

TRANSMITTAL

Date: 14 January 2004

From: Lynn Marie Hornecker *LMAH*

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

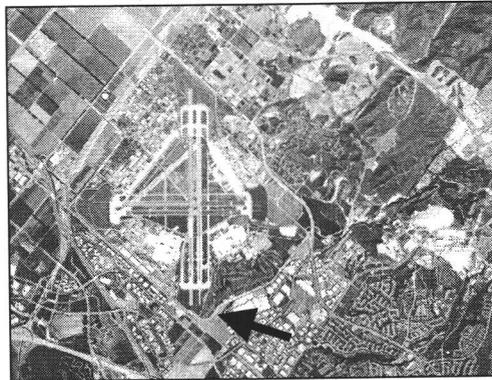
John Broderick
Remedial Project Manager
California Regional Water Quality Control Board
Santa Ana Region
3737 Main Street, Suite 500
Riverside, CA 92501-3348

Subj: Aerial Photograph Anomaly APHO 103 (SAIC 175)
Former Marine Corps Air Station, El Toro

Provided for your review as the attachment is the Information Package for APHO 103 (SAIC 175) at the Former Marine Corps Air Station (MCAS), El Toro. The information presented in the attachment is intended to supplement our response to Comment 5 of the DTSC letter dated 12 May 1999.

APHO 103 was identified as anomaly 175 by Science Applications International Corporation (SAIC) on an aerial photograph taken on 28 August 1968. The anomaly is described as an impoundment or closed-drainage depression near the approach end of Runway 34R, between the railroad tracks and Perimeter Road. The anomaly is approximately 500 feet long by 300 feet wide.

APHO 103 (SAIC 175) is located southeast of Perimeter Road and south of the south end of north-south Runway 34R. The anomaly is also located southeast of Borrego Canyon Wash that was investigated as Solid Waste Management Unit (SWMU) Number 5 during the Resource Conservation and Recovery Act Facility Assessment (RFA), and the RFA included field sampling along Borrego Canyon Wash in the general vicinity of APHO 103 (SAIC 175). The approximate location of APHO 103 (SAIC 175) is shown by the arrow on the following aerial photograph of Former MCAS El Toro.



Approximate Date of Photograph: 1997 (Source of Photograph: County of Orange)

APHO 103 (SAIC 175) is located at a former slough of Borrego Canyon Wash. The slough is shown on historical facility maps. It is possible that branches of the slough were not filled in during the construction of channel improvements to Borrego Canyon Wash, and that one of the branches of the slough caused the appearance of the impoundment or closed-drainage depression on the 1968 photograph. The reach of Borrego Canyon Wash near APHO 103 (SAIC 175) has been a paved channel since the 1950's.

Prior to 24 March 1976, the parcel on which APHO 103 (SAIC 175) is located was owned by The Irvine Company. The Department of the Navy acquired Real Estate Parcel 21 from The Irvine Company in 1976, and the property has been used for agricultural production.

The Environmental Baseline Survey (EBS) update of 2003 included an evaluation of agricultural use areas, and APHO 103 (SAIC 175) and the surrounding property were included in agricultural use parcel AG-7. The EBS included field sampling at three locations within parcel AG-7, and pesticides and herbicides were not detected above the USEPA Region 9 Preliminary Remediation Goals (PRGs) for residential soil.

We believe the information presented in the attachment substantiates our recommendation to designate no further action and environmental condition of property category 3 for APHO 103 (SAIC 175) based upon the results of the EBS sampling at agricultural use parcel AG-7. The review of historical records did not show waste disposal or industrial activities at or near APHO 103. Instead, the record shows that this area has been used for agricultural production for decades.

We propose to document no further action for APHO 103 (SAIC 175) in the next BRAC Business Plan update. A formal transmittal letter may follow.

If we do not receive comments from your office within sixty (60) days of receipt of this transmittal, then we will assume that you concur with our recommendation.

Please do not hesitate to contact me at (619) 532-0783 if you have questions pertaining to this transmittal.

Attachment
Information Package (SWDIV January 2004)

CF:
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Superfund Division, SFD-8-1
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CSO El Toro

Project File (MCAS El Toro)

Information Package

Aerial Photograph Anomaly APHO 103 (SAIC 175)

Former Marine Corps Air Station, El Toro

14 January 2004

Prepared by:
Naval Facilities Engineering Command
Southwest Division
San Diego, California

APHO 103 (SAIC 175)

Information Package Contents

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Summary

APHO 103 (SAIC 175), Former Marine Corps Air Station El Toro Dates of Visual Inspections: December 2003; 8 and 12 January 2004

APHO 103 (SAIC 175) was identified on a photograph taken 28 August 1968. The description from the "Final Report, Aerial Photograph Assessment, MCAS El Toro" (SAIC 1993) follows: "There is an impoundment (IM) between the railroad tracks and Perimeter Road, near the approach end of Runway 34R that is formed by a closed-drainage depression. The dark tones probably result from the soil or vegetation. The site may have been used for disposal, and surface water is likely to accumulate. A review of the site's history is recommended."

DTSC recommended further evaluation of SAIC 175 in their letter dated 12 May 1999.

APHO 103 (SAIC 175) is located south of the south end of Runway 34R, southeast of Borrego Canyon Wash, northeast of the railroad tracks, and southeast of Perimeter Road as shown on Figures 1 and 2. The anomaly is approximately 500 feet long by 300 feet wide.

Historical records were acquired and reviewed, and the following paragraphs include discussions of some of the records. An overview of the information contained in the historical records is presented in the Summary Table, and excerpts from pertinent historical reports and maps are included in the Appendix.

Visual Inspections

Visual inspections were conducted of the APHO 103 (SAIC 175) vicinity in December 2003 and on 8 and 12 January 2004. The anomaly area is relatively level, and the anomaly is located near the Cloud Height Detector Base, an existing structure that is visible from Perimeter Road. The APHO 103 (SAIC 175) vicinity was in use for agricultural production at the time of the visual inspections. No evidence of current or historical industrial or waste disposal activities was observed during the visual inspections. Photographs from the visual inspections of 8 and 12 January 2004 are included in the Appendix.

Real Estate Records

APHO 103 (SAIC 175) is located on real estate Parcel 21 that was acquired by the Department of the Navy from The Irvine Company on 24 March 1976. The historical photographs contained within the "Final Report, Aerial Photograph Assessment, MCAS El Toro" (SAIC 1993) were reviewed, and the photographs show agricultural activities in the APHO 103 vicinity.

Historical Facility Maps

The historical maps dated 1948, 1949, and 1950 show a former slough on Borrego Canyon Wash that coincides with the approximate location of APHO 103 (SAIC 175). Borrego Canyon Wash was improved during the 1950's and a paved reach was constructed near APHO 103 (SAIC 175). It is possible that one of the branches of the slough caused the appearance of an impoundment or closed-drainage depression on the 1968 aerial photograph.

Due to channel improvements and maintenance activities on Borrego Canyon Wash, the slough areas have been filled with soil over the years. The aerial photograph on which APHO 103 was identified was taken in 1968, prior to the construction of the current concrete channel. The area designated as a slough on the 1948 map has been used for agricultural production for decades.

No industrial or waste disposal activities were identified at or near APHO 103 (SAIC 175) on the historical facility maps.

RCRA Facility Assessment

APHO 103 (SAIC 175) is adjacent to the concrete channel of Borrego Canyon Wash south of Runway 34R. Borrego Canyon Wash was identified as Solid Waste Management Unit (SWMU) Number 5 during the Resource Conservation and Recovery Act Facility Assessment (RFA). Soil samples were collected from two 60-foot angle borings (005A1 and 005A2) adjacent to Borrego Canyon Wash in the APHO 103 vicinity. The RFA recommended no further action for SWMU Number 5.

Installation Restoration Program

The nearest Installation Restoration Program (IRP) groundwater monitoring well – 18_BGMW14 - is located approximately 1,800 feet northwest (downgradient) from APHO 103 (SAIC 175). The location of the well is shown on Figure 2. The well is screened from a depth of 75 to 115 feet, and the depth to groundwater was approximately 66 feet below top of casing in 1999. No volatile organic compounds were detected at or above reporting limits during the sampling activities of 1999 (CDM 2000).

Environmental Baseline Survey

The Environmental Baseline Survey (EBS) included an evaluation of agricultural use areas at the facility, and APHO 103 (SAIC 175) is located within agricultural use parcel AG-7. Soil samples were collected from three locations within AG-7 during the recent EBS update of 2003. Pesticides and herbicides were not detected above the USEPA Region 9 Preliminary Remediation Goals (PRGs) for residential soil. No further actions were recommended.

Summary Table – Overview of Historical Information for APHO 103 (SAIC 175)

Identifier	Date of Information	Comments
Drainage Plan (Yards and Docks Drawing Number 224,525)	1942	The drainage plan shows APHO 103 (SAIC 175) at a slough on Borrego Canyon Wash.
Master Plot Plan of January 1948 (Master Plot Plan, Existing and Future Facilities)	1948	The master plot plan shows APHO 103 (SAIC 175) at a slough on Borrego Canyon Wash. The plan shows APHO 103 (SAIC 175) adjacent to the edge of the feature identified as the FLIGHT CONE at the approach to the south end of the north-south runways. The plan also shows that APHO 103 (SAIC 175) was beyond the facility boundary of 1948.
Map of Conditions as of June 30, 1949	1949	The map shows APHO 103 (SAIC 175) at a slough on Borrego Canyon Wash.
Master Plot Plan dated 17 January 1950 (Master Plot Plan, Existing and Future Facilities)	1950	The plan shows APHO 103 (SAIC 175) at a slough on Borrego Canyon Wash.
Location Plan, New Perimeter Roads dated 1958 (Yards and Docks Drawing Number 817790)	1958	The plan shows the new location of the perimeter road and the paved channel for Borrego Canyon Wash in the vicinity of APHO 103.
General Development Map, Area 18 (Yards and Docks Drawing Number 826784)	1962	The 1962 map shows the limits of the standard approach surface for Runway 34R. APHO 103 is within the approach surface.
Aerial Photograph dated 28 February 1963 (Source: USGS)	1963	The aerial photograph shows the vicinity of APHO 103 (SAIC 175) within an open field.
Station Map dated 1973 (Public Works Drawing S-2010)	1973	The map shows the locations of the CLOUD HEIGHT DETECTOR and the CLOUD HEIGHT PROJECTOR near APHO 103.
Transfer of property (Navy real estate parcel 21 that includes APHO 103) from The Irvine Company to the Department of the Navy	1976	Milestone.

**Summary Table – Overview of Historical Information for APHO 103 (SAIC 175)
 (Continued)**

Identifier	Date of Information	Comments
General Development Map (NAVFAC Drawing 6084147)	1978	The map shows cultivation (agricultural production) in the vicinity of APHO 103.
Real Estate Summary Maps (NAVFAC Drawings 6117892 and 6117893; WESTDIV Drawings C-102296 and C-102297 dated 1979)	1979	The real estate documentation shows that Parcel 21, the parcel that includes APHO 103 (SAIC 175), was acquired by grant deed from The Irvine Company on 24 March 1976 (Document NF® 27587).
Area 29, Electrical Distribution Plan (U.S. Marine Corps Air Station, El Toro, Public Works Department, Revised 14 April 1988)	1988	The plan shows APHO 103 (SAIC 175) at the location of a feature designated as a CLOUD HEIGHT DETECTOR BASE that is located several hundred feet east of the runway approach lighting structures.
Final Report, Aerial Photograph Assessment, MCAS El Toro (SAIC 1993)	1993	The SAIC assessment includes several photographs that show the APHO 103 (SAIC 175) vicinity. The photographs show agricultural activities in this area.
Resource Conservation and Recovery Act (RCRA) Facility Assessment (RFA) Report (Jacobs Engineering Group (JEG) July 1993)	1993	<p>The RFA documentation shows the Solid Waste Management Unit (SWMU) Number 5 (Borrego Canyon Wash) is located near APHO 103 (SAIC 175). Soil samples were collected from two sixty-foot angle borings adjacent to the wash in 1992. The borings were located approximately 500 feet north of APHO 103 (SAIC 175). No further action was recommended for SWMU Number 5 in the RFA.</p> <p>Borrego Canyon Wash was further evaluated during the Remedial Investigation of Installation Restoration Program (IRP) Site 25 – the Major Drainages – that included Borrego Canyon Wash, Agua Chinon Wash, Bee Canyon Wash, and Marshburn Channel.</p>

**Summary Table – Overview of Historical Information for APHO 103 (SAIC 175)
(Continued)**

Identifier	Date of Information	Comments
Groundwater Monitoring Data Summary Report	1999	Groundwater Monitoring Well 18_BGMW14 is located northwest of APHO 103. No volatile organic compounds were detected at or above reporting limits during the 1999 sampling activities.
Final Environmental Baseline Survey, Former Marine Corps Air Station, El Toro, California (Earth Tech 2003)	2003	APHO 103 (SAIC 175) is located within an agricultural use parcel AG-7, that was evaluated during the Environmental Baseline Survey (EBS). Soil samples were collected from three locations in parcel AG-7. Pesticides and herbicides were detected at concentrations that did not exceed the USEPA Region 9 Preliminary Remediation Goals (PRGs) for residential soil.
Visual Inspections	December 2003 and January 2004	The APHO 103 (SAIC 175) vicinity was in use for agricultural production.

Findings and Recommendations

Based upon the review of historical documentation and the results of the visual inspections, it appears that the anomaly identified as APHO 103 (SAIC 175) on the 1968 aerial photograph was caused by a branch of the Borrego Canyon Wash slough. The former slough area probably caused the appearance of an impoundment or closed-drainage depression on the 1968 photograph.

The APHO 103 (SAIC 175) vicinity was under agricultural use during the visual inspections of November and December 2003 and January 2004. Historical photographs and records identify agricultural activities at APHO 103 since the 1950's.

Field sampling activities were conducted along Borrego Canyon Wash near APHO 103 (SAIC 175) during the RFA, and no further actions were recommended based upon the sampling results. Additionally, sampling was conducted at parcel AG-7, that includes APHO 103 (SAIC 175), during the Environmental Baseline Survey (EBS) and the results indicated that residual chemical concentrations were less than the USEPA Region 9 PRGs for residential soil.

Historical documents did not show that waste disposal or industrial activities were conducted at or in the vicinity of APHO 103 (SAIC 175).

Based upon the review of the historical information and the results of the visual inspections, no further action is recommended for APHO 103 (SAIC 175) with Environmental Condition of Property (ECP) category 3.

References and/or Sources of Information.

California Department of Toxic Substances Control Letter to Marine Corps Air Station, El Toro dated 12 May 1999.

CDM Federal Programs Corporation. 2000. Groundwater Monitoring Data Summary Report, 1999 Monitoring Round 9, 10, and 11, Marine Corps Air Station, El Toro. [Contract GS10F-0227J, Delivery Order N68711-00-F-0102]

Earth Tech, Inc. 2003. Final Environmental Baseline Survey, Former Marine Corps Air Station, El Toro, California. [Navy Contract N62742-94-D-0048, CTO 104]

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). 1993. Marine Corps Air Station, El Toro: Installation Restoration Program, Phase I Remedial Investigation Technical Memorandum. [Navy Contract N68711-89-D-9296, Contract Task Order 145]

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]

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]

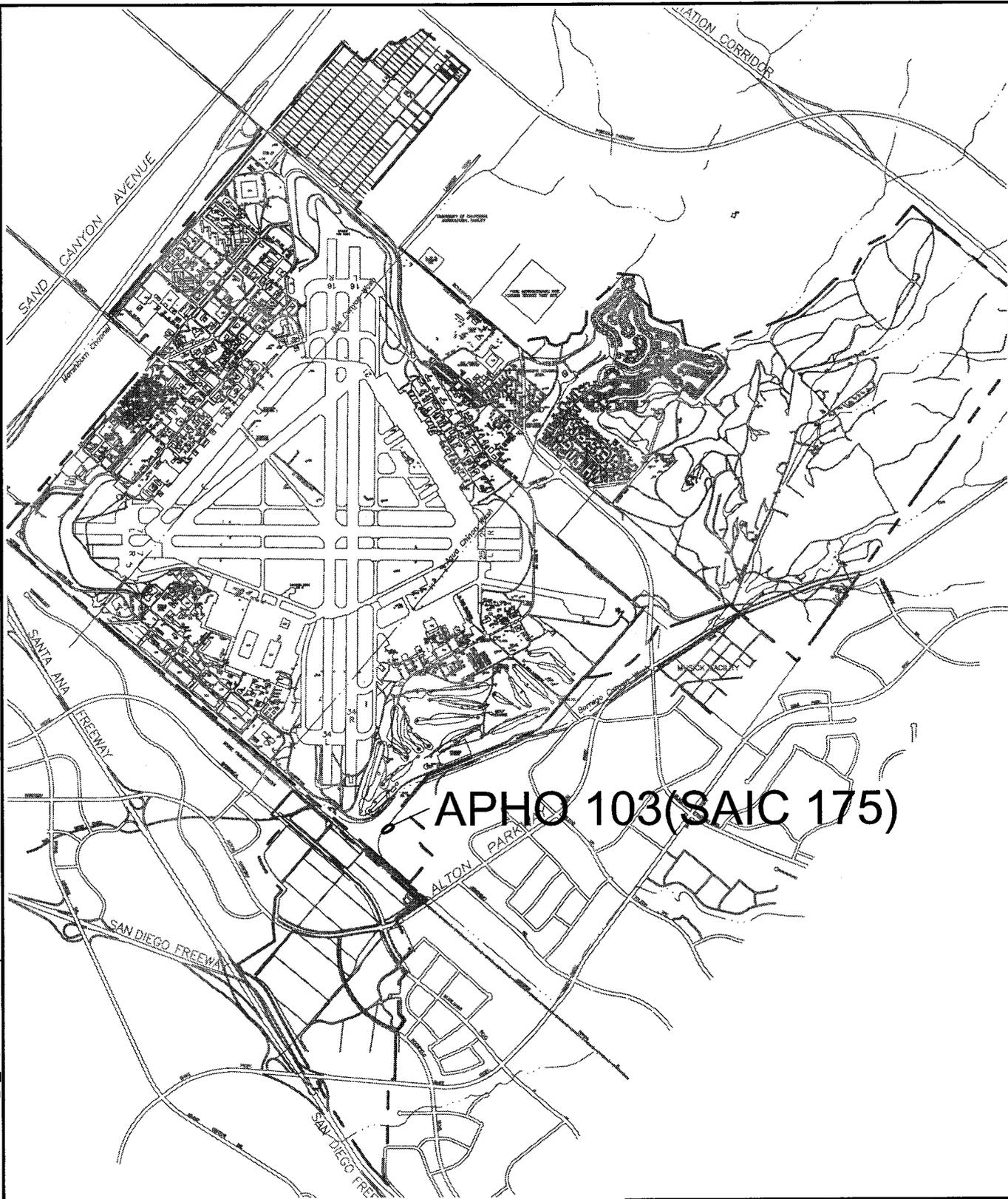
Southwest Division, Naval Facilities Engineering Command. 1999. Technical Memorandum, Aerial Photograph Anomalies, Marine Corps Air Station, El Toro, California. April.

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

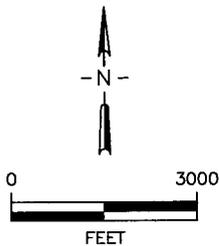
United States Marine Corps Air Station, El Toro. 1997. Draft Final Record of Decision, Operable Units 2A and 3A, No Action Sites, Marine Corps Air Station, El Toro, California. September.

United States Marine Corps Air Station, El Toro. 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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APHO 103(SAIC 175)



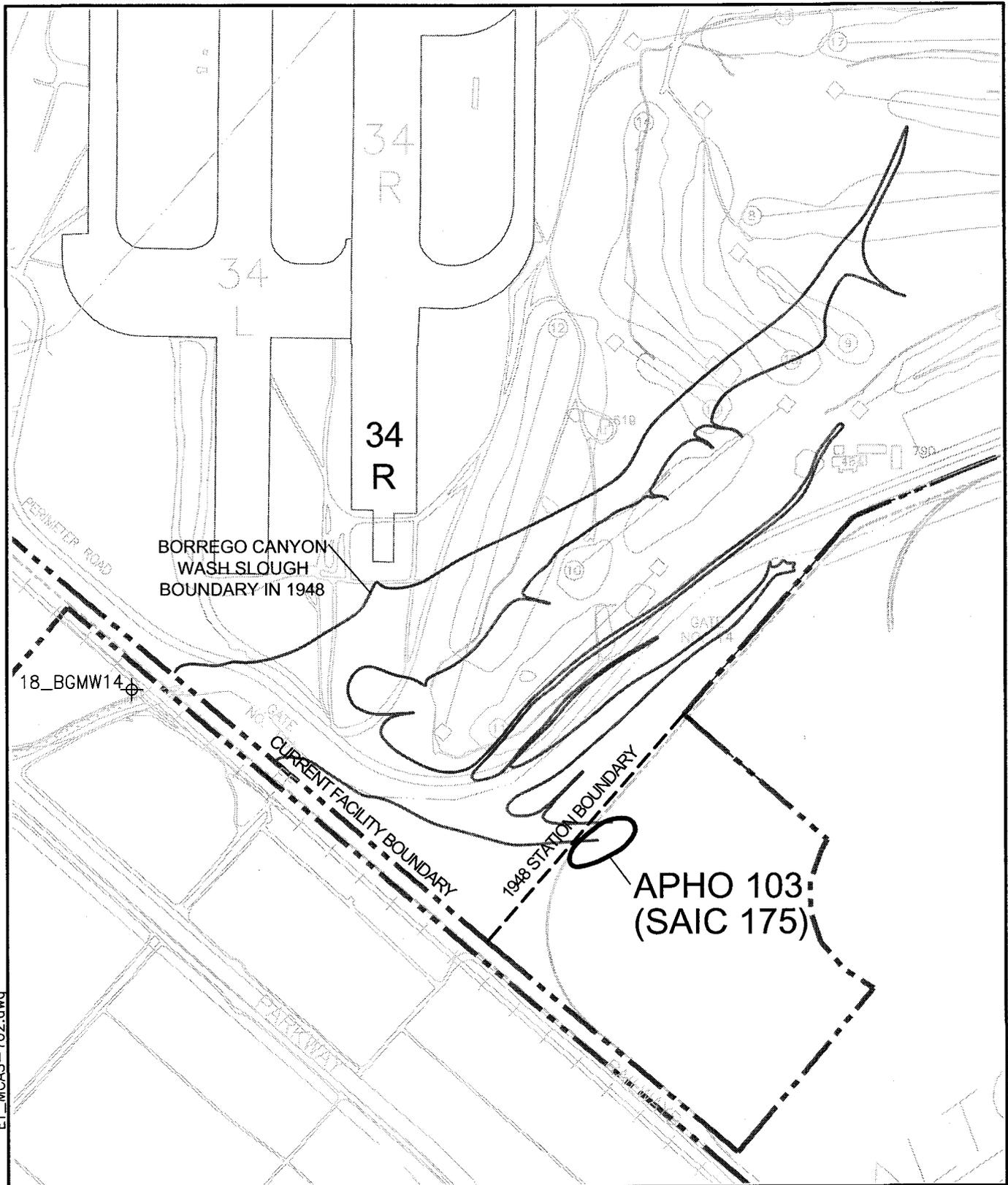
**SOUTHWEST DIVISION
NAVAL FACILITIES ENGINEERING COMMAND**

FORMER MCAS EL TORO, CA

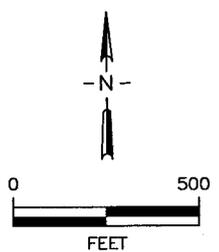
APHO 103 VICINITY

FILE NO.	Figure 1	DATE
EL-MCAS-101		12/22/03

1/3/2004 5:21 PM ET_MCAS-102.dwg



NOTE: SLOUGH BOUNDARY TAKEN FROM "MAP OF MARINE CORPS AIR STATION, EL TORO, CALIF., ELEVENTH NAVAL DISTRICT, SAN DIEGO, CALIF. SHOWING CONDITION ON JUNE 30, 1948".



SOUTHWEST DIVISION NAVAL FACILITIES ENGINEERING COMMAND		
FORMER MCAS EL TORO, CA		
APHO 103		
FILE NO.	Figure 2	DATE
ET_MCAS-102		12/22/03

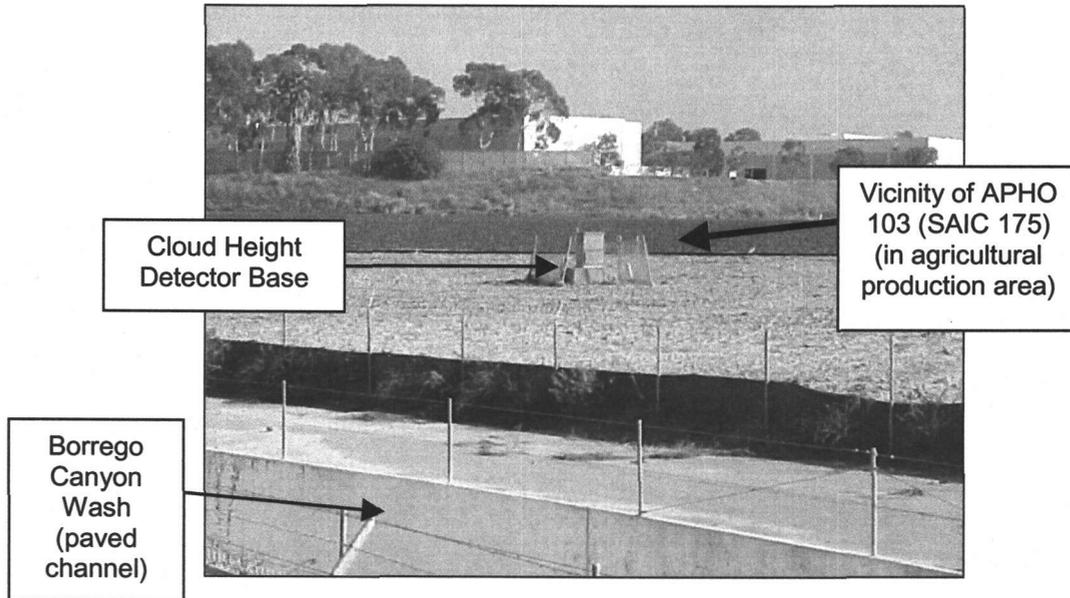
APPENDIX

Photographs

Historical Documentation

Photograph 1. Vicinity of APHO 103 (SAIC 175) Looking South-Southeast
Former MCAS El Toro

Date of Photograph: 8 January 2004



Photograph 2. Vicinity of APHO 103 (SAIC 175)
Former MCAS El Toro

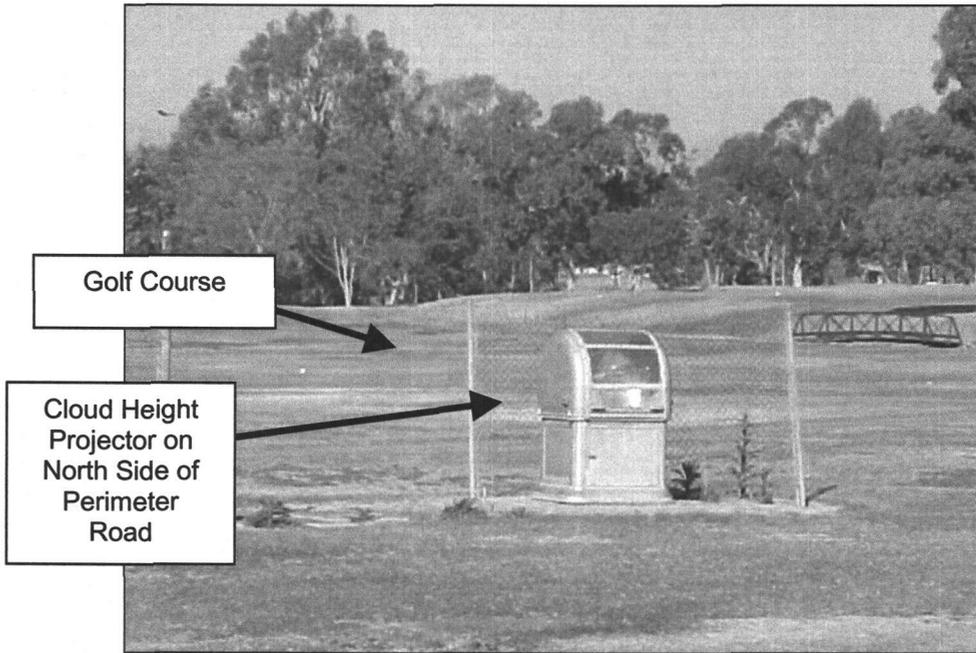
Date of Photograph: 8 January 2004



Photograph 3. Area North of APHO 103 (SAIC 175)

Former MCAS El Toro

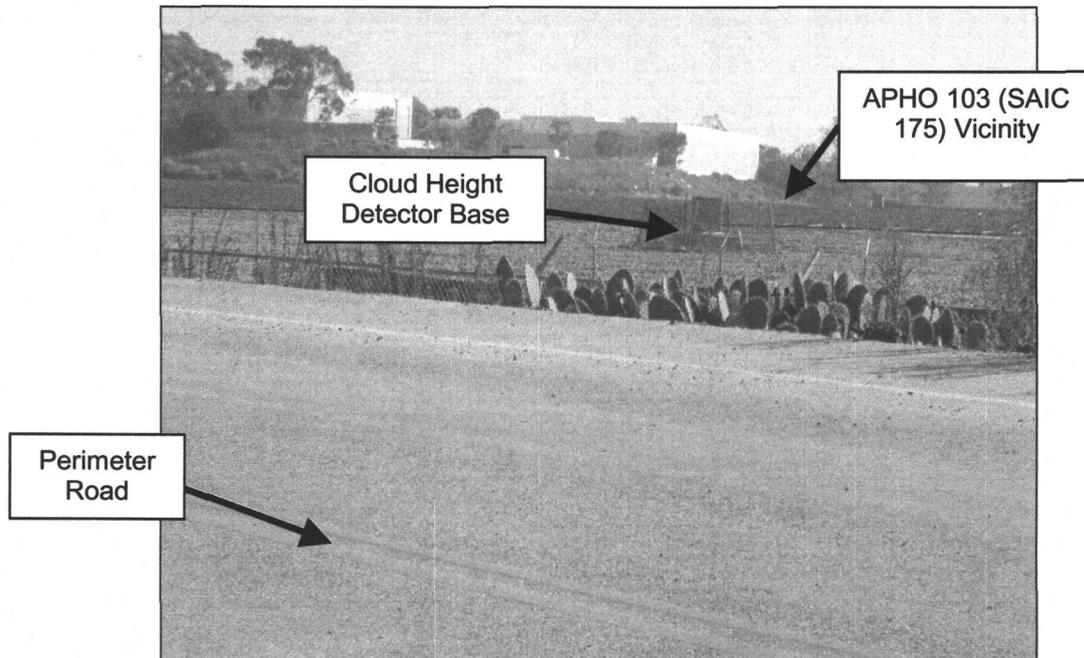
Date of Photograph: 8 January 2004



Photograph 4. Vicinity of APHO 103 (SAIC 175) From Perimeter Road

Former MCAS El Toro

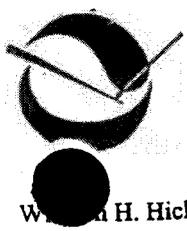
Date of Photograph: 12 January 2004



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

File: etSAIC175APHO103summaryJan2004

Department of Toxic Substances Control Letter dated 12 May 1999



Department of Toxic Substances Control

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



Gray Davis
Governor

William H. Hickox
Secretary for
Environmental
Protection

May 12, 1999

Mr. Joseph Joyce
BRAC Environmental Coordinator
U.S. Marine Corps Air Station - El Toro
AC/S, Environmental (1AU), BRAC Building #899
P. O. Box 95001
Santa Ana, California 92709-5001

Dear Mr. Joyce:

COMMENTS ON TECHNICAL MEMORANDUM, AERIAL PHOTOGRAPH ANOMALIES, MARINE CORPS AIR STATION (MCAS) EI TORO

The Department of Toxic Substances Control (DTSC) has reviewed the above subject document dated April 1999. The Technical Memorandum presents summary data from the evaluation of historical aerial photographs and recommendations for the future management of more than 700 anomaly sites at MCAS El Toro. According to the memorandum, the Department of Navy (DoN) acquired and reviewed both historical Station maps and the results of investigations associated with the Installation Restoration Program (IRP) and environmental compliance program sites. The DoN then confirmed previous recommendations or developed refined recommendations based upon the most recently collected data. The DoN recommended no further action status for all the anomaly sites except five (5) Aerial Photograph Anomaly Areas. The five Anomaly Areas consist of nineteen (19) anomaly sites proposed for further evaluation.

DTSC comments are as follows:

1. *Introduction, page 1:*

The investigation of aerial photograph anomalies was initially conducted by U.S. EPA as part of the Preliminary Assessment/Site Inspection (PA/SI) to identify CERCLA sites at MCAS El Toro. An additional aerial photograph study was conducted by Science Applications International Corporation (SAIC). Since these investigations were conducted as part of the PA/SI, all aerial photograph anomalies should be considered potential CERCLA sites until sufficient investigations have been conducted. It is premature to recommend that sites be recommended for No Further Action or minimal sampling based

solely on a record review. The photograph anomalies may indicate areas where hazardous substances were spilled, released or buried prior to accurate records having been kept at the base.

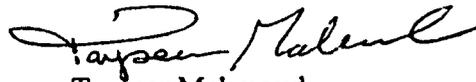
2. *Recommendations Section, page 3:* Anomaly Areas 1, 2, 4, and 5 are proposed for shallow soil sampling for petroleum hydrocarbons and volatile organic compounds; the results of field investigations are then to be submitted to the Regional Water Quality Control Board (RWQCB). This approach is not acceptable to DTSC because there is no evidence that the spills were as a result of petroleum hydrocarbon releases only. These areas should be investigated for the same suite of constituents of concern as all other Temporary Accumulation Areas and the results of investigation should be submitted to the regulatory agencies. Based on the results of analysis, the areas with petroleum contamination only can then be deferred to the RWQCB for assessment.
3. *Aerial Photograph Anomaly Area 3, page 5:* The reference to the location of Area 3 should be the northeast section of the Station not the northwest.
4. *Table 2, Proposed List of Aerial Photograph Anomalies (APHOs):* Most of the APHOs listed in the table are recommended for No Further Action (NFA) status based upon review of historical records. DTSC is of the opinion that a visual site inspection should be conducted for every anomaly database tracking location (i.e., APHO 1 through APHO 68) to check for sign of past spills or releases of hazardous constituents. The APHOs should be visually inspected, photographed, and a written evaluation report submitted to the agencies before a No Further Action (NFA) status can be agreed to by DTSC. The report should be prepared in a format similar to the Resource Conservation and Recovery Act (RCRA) Facility Assessment report conducted for the Temporary Accumulation Areas at MCAS El Toro.
5. *Exhibit 1, Table 2, SAIC Aerial Photograph Anomaly List:* The Technical Memorandum did not provide adequate explanation of the criteria/rationale used by DoN to recommend No Further Action on several anomaly sites that SAIC recommended for Further Investigations (FI). The following anomalies should be visually inspected and the reports submitted to the agencies. If a previous investigation or cleanup was conducted in the same location as an APHO, sufficient information should be provided to demonstrate that the APHO was investigated. Simply noting that investigations or cleanups were conducted adjacent to an APHO is not sufficient. Site inspections and reports should be provided for the following SAIC numbered anomalies: 117, 133, 270, 404, 405, 523, 525, 8, 66, 67, 88, 111, 112, 145, 147, 149, 157, 199, 217, 260, 284, 285, 458, 35, 68, 135, 176, 177, 246, 303, 305, 342, 348, 488, 528, 570, 58, 121, 125, 127, 163, 175, 364, 413, 452, and 219.

Also, please provide page numbers and table header for the pages following page 1.

Mr. Joseph Joyce
May 12, 1999
Page 3

If you have any questions, please contact me at (714) 484-5418.

Sincerely,



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

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Ms. Polin Modanlou
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Ms. Lynn Hornecker
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San Diego, California 92132-5187

Excerpts from the Final Report, Aerial Photograph Assessment, MCAS El Toro
(SAIC 1993)

NOTE: Excerpts pertaining to the aerial photograph anomaly APHO 103 (SAIC 175) are
presented.

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

EXCERPTS

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

2.9 1968 PHOTOGRAPHS

FIGURE: 10
DATE: 28 AUGUST 1968
PHOTOGRAPH: 2400-4-5
NOTE: The photographs do not provide complete coverage of the site, and do not provide complete stereographic coverage.

- c 175. There is an impoundment (IM) between the railroad tracks and Perimeter Road, near the approach end of Runway 34R that is formed by a closed-drainage depression. The dark tones probably result from the soil or vegetation. The site may have been used for disposal, and surface water is likely to accumulate. A review of the site's history is recommended.
- c 176. An area of extraction (EXT) is located between Runways 34L and 34R, about 500 feet south of Runway 25L. The extraction is about 400 feet by 70 feet in dimension. The purpose unknown and additional investigation is recommended.
- c 177. An excavation (EX) near threshold of Runway 34R contains unidentified equipment or materials. An investigation of the purpose of the excavation and the potential for contaminant release is recommended.
- c 178. There are stains (ST) or wet soil (WS) easterly of Building 464, at the Marine Memorial Golf Course, on the southerly side of the practice fairway. The features probably result from irrigation water. No additional investigation is recommended at this time.
- c 179. At the Rodeo Area, liquid (LQ) is flowing westerly from Building 1798, and wet soil (WS) is observed along the northwest and eastern portions of Building 1798. These features probably result from irrigation and wash water. Additional investigation is not recommended at this time.
- c 180. In the vicinity of R Street and West Marine Way, stains (ST) can be observed in the cleared areas east of R Street, and probable wet soil (WS) is noted in the northeast corner of the DRMO Storage Yard (Site 8). The current IR program field investigation should be expanded to include all areas of potential contamination.
- a 181. Probable wet soil (WS) is observed between Buildings 320 and 323 at the Material Management Group area (Site 21), adjacent to S 15th Street, between M Street and O Street. No additional investigation is recommended at this time. The current IR program field investigation of Site 21 appears to be adequate, relative to the features noted here.

Aerial Photographic Interpretation
 MCAS El Toro
 Santa Ana, California

1968

Figure 10

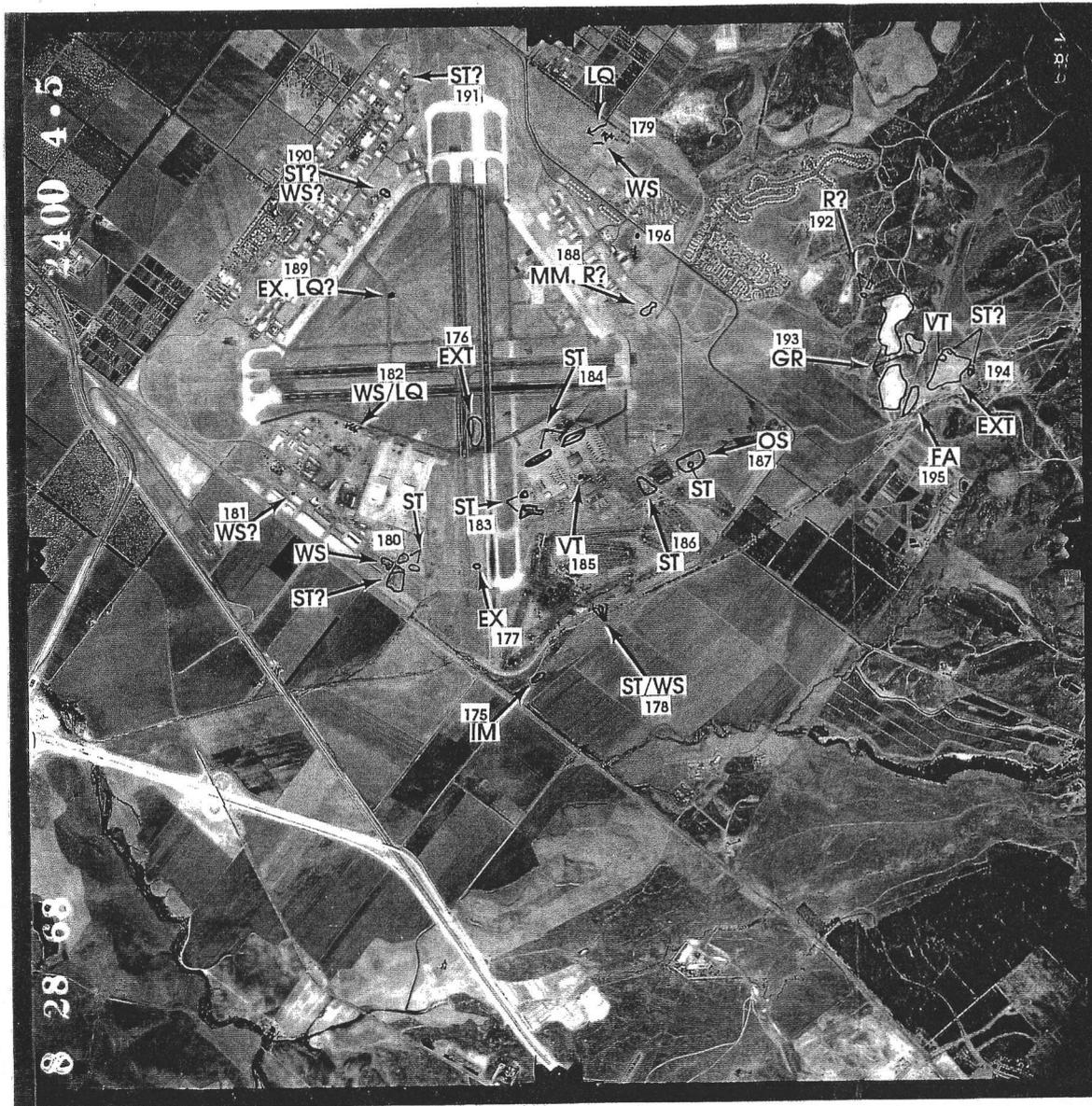
Sheet 1 of 1
 August 28, 1968

Photo Number 2400-4-5

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

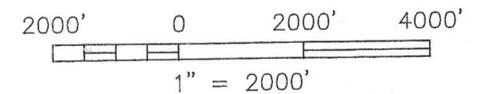
Prepared for:

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 Revetment	TR	Trench
GR	Graded Area	UO	Unidentified Object
GS	Ground Scar	VT	Vertical Tank
HT	Horizontal Tank	WS	Wet Soil



SAIC Science Applications
 International Corporation
 An Employee-Owned Company

VI
185

EX

177

PERIMETER FORD

175

IM

S

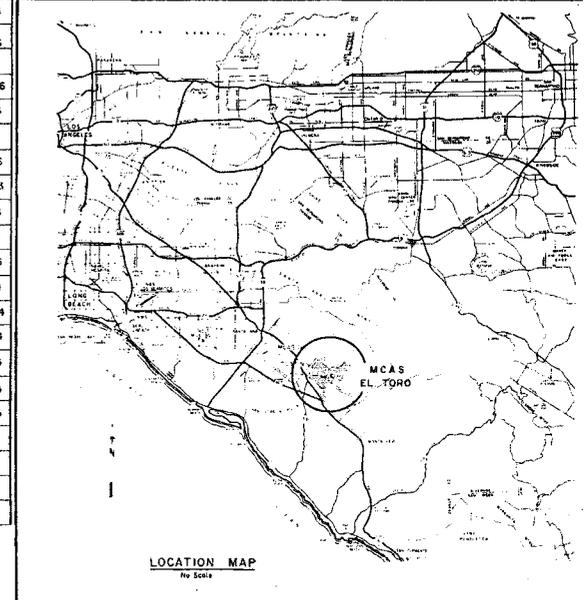
Excerpts from Real Estate Summary Maps
NAVFAC Drawings 6117892 & 6117893

NOTE: Drawing 6117893 is annotated with a solid circle symbol to show the approximate location of APHO 103 (SAIC 175).

ESTATES ACQUIRED BY U.S.A.						
ITEM	ESTATE	ACRES	GRANTOR & RECORD DOCUMENT	DATE ACQUIRED	AFFECTED BY ITEMS	REMARKS
1	FEE Simple	238.885	CIVIL 2504-Y	10/17/1942		
2	Agreement (1/2" Sewer Line)		Conveyed by Atchison, Topoka and Santa Fe R.R. Ndy(R) 38143	1/2/1945		
3	Transfer	21515	CIVIL 4377-B (Housing)	8/20/1945		
4	Permit (18" Water Line)		Conveyed by City of Santa Ana Ndy(R) 45372	7/10/1950		
5	Permit (18" Water Line)		Conveyed by The Irvine Company Ndy(R) 45373	7/10/1950		
6	Permit (18" Water Line)		Conveyed by County of Orange Ndy(R) 45396	5/23/1950		
7	Permit (18" Water Line)		Conveyed by Atchison, Topoka and Santa Fe R.R. Ndy(R) 45462	9/21/1950		
8	Permit (18" Water Line)	0.02	Conveyed by Southern Pacific Railway Ndy(R) 45395	11/7/1950		
9	FEE Simple	160734	Grant Deed from The Irvine Company (Title III Housing) Ndy(R) 65372	1/9/1952		
10	Permit (Sewer Line)		Conveyed by The Irvine Company	6/27/1952		
11	Permit (Sewer Line)		Conveyed by County of Orange	7/1/1952		
12	Permit Agreement	0046	Conveyed by So. Calif. Edison Company Ndy(R) 47302	7/28/1952		
13	Agreement (18" Road)		Conveyed by Atchison, Topoka and Santa Fe R.R. Ndy(R) 48325	4/23/1954		
14	Agreement		Conveyed by So. Calif. Edison Company Ndy(R) 49084	7/12/1955		
15	Agreement (20" Road)		Conveyed by Atchison, Topoka and Santa Fe R.R. Ndy(R) 49069	9/1/1955		
16	FEE Simple	140342	CIVIL 15821-WB	4/15/1960		
17	License (1/2" Sewer Line)		Conveyed by Atchison, Topoka and Santa Fe R.R. NF (R) 7559	1/27/1969		
18	License (Elec. & Tel.)		Conveyed by Atchison, Topoka and Santa Fe R.R. NF (R) 7539	9/16/1969		
19	Land Exchange	8695	Grant Deed from The Irvine Company	4/28/1972		
20	Land Exchange	1.15	Grant Deed from The Irvine Company	9/14/1975		
21	Land Exchange	729	Grant Deed from The Irvine Company NF (R) 27587	3/24/1976		
22	Lease		Conveyed by The Irvine Company NF (R) 27566	7/1/1976		
23	Agreement		Conveyed by Atchison, Topoka and Santa Fe R.R. Ndy(R) 34379	8/9/1943		
24	Easement	2.53	Conveyed by The Irvine Company NF (R) 13910	7/14/1971		
	Lease		The Irvine Company BRP00089	9/30/86		

ENCUMBRANCES & OUTGRANTS						
ITEM	ESTATE	ACRES	GRANTEE & RECORD DOCUMENT	DATE GRANTED	AFFECTS ITEMS	REMARKS
1	Easement (Road)	3.06	Conveyed to County of Orange Ndy(R) 56107	8/12/1959		ON SHEET 3
2	Easement (Water Line)	378	Conveyed to Los Alisos & El Toro Water District. Ndy(R) 22550	9/13/1961		ON SHEET 5
3	Easement (15" Gas Line)	0.11	Conveyed to Southern Counties Gas Co. of California Ndy(R) 62897	6/28/1962		ON SHEET 4
4	Easement	0.19	Conveyed to Pacific Tel. & Telegraph Ndy(R) 64721	6/14/1963		ON SHEETS 4, 5 & 7
5	Easement (20" Water Line)	0.34	Conveyed to County of Orange/Irvine Ranch Water District Ndy(R) 69386	11/23/1964		ON SHEET 5
6	Lease	10.73	Conveyed to San Joaquin School District Ndy(R) 92118	7/23/1965		ON SHEET 7
7	Agreement	0.33	Conveyed to F.A.A. NF (R) 4540	5/28/1975		ON SHEET 4
8	Easement (20" Water Line)	0.79	Conveyed to Irvine Ranch Water District / County of Orange NF (R) 32778	7/9/1976		ON SHEET 5
9	Agreement (Agricultural)	107.768 (Parcel 3)	Conveyed to The Irvine Company N6247482RPO0P08	7/28/1976		ON SHEETS 4 & 5
10	Lease (Agricultural)	204.52	Conveyed to Bordier's Nursery Inc. N6247403RPO2821	2/29/1976		ON SHEET 6
11	Easement (Road, Utility)	68.887 (B-1 North)	Conveyed to The Irvine Company 78 RPO 7025	5/9/1978		ON SHEET 6
		6.200 (Parcel 3)	78 RPO 7026	5/17/1978		ON SHEET 6
		12.882 (Parcel 1)	78 RPO 7027	5/17/1978		ON SHEET 6
12	Lease (Building)	0.91	Conveyed to Marine Federal Credit Union NF (R) 1483	10/1/1967		ON SHEET 3
13	Easement (Water Line)	0.2	Conveyed to Irvine Ranch Water District N5247379RPO3025			ON SHEET 6
14	Easement (Water Tank)	4.13	Conveyed to Irvine Ranch Water District	1983		
15	Easement (Slope)	1.315	T.I.C. & M.W.O.C.C. 79RPO096	8/9/1981		ON SHEET 6
16	Easement Irrigation	0.894	T.I.C. & M.W.O.C.C. 79RPO095	8/9/1981		ON SHEET 4
17	Easement Storm Drain	1.165	T.I.C. & Michigan Corporation 79RPO092	8/7/1981		ON SHEET 4
18	Easement Under Grd. Pow. Ln.	0.09	Southern California Edison Co. 79RPO093	8/7/1981		ON SHEET 4
19	Easement Water Pipeline	0.52	Municipal Water District of Orange County BRP0020	10/27/1980		ON SHEET 5
20	Easement Power Line	8.89	So. California Edison Co. BRP00009	10/16/1981		ON SHEET 5
21	Easement Power Line	0.01	So California Edison Co. BRP00006	6/11/1982		ON SHEET 5
22	Easement Pipe Lines	0.36	San Diego Pipeline Co. Ndy(R) 67877	3/30/1964		Off Site Component

REAL ESTATE ACREAGE SUMMARY							
ESTATE	ACQUISITIONS					ENCUMBRANCES AND OUTGRANTS	
	PURCHASE	CONDEMNATION	EXCHANGE	TRANSFER	TOTAL	LEASES	ENCUMBRANCES
FEE	160734	3722253	817.10	21.515	4721.602		739.96
EASEMENT					2.53	2.53	96239
LEASE							
Permit					0.066	0.066	
TOTAL	160734	3722253	817.10	21.515	2596	4724.198	836.219



INDEX OF SHEETS

- Sheet No. 1 In-grant and Out-grant Sheet
- " " 2 Acquisition Summary Sheet.
- " " 3-6 Boundary Details (M.C.A.S. El Toro)
- " " 7 School Site and Namor Housing (M.C.A.S. El Toro)
- " " 8 Easement Details Sheet
- (So. Calif. Edison Irvine Sub-Station)

LEGEND

- Acquisition Item No. (1) (No)
- Encumbering Item No. (2) (No)
- Marine Corps Reservation Boundary Line
- Easement Line
- Lot Line
- Bross Cop Conc. Mon.

FEDERAL LEGISLATIVE JURISDICTION

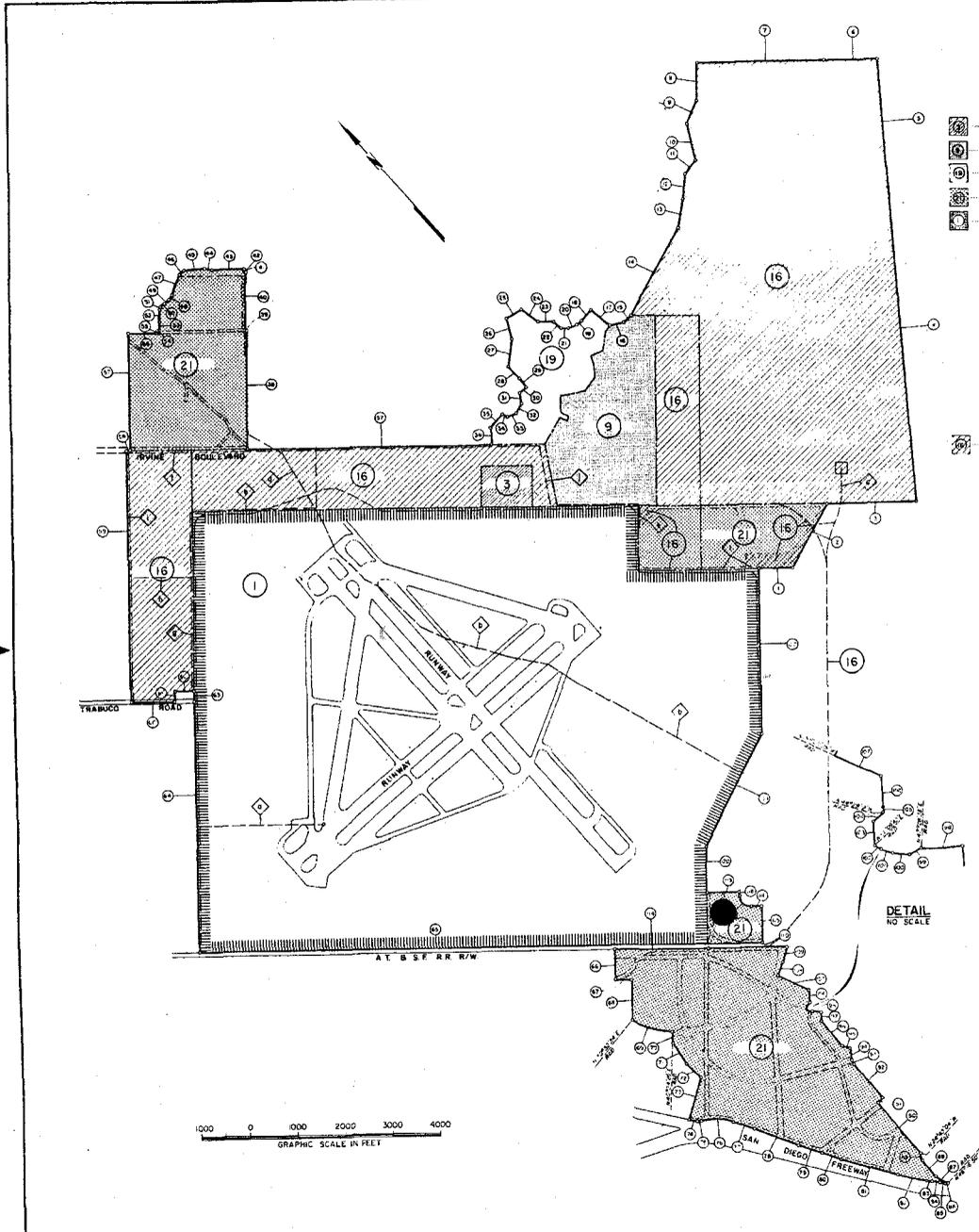
As defined in NAVFAC P-73, chapter 26

- 1 and 2 Chapter 26.2 (c) Partial
- 3 Chapter 26.2 (d) Proprietary
- 15 Chapter 26.2 (b) Concurrent

WESTOY DWS. NO. C-102296	DEPT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND WESTERN DIVISION, SAN BRUNO, CALIF.
DRAWN BY Checked by Checked by Checked by	MARINE CORPS AIR STATION EL TORO, (SANTA ANA,) CALIFORNIA IRVINE-TUSTIN
DATE OF REVISION 2-14-79 2-14-79 2-14-79	REAL ESTATE SUMMARY MAP

ESTATES ACQUIRED BY U.S.A.

ITEM	ESTATE	ACRES	GRANTOR & RECORD DOCUMENT	DATE ACQUIRED	AFFECTED BY ITEMS	REMARKS
①	FEE Simple	2318.883	CIVIL 2504-Y	10/17/1942		
②	Agreement (12" Sewer Line)		Conveyed by Atchison, Topeka and Santa Fe R.R. NOy(R) 38143	1/2/1945		
③	Transfer	21.515	CIVIL 4377-B (Housing)	8/20/1945		
④	Permit (18" Water Line)		Conveyed by City of Santa Ana NOy(R) 45372	7/10/1950		
⑤	Permit (18" Water Line)		Conveyed by The Irvine Company NOy(R) 45373	7/10/1950		
⑥	Permit (18" Water Line)		Conveyed by County of Orange NOy(R) 45396	5/23/1950		
⑦	Permit (18" Water Line)		Conveyed by Atchison, Topeka and Santa Fe R.R. NOy(R) 45462	9/21/1950		
⑧	Permit (18" Water Line)	0.02 900	Conveyed by Southern Pacific Railway NOy(R) 45395	11/7/1950		
⑨	FEE Simple	160.734	Grant Deed from The Irvine Company (Title III Housing) NOy(R) 65372	1/9/1952		
⑩	Permit (Sewer Line)		Conveyed by The Irvine Company	6/27/1952		
⑪	Permit (Sewer Line)		Conveyed by County of Orange	7/1/1952		
⑫	Permit Agreement	0046	Conveyed by So. Calif. Edison Company NOy(R) 47902	7/28/1952		
⑬	Agreement (16" Road)		Conveyed by Atchison, Topeka and Santa Fe R.R. NOy(R) 48325	4/23/1954		
⑭	Agreement		Conveyed by So. Calif. Edison Company NOy(R) 49064	7/12/1955		
⑮	Agreement (20" Road)		Conveyed by Atchison, Topeka and Santa Fe R.R. NOy(R) 49069	9/1/1955		
⑯	FEE Simple	1403.42	CIVIL 15821-WB	4/15/1960		
⑰	License (12" Sewer Line)		Conveyed by Atchison, Topeka and Santa Fe R.R. NF(R) 7358	1/27/1969		
⑱	License (Elec. & Tel.)		Conveyed by Atchison, Topeka and Santa Fe R.R. NF(R) 7539	9/16/1969		
⑲	Land Exchange	86.95	Grant Deed from The Irvine Company	4/28/1972		
⑳	Land Exchange	1.15	Grant Deed from The Irvine Company	9/14/1975		
㉑	Land Exchange	729	Grant Deed from The Irvine Company NF(R) 27587	3/24/1976		
㉒	Lease		Conveyed by The Irvine Company NF(R) 27568	7/1/1976		
㉓	Agreement		Conveyed by Atchison, Topeka and Santa Fe R.R. NOy(R) 34379	8/9/1943		
㉔	Easement	2.53	Conveyed by The Irvine Company NF(R) 13910	7/14/1971		
	Lease		The Irvine Company 83RPO089	9/30/86		

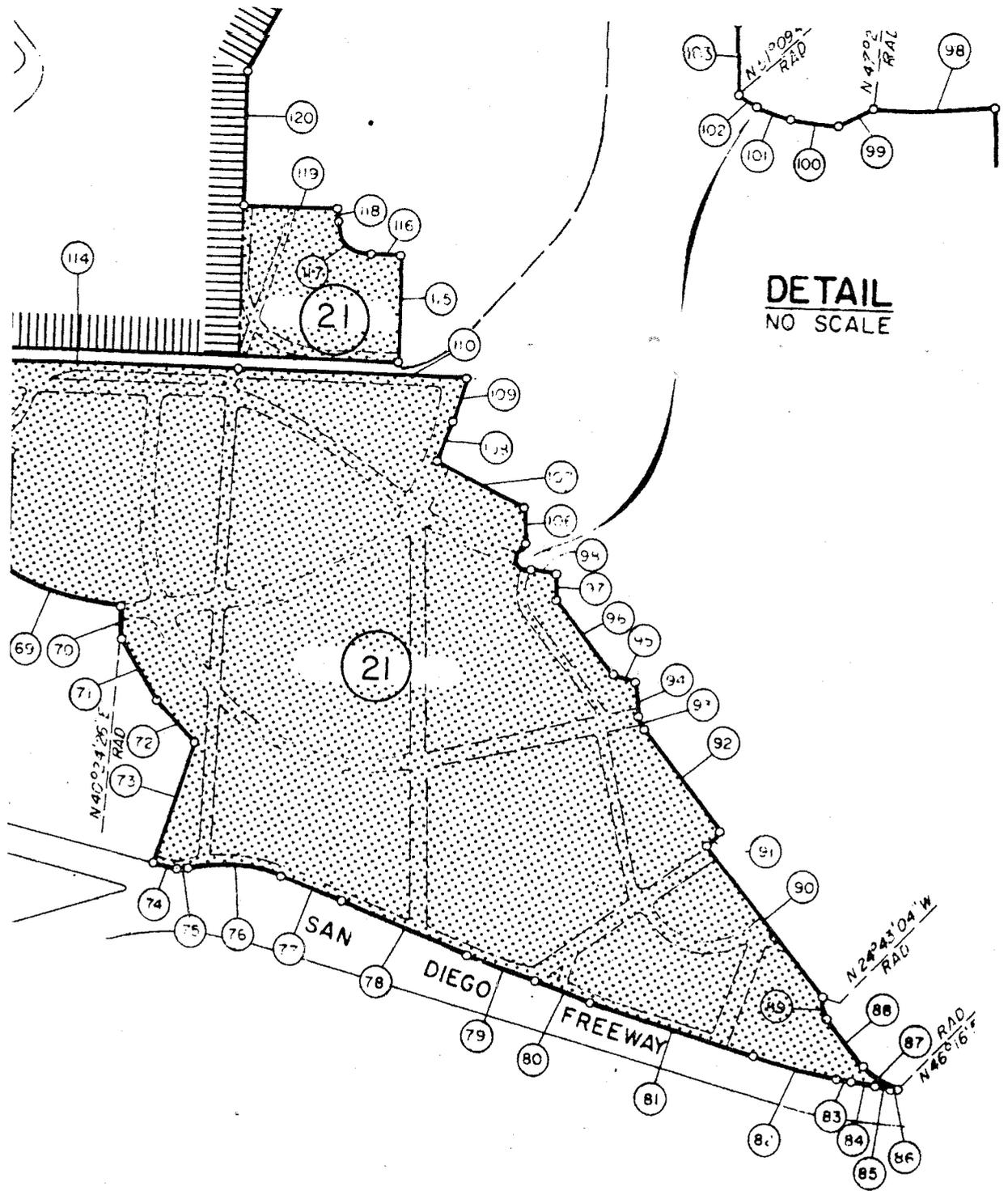


- CIVIL 4377-B (HOUSING) 23,525 AC.
 - LAND EXCHANGE (TITLE VIII HOUSING) 160,734 AC.
 - LAND EXCHANGE 86,950 AC.
 - LAND EXCHANGE 729,000 AC.
 - CIVIL 2405-Y 2313,833 AC.
- DECLARATION OF TAKING FILED 10/12/1942
 SUBJECT TO EASEMENT REVERTED TO THE IRVING COMPANY IN FINAL JUDGMENT AND DECREE IN CONDEMNATION FILED 10/27/1943
- PERPETUAL RIGHT AND EASEMENT TO OPERATION, MAINTENANCE, REPAIR, REPLACEMENT, USE, PRODUCTION AND TRANSPORTATION OF WATER FROM EXISTING WATER WELL AND THE NECESSARY RIGHT OF ACCESS TO SAID WELL.
 - PERPETUAL RIGHT AND EASEMENT TO OPERATION, MAINTENANCE, REPAIR, REPLACEMENT, USE, PRODUCTION AND TRANSPORTATION OF WATER FROM EXISTING CANAL AND THE NECESSARY RIGHT OF ACCESS TO SAID CANAL.
- CIVIL 15521-MB 3403,420 AC.
- DECLARATION OF TAKING FILED 8/13/1953
 SUBJECT TO EASEMENT REVERTED TO PRIOR OWNER IN JUDGMENT AND STIPULATION FILED 9/25/1960
- EASEMENT WELL SITE 1.19 AC.
 - GUNITE CANAL EASEMENT 0.77 AC.
 - 12" TRANSITE WATER PIPELINE EASEMENT 1.83 AC.
 - 14" IRRIGATION PIPELINE EASEMENT 2.36 AC.
 - 14" AND 12" WATER PIPELINE EASEMENT 3.49 AC.
 - 12" AND 2" WATER PIPELINE EASEMENT 0.39 AC.
 - STORM DRAIN EASEMENT 3.03 AC.
 - ROAD PIPELINE AND UTILITY EASEMENT 4.96 AC.
 - WATERLINE EASEMENT ACROSS PARCEL 3A 0.10 AC.
 - WATERLINE EASEMENT ACROSS 0.53 AC.
- GENERAL NOTE
 PERIMETER OF THIS INSTALLATION WAS COMPILED AND DELINEATED FROM ABOVE CIVIL ACTION DOCUMENTS AND RECORD OF SURVEY 12-42 FILED 10/27/1942; 23-22 FILED 12/28/1950; 24-16 FILED 6/13/1951; 24-43 FILED 11/1/1951; 25-14 FILED 2/14/1952; AND MISC. MAP 1-88 FILED 4/13/1959.

PERIMETER DATA			PERIMETER DATA		
COURSE	BEARING	DISTANCE	COURSE	BEARING	DISTANCE
1	S 49°19'33" E	681.780	62	S 49°20'31" E	400.000
2	N 70°34'28" E	150.000	63	S 40°17'22" E	271.800
3	S 89°44'45" E	192.640	64	S 47°36'01" W	3230.980
4	N 30°35'31" E	1652.640	65	S 49°20'31" E	11790.130
5	N 50°50'48" E	2651.840	66	S 40°18'29" W	683.000
6	N 49°22'21" W	1127.900	67	S 49°20'31" E	160.000
7	N 49°22'15" W	2644.450	68	S 40°18'29" W	671.700
8	S 49°46'21" E	600.000	69	S 07°27'50" E	538.510
9	S 53°18'25" W	459.470	70	S 40°24'24" W	210.000
10	S 82°22'48" W	198.970	71	S 05°16'08" W	572.910
11	S 78°53'29" W	319.540	72	S 05°17'01" E	995.800
12	S 40°52'49" W	369.260	73	S 37°40'17" W	931.200
13	S 30°12'25" W	578.850	74	S 32°48'48" E	200.643
14	S 09°16'45" W	2572.140	75	S 61°32'01" E	51.530
15	S 57°42'34" W	104.850	76	S 79°31'17" E	751.277
16	N 60°03'24" W	400.680	77	S 22°44'44" E	405.450
17	N 09°57'28" W	283.370	78	S 69°00'40" E	671.600
18	S 81°17'02" W	200.800	79	S 37°44'47" E	526.090
19	N 10°49'55" W	124.470	80	S 27°07'30" E	502.470
20	N 60°30'45" W	203.080	81	S 12°30'22" E	1247.600
21	N 08°18'36" W	1040.900	82	S 77°29'14" E	635.080
22	N 08°22'10" W	716.340	83	S 49°20'31" E	4860.000
23	N 49°46'24" W	325.600	84	S 47°36'01" E	193.260
24	N 11°48'03" W	477.810	85	S 43°40'07" E	680.400
25	N 04°51'49" W	3160.000	86	S 43°43'40" E	5.980
26	S 27°40'09" W	417.780	87	S 47°22'43" E	575.510
27	S 49°46'25" W	3067.350	88	N 00°22'37" E	450.280
28	S 07°50'50" W	344.480	89	S 47°22'37" E	137.904
29	S 30°00'00" W	228.230	90	N 50°18'35" E	464.589
30	S 87°53'05" W	220.140	91	S 59°20'42" E	150.370
31	S 26°01'00" W	108.940	92	N 00°38'50" E	1246.810
32	S 09°16'45" W	255.200	93	N 33°11'22" E	95.020
33	N 72°51'03" W	156.900	94	N 38°11'01" E	218.250
34	N 24°30'16" W	181.100	95	N 47°30'05" W	185.840
35	S 83°17'24" W	367.420	96	N 00°38'51" E	712.410
36	S 40°40'23" W	397.530	97	S 14°12'20" E	216.540
37	N 49°20'50" W	4816.890	98	S 01°13'18" E	193.350
38	N 40°58'37" E	2810.900	99	N 80°23'22" W	24.230
39	N 49°21'40" W	30.000	100	N 40°47'01" W	60.000
40	N 40°18'37" E	1883.370	101	N 52°40'08" E	34.230
41	N 49°21'25" W	23.000	102	S 01°21'22" E	7.540
42	N 40°18'37" E	53.760	103	N 53°39'42" E	100.000
43	N 49°30'23" W	890.950	104	S 84°39'47" E	38.560
44	N 40°59'03" W	181.300	105	S 21°56'00" E	39.420
45	N 33°35'03" W	518.800	106	N 42°34'48" E	249.600
46	N 86°28'15" W	95.000	107	N 40°18'29" W	74.550
47	S 50°44'00" W	325.700	108	S 01°28'35" E	308.818
48	S 80°06'17" W	127.200	109	N 50°30'00" E	361.090
49	N 71°33'33" W	184.500	110	N 49°20'17" W	1737.720
50	S 78°06'37" W	91.300	111	S 40°18'29" W	286.440
51	S 47°20'22" W	48.200	112	S 40°18'29" W	286.440
52	S 40°18'29" W	326.200	113	S 40°18'29" W	286.440
53	S 30°18'17" W	100.000	114	N 40°18'29" W	2023.000
54	S 89°45'37" W	48.200	115	N 40°18'29" W	780.000
55	S 40°18'29" W	41.810	116	N 40°18'29" W	283.360
56	N 49°41'48" W	627.280	117	S 07°27'50" E	538.510
57	S 40°18'29" W	1274.130	118	N 40°18'29" W	100.000
58	N 49°22'15" W	60.460	119	N 40°18'29" W	723.040
59	S 40°18'29" W	5180.840	120	N 40°18'29" W	951.630
60	S 49°20'31" E	913.000	121	N 67°53'49" E	2643.370
61	N 47°37'55" E	217.900	122	N 40°18'29" W	548.763



NO.	AMENDMENT, REVISION OR CORRECTION	DATE	APPROVED
WESTON DWG. NO.	C-102297		
DRAWN BY	W. J. [Signature]	DEPT. OF THE NAVY	NAVAL FACILITIES ENGINEERING COMMAND
CHECKED BY	[Signature]	WESTERN DIVISION, SAN BRUNO, CALIF.	
REVISED BY	[Signature]	MARINE CORPS AIR STATION	
DATE	10/13/1951	EL TORO, (SANTA ANA), CALIFORNIA	
REAL ESTATE SUMMARY MAP			
SCALE	AS SHOWN	DATE	NOV 1951
UIC-M 60050	[Signature]	NO. 8	6117893
DIRECTOR, REAL ESTATE DIVISION FOR COMMANDER, NAVAL FACILITIES ENGINEERING COMMAND			



DETAIL
NO SCALE

N 42° 09' 25" E
RAD

N 22° 43' 04" W
RAD

N 46° 16' 12" E
RAD

21

21

SAN DIEGO FREEWAY

114

120

119

118

116

117

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Excerpts from Resource Conservation and Recovery Act Facility Assessment (RFA) Report (JEG 1993)

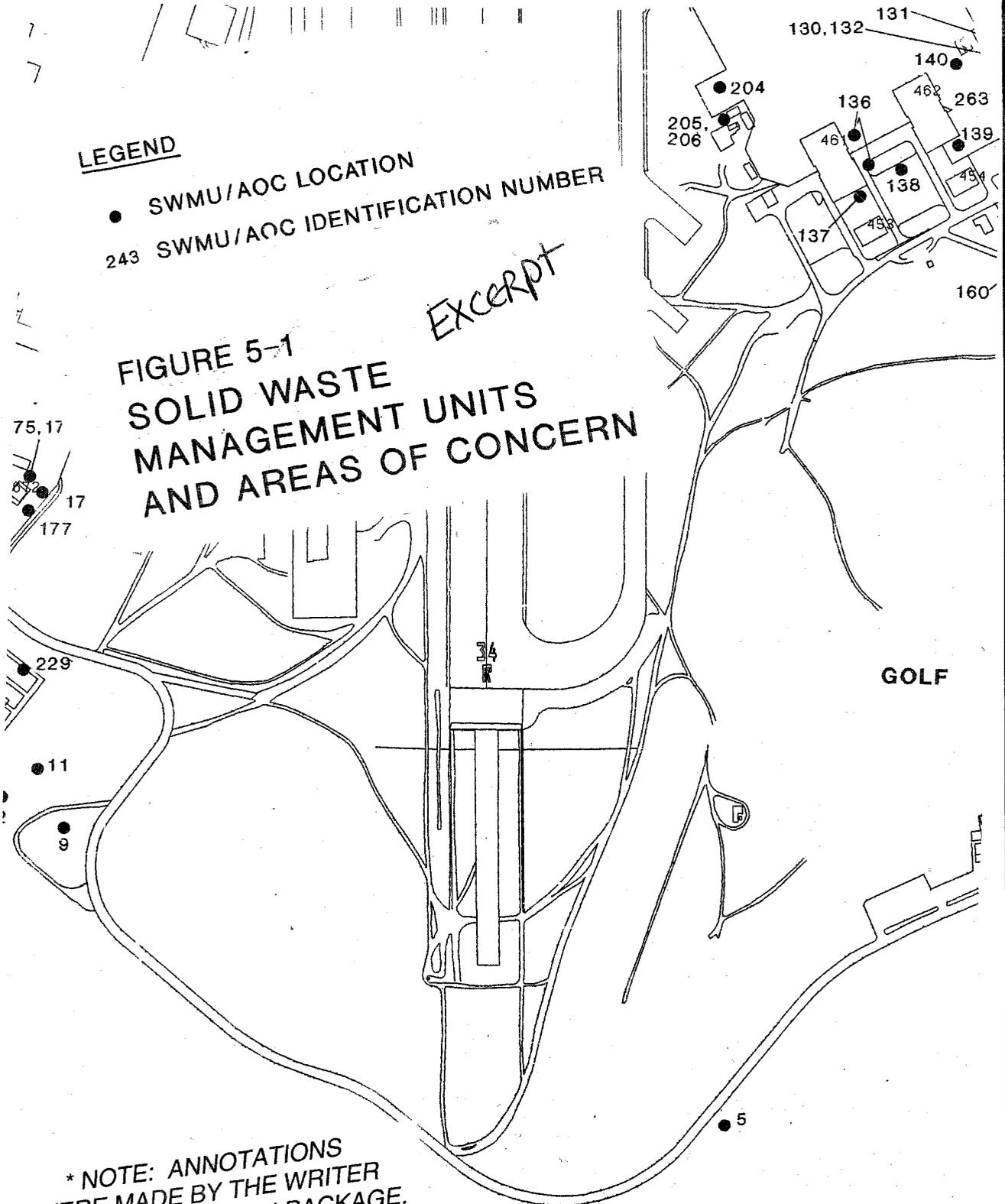
NOTES: (1) The excerpt from the RFA map (Figure 5-1) is annotated with an open circle symbol to show the approximate location of APHO 103 (SAIC 175). (2) The RFA visual inspection record and sampling visit information are presented.

LEGEND

- SWMU/AOC LOCATION
- 243 SWMU/AOC IDENTIFICATION NUMBER

FIGURE 5-1
SOLID WASTE
MANAGEMENT UNITS
AND AREAS OF CONCERN

EXCERPT



* NOTE: ANNOTATIONS
WERE MADE BY THE WRITER
OF THE INFORMATION PACKAGE.
THE LOCATION OF APHO 103
IS ESTIMATED.

○ ← APHO 103
VICINITY *

**Evaluation Form
SWMU/Area of Concern
Number 5**

Name: Borrego Canyon Wash

Location: Adjacent to the SE boundary fence

Size: Approximately 30 ft wide by 10 ft deep

Date of Site Visit: 15 May 1991



Period of Operation

Currently active

**Evaluation Form
SWMU/Area of Concern
Number 5**

Unit Characteristics

Borrogo Canyon Wash is located primarily off-Station, adjacent to the Station's southeastern boundary. It enters the Station as a concrete-lined channel near Gate 14 and becomes unlined west of Gate 14A. The wash exits the Station and combines with the Agua Chinon Wash west of Station property. Although current operations at the Station do not provide runoff into this wash, prior operations at the far eastern part of the Station at the Magazine Road Landfill (RI/FS Site 2) may have impacted the past runoff to this wash.

Waste Characteristics

Storm water runoff

Migration Pathways

Soil and surface water

Evidence of Release

Possible release may occur through the cracks in the western section of the wash

Exposure Potential

On-Station personnel and general public located downstream of the Station

Recommendations

A sampling visit is recommended for the Borrogo Canyon Wash to evaluate the unlined section for potential release

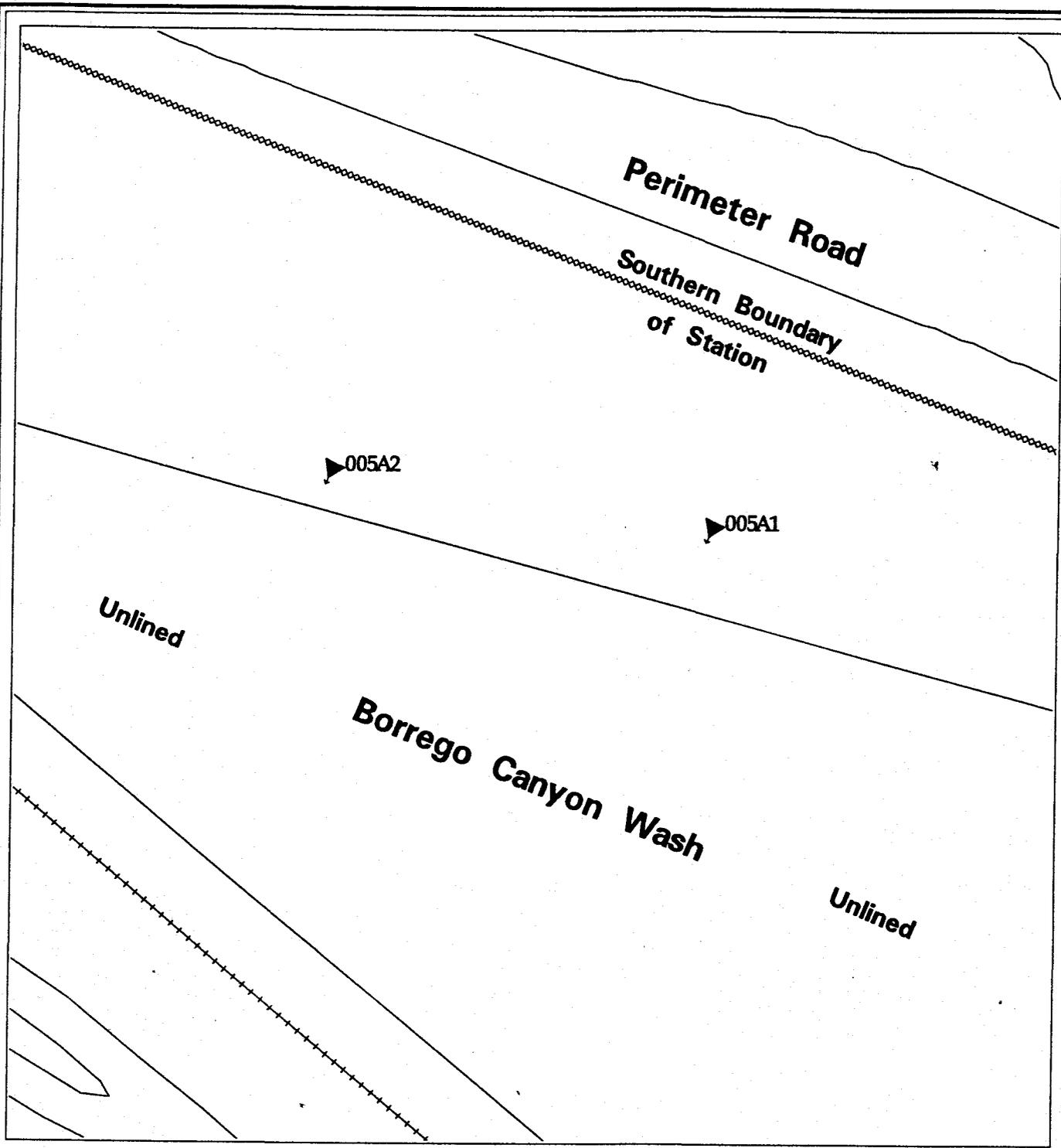


Figure 3 Sample Location Map

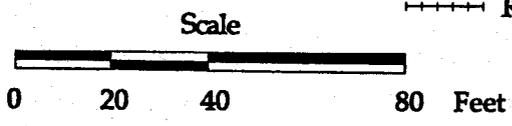
SWMU/AOC Number and Type:
5 - Borrego Canyon Wash

Boring Location and Number:

Features:

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

- Building
- Concrete
- Fence
- Railroad



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						
5	Borrego Canyon Wash (3)	A1	10	105	ND	35 Z	Methylene Chloride-6 BJ * Toluene-4 J	ND	ND	Silver-ND	NFA TPH/TFH < 1000 ppm VOCs < CRDL SVOCs < CRDL Pest/PCB < CRDL Metals < ETM & PRG CRDL - Contract Required Detection Limit	
			20	ND	ND	ND	Methylene Chloride-7 BJ * Acetone-6 BJ *	Diethylphthalate-56 J Di-n-butylphthalate-29 J Pyrene-22 J	ND	Silver-ND		
			30	ND	ND	ND	Methylene Chloride-7 BJ * Toluene-3 J	ND	ND	Silver-ND		
			40	45.6	ND	ND	Methylene Chloride-6 BJ * Acetone-4 BJ *	Diethylphthalate-22 J Di-n-butylphthalate-21 J	ND	Silver-ND		
			50	ND	ND	ND	Methylene Chloride-6 BJ *	Diethylphthalate-23 J Di-n-butylphthalate-30 J Bis(2-Ethylhexyl)phthalate-68 BJ *	ND	Silver-ND		
			60	66	ND	ND	Methylene Chloride-7 BJ * Toluene-2 J	Bis(2-Ethylhexyl)phthalate-120 BJ *	ND	Silver-ND		
		A2	10	ND	ND	ND	Methylene Chloride-5 BJ *	Di-n-butylphthalate-22 J	ND	Silver-ND		
			20	ND	ND	ND	Methylene Chloride-12 B *	Diethylphthalate-21 J Di-n-butylphthalate-23 J	ND	Silver-ND		
			30	ND	ND	ND	Methylene Chloride-8 BJ *	Bis(2-Ethylhexyl)phthalate-210 BJ *	ND	Silver-ND		
			40	ND	ND	ND	Methylene Chloride-6 BJ * Acetone-8 BJ *	Diethylphthalate-19 BJ * Bis(2-Ethylhexyl)phthalate-95 BJ *	ND	Silver-0.67 B		
			50	ND	ND	ND	Methylene Chloride-12 B *	Bis(2-Ethylhexyl)phthalate-22 BJ	ND	Silver-ND		
			50 (Duplicate)	ND	ND	ND	Methylene Chloride-8 BJ *	Di-n-butylphthalate-27 BJ * Bis(2-Ethylhexyl)phthalate-32 BJ *	ND	Silver-ND		
			60	ND	ND	ND	Methylene Chloride-7 BJ *	Diethylphthalate-25 BJ * Bis(2-Ethylhexyl)phthalate-31 BJ *	ND	Silver-ND		

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

SWMU No.	SWMU Description	Recommendation (FA/NFA)	Description of Further Action	Rationale for Further Action
3	Marshburn Channel	NFA	--	--
4	Bee Canyon Wash	NFA	--	--
5	Borrego Canyon Wash	NFA	--	--
6	Landfarming site	NFA	--	--
7	Transformer storage area	NFA	--	--
8	Abandoned Well 50-3285	NFA	--	--
9	Fuel bladder	NFA	--	--
11	Agua Chinon Wash	NFA	--	--
13	Drop Tank Storage Area	NFA	--	--
14	Drop Tank Fuel Storage Area	FA	Repair cracks in pavement	Prevent future migration of petroleum hydrocarbons
15	Wash Water Runoff Site	NFA	--	--
16	Wash Water Runoff Site	NFA	--	--
20	Underground Storage Tank	NFA	--	--
26	Hazardous Waste Storage Area	FA	Excavate shallow, stained soil	Moderate petroleum hydrocarbon contamination
27	Hazardous Waste Storage Area	NFA	--	--
30	Drum Storage Area	NFA	--	--
33	Hazardous Waste Storage Area	FA	Excavate shallow, stained soil	Petroleum hydrocarbon contamination
39	Hazardous Waste Storage Area	NFA	--	--
41	Vehicle Wash Rack	NFA	--	--
45	Drum Storage Area	NFA	--	--
46	Vehicle maintenance and parking	FA	Additional boring(s)	Petroleum hydrocarbon contamination, unknown extent
48	Underground Storage Tank	NFA	--	--
49	Underground Storage Tank	NFA	--	--
57	Underground Storage Tank	NFA	--	--
59	Underground Storage Tank	NFA	--	--
65	Underground Storage Tank	NFA	--	--
70	Hazardous Waste Storage Area	NFA	--	--
73	Hazardous Waste Storage Area	NFA	--	--
76	Oil/Water Separator	NFA	--	--
83	Hazardous Waste Storage Area	NFA	--	--
84	Oil/Water Separator	FA	Leak test/inspection of separator	Moderate petroleum hydrocarbon contamination at 10-foot depth
88	Drum Storage Area	NFA	--	--
90	Former Sewage Treatment Plant Site	NFA	--	--

**Annotated Excerpts from the Environmental Baseline Survey, Former Marine
Corps Air Station, El Toro, California (Appendix C – Baseline Verification
Summary Report, Agricultural Use Areas) (Earth Tech 2003)**

NOTES: (1) The approximate location of APHO 103 (within the agricultural use study area AG-7) is identified with a large solid circle symbol on the map. (2) A data summary table and an excerpt from the text are presented.

Cabinet 13
shelf # top

Final

Environmental Baseline Survey

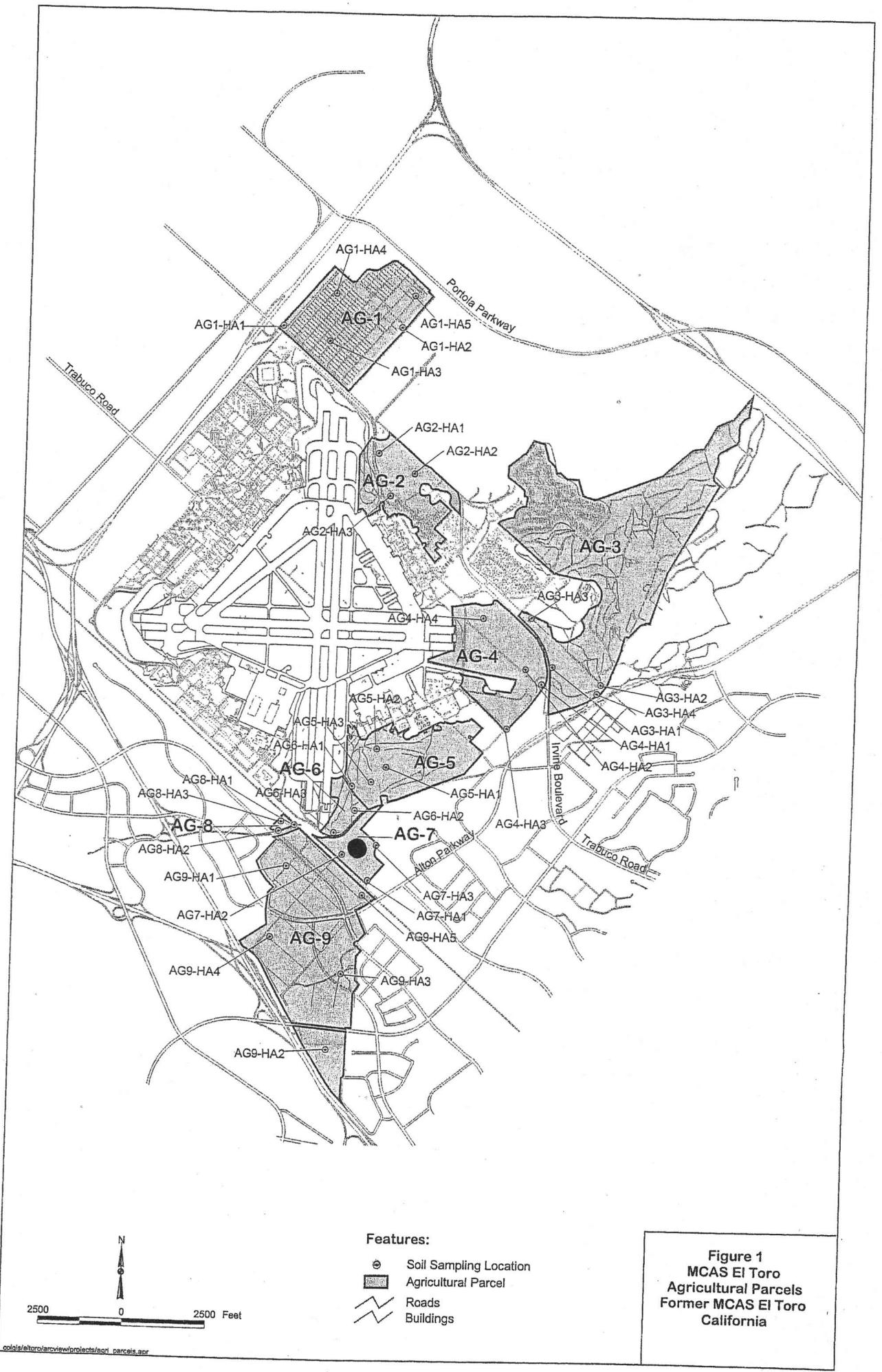
FORMER MARINE CORPS AIR STATION
EL TORO, CALIFORNIA

EXCERPTS

September 2003

Department of the Navy
Commander, Southwest Division
Naval Facilities Engineering Command
San Diego, California 92132-5190

Comprehensive Long-Term Environmental Action Navy II
Contract Number N62742-94-D-0048, CTO 0104



- Features:**
-  Soil Sampling Location
 -  Agricultural Parcel
 -  Roads
 -  Buildings

Figure 1
MCAS El Toro
Agricultural Parcels
Former MCAS El Toro
California

Table 6-7: Detected Analytes, Parcel AG-7

Analyte	Units	MCAS El Toro Background Concentration	Residential Soil PRG	Residential Cancer Risk Screening Level	Residential Noncancer Risk Screening Level	AG7-HA1 1 foot bgs LJ030	AG7-HA1 4 feet bgs LJ031	AG7-HA2 1 foot bgs LJ028	AG7-HA2 4 feet bgs LJ029	AG7-HA3 1 foot bgs LJ026	AG7-HA3 4 feet bgs LJ027
Organochloride Pesticides											
4,4'-DDD	µg/kg	36.1	2.4E+03	2.4E+03	--	56	3.5 U	9.7	3.3 U	26	3.4 U
4,4'-DDE	µg/kg	145	1.7E+03	1.7E+03	--	192	0.4 J	66	3 J	90	1 J
4,4'-DDT	µg/kg	236	1.7E+03	1.7E+03	3.6E+04	137	3.5 U	22	0.7 J	56	0.4 J
Alpha-Chlordane	µg/kg	2.24	1.6E+03	1.6E+03	3.5E+04	8.5	1.2 U	1	1.1 U	5.2	1.1 U
Dieldrin	µg/kg	19.9	3.0E+01	3.0E+01	3.1E+03	5	3.5 U	2 J	3.3 U	6	3.4 U
Endosulfan Sulfate	µg/kg	3.1	3.7E+05	--	3.7E+05	15	5.9 U	5.4 U	5.5 U	7	5.6 U
Endrin Aldehyde	µg/kg	2.22	1.8E+04	--	1.8E+04	9	3.5 U	3.2 U	3.3 U	4	3.4 U
Gamma-Chlordane	µg/kg	2.7	1.6E+03	1.6E+03	3.5E+04	4.9	1.2 U	0.4 J	1.1 U	2	1.1 U
Heptachlor Epoxide	µg/kg	--	5.3E+01	5.3E+01	7.9E+02	2 J	2 U	1.8 U	1.9 U	1.9 U	1.9 U

J = estimated concentration

µg/kg = micrograms per kilogram

U = not detected (including not present because of blank contamination)

6.3 PARCEL AG-3

Eleven samples were collected from four locations at parcel AG-3. 4,4'-DDD was detected in five samples, with a maximum concentration of 6 µg/kg. 4,4'-DDE was detected in six samples, with a maximum concentration of 42 µg/kg. 4,4'-DDT was detected in six samples, with a maximum concentration of 14 µg/kg. Alpha-chlordane was detected in six samples, with a maximum concentration of 51 µg/kg. Dieldrin was detected in three samples, with a maximum concentration of 2 µg/kg. Gamma-chlordane was detected in seven samples, with a maximum concentration of 52 µg/kg. Heptachlor epoxide was detected in one sample, at a concentration of 1 µg/kg. All detected analytes had concentrations below their respective residential PRG.

6.4 PARCEL AG-4

Eleven samples were collected from four locations at parcel AG-4. 4,4'-DDD was detected in six samples, with a maximum concentration of 23 µg/kg. 4,4'-DDE was detected in six samples, with a maximum concentration of 72 µg/kg. 4,4'-DDT was detected in six samples, with a maximum concentration of 43 µg/kg. Alpha-chlordane was detected in three samples, with a maximum concentration of 3.7 µg/kg. Gamma-chlordane was detected in four samples, with a maximum concentration of 2 µg/kg. All detected analytes had concentrations below their respective residential PRG.

6.5 PARCEL AG-5

Nine samples were collected from three locations at parcel AG-5. 4,4'-DDD was detected in one sample, at a concentration of 3 µg/kg. 4,4'-DDE was detected in four samples, with a maximum concentration of 8 µg/kg. 4,4'-DDT was detected in three samples, with a maximum concentration of 6 µg/kg. Dieldrin was detected in one sample, at a concentration of 0.4 µg/kg. Methoxychlor was detected in one sample, at a concentration of 1 µg/kg. All detected analytes had concentrations below their respective residential PRG.

6.6 PARCEL AG-6

Nine samples were collected from three locations at parcel AG-6, including one duplicate. 4,4'-DDD was detected in three samples, with a maximum concentration of 4 µg/kg. 4,4'-DDE was detected in seven samples, with a maximum concentration of 54 µg/kg. 4,4'-DDT was detected in two samples, with a maximum concentration of 0.9 µg/kg. Alpha-chlordane was detected in two samples, with a maximum concentration of 4.8 µg/kg. Endrin Aldehyde was detected in one sample, at a concentration of 0.7 µg/kg. Gamma-chlordane was detected in two samples, with a maximum concentration of 3.7 µg/kg. Methoxychlor was detected in one sample at a concentration of 2 µg/kg. All detected analytes had concentrations below their respective residential PRG.

6.7 PARCEL AG-7 ←

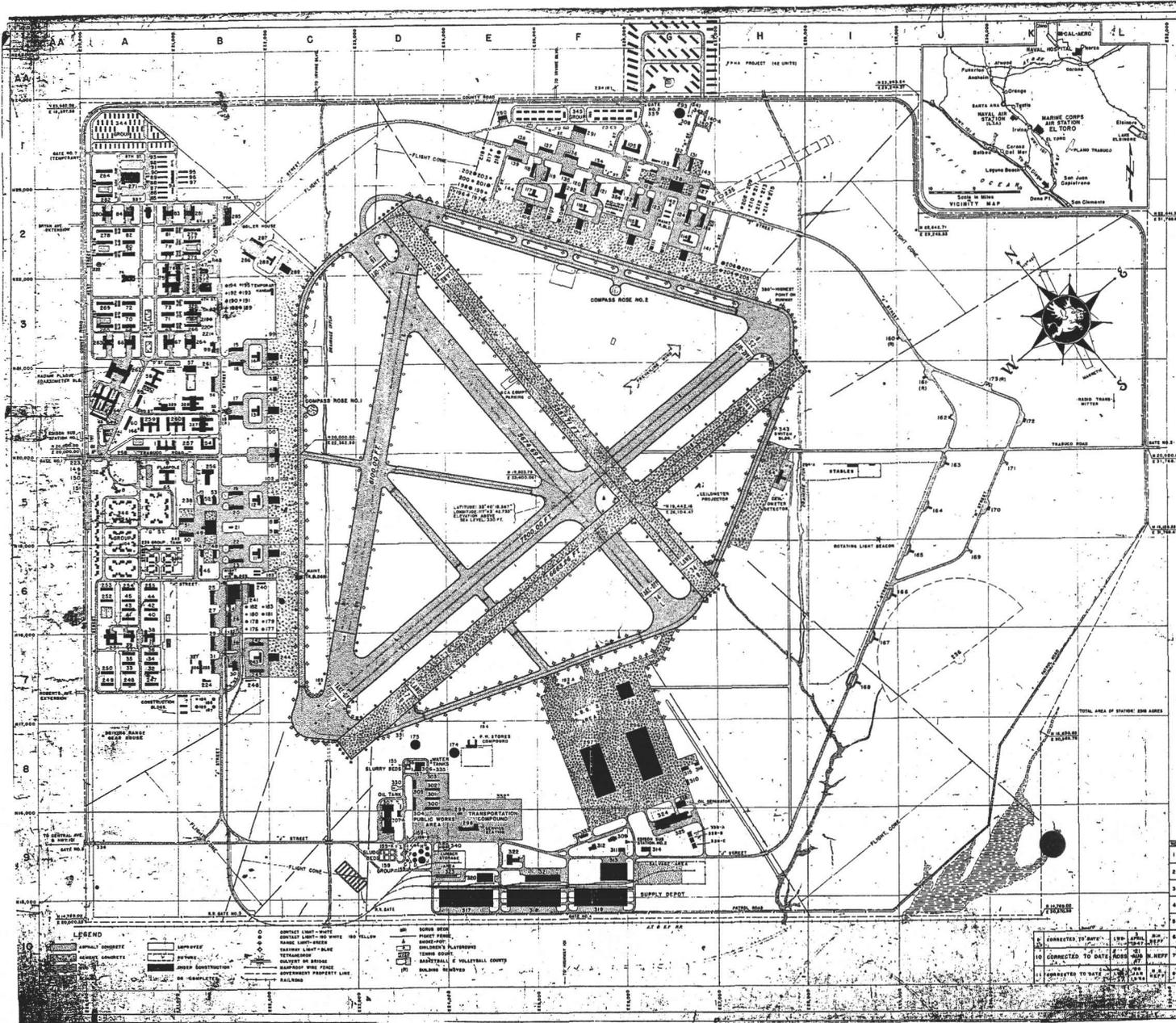
Six samples were collected from three locations at parcel AG-7. 4,4'-DDD was detected in three samples, with a maximum concentration of 56 µg/kg. 4,4'-DDE was detected in all six samples, with a maximum concentration of 192 µg/kg. 4,4'-DDT was detected in five samples, with a maximum concentration of 137 µg/kg. Alpha-chlordane was detected in three samples, with a maximum concentration of 8.5 µg/kg. Dieldrin was detected in three samples, with a maximum concentration of 6 µg/kg. Endosulfan sulfate was detected in two samples, with a maximum concentration of 15 µg/kg. Endrin aldehyde was detected in two samples, with a maximum concentration of 9 µg/kg. Gamma-chlordane was detected in three samples, with a maximum concentration of 4.9 µg/kg. Heptachlor epoxide was detected in one sample, at a concentration of 2 µg/kg. All detected analytes had concentrations below their respective residential PRG.

Historical Drainage Plan Prepared in 1942

NOTES: (1) The 1942 map is annotated with a solid circle symbol to show the approximate location of APHO 103 (SAIC 175). (2) The 1942 map shows the approximate location of APHO 103 at the Borrego Canyon Wash slough.

Historical Master Plot Plan Prepared in January 1948

NOTES: (1) The 1948 map is annotated with a solid circle symbol to show the approximate location of APHO 103 (SAIC 175). (2) The 1948 map shows the approximate location of APHO 103 at the Borrego Canyon Wash slough and adjacent to the feature designated as the FLIGHT CONE.



LEGEND OF FACILITIES

NO	LOC	USE	NO	LOC	USE
1	101	OFFICER'S QUARTERS	101	101	OFFICER'S QUARTERS
2	102	OFFICER'S QUARTERS	102	102	OFFICER'S QUARTERS
3	103	OFFICER'S QUARTERS	103	103	OFFICER'S QUARTERS
4	104	OFFICER'S QUARTERS	104	104	OFFICER'S QUARTERS
5	105	OFFICER'S QUARTERS	105	105	OFFICER'S QUARTERS
6	106	OFFICER'S QUARTERS	106	106	OFFICER'S QUARTERS
7	107	OFFICER'S QUARTERS	107	107	OFFICER'S QUARTERS
8	108	OFFICER'S QUARTERS	108	108	OFFICER'S QUARTERS
9	109	OFFICER'S QUARTERS	109	109	OFFICER'S QUARTERS
10	110	OFFICER'S QUARTERS	110	110	OFFICER'S QUARTERS
11	111	OFFICER'S QUARTERS	111	111	OFFICER'S QUARTERS
12	112	OFFICER'S QUARTERS	112	112	OFFICER'S QUARTERS
13	113	OFFICER'S QUARTERS	113	113	OFFICER'S QUARTERS
14	114	OFFICER'S QUARTERS	114	114	OFFICER'S QUARTERS
15	115	OFFICER'S QUARTERS	115	115	OFFICER'S QUARTERS
16	116	OFFICER'S QUARTERS	116	116	OFFICER'S QUARTERS
17	117	OFFICER'S QUARTERS	117	117	OFFICER'S QUARTERS
18	118	OFFICER'S QUARTERS	118	118	OFFICER'S QUARTERS
19	119	OFFICER'S QUARTERS	119	119	OFFICER'S QUARTERS
20	120	OFFICER'S QUARTERS	120	120	OFFICER'S QUARTERS
21	121	OFFICER'S QUARTERS	121	121	OFFICER'S QUARTERS
22	122	OFFICER'S QUARTERS	122	122	OFFICER'S QUARTERS
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24	124	OFFICER'S QUARTERS	124	124	OFFICER'S QUARTERS
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44	144	OFFICER'S QUARTERS	144	144	OFFICER'S QUARTERS
45	145	OFFICER'S QUARTERS	145	145	OFFICER'S QUARTERS
46	146	OFFICER'S QUARTERS	146	146	OFFICER'S QUARTERS
47	147	OFFICER'S QUARTERS	147	147	OFFICER'S QUARTERS
48	148	OFFICER'S QUARTERS	148	148	OFFICER'S QUARTERS
49	149	OFFICER'S QUARTERS	149	149	OFFICER'S QUARTERS
50	150	OFFICER'S QUARTERS	150	150	OFFICER'S QUARTERS
51	151	OFFICER'S QUARTERS	151	151	OFFICER'S QUARTERS
52	152	OFFICER'S QUARTERS	152	152	OFFICER'S QUARTERS
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54	154	OFFICER'S QUARTERS	154	154	OFFICER'S QUARTERS
55	155	OFFICER'S QUARTERS	155	155	OFFICER'S QUARTERS
56	156	OFFICER'S QUARTERS	156	156	OFFICER'S QUARTERS
57	157	OFFICER'S QUARTERS	157	157	OFFICER'S QUARTERS
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60	160	OFFICER'S QUARTERS	160	160	OFFICER'S QUARTERS
61	161	OFFICER'S QUARTERS	161	161	OFFICER'S QUARTERS
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63	163	OFFICER'S QUARTERS	163	163	OFFICER'S QUARTERS
64	164	OFFICER'S QUARTERS	164	164	OFFICER'S QUARTERS
65	165	OFFICER'S QUARTERS	165	165	OFFICER'S QUARTERS
66	166	OFFICER'S QUARTERS	166	166	OFFICER'S QUARTERS
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81	181	OFFICER'S QUARTERS	181	181	OFFICER'S QUARTERS
82	182	OFFICER'S QUARTERS	182	182	OFFICER'S QUARTERS
83	183	OFFICER'S QUARTERS	183	183	OFFICER'S QUARTERS
84	184	OFFICER'S QUARTERS	184	184	OFFICER'S QUARTERS
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89	189	OFFICER'S QUARTERS	189	189	OFFICER'S QUARTERS
90	190	OFFICER'S QUARTERS	190	190	OFFICER'S QUARTERS
91	191	OFFICER'S QUARTERS	191	191	OFFICER'S QUARTERS
92	192	OFFICER'S QUARTERS	192	192	OFFICER'S QUARTERS
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96	196	OFFICER'S QUARTERS	196	196	OFFICER'S QUARTERS
97	197	OFFICER'S QUARTERS	197	197	OFFICER'S QUARTERS
98	198	OFFICER'S QUARTERS	198	198	OFFICER'S QUARTERS
99	199	OFFICER'S QUARTERS	199	199	OFFICER'S QUARTERS
100	200	OFFICER'S QUARTERS	200	200	OFFICER'S QUARTERS

474776

NAVY AIR BASES COMMAND
MARINE CORPS ACTIVITIES
SEVENTH NAVAL DISTRICT
EL TORO, (SANTA ANA) CALIFORNIA

MASTER PLOT PLAN
OF
EXISTING & FUTURE
FACILITIES

DATE: 1/25/50

BY: [Signature]

APPROVED: [Signature]

10 CONNECTED TO DATE: [Signature]

11 CONNECTED TO DATE: [Signature]

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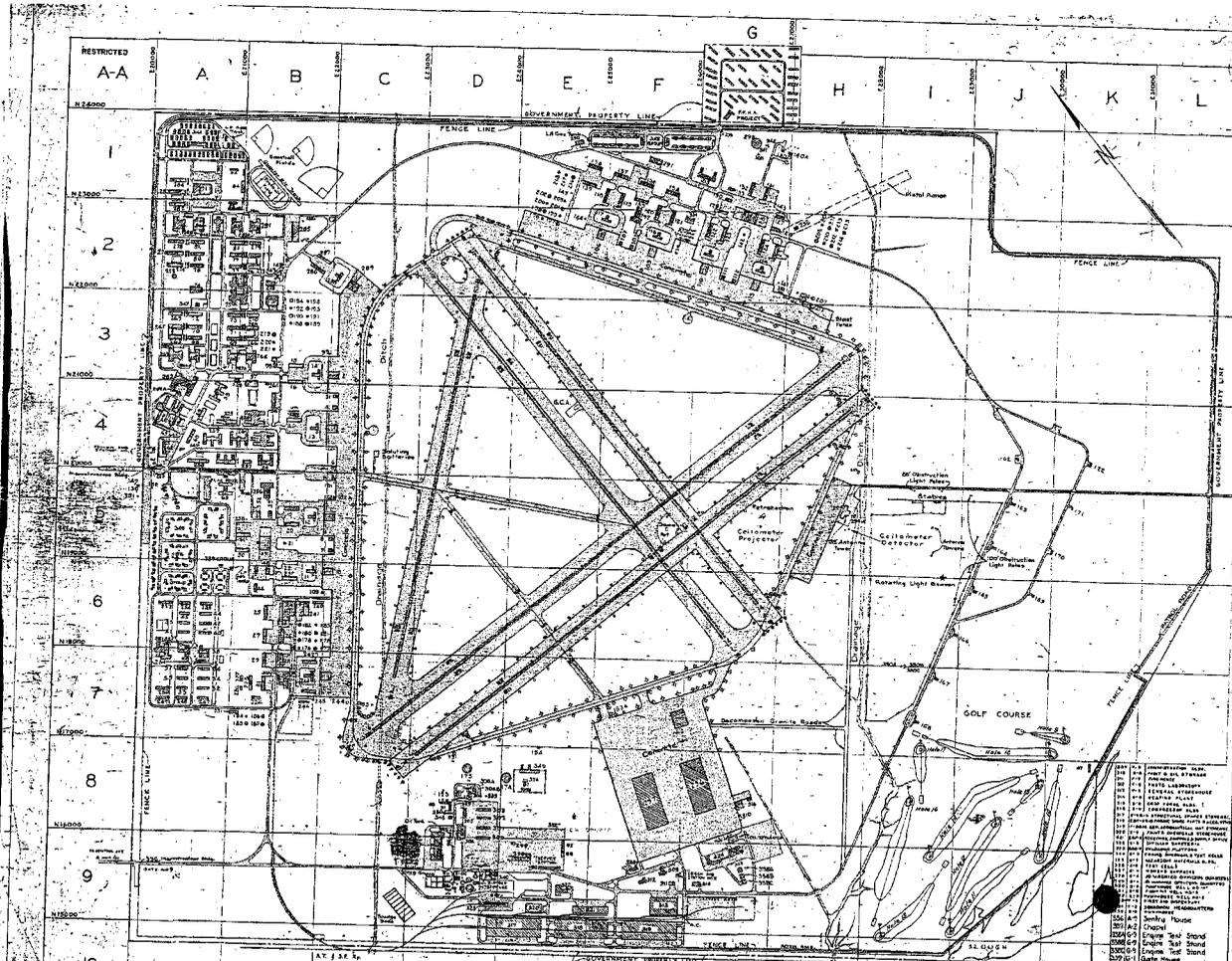
18 CONNECTED TO DATE: [Signature]

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Historical Map of Conditions as of June 30, 1949

NOTE: The 1949 map is annotated with a solid circle symbol to show the approximate location of APHO 103 (SAIC 175).



NR	LOCATION	USE	NR	LOCATION	USE
A-5	Officers Quarters	110	G-2	Nose Hangar	
A-3	Do	111	G-2	Firehouse / Armory Bldg	
A-4	Administration Bldg	112	G-2	Nose Hangar	
C-3	Nose Hangar	113	G-2	Squadron Headquarters	
C-4	Firehouse / Armory Bldg	114	G-2	Do	
C-5	Nose Hangar	115	G-2	Do	
C-6	Operations Bldg	116	G-2	Do	
C-7	Firehouse / Armory Bldg	117	G-2	Do	
C-8	Nose Hangar	118	G-2	Do	
C-9	Squadron Headquarters	119	G-2	Do	
D-1	Do	120	G-2	Do	
D-2	Do	121	G-2	Do	
D-3	Do	122	G-2	Do	
D-4	Do	123	G-2	Do	
D-5	Do	124	G-2	Do	
D-6	Do	125	G-2	Do	
D-7	Do	126	G-2	Do	
D-8	Do	127	G-2	Do	
D-9	Do	128	G-2	Do	
D-10	Do	129	G-2	Do	
D-11	Do	130	G-2	Do	
D-12	Do	131	G-2	Do	
D-13	Do	132	G-2	Do	
D-14	Do	133	G-2	Do	
D-15	Do	134	G-2	Do	
D-16	Do	135	G-2	Do	
D-17	Do	136	G-2	Do	
D-18	Do	137	G-2	Do	
D-19	Do	138	G-2	Do	
D-20	Do	139	G-2	Do	
D-21	Do	140	G-2	Do	
D-22	Do	141	G-2	Do	
D-23	Do	142	G-2	Do	
D-24	Do	143	G-2	Do	
D-25	Do	144	G-2	Do	
D-26	Do	145	G-2	Do	
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D-28	Do	147	G-2	Do	
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D-40	Do	159	G-2	Do	
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D-44	Do	163	G-2	Do	
D-45	Do	164	G-2	Do	
D-46	Do	165	G-2	Do	
D-47	Do	166	G-2	Do	
D-48	Do	167	G-2	Do	
D-49	Do	168	G-2	Do	
D-50	Do	169	G-2	Do	
D-51	Do	170	G-2	Do	
D-52	Do	171	G-2	Do	
D-53	Do	172	G-2	Do	
D-54	Do	173	G-2	Do	
D-55	Do	174	G-2	Do	
D-56	Do	175	G-2	Do	
D-57	Do	176	G-2	Do	
D-58	Do	177	G-2	Do	
D-59	Do	178	G-2	Do	
D-60	Do	179	G-2	Do	
D-61	Do	180	G-2	Do	
D-62	Do	181	G-2	Do	
D-63	Do	182	G-2	Do	
D-64	Do	183	G-2	Do	
D-65	Do	184	G-2	Do	
D-66	Do	185	G-2	Do	
D-67	Do	186	G-2	Do	
D-68	Do	187	G-2	Do	
D-69	Do	188	G-2	Do	
D-70	Do	189	G-2	Do	
D-71	Do	190	G-2	Do	
D-72	Do	191	G-2	Do	
D-73	Do	192	G-2	Do	
D-74	Do	193	G-2	Do	
D-75	Do	194	G-2	Do	
D-76	Do	195	G-2	Do	
D-77	Do	196	G-2	Do	
D-78	Do	197	G-2	Do	
D-79	Do	198	G-2	Do	
D-80	Do	199	G-2	Do	
D-81	Do	200	G-2	Do	
D-82	Do	201	G-2	Do	
D-83	Do	202	G-2	Do	
D-84	Do	203	G-2	Do	
D-85	Do	204	G-2	Do	
D-86	Do	205	G-2	Do	
D-87	Do	206	G-2	Do	
D-88	Do	207	G-2	Do	
D-89	Do	208	G-2	Do	
D-90	Do	209	G-2	Do	
D-91	Do	210	G-2	Do	
D-92	Do	211	G-2	Do	
D-93	Do	212	G-2	Do	
D-94	Do	213	G-2	Do	
D-95	Do	214	G-2	Do	
D-96	Do	215	G-2	Do	
D-97	Do	216	G-2	Do	
D-98	Do	217	G-2	Do	
D-99	Do	218	G-2	Do	
D-100	Do	219	G-2	Do	
D-101	Do	220	G-2	Do	
D-102	Do	221	G-2	Do	
D-103	Do	222	G-2	Do	
D-104	Do	223	G-2	Do	
D-105	Do	224	G-2	Do	
D-106	Do	225	G-2	Do	
D-107	Do	226	G-2	Do	
D-108	Do	227	G-2	Do	
D-109	Do	228	G-2	Do	
D-110	Do	229	G-2	Do	
D-111	Do	230	G-2	Do	
D-112	Do	231	G-2	Do	
D-113	Do	232	G-2	Do	
D-114	Do	233	G-2	Do	
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D-117	Do	236	G-2	Do	
D-118	Do	237	G-2	Do	
D-119	Do	238	G-2	Do	
D-120	Do	239	G-2	Do	
D-121	Do	240	G-2	Do	
D-122	Do	241	G-2	Do	
D-123	Do	242	G-2	Do	
D-124	Do	243	G-2	Do	
D-125	Do	244	G-2	Do	
D-126	Do	245	G-2	Do	
D-127	Do	246	G-2	Do	
D-128	Do	247	G-2	Do	
D-129	Do	248	G-2	Do	
D-130	Do	249	G-2	Do	
D-131	Do	250	G-2	Do	
D-132	Do	251	G-2	Do	
D-133	Do	252	G-2	Do	
D-134	Do	253	G-2	Do	
D-135	Do	254	G-2	Do	
D-136	Do	255	G-2	Do	
D-137	Do	256	G-2	Do	
D-138	Do	257	G-2	Do	
D-139	Do	258	G-2	Do	
D-140	Do	259	G-2	Do	
D-141	Do	260	G-2	Do	
D-142	Do	261	G-2	Do	
D-143	Do	262	G-2	Do	
D-144	Do	263	G-2	Do	
D-145	Do	264	G-2	Do	
D-146	Do	265	G-2	Do	
D-147	Do	266	G-2	Do	
D-148	Do	267	G-2	Do	
D-149	Do	268	G-2	Do	
D-150	Do	269	G-2	Do	
D-151	Do	270	G-2	Do	
D-152	Do	271	G-2	Do	
D-153	Do	272	G-2	Do	
D-154	Do	273	G-2	Do	
D-155	Do	274	G-2	Do	
D-156	Do	275	G-2	Do	
D-157	Do	276	G-2	Do	
D-158	Do	277	G-2	Do	
D-159	Do	278	G-2	Do	
D-160	Do	279	G-2	Do	
D-161	Do	280	G-2	Do	
D-162	Do	281	G-2	Do	
D-163	Do	282	G-2	Do	
D-164	Do	283	G-2	Do	
D-165	Do	284	G-2	Do	
D-166	Do	285	G-2	Do	
D-167	Do	286	G-2	Do	
D-168	Do	287	G-2	Do	
D-169	Do	288	G-2	Do	
D-170	Do	289	G-2	Do	
D-171	Do	290	G-2	Do	
D-172	Do	291	G-2	Do	
D-173	Do	292	G-2	Do	
D-174	Do	293	G-2	Do	
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D-176	Do	295	G-2	Do	
D-177	Do	296	G-2	Do	
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D-180	Do	299	G-2	Do	
D-181	Do	300	G-2	Do	
D-182	Do	301	G-2	Do	
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D-184	Do	303	G-2	Do	
D-185	Do	304	G-2	Do	
D-186	Do	305	G-2	Do	
D-187	Do	306	G-2	Do	
D-188	Do	307	G-2	Do	
D-189	Do	308	G-2	Do	
D-190	Do	309	G-2	Do	
D-191	Do	310	G-2	Do	
D-192	Do	311	G-2	Do	
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D-195	Do	314	G-2	Do	
D-196	Do	315	G-2	Do	
D-197	Do	316	G-2	Do	
D-198	Do	317	G-2	Do	
D-199	Do	318	G-2	Do	
D-200	Do	319	G-2	Do	
D-201	Do	320	G-2	Do	
D-202	Do	321	G-2	Do	
D-203	Do	322	G-2	Do	
D-204	Do	323	G-2	Do	
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D-213	Do	332	G-2	Do	
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D-229	Do	348	G-2	Do	
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D-233	Do	352	G-2	Do	
D-234	Do	353	G-2	Do	
D-235	Do	354	G-2	Do	
D-236	Do	355	G-2	Do	
D-237	Do	356	G-2	Do	
D-238	Do	357	G-2	Do	
D-239	Do	358	G-2	Do	
D-240	Do	359	G-2	Do	
D-241	Do	360	G-2	Do	
D-242	Do	361	G-2	Do	
D-243	Do	362	G-2	Do	
D-244	Do	363	G-2	Do	
D-245	Do	364	G-2	Do	
D-246	Do	365	G-2	Do	
D-247	Do	366	G-2	Do	
D-248	Do	367	G-2	Do	
D-249	Do	368	G-2	Do	
D-250	Do	369	G-2	Do	
D-251	Do	370	G-2	Do	
D-252	Do	371	G-2	Do	
D-253	Do	372	G-2	Do	
D-254	Do	373	G-2	Do	
D-255	Do	374	G-2	Do	
D-256	Do	375	G-2	Do	
D-257	Do	376	G-2	Do	
D-258	Do	377	G-2	Do	
D-259	Do	378	G-2	Do	
D-260	Do	379	G-2	Do	
D-261	Do	380	G-2	Do	
D-262	Do	381	G-2	Do	
D-2					

Master Plot Plan dated 17 January 1950
(Master Plot Plan, Existing and Future Facilities)

NOTES: (1) The 1950 plan is annotated with a solid circle symbol to show the approximate location of APHO 103 (SAIC 175). (2) The plan shows the location of APHO 103 (SAIC 175) at the Borrego Canyon Wash slough.

Excerpt from Location Plan, New Perimeter Roads, Extension to Runway 16L –
34R & Installation of Approach Lighting (Yards and Docks Drawing 817790,
Sheet 59 of 75, dated 1958)

NOTE: The excerpt from the plan shows the new alignment for the perimeter road in the vicinity of APHO 103 and the paved channel for Borrego Canyon Wash near APHO 103.

<input checked="" type="checkbox"/>	F.P.	REVISED LOCATION OF S. PERIMETER ROAD	10-2-58	<i>[Signature]</i>
SYMBOL	BY	DESCRIPTION	DATE	APPROVAL

REVISIONS

A. & E. JOB NO. 5721
DRAWING NO. 59
DESIGNED <i>L.H.</i>
AWN <i>S.C. & ARS</i>
CHECKED <i>F. PRATT</i>
OL. DEGR. ENGR. <i>FERREST</i>
SE. PROT. ENGR.
ARCH. ENGR. <i>Budman</i>
ECTOR <i>[Signature]</i>
OL. ENGR. <i>[Signature]</i>
IT. D.P.W.O. P.S.D. <i>[Signature]</i>

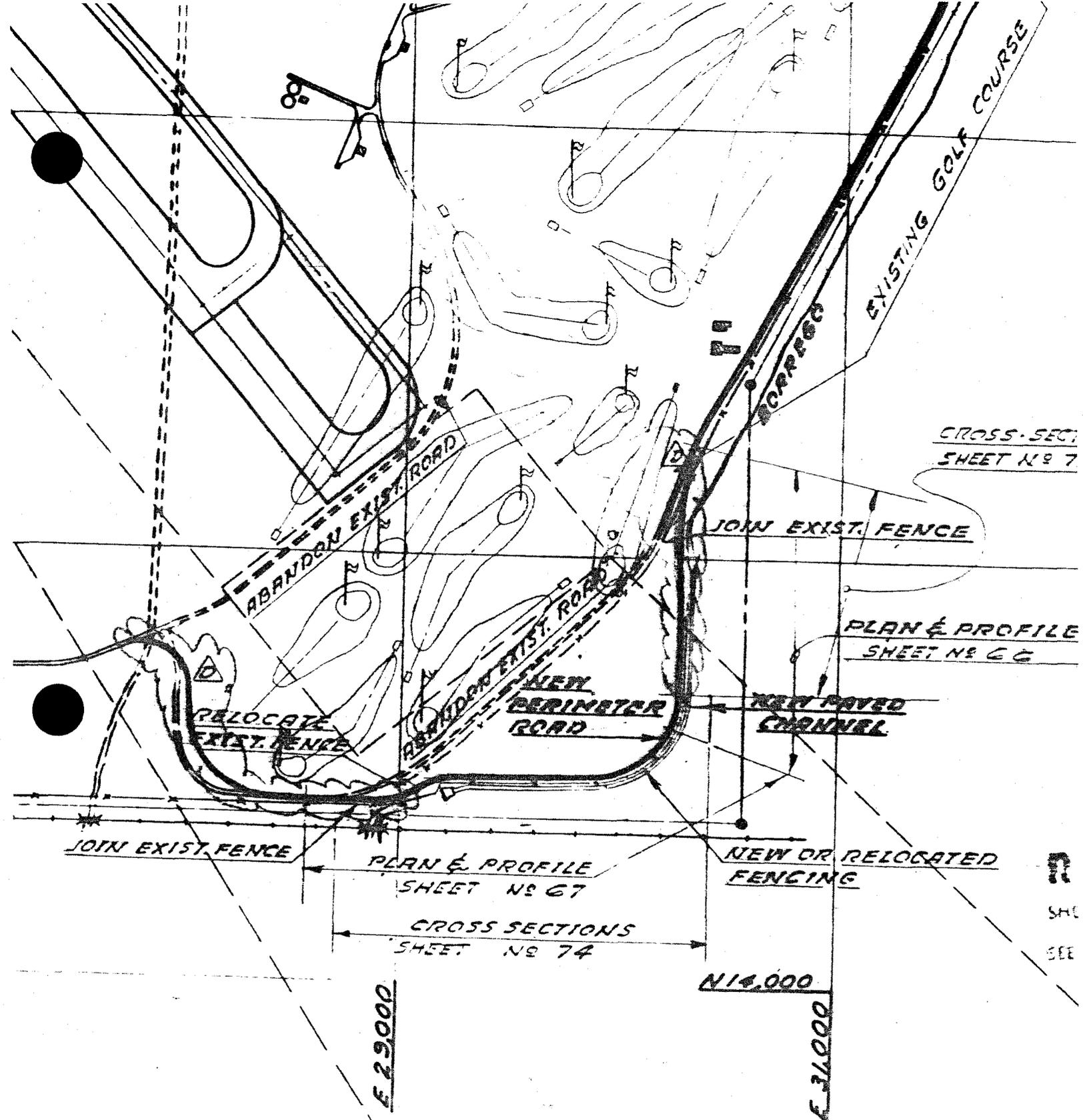
DEPARTMENT OF THE NAVY
BUREAU OF YARDS AND DOCKS
ELEVENTH NAVAL DISTRICT P. W. O. SAN DIEGO, CALIFORNIA
QUINTON ENGINEERS, LTD.
LOS ANGELES 17, CALIFORNIA

MARINE CORPS AIR STATION
EL TORO (SANTA ANA), CALIFORNIA
EXTENSION TO RUNWAY 16L-34R
& INSTALLATION OF APPROACH LIGHTING
LOCATION PLAN
NEW PERIMETER ROADS

APPROVED *[Signature]* DATE *10-2-58*
FOR DISTRICT PUBLIC WORKS OFFICE FOR CHIEF OF BUREAU

SATISFACTORY TO _____
BY _____

SCALE <i>AS NOTED</i>	SPEC 10014/57
SHEET <i>59</i> OF <i>75</i>	NO. 10014
Y & D DRAWING NO. <i>E17790</i>	



CROSS-SECTION
SHEET NO 7

PLAN & PROFILE
SHEET NO 66

PLAN & PROFILE
SHEET NO 67

CROSS SECTIONS
SHEET NO 74

E 29,000

N 14,000

E 31,000

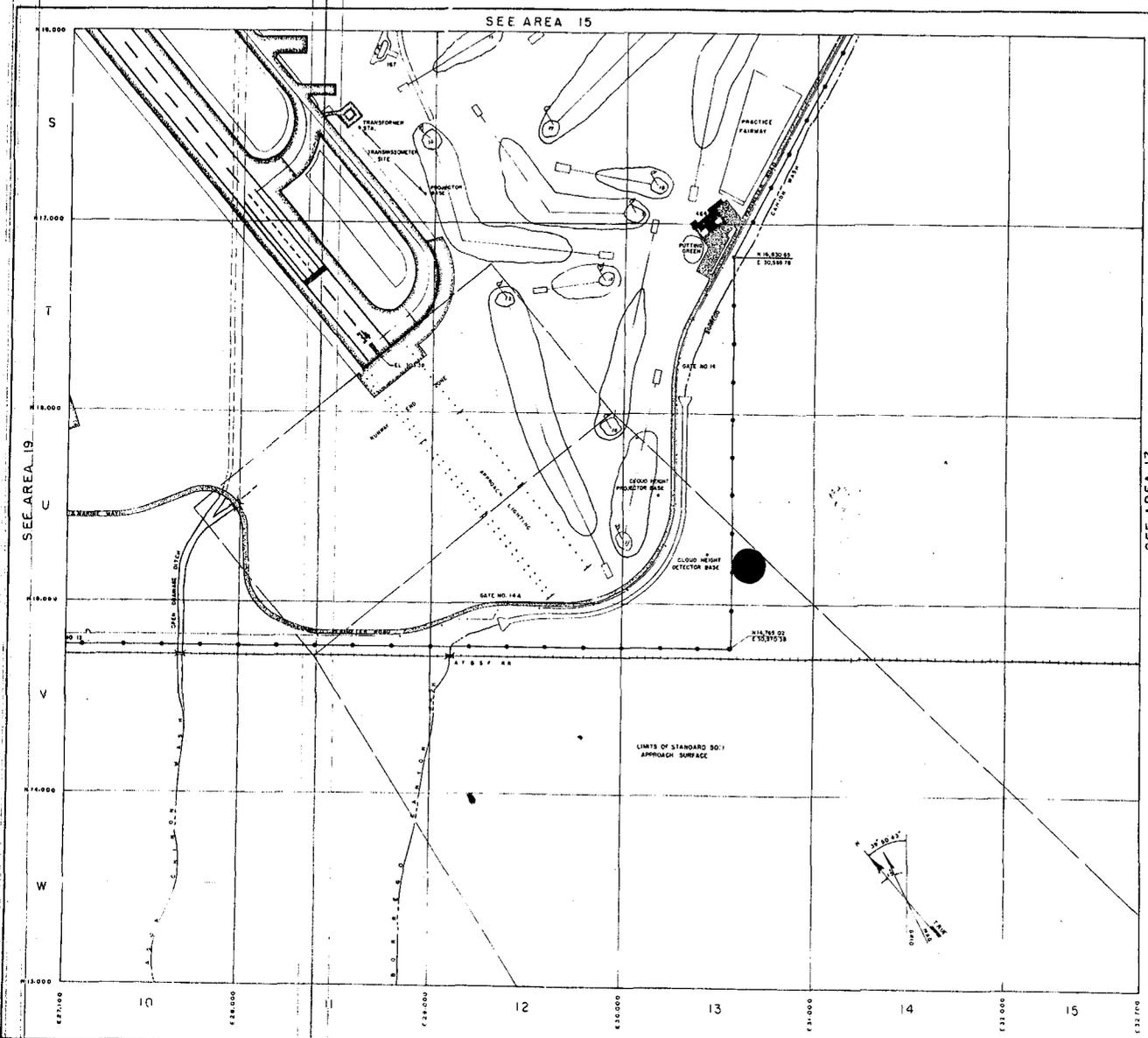
ADS

ALTERNATIONS



Excerpt from 1962 General Development Map

NOTE: The excerpt from the map has been annotated with a solid circle symbol at the approximate location of APHO 103. The map shows the runway approach surface.



LEGEND

- EXISTING STRUCTURES TO BE RETAINED
- EXISTING STRUCTURES TO BE REMOVED
- ▤ PLANNED PEACETIME STRUCTURES
- ▥ PLANNED MOBILIZATION STRUCTURES
- ▧ EXISTING ROADS OR PAVED AREA TO BE RETAINED
- ▨ EXISTING ROADS OR PAVED AREA TO BE REMOVED
- ▩ PLANNED PEACETIME ROADS OR PAVED AREA
- PLANNED MOBILIZATION ROADS OR PAVED AREA
- EXISTING AIRFIELD PAVING TO BE RETAINED
- ▬ EXISTING AIRFIELD PAVING TO BE REMOVED
- ▭ PLANNED PEACETIME AIRFIELD PAVING
- ▮ PLANNED MOBILIZATION AIRFIELD PAVING
- ▯ EXISTING RAILROAD TO BE RETAINED
- ▰ EXISTING RAILROAD TO BE REMOVED
- ▱ PLANNED PEACETIME RAILROAD
- ▲ PLANNED MOBILIZATION RAILROAD
- △ EXISTING NAVY PROPERTY BOUNDARY WITHOUT FENCE TO BE RETAINED
- ▴ EXISTING NAVY PROPERTY BOUNDARY WITHOUT FENCE TO BE REMOVED
- ▵ PLANNED PEACETIME NAVY PROPERTY BOUNDARY WITHOUT FENCE
- ▶ PLANNED MOBILIZATION NAVY PROPERTY BOUNDARY WITHOUT FENCE
- ▷ EXISTING NAVY PROPERTY BOUNDARY WITH FENCE TO BE RETAINED
- EXISTING NAVY PROPERTY BOUNDARY WITH FENCE TO BE REMOVED
- PLANNED PEACETIME NAVY PROPERTY BOUNDARY WITH FENCE
- PLANNED MOBILIZATION NAVY PROPERTY BOUNDARY WITH FENCE
- ▻ EXISTING FENCE TO BE RETAINED
- ▼ PLANNED PEACETIME FENCE
- ▽ PLANNED MOBILIZATION FENCE
- ◆ MAIN STATION ENTRANCE
- ▭ BOUNDARIES OF END B APPROACH ZONE
- T— TRANSMISSION LINE

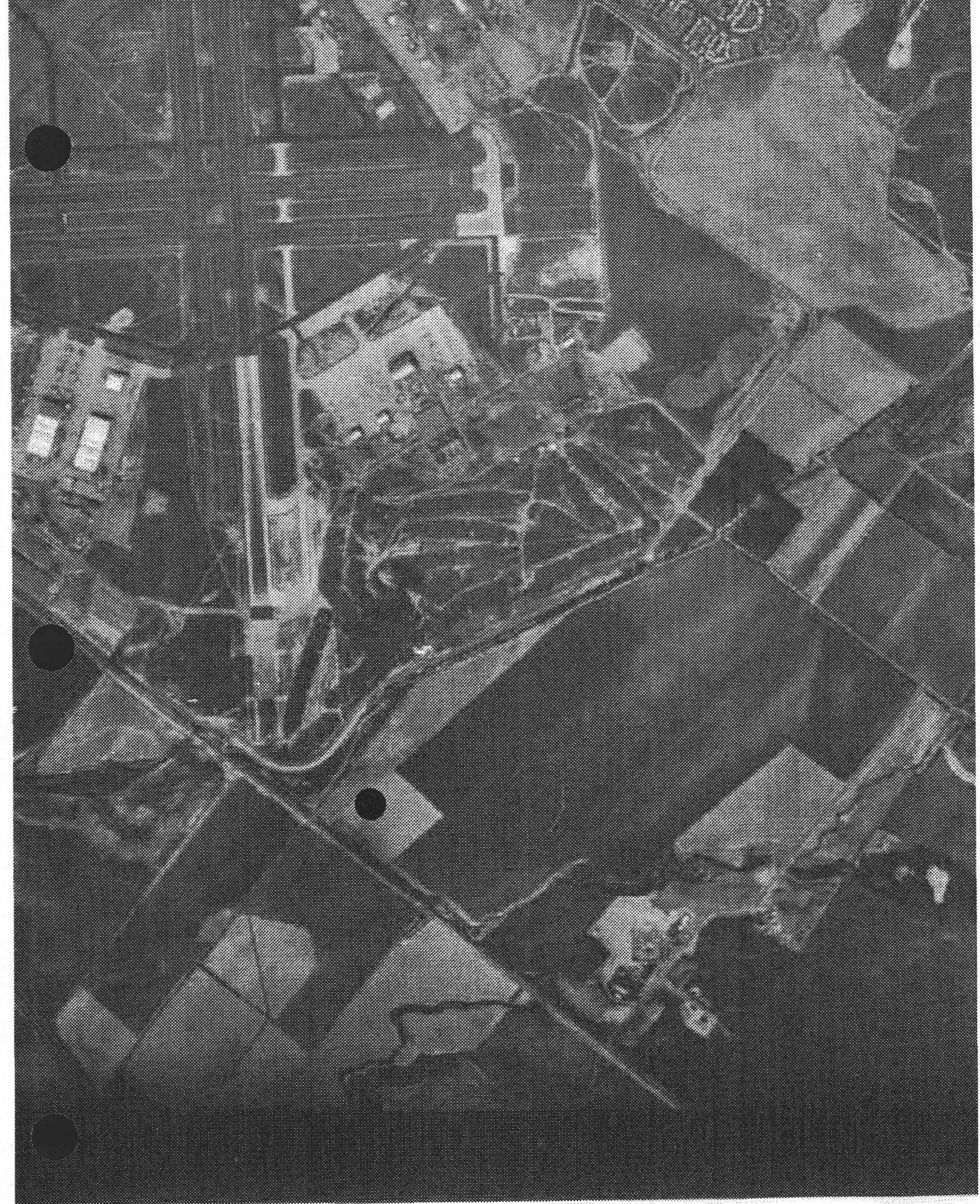


COR. PER APPRO. BY BILSON PY 64-58 B UPDATE M. 1/16/64		DATE	APPROVED
COR. PER APPRO. BY BILSON PY 64-58 B UPDATE M. 1/16/64		DATE	APPROVED
NO. AND OR COR.		DESCRIPTION OF AMENDMENT OR CORRECTION	DATE APPROVED
DEPARTMENT OF THE NAVY - BUREAU OF YARDS & DOCKS			
MCAS EL TORO SANTA ANA, CALIFORNIA GENERAL DEVELOPMENT MAP AREA 18			
SUBMITTED TO: RESTON/DODS		DATE: 1/16/64	
DRAWN BY: [Signature]		DATE: 1/16/64	
CHECKED BY: [Signature]		DATE: 1/16/64	
APPROVED BY: [Signature]		DATE: 1/16/64	
SCALE GRAPHIC		T & D DWG NO.	
Sheet 16 of 22		826784	

1962

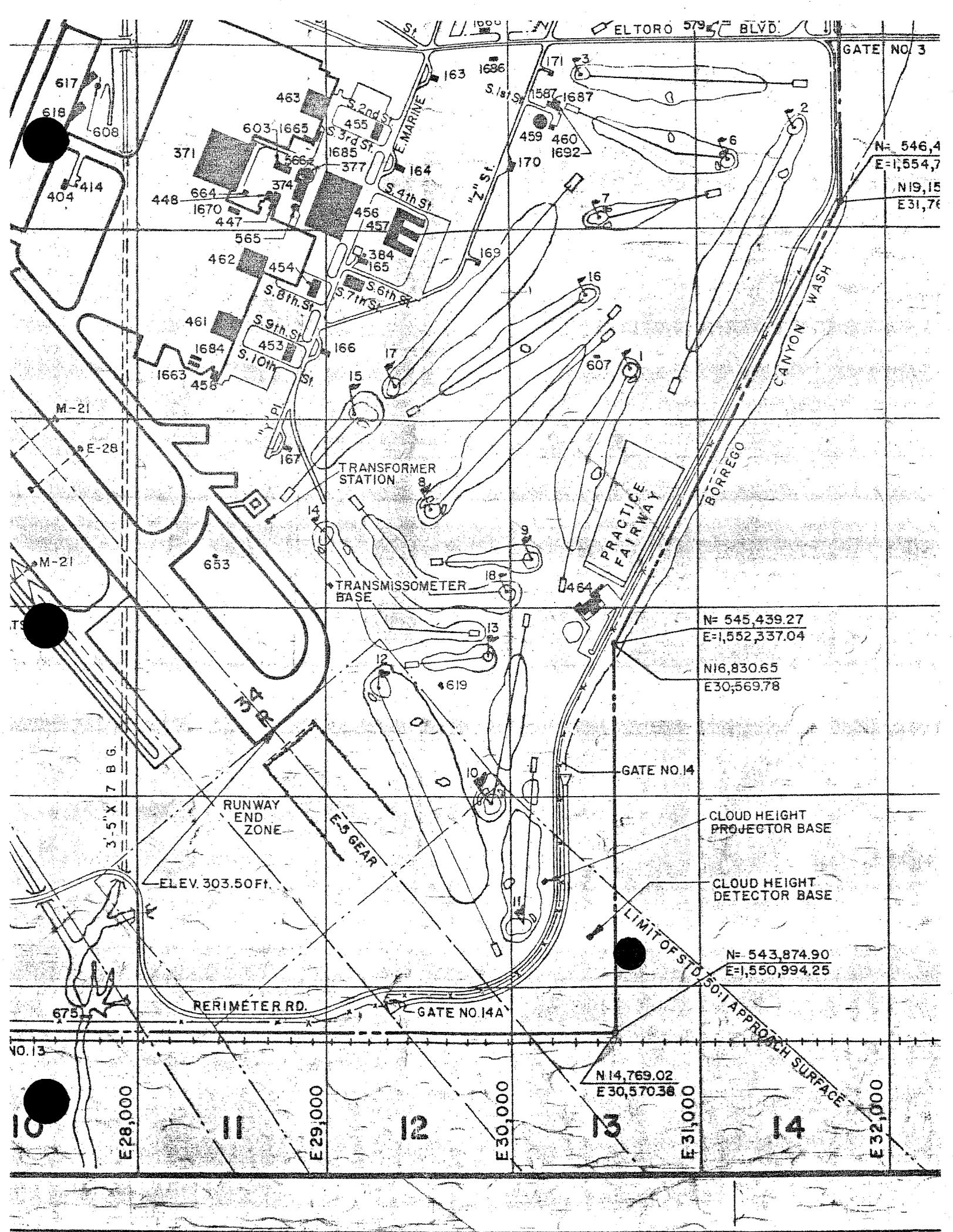
Excerpt from Historical Aerial Photograph
Date of Photograph: 28 February 1963
Source of Photograph: United States Geological Survey (USGS)
(Photo identifiers: GS VASK, XF6748, Frame 2-89, H15000)

NOTE: The excerpt from the 1963 aerial photograph is annotated with a solid circle symbol to show the approximate location of APHO 103 (SAIC 175).



Excerpt from 1973 Station Map (Public Works Drawing S-2010)

NOTE: The excerpt from the Station Map shows the locations of Gate 14, Gate 14A, Borrego Canyon Wash, Perimeter Road, the CLOUD HEIGHT DETECTOR BASE and the CLOUD HEIGHT PROJECTOR, and the approximate location of APHO 103 (SAIC 175) (denoted by a solid circle symbol).



GATE NO. 3
 N= 546,4
 E=1,554,7
 N19,15
 E31,76

N= 545,439.27
 E=1,552,337.04
 N16,830.65
 E30,569.78

CLOUD HEIGHT PROJECTOR BASE
 CLOUD HEIGHT DETECTOR BASE

N= 543,874.90
 E=1,550,994.25

N 14,769.02
 E 30,570.38

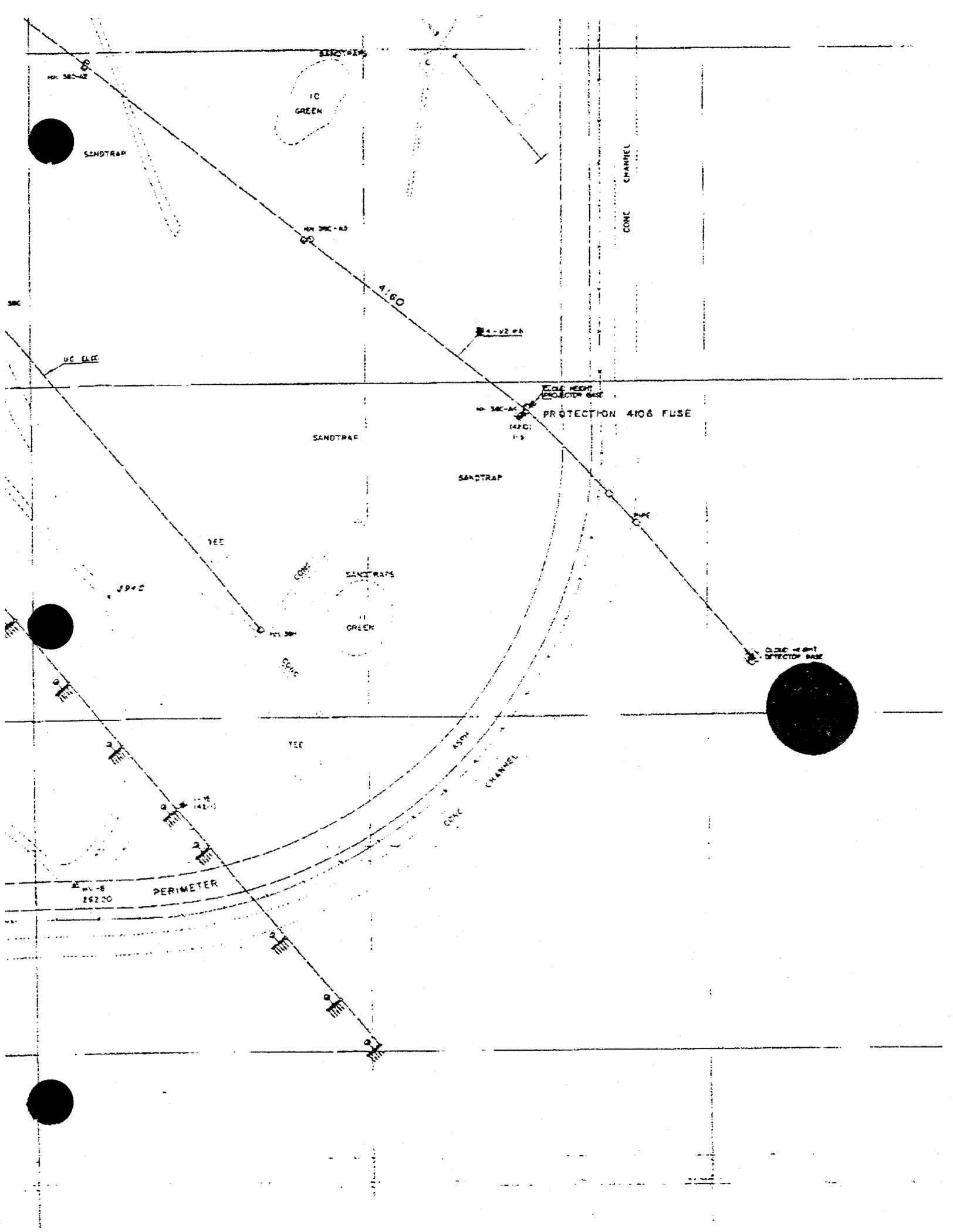
NO. 13
 E28,000
 11
 E29,000
 12
 E30,000
 13
 E31,000
 14
 E32,000

Excerpt from 1978 General Development Map
(NAVFAC Drawing Number 6084147, Sheet 15 of 18)

NOTE: The excerpt from the map shows the location of agricultural production areas near
APHO 103.

Excerpt from Area 29, Electrical Distribution Plan (U.S. Marine Corps Air Station,
El Toro, Public Works Department, Revised 14 April 1988)

NOTE: The excerpt from the electrical distribution plan has been annotated with a solid circle symbol for the approximate location of APHO 103 (SAIC 175), near the feature identified as the
CLOUD HEIGHT DETECTOR BASE.



SOUTHWESTNAVFACENGCOM
Code 06CC.LMH
1220 Pacific Highway
San Diego, CA 92132
Telephone: (619) 532-0783/Fax: (619) 532-0780

File: eltoroar.doc

TRANSMITTAL

Date: 25 March 2004

From: Lynn Marie Hornecker
MCAS El Toro

To: Diane Silva
Code ~~015.DS~~ Code 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):

Author:

Recipient:

Record Date: RWDQB letter 1 March 2004
SWDIV transmittal 14 January 2004

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Contract: N/A

CTO Number: N/A