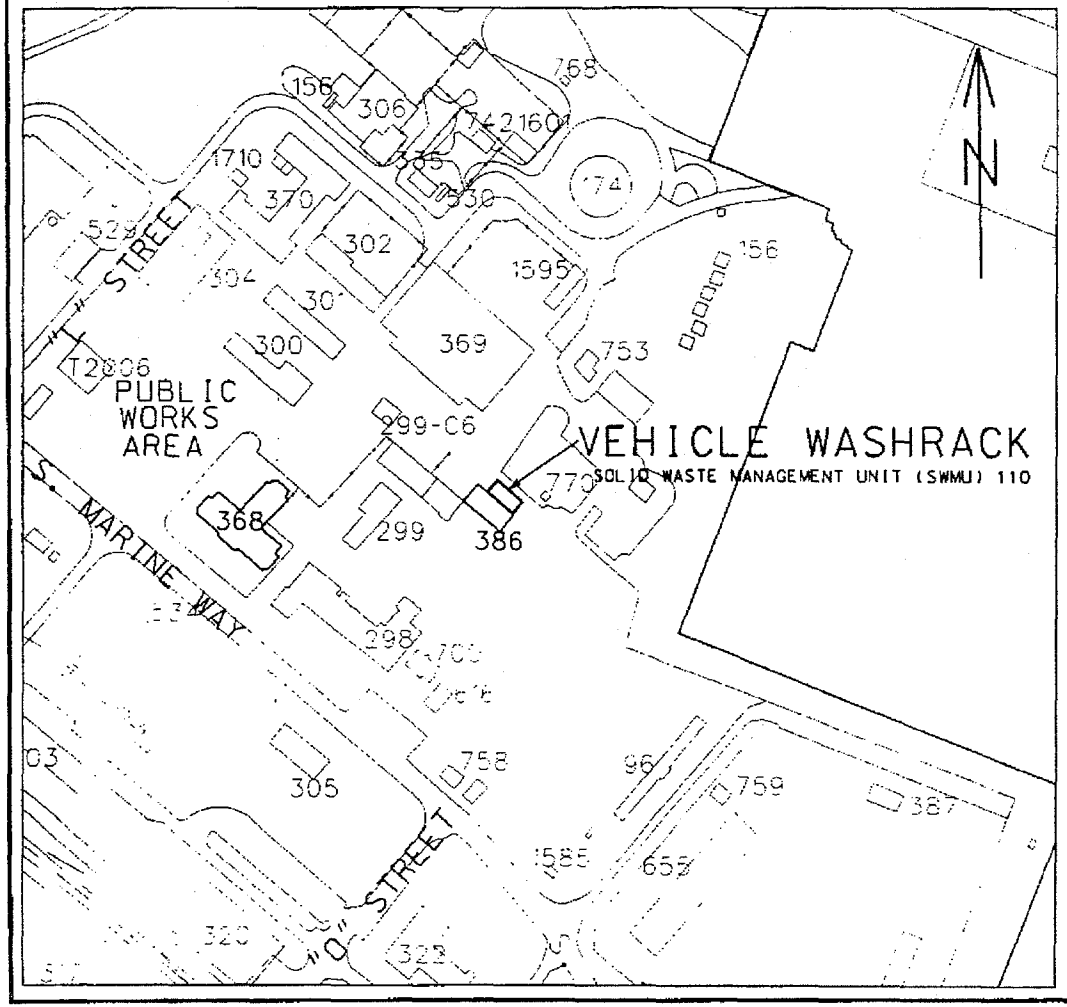
GEOFON, Incorporated. 1999. Technical Information Package for washrack repairs – Building 386 (SWMU 110).

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). 1994. Marine Corps Air Station, El Toro, El Toro, California, Installation Restoration Program, Remedial Investigation/Feasibility Study, Final Soil Gas Survey, Technical Memorandum, Sites 24 and 25. October. [Navy Contract N68711-89-D-9296, Contract Task Order 145]

Jacobs Engineering Group (JEG). 1994. Marine Corps Air Station, El Toro: Installation Restoration Program, Phase I Remedial Investigation Technical Memorandum. [Contract N68711-89-D-9296, Contract Task Order 145]

Marine Corps Air Station, El Toro. 1998. Base Realignment and Closure (BRAC) Cleanup Plan.



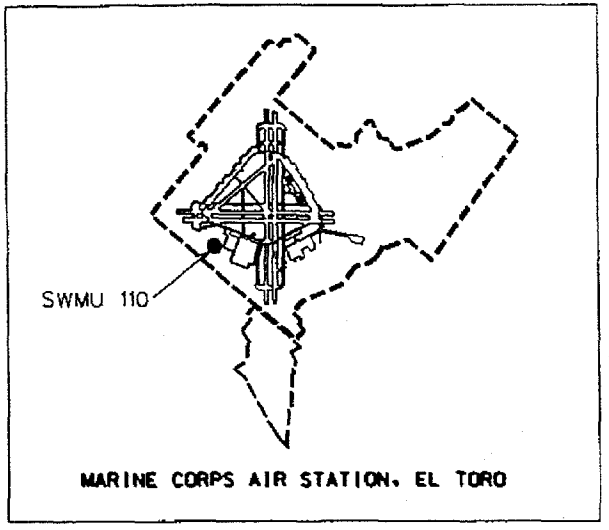
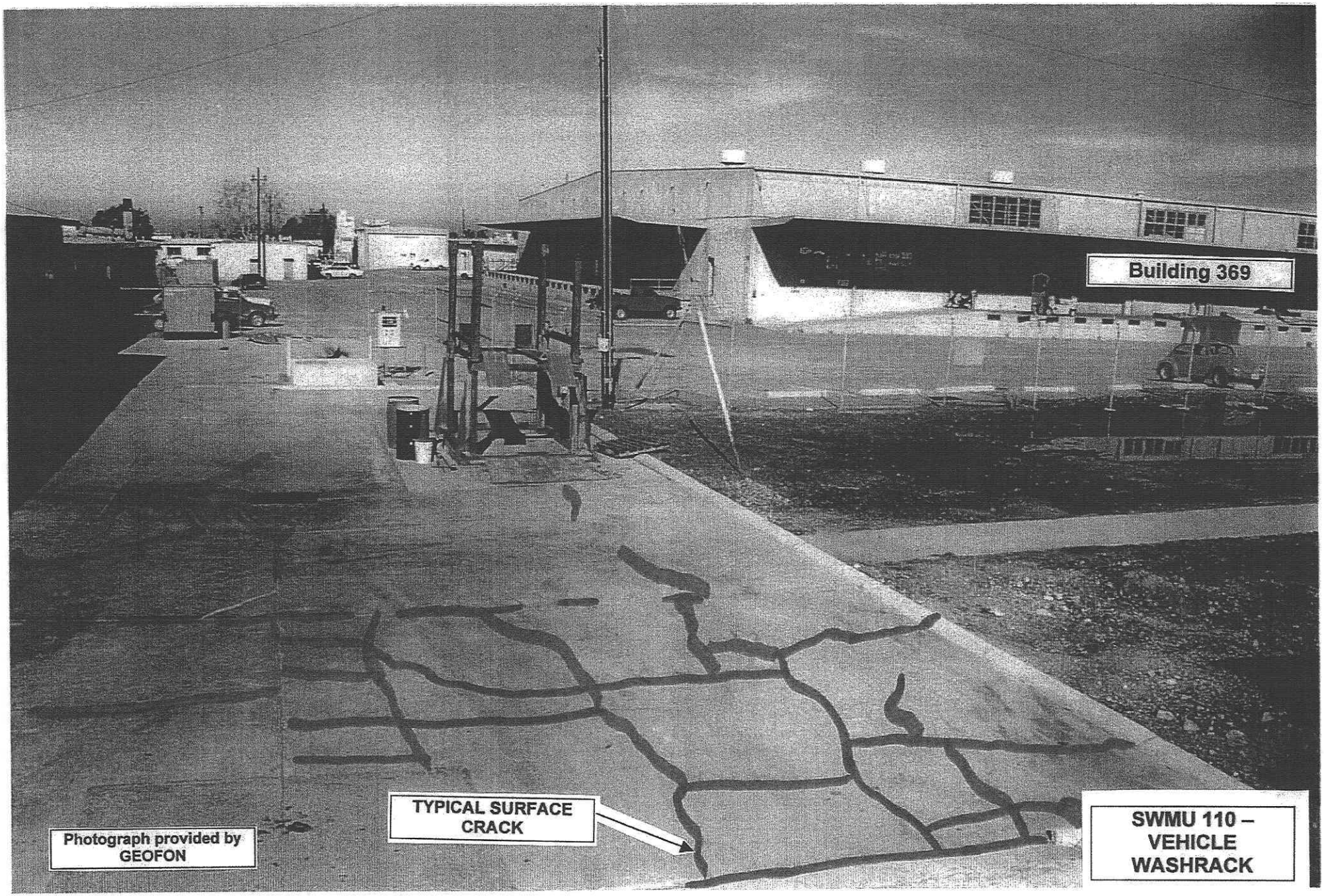




Figure 1.

SOLID WASTE MANAGEMENT UNIT (SWMU)
NUMBER 110 - VEHICLE WASHRACK

**VICINITY MAP**

MARINE CORPS AIR STATION, EL TORO


Building 369
TYPICAL SURFACE CRACK
Photograph provided by GEOFON
SWMU 110 – VEHICLE WASHRACK

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

VOLUME I

16 July 1993

**EXTRACTS**


PREPARED BY:
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THROUGH:
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WITH:
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In association with:
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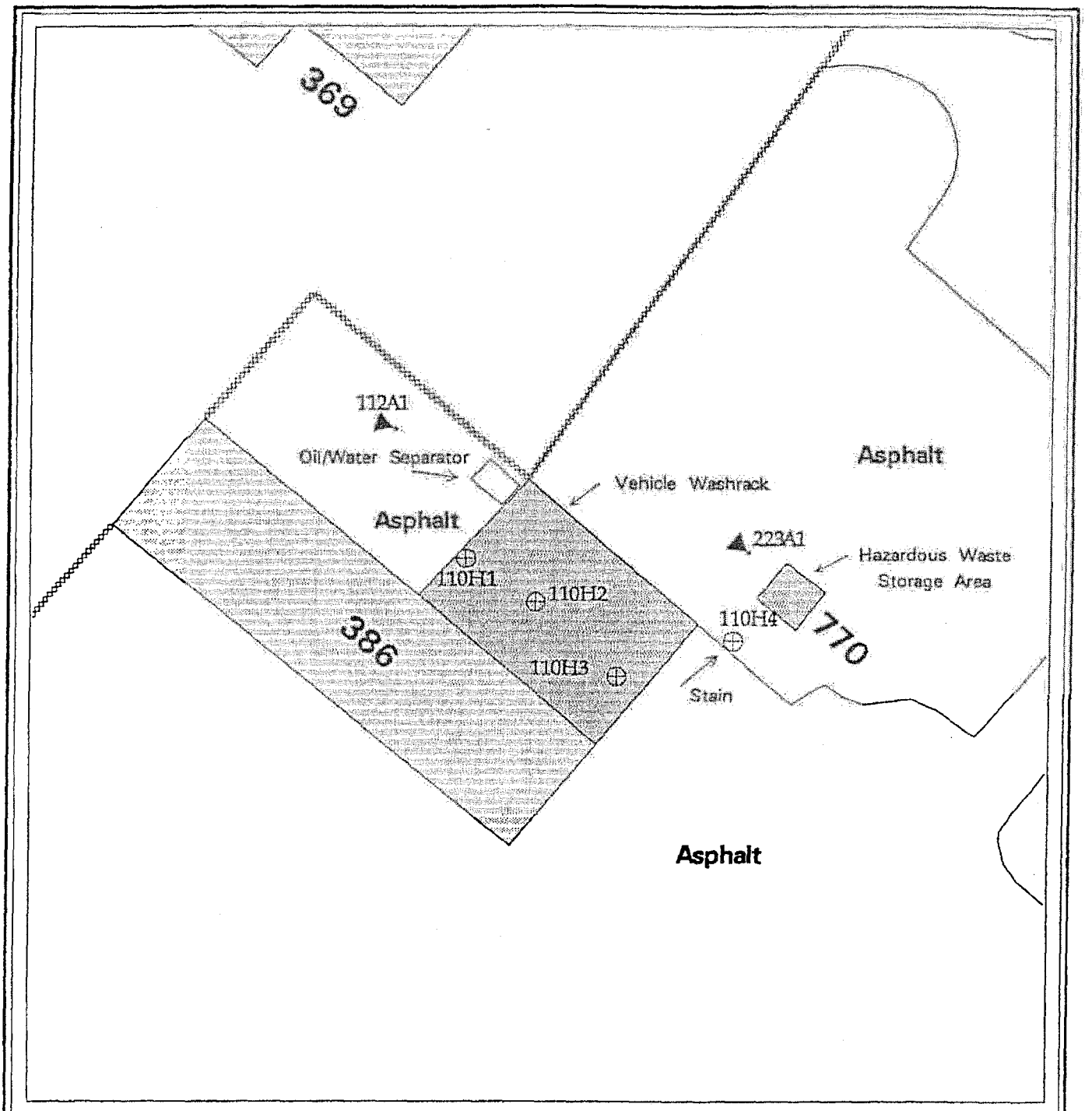
CH2M HILL

**Table 6-15**
**Recommendations for SWMUs/AOCs**
**MCAS El Toro RFA**

| SWMU No. | SWMU/AOC Type | Recommendation (FA/NFA) | Description of Further Action | Rationale for Further Action |
|---|---|---|---|---|
| 84 | Oil/Water Separator | FA | Leak test/inspection of separator | Moderate petroleum hydrocarbon contamination at 10-foot dept |
| 88 | Drum Storage Area | FA | Shallow soil borings | Potential for PCBs in shallow soil |
| 90 | Former Sewage Treatment Plant Sit | NFA | -- | -- |
| 91 | Underground Storage Tank | NFA | -- | -- |
| 92 | Underground Storage Tank | NFA | -- | -- |
| 95 | Engine Test Cell | NFA | -- | -- |
| 98 | Vehicle Wash Rack | NFA | -- | -- |
| 99 | Drum Storage Area | NFA | -- | -- |
| 100 | TCE Degreaser | NFA | -- | -- |
| 101 | Oil/Water Separator | NFA | -- | -- |
| 102 | Underground Storage Tank | NFA | -- | -- |
| 107 | Hazardous Waste Storage Area | NFA | -- | -- |
| → 110 | Vehicle Wash Rack | FA | Repair cracks in pavement | Prevent future migration of petroleum hydrocarbons |
| 112 | Oil/Water Separator | NFA | -- | -- |
| 116 | Drum Storage Area | NFA | -- | -- |
| 120 | Vehicle Wash Rack | NFA | -- | -- |
| 124 | Hazardous Waste Storage Area | NFA | -- | -- |
| 125 | Hazardous Waste Storage Area | NFA | -- | -- |
| 129 | Underground Storage Tank | NFA | -- | -- |
| 130 | Drum Storage Area | NFA | -- | -- |
| 131 | Engine Test Cell | FA | Shallow soil borings | SVOC above PRG value |
| 132 | Oil/Water Separator | NFA | -- | -- |
| 137 | Oil/Water Separator | NFA | -- | -- |
| 138 | Drum Storage Area | NFA | -- | -- |
| 139 | Oil/Water Separator | NFA | -- | -- |
| 144 | Drum Storage Area | NFA | -- | -- |
| 145 | Underground Storage Tank | FA | Additional boring(s) | Petroleum hydrocarbon contamination, unknown extent |
| 147 | Drum Storage Area | NFA | -- | -- |
| 149 | Drum Storage Area | NFA | -- | -- |
| 151 | Oil/Water Separator | FA | Leak test/inspection of separator | Moderate petroleum hydrocarbon contamination at 10-foot dept |




## Figure 35 Sample Location Map

Boring Location and Number:

- ⊕ 123H4 5′ Deep Boring
- ◒ 123B4 25′ Deep Boring
- ▲ 123A4 60′ Long, Angle Boring

Features:

- Building
- Concrete
- Fence
- Railroad

Scale

0 20 40 80 Feet

SWMU/AOC Number and Type:

110 - Vehicle Washrack

112 - Oil/Water Separator

223 - Hazardous Waste Storage Area

MCAS El Toro
RCRA Facility Assessment

## MCAS EL TORO RCRA FACILITY ASSESSMENT – SAMPLING VISIT RESULTS

| SWMU/AOC NUMBER | SWMU/AOC TYPE (FIGURE) | BORING NUMBER | SAMPLE DEPTH (FEET) | ANALYTICAL TEST RESULTS | | | | | | | RECOMMENDATIONS | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | TPH (mg/kg) | TFH (mg/kg) | | VOCs (ug/kg) | SVOCs (ug/kg) | PESTICIDES/PCBs (ug/kg) | METALS (mg/kg) | Action | Rationale |
| | | | | | Gasoline | Diesel | | | | | | |
| 110 | Vehicle Wash Rack (35) | H1 | 2 | ND | NA | NA | Methylene Chloride-4 J *<br>Acetone-4 BJ *<br>Toluene-1 J * | NA | NA | NA | Repair cracks in pavement. | To prevent future migration of petroleum hydrocarbons.<br><br>TPH/TFH < 1000 ppm<br>VOCs < ETM & PRG |
| | | | 5 | ND | NA | NA | Methylene Chloride-3 J *<br>2-Butanone-2 J | NA | NA | NA | | |
| | | H2 | 2 | 680 | NA | NA | Methylene Chloride-4 J *<br>Acetone-4 BJ *<br>Toluene-1 J * | NA | NA | NA | | |
| | | | 2 (Duplicate) | 590 | NA | NA | Methylene Chloride-4 J *<br>Acetone-10 BJ *<br>Toluene-4 J *<br>2-Butanone-3 J<br>Ethylbenzene-5 J<br>Xylene-62<br>PCE-11 J | NA | NA | NA | | |
| | | | 5 | 440 | NA | NA | Methylene Chloride-20 BJ *<br>Acetone-14 BJ *<br>2-Butanone-5 J<br>Xylene-13 J | NA | NA | NA | | |
| | | H3 | 2 | ND | NA | NA | Methylene Chloride-4 J *<br>Acetone-7 BJ *<br>Toluene-1 J * | NA | NA | NA | | |
| | | | 5 | ND | NA | NA | Methylene Chloride-6 J *<br>Toluene-1 J * | NA | NA | NA | | |
| | | H4 | 2 | ND | NA | NA | Methylene Chloride-4 J *<br>Acetone-5 BJ * | NA | NA | NA | | |
| | | | 5 | ND | NA | NA | Methylene Chloride-4 J *<br>Acetone-4 BJ *<br>Toluene-1 J * | NA | NA | NA | | |

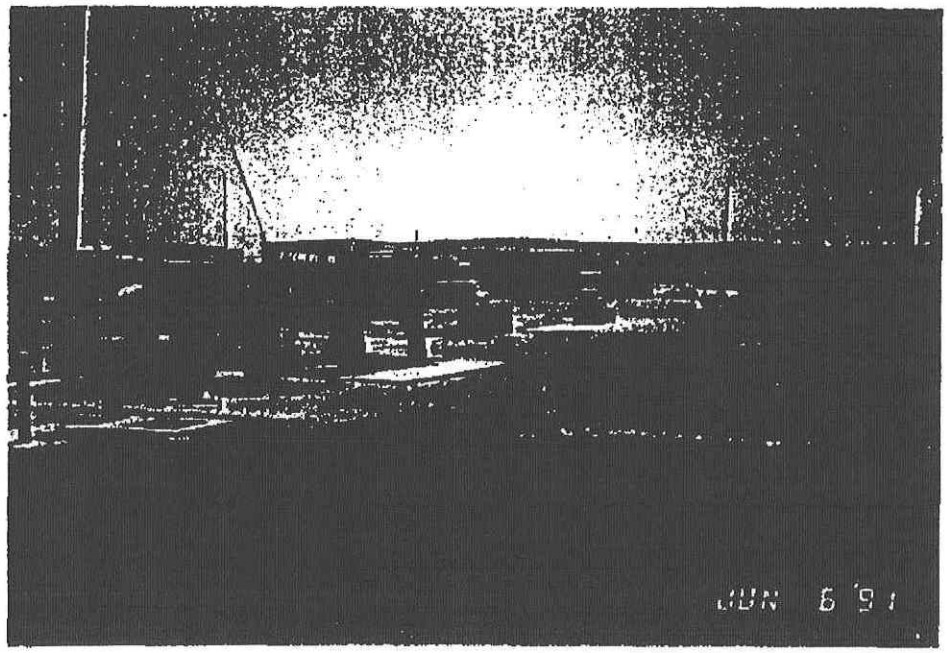
# Evaluation Form
# SWMU/Area of Concern
# Number 110

Name: Vehicle Washrack

Location: East of Building 386

Size: 3,200 sq ft

Date of Site Visit: 23 April 91




Period of Operation

Currently active

# Evaluation Form
# SWMU/Area of Concern
# Number 110

## Unit Characteristics

The washrack is located adjacent to the northeastern side of Building 386. It is surrounded by a small unpaved area to the northeast, a concrete parking area to the southeast, and an asphalt paved area on the northwest side of the wash area.

The washrack consists of a concrete wash surface surrounded by a 4-in. concrete berm. The washrack is graded so that all the water flows toward a drain situated in the center of the wash area. The drain leads to oil/water Separator 386-B. The wash pad is badly stained from vehicles being worked on inside the wash area. There are also several cracks in the wash pad where water could possible leak through to the soil beneath the washrack. A portion of the berm has been removed from the southwestern corner so that vehicles can easily be driven into the wash area. It is unlikely that any water would flow away from this area because it is upgradient from the drain. The southeastern corner of the berm is also badly cracked. There are several stains on the ground outside this corner.

A 500-gallon bowser is stored in the northeastern corner of the washrack. The bowser is used to store waste oil. The bowser is elevated about 3 ft, therefore it is possible for a spill to spread outside the washrack berm. Two drip pans, located next to the bowser, are used to drain oil filters before disposal. There are several dark stains on the washrack's surface next to the bowser and the drip pans.

A hydraulic lift is located next to the bowser. From the stains around the hydraulic lift, it is evident that the hydraulic lift is still used.

## Waste Characteristics

Oily waste
Waste oil
Hydraulic fluid
Antifreeze

## Possible Migration Pathways

Storm drain system
Oil/water separator
Soil

## Evidence of Release

Stained wash pad and stained ground outside the washrack

# Evaluation Form
# SWMU/Area of Concern
# Number 110

## Exposure Potential

On-Station personnel

## Recommendations

Based on the stains and cracks in the concrete, this washrack is recommended for a sampling visit.

## MCAS EL TORO RCRA FACILITY ASSESSMENT -- SAMPLING VISIT RESULTS

| SWMU/AOC NUMBER | SWMU/AOC TYPE (FIGURE) | BORING NUMBER | SAMPLE DEPTH (FEET) | ANALYTICAL TEST RESULTS | | | | | | | RECOMMENDATIONS | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | TPH (mg/kg) | TFH (mg/kg) | | VOCs | SVOCs | PESTICIDES/PCBs | METALS | | |
| | | | | (mg/kg) | Gasoline | Diesel | (ug/kg) | (ug/kg) | (ug/kg) | (mg/kg) | Action | Rationale |
| 112 | Oil/Water Separator (35) | A1 | 10 | ND | NA | NA | Methylene Chloride-3 J *<br>Acetone-24 B *<br>2-Butanone-4 BJ * | NA | NA | NA | NFA | TPH/TFH < 100 ppm<br>VOCs < CRDL |
| | | | 20 | ND | NA | NA | Acetone-27 B *<br>2-Butanone-4 BJ * | NA | NA | NA | | |
| | | | 30 | ND | NA | NA | Acetone-24 B *<br>2-Butanone-3 BJ * | NA | NA | NA | | CRDL - Contract Required Detection Limit |
| | | | 40 | ND | NA | NA | Methylene Chloride-3 J *<br>Acetone-18 B *<br>2-Butanone-3 BJ * | NA | NA | NA | | |
| | | | 40 (Duplicate) | ND | NA | NA | Methylene Chloride-13 B *<br>Acetone-13 B *<br>2-Butanone-3 J | NA | NA | NA | | |
| | | | 50 | ND | NA | NA | Methylene Chloride-24 B *<br>Acetone-34 B *<br>2-Butanone-3 J | NA | NA | NA | | |
| | | | 60 | ND | NA | NA | Methylene Chloride-12 BJ *<br>Acetone-11 BJ *<br>2-Butanone-3 J | NA | NA | NA | | |

EXTRACTS

# MARINE CORPS AIR STATION EL TORO
# EL TORO, CALIFORNIA
## INSTALLATION RESTORATION PROGRAM
## REMEDIAL INVESTIGATION/FEASIBILITY STUDY
## FINAL SOIL GAS SURVEY
## TECHNICAL MEMORANDUM
## SITES 24 AND 25

**Revision 0**


PREPARED BY:
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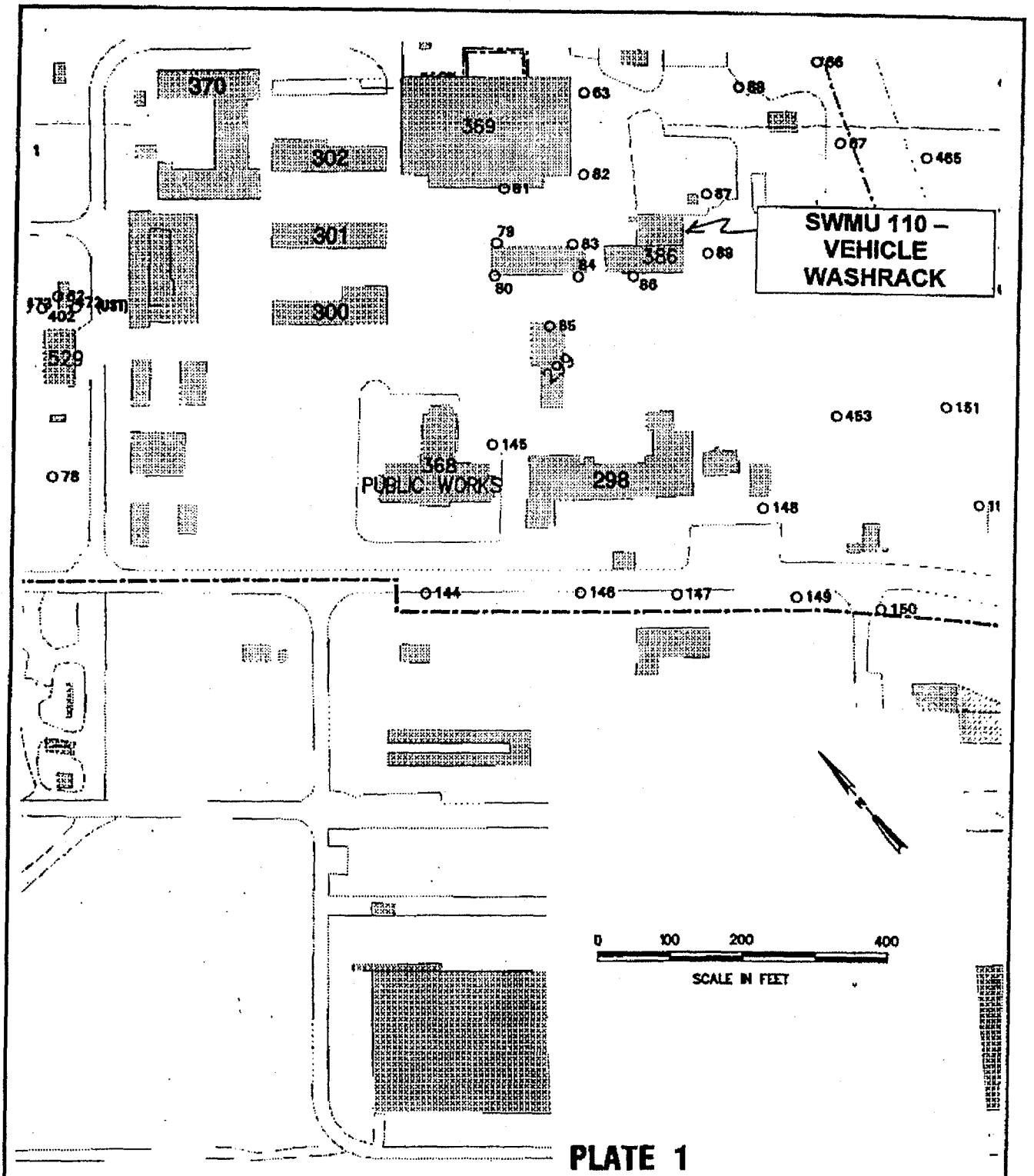


**PLATE 1**

**SAMPLE LOCATION MAP**