

Appendix J-1

Phase I Environmental Site Assessment

DRAFT



PHASE I ENVIRONMENTAL SITE ASSESSMENT MERIDIAN – WEST CAMPUS UPPER PLATEAU

ALL OR PORTIONS OF RIVERSIDE COUNTY APNS:

276-170-001, -007, 294-020-001

297-090-001, -002, -003, -005, 006, -007, -008, -009

297-080-002, -003, -004, -005

RIVERSIDE, CALIFORNIA 92508

Prepared For **MERIDIAN PARK WEST, LLC**
1156 North Mountain Avenue
Upland, California 91786

Prepared By **LEIGHTON CONSULTING, INC.**
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Project No. 13226.002

October 28, 2021

DRAFT



Leighton Consulting, Inc.

A Leighton Group Company

October 28, 2021

Project No. 13226.002

Meridian Park West, LLC.
1156 North Mountain Avenue
Upland, California 91786

Attention: Mr. Timothy Reeves / Mr. Adam Collier

Subject: Phase I Environmental Site Assessment
Meridian - West Campus Upper Plateau
Riverside, California 92508

Leighton Consulting, Inc. (Leighton) is pleased to present this draft copy of the Phase I Environmental Site Assessment for the subject property in Riverside, California, including all or portions of fifteen Riverside County Assessor Parcel Numbers (APNs): 276-170-001, -007, 294-020-001, 297-090-001, -002, -003, -005, 006, -007, -008, -009, 297-080-002, -003, -004, -005. Leighton declares that, to the best of our professional knowledge and belief, we meet the definition of Environmental Professional as defined in §312.10 of 40 Code of Federal Regulations (CFR) 312, and the ASTM International E1527-13.

Leighton has the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject site. Leighton has developed and performed all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

If you have questions regarding this report, please contact us. We appreciate the opportunity to be of service to MERIDIAN PARK WEST, LLC.

Respectfully submitted,

LEIGHTON CONSULTING, INC.

Robert B. Hansen
Associate Env. Geologist

Distribution: Addressee

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1.0 INTRODUCTION

1.1 Authorization

Leighton Consulting, Inc. (Leighton) performed a Phase I Environmental Site Assessment (ESA) for the subject property (“Site”) located in Riverside, California (Site Location Map - **Figure 1**). This work was completed in general accordance with our authorized agreements with MERIDIAN PARK, WEST, LLC (Client).

1.2 Purpose

The purpose of the Phase I ESA was to identify recognized environmental conditions (RECs), historical RECs (HRECs), or controlled RECs (CRECs) in connection with the Site. The assessment was conducted in general accordance with ASTM E1527-13 guidelines (ASTM E1527-13, 2013).

According to ASTM E1527-13, RECs are defined as *“the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. De minimis conditions are not RECs.”* De minimis conditions are defined by ASTM 1527-13 as *“a condition that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be de minimis conditions are not recognized environmental conditions nor controlled recognized environmental conditions.”*

According to ASTM E1527-13, HRECs are defined as *“a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls.”*

According to ASTM E1527-13, CRECs are defined as *“a REC resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority, with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls.”*

1.3 Scope of Work

The scope of work was performed in accordance with the Leighton’s proposal (TE21-157), and included the following tasks:

- A reconnaissance-level visit of the Site for evidence of existing or potential release(s) of hazardous materials and/or petroleum products;

- A review of records (including previous environmental reports if applicable, selected governmental databases, and historical Site usage information);
- Interviews; and
- Preparation of this report presenting our findings and recommendations.

1.4 Significant Assumptions

Leighton assumes that the purpose of this Phase I ESA is to provide appropriate inquiry into the previous ownership and use of the Site so that the Client may qualify for the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) landowner liability protections as defined in CERCLA, 42 USC §9601(35)(B). Leighton also assumes that the information provided by the Client and its agents, regulatory environmental database search provider, and regulatory agencies is true and reliable.

1.5 Limitations and Exceptions

This Phase I ESA was conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions.

The observations and conclusions presented in this report are professional opinions based on the scope of activities, work schedule, and information obtained during the assessment described herein. Opinions presented herein apply to property conditions existing at the time of our study, and cannot necessarily be taken to apply to property conditions or changes that we are not aware of or have not had the opportunity to evaluate. It must be recognized that conclusions drawn from these data are limited to the amount, type, distribution, and integrity of the information collected at the time of the investigation, and the methods utilized to collect and evaluate the data. Although Leighton has taken steps to obtain true copies of available information, we make no representation or warranty with respect to the accuracy or completeness of the information provided by others.

This practice does not address whether requirements, in addition to all appropriate inquiry have been met in order to qualify for the landowner liability protections including the continuing obligation not to impede the integrity and effectiveness of activity and use limitations, or the duty to take reasonable steps to prevent releases, or the duty to comply with legally required release reporting obligations. Users should also be aware that there are likely to be other legal obligations with regard to hazardous substances or petroleum products discovered on the subject site that are not addressed in this practice, and that may pose risks of civil and/or criminal sanctions for non-compliance.

The Client is referred to **Appendix I** regarding important information provided by Geoprofessional Business Association (GBA) on geoenvironmental studies and reports.

1.6 Special Terms and Conditions

The scope of work for this Phase I ESA did not include (unless otherwise stated): testing of electrical equipment for the presence of polychlorinated biphenyls (PCBs); collection of environmental samples from soil, air, water, soil gas, building materials, paint, or other media; assessment of natural hazards such as naturally occurring asbestos, radon gas or methane gas; assessment of the potential presence of radionuclides; or assessment of nonchemical hazards such as the potential for damage from earthquakes or floods, or the presence of endangered species or wildlife habitats. This Phase I also did not include an extensive assessment of the environmental compliance status of the Site or of any businesses operating at the Site, or a health-based risk assessment.

1.7 User Reliance

This report is for the exclusive use of MERIDIAN PARK WEST, LLC. Use of this report by any other party shall be at such party's sole risk.

2.0 SITE DESCRIPTION

2.1 Location and Legal Description

The general location of the Site is shown on attached **Figure 1** (Site Location Map). The Site consists of all or portions of the following fifteen Riverside County Assessor Parcel Numbers (APNs):

- **APN**
- 276-170-007
- 276-120-001
- 294-020-001
- 297-090-001,-002,-003,-005,-006,-007,-008,-009
- 297-080-002,-003,-004,-005

Appendix C includes a map showing the limits of the Site and proposed development. The area of the proposed development is approximately 312 acres. Client has requested an additional 100 feet around the proposed development area be included in the assessment.

The Site is part of the former March Air Force Base, and Leighton is unaware of any specific street address associated with the site.

2.2 Property and Vicinity General Characteristics

The Site includes the former March Air Force Base ordnance storage area. This ordnance area is currently occupied by 14 ordnance storage bunkers, and seven associated buildings in various states of abandonment.

The general vicinity surrounding the Site consists of single and multi-family residential developments (north, west and south), and vacant land or recently constructed (within past year) industrial warehousing, to the east. A zone of approximately 300 to 1,000 feet of undeveloped land exists between the Site and surrounding developed properties.

2.3 Current Use of the Subject Property

The Site is generally unoccupied, with the exception of a tenant which uses some of the former ordnance bunkers for the storage of fireworks. There does not appear to be any manufacturing of fireworks on the Site, and the tenant has confirmed this.

2.4 Descriptions of Structures, Roads and Other Improvements on the Property

The Site contains the former March Air Force Base ordnance storage area. This ordnance area is surrounded by approximate 10-foot high barbed-wire-topped, chain link fencing, and makes up approximately 70% of the Site. The remainder of the Site is undeveloped land. The former

ordnance area is currently occupied by 14 single-story, concrete ordnance storage bunkers (circa 1950's and 1960's), and seven other associated single-story buildings (circa late 1950's to mid 1960's) in various states of abandonment. Numerous asphalt paved roads, as well as dirt roads, exist within the ordnance area, and connect the various structures. The general layout and limits of the Site are shown on attached **Figure 2**.

The Site/proposed development area extends beyond the limits of the fenced, former ordnance area (mostly to the north and west of it) into areas which are vacant/undeveloped land. These additional Site areas contain numerous dirt roads.

The following utilities would likely provide future services to the Site:

Natural Gas:	Southern California Gas Co.
Source of Potable Water:	Western Municipal Water District
Electric:	City of Riverside
Sewage Disposal:	Western Municipal Water District
Waste Disposal:	City of Riverside/Burrtec

2.5 Current Uses of Adjoining Properties

Properties immediately adjoining the Site are vacant and undeveloped. Another 300 to 1,000 feet beyond this are various nearby developments described in the table below. Photos of the nearby properties described below are provided in **Appendix B**, and the photo locations indicated on **Figure 2**.

Direction	Address	Nearby and Adjoining Property Use
North	N/A	Vacant undeveloped land Single family residences (Appendix B - Photo 31)
East	N/A	Vacant undeveloped land Recently constructed warehouse
South	N/A	Vacant undeveloped land Single family residences (Appendix B - Photo 47)
Southwest	19900 Grove Community Dr.	The Grove Community Church (Appendix B - Photo 48)
West	N/A	Vacant undeveloped land Single family residences (Appendix B - Photo 33)

3.0 USER PROVIDED INFORMATION

The User of this Phase I ESA is identified as MERIDIAN PARK WEST, LLC. As a part of the ASTM E1527-13 process, the User was forwarded a questionnaire regarding the property. Mr. Adam Collier of MERIDIAN PARK WEST, LLC completed the User questionnaire, a copy of which is included in **Appendix D**. A summary of information provided is discussed below.

3.1 Environmental Liens or Activity and Use Limitations (AULs)

Mr. Collier reported it is unknown if any environmental liens or AULs exist for the Site.

Leighton subcontracted NETR to research for potential environmental liens or AULs. A review of the environmental lien/AUL search report indicates none were reported associated with the Site. Copies of the lien search reports are provided in **Appendix E**.

3.2 Specialized Knowledge

Mr. Collier reports no specialized knowledge or experience related to the former operations, or current activities, on the Site.

3.3 Commonly Known or Reasonably Ascertainable Information

Mr. Collier reports no knowledge of any specific chemicals formerly used or stored on the Site, no known spills of chemicals on the Site, or any environmental cleanups which have taken place at the Site.

3.4 Valuation Reduction for Environmental Issues

Mr. Collier did not indicate knowledge of any purchase price for the property or potential valuation adjustments related to known environmental impacts, and reports the acquisition terms are based on a prior agreement from 2001.

3.5 Owner, Property Manager, and Occupant Information

The Phase I User identified March Joint Powers Authority (MJPA) as the property owner. MJPA manages the Site, and currently leases portions of it to a fireworks company for use as storage of finished firework products.

The Client was forwarded a copy of the Phase I Owner/Site Manager Questionnaire. Information received re. this questionnaire is discussed below in **Section 6.0**.

3.6 Reason for Performing Phase I ESA

According to the client/User, the Phase I ESA is being completed prior to purchase of the Site.

3.7 Other

Mr. Collier did not sign the User questionnaire. This data gap is not considered significant in consideration of all other information obtained during the assessment.

No other significant user information was provided.

4.0 RECORDS REVIEW

4.1 Physical Setting Source(s)

Leighton reviewed pertinent maps, readily available literature and databases for information on the physiography and hydrogeology of the Site. A summary of this information is presented in the following subsections.

4.1.1 Topography

The Site is predominantly (approximately 70% or greater) located in Section 16 of Township 03 South, Range 04 West, relative to the San Bernardino Baseline and Meridian. The remaining portions of the Site are found in Section 17 (western-most portion) and Section 21 (southern-most portion).

The Site is located on the United States Geological Survey (USGS) Riverside East, 7.5-Minute Topographic Quadrangle dated 2012 (USGS, 2012). The predominant overall downward slope of the Site vicinity is northwest to north. The Site itself is mounded in its central portions, and slopes downward in several directions. The Site elevations range from approximately 1,620 to 1,760 feet above mean sea level (msl).

4.1.2 Surface Water

No surface water bodies were observed on the Site. The closest large surface water body (i.e. ocean, lake, river, creek, reservoir, etc.) to the Site is the Perris Reservoir, approximately 6.5 miles to the southeast.

The average annual precipitation in the general Site vicinity (reporting station: Riverside Fire Station 3, CA) is approximately 10.33 inches (NOAA, 2021).

4.1.3 Shallow Soils

Shallow soils encountered during a separate geotechnical investigation are reported to consist of approximately two to seven feet of topsoil (comprised of silty sand and silty clayey sand) underlain by granitic bedrock of varying degrees of weathering (Leighton, 2021).

4.1.4 Geology / Hydrogeology (Groundwater Depth and Flow Direction)

The Site is located within a prominent natural geomorphic province in southwestern California known as the Peninsular Ranges. This province is characterized by steep, elongated ranges and valleys that trend northwestward. More specifically, the Site is located within the relatively stable Perris Block.

The Perris Block, approximately 20 miles by 50 miles in extent, is bounded by the San Jacinto Fault Zone to the northeast, the Elsinore Fault Zone to the southwest. The Perris Block has had a complex tectonic history, apparently undergoing relative vertical land-movements of several thousand feet in response to movement on the Elsinore and San Jacinto Fault Zones. Thin sedimentary and volcanic materials locally mantle crystalline bedrock, consisting of the Val Verde Tonalite (Kvt) and lesser amounts of Cretaceous granitic dikes (Kg).

The Site is located at the eastern edge of the San Jacinto River Groundwater Basin, adjoining just west of the Perris North groundwater subbasin. Existing beneficial uses designated in this subbasin include: municipal, agricultural, industrial and process supply; however, the Site appears to be just outside (west of) this subbasin (SARWQCB, 2019).

A separate geotechnical investigation included six soil borings drill at the Site to mostly depths of 40 to 50 feet. Of the six soil borings drilled, only one encountered groundwater. Groundwater was encountered at a depth of approximately 48 feet bgs, in the underlying bedrock (Leighton, 2021). Based on topography of the Site, the flow direction of groundwater is estimated to be west to northwest beneath most of the Site, with some flow to the east beneath the eastern-most portions of the Site.

4.2 Standard Environmental Record Sources

Leighton contracted a search of selected environmental databases. The search was completed by Environmental Data Resources, Inc. (EDR). The search was done in general accordance with requirements of ASTM E1527-13. A copy of the database search report is provided in **Appendix F**; however, a summary of the results is discussed below.

4.2.1 Subject Property

Listings found pertaining to the Site are summarized as follows:

SITE LISTINGS	
Listing Name	Address / Location
March Air Force Base/ March Air Force Base (CLOSED)	Regional
<p>The Site is listed in various environmental databases, within in the context of a larger regional listing for the former March Air Force Base. Databases in which the former March Air Force Base are listed include: DOD, NPL, SEMS, RCRA-LQG, US ENG CONTROLS, US INST CONTROLS, ROD and PRP. It is our judgement that these listings may or may not be connected to the specific Site, and that assessment of the Site via other sources is necessary.</p>	

4.2.2 Offsite

Provided below is a brief summary of some of the more notable off-site database listings, notable either due to their proximity to the Site, and/or nature of their listing:

NOTABLE LISTINGS	
Listing Name	Address / Location
Mills Tank D	14255 Vista Grande, Riverside
This facility is plotted adjoining north of the Site, and is believed to be the large above-ground water storage tank adjoining north of the Site. It is listed in the RCRA Nongen/NLR database in connection with the Eastern Municipal Water District. It is our judgement this listing does not indicate evidence of a likely REC on the Site.	
9th Street Italian	19638 Webster Road
This facility is plotted a few hundred feet west of the Site in a residential neighborhood. It is listed in the EDR HIST AUTO database, and indicated as a gasoline station (in 2013 & 2014). It appears highly unlikely a gas station existed here, and the listing may be mis-plotted, or a home address used in connection with a business elsewhere. It is our judgment this listing does not indicate evidence of a likely REC on the Site.	
Paul Small	14150 Barton Street
This facility is approximately 900 feet north of the Site in a residential neighborhood. It is listed in the RCRA NonGen/NLR database. It is our judgment this listing does not indicate evidence of a likely REC on the Site.	
Benjamin Franklin Elementary School	19661 Orange Terrace Parkway
This facility is a public school approximately 0.5 miles southwest of the Site. It is listed in the ENVIROSTOR, SCH and CERS databases. It is our judgment these listings do not indicate evidence of a likely REC on the Site.	
March USAR	3,545 Acres, E. of Riverside
This facility is plotted approximately 0.7 miles east of the Site, and has a listing in the ENVIROSTOR database. The case is reported as a military evaluation requiring no further action. The listing provides very little specific data on its location, or nature of the listing. It is our judgment this listing, by itself, does not indicate evidence of a likely REC on the Site.	

No other database listings of potential concern were reported. A review of reported “Orphan” facilities (facilities with locations that cannot reliably be plotted) also indicated no concerns. **In summary, the database search report resulted in no On- or Off-Site**

listings with evidence they have likely created a REC on the Site. A copy of the database search report is provided in **Appendix F**.

4.2.3 Regulatory Agency Contacts

Leighton staff researched other reasonably ascertainable, local and regional regulatory agency records. The results are summarized below:

Riverside County Department of Environmental Health (RCDEH)
The RCDEH will not process records search requests with only APNs (i.e. street address needed). This data gap is judged to have a low likelihood of significance based on all other data collected during this assessment.
State of California Dept. of Toxic Substances Control (DTSC)
A request for a records search was made to the DTSC, Cypress and Chatsworth offices, under the current Site APNs. The Chatsworth office responded by deferring to the Cypress office. The Cypress office indicated <u>no</u> records were found for the Site (see Appendix G).
State of California Regional Water Quality Control Board, Santa Ana Region (SARWQCB)
The SARWQCB will not process records search requests with only APNs (i.e. street address needed). This data gap is judged to have a low likelihood of significance based on all other data collected during this assessment.
Envirostor - DTSC Envirostor Database
A review of the DTSC Envirostor database revealed <u>no</u> listings on the Site, or within a one-mile radius, with the exception of: <ul style="list-style-type: none">• <u>Benjamin Franklin School (19661 Orange Terrace Parkway)</u> – This listed school facility is not considered evidence of a likely REC on the Site.
GeoTracker - State of California Water Resources Control Board GeoTracker Database

The State of California Water Resources Control Board maintains the GeoTracker database which includes various facilities with current or former environmental investigations. Types of listed cases include: leaking USTs, permitted USTs, other cleanup program cases, military cleanup cases, land disposal cases, and confined animal facilities.

A review of the GeoTracker database revealed no listings for the Site, and two nearby listings within 0.5 miles of the Site (GeoTracker, 2021). These two closest listings are summarized/discussed below:

- Site 25 - March Air Force Base – US Air Force, former March AFB – OU-2-Site 25 Munitions Burial Site (DOD100288200) (North of Iris Canyon Rd and West of Indigo Point, Riverside, CA 92518) - This listing is for a military cleanup case which was closed on May 12, 2004. It is plotted approximately 1,500 feet southeast of the Site, but is judged to be essentially adjoining the Site to the southeast (see **Figure 2**).

This facility is reported to be a 33-acre former military area used in the past for open air detonations and burning of munitions. Three areas with shallow trenches were used to bury munitions residue after destruction. Reported soil contaminants include munition residues such as: nickel, 1,3,5-trinitrobenzene, nitroglycerin, benzo(a)pyrene, RDX and 1,1-dichloroethene. Groundwater is reported to have been within the weathered bedrock at 15 to 45 feet deep. The USAF was concerned with soil contaminants causing groundwater impacts, so in 1996, excavated 3,000 cubic yards of non-hazardous waste and soil from the trenches, and disposed of them in an engineered waste cell at Site 6 (USAF, 2004). This engineered waste landfill (Site 6) is approximately 1.5 miles south-southeast of the Site. The approximate primary area of soil remediation within Site 25 is shown on attached **Figure 2**, and is roughly 600 feet southeast of the Site.

Confirmation soil samples collected after the removal action at Site 25 reported detections of residual dioxins, 4,4'-DDT, and 4,4'-DDE. The dioxin TCDD equivalent concentration for the maximum sample with dioxin and furans is reported as 2×10^{-6} , less than the Risk Based Preliminary Remediation Goal (RPRG) of 3.9×10^{-6} mg/kg. The detected 4,4'-DDT and 4,4'-DDE are reported also be less than the RBPRGs. No VOCs, semi-VOCs, chlorinated herbicides, PCBs, PAHs, organophosphorus pesticides, or nitroaromatics/nitroamines were detected in the confirmation soil samples. The residual organic compounds in the soil, after the removal actions, are reported to not pose a risk above the range identified in the NCP (National Contingency Plan) to residential receptors based on the RPRGs. Reported potential future land uses for Site 25 include: Business Park (preferred) and Residential or Stephens Kangaroo Rat Conservation (alternative uses) (USAF, 2004).

Focused groundwater monitoring was completed at Site 25, and no contaminants of concern were reported to have been detected. Groundwater at Site 25 is reported to flow to the east (i.e. away from subject Site) (USAF, 2004).

- Site 3 - March Air Force Base – US Air Force, former March AFB – OU-2-Site 3 Landfill No. 5 (DOD100278800) Riverside, CA 92518 - This listing is for a military cleanup case which was closed on February 3, 1997. It is plotted approximately 1,800 feet east of the Site, but is estimated to be as close as approximately 1,000 feet east of the Site.

This facility is a reported former 23-acre landfill located south of Cactus Ave. and west of Plummer Road. The landfill was used from 1954 through 1974 for household and dumpster wastes, construction debris and military waste from the base. Contaminants reported in the waste include: VOCs, pesticides, PCBs, PAHs and munitions residues. The USAF was concerned with soil contaminants causing groundwater impacts, so excavated 223,200 cubic yards of landfilled materials and soil, and disposed of them in an engineered waste cell (Site 6) in 1995 and 1996 (USAF, 2004). This engineered waste landfill (Site 6) is approximately 1.5 miles south-southeast of the subject Site.

Soil confirmation samples collected after the removal action at Site 3 reported detections of residual PAHs and one PCB in surface/near surface soils, all at concentrations generally below RPRGs. No VOCs, semi-VOCs, chlorinated herbicides, PCBs, PAHs, organophosphorus pesticides, or nitroaromatics/nitroamines are reported to have been detected in the confirmation soil samples. In summary, the USAF reports that Site 3 no longer poses a threat to human health above the manageable risk range identified in the NCP, and no further action was recommended. Reported potential future land uses for Site 3 include Business Park (preferred) and Public Facilities/Recreational or Stephens Kangaroo Rat Conservation (alternative uses) (USAF, 2004).

Groundwater is reported beneath Site 3 at depths of 15 to 25 feet, with a flow direction to the northeast (i.e. away from Site). Groundwater sampling conducted at Site 3 after the removal action is reported to have shown no detectable concentrations of the contaminants that were detected prior to the removal action. The removal actions at Site 3 are reported to have eliminated the potential for migration of contaminants to groundwater (USAF, 2004).

California Department of Conservation, Geologic Energy Management Division (CalGEM)

The CalGEM Well Finder database was reviewed on-line to search for any indication of the presence of an active or abandoned oil or gas wells, on or within the vicinity of the Site. The review indicated no wells within at least a 1.0 mile radius of the Site (CalGEM, 2021).

National Pipeline Mapping System (NPMS)

A review of the NPMS pipeline database revealed one gas transmission pipeline on the Site itself. The pipeline trends roughly east-west through the northern portion of the Site/proposed development area. The approximate pipeline location is shown on attached **Figure 2**. The pipeline is identified with the following information:

- Southern California Gas Co, Transmission, Natural Gas, Active (filled), Pipeline ID 117

Several attempts were made (via telephone and email) to contact the Southern California Gas Co. to obtain further information on this pipeline, but no responses were received. It is our judgement there is a low likelihood that current operations of this natural gas pipeline has impacted the Site with a REC; however, no information could be obtained regarding historical operations.

The review of the pipeline database revealed no hazardous liquid pipelines, no pipeline incidents (gas), accidents (liquid), or other gas pipelines, within approximately one mile of the Site (NPMS, 2021).

South Coast Air Quality Management District (SCAQMD)

An on-line records search was completed using the SCAQMD F.I.N.D database. The database reported no records associated with the Site or immediately adjoining properties (SCAQMD, 2021).

Copies of the various local and regional agency records requests and responses are provided in **Appendix G**.

4.2.4 Radon

Radon is not regulated within the State of California. Nonetheless, the California Department of Health Services (CDPH) and the USEPA both recommend a threshold of 4 picocuries per liter (pCi/L) above which certain precautions be taken to mitigate radon buildup in structures.

The Site is reported to be located in Zone 2, which has a likely predicted average indoor radon screening levels between 2 and 4 pCi/L.

4.2.5 Other Reports

No prior environmental reports associated with the Site were provided by the Client for review, or found during this assessment.

4.2.6 Vapor Encroachment

A vapor encroachment screening was completed in general accordance with ASTM Standard Guide E2600-10. Our modified Area of Concern (AOC) is defined as follows:

<u>Direction Relative to Site</u>	<u>AOC - VOC Vapors</u>	<u>AOC - Petroleum HC Vapors</u>
Up Gradient Source	1,760 feet	520 feet
Cross Gradient Source	365 feet	165 feet
Down Gradient Source	100 feet	100 feet

Based on various research discussed within this report, no facilities with reported releases of VOCs were identified within the modified AOCs discussed above, with the following possible exception:

- Site 25 - US Air Force, former March AFB – OU-2-Site 25 Munitions Burial Site
- This facility is located adjoining southeast of the Site, and was previously discussed above in 4.2.3 (Geotracker). It is a former munitions burial site. In 1997, the USAF excavated 3,000 cubic yards of non-hazardous waste and soil from this facility and disposed of them in an engineered waste landfill (Site 6) 1.5 miles south-southeast of the subject Site.

Reported soil contaminants include munition residues such as: nickel, 1,3,5-trinitrobenzene, nitroglycerin, benzo(a)pyrene, RDX and 1,1-dichloroethene. Confirmation soil samples collected in 1997, after the removal action at Site 25, reported detections of residual dioxins, 4,4'-DDT, and 4,4',-DDE. No VOCs, semi-VOCs, chlorinated herbicides, PCBs, PAHs, organophosphorus pesticides,

or nitroaromatics/nitroamines were reported to have been detected in the confirmation soil samples.

No evidence was found to indicate soil gas samples were collected for VOCs during or subsequent to this 1997 removal action. This is not unexpected given that vapor intrusion was not a common concern in 1997. A review of the USAF documents related to the adjoining Site 25 indicate that groundwater beneath the former burial area was reported to flow to the east, making it a down gradient source from the subject Site. The Site 25 documents also indicate the main remediation areas (3 areas) were 600 feet from the Site, and greater than 1,000 feet from the closest proposed building for the subject Site (see **Figure 2** and Site Development Plan in **Appendix C**). **Despite the absence of known soil gas data from Site 25, it is our judgment it is not a VEC for the subject Site based on the reported groundwater flow direction (east), and the distance between the subject Site and the reported Site 25 remediation area.**

4.3 Historical Use Information on the Property

Following is a summary of our review of records regarding historical usage of the Site and adjoining properties, as this information pertains to the potential for environmental concerns.

Info Type	Years	Source	Summary of Review
Topo Maps	1901 1942 1947 1953 1967 1980 2012	EDR	<ul style="list-style-type: none"> • 1901-1947: Maps show no development on the Site except a dirt road in the western and southern portions. Allesandro Blvd. is visible north of Site. • 1953: Map shows a complex of curvy roads in the center of the Site (i.e. the oldest configuration of ordnance storage bunkers). A pipeline is indicated along the present day alignment of the So. Cal Gas pipeline (transecting the Site roughly E-W). • 1967-2021: Maps show the Site roads largely in their present day configuration, with increased surrounding development by single family residences over this period.

<p style="text-align: center;">Aerial Photos</p>	<p>1931 1938 1949 1953 1962 1967 1976 1978 1985 1989 1994 2002 2006 2009 2012 2016</p>	<p style="text-align: center;">EDR UCSB</p>	<ul style="list-style-type: none"> • 1931-38: The 1931 photo only partially covers the western portion of Site. Photos show no development on Site, just a few dirt roads transecting the Site. Limited dry farming is visible at the northern, western and southern edges of the Site. • 1949: Photo shows a complex of curvy roads and ordnance storage bunkers in the center of Site. Several small buildings are also visible near/between some of the bunkers. Two cleared/disturbed areas are visible near: 1) the northeastern most bunkers (Figure 3 - 1949: Cleared Area 1) and 2) near the southern most bunkers (Figure 3 - 1949-1967: Cleared Area 2). While the above-mentioned bunkers and building are no longer present, the curvy roads remain to present day as a reference. Additionally, a cleared pathway is visible along the present day alignment of the Southern California Gas pipeline transecting the northern portion of the Site (roughly E-W), indicating this pipeline may have existed at this time, or is under construction. <p>The Site appears to be accessed from two main roads; one entering from the east, and one entering from the south.</p> • 1953: Photo is similar to 1949 photo, but another road-line of ordnance storage bunkers have been added west of the original ones (i.e. the eastern-most road-line of present day bunkers). Two new buildings/storage areas are noted at: 1) northwestern end of the ordnance bunkers (Figure 3 - 1953: Bldg/Stor Area 1), and 2) near the southern ordnance bunkers (Figure 3 - 1953: Bldg/Stor Area 2). • 1962-1967: Seven buildings have been constructed in in NE quadrant of the Site (i.e. present day buildings), and another road-line of ordnance bunkers have been installed further west of prior ones (i.e. present day western most line of bunkers). The Site appears similar to the present day configuration, except the oldest ordnance bunkers in center of Site are still present. Several of the older buildings mentioned above (from 1940's-1950's) are now gone. An unknown U-shaped feature with a connecting access road is first visible near the northern Site edge (Figure 3 – 1967-89: U-Shaped Feature). This feature appears to be a concrete pad, not a building. <p>By 1967, the southern access road to the Site area no longer appears used, while the eastern access road remains.</p> <p>Adjoining southeast of Site is an area of disturbed soil believed to be the munitions burial site (Site 25) which is discussed above in Section 4.2.3 (Geotracker).</p> • 1976-1989: The original (late 1940's) ordnance bunkers in the center of the Site have been removed by 1976 (but curvy roads remain at present day). The Site now appears largely in its present day configuration. The So. Cal Gas pipeline alignment remains visible transecting through northern portion of Site (E-W). The unknown U-shaped feature near
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			<p>northern Site edge is visible and appears to have disturbance/activity mostly around its southern, western and northern most sides.</p> <p>The munitions burial site (Site 25) remains visible adjoining southeast of Site. By 1985, the above-ground water tank north of the Site is visible, and some of the single family residences north of the Site have been constructed.</p> <ul style="list-style-type: none"> • 1994: The Site appears in its present- day configuration and similar to prior photos (i.e. 1976-1989). Single family residential developments are now visible south of Site. The unknown U-shaped feature near northern Site edge is visible, but no longer appears used. • 2002: Site appears in its present-day configuration. Surrounding properties to north, west and south are developed with present day single-family residences. Adjoining southeast munitions burial area (Site 25) appears to be re-vegetated (i.e. remediation completed). • 2006-2016: Site appears in its present-day configuration. A fireworks manufacturer utilizes some of the ordnance bunkers for storage of product at present day (based on site recon only). <p>Surrounding properties to north, west and south are developed with the present-day single-family residences. Grove Community church has been constructed adjoining southwest of site.</p>
Fire Ins Maps	N/A	EDR	No coverage reported for Site.
City Direct-ories	1921-2007	EDR	The city directory search revealed no listings associated with the Site.
<p><u>Summary of Historical Review</u></p> <p>1930's - The Site was undeveloped and unused during the 1930's, with the exception of some dry farming along the northern, western and southern edges.</p> <p>1940's - By 1949, a series of ordnance bunkers, and a few small nearby buildings had been constructed along some curvy roads in the center of the Site (note: curvy roads are still present, but these original bunkers and buildings are not). A few cleared/disturbed areas also existed in this original central ordnance bunker area.</p> <p>1950's & 1960's - In the 1950's, an additional road-line of bunkers was installed west of the original bunkers, as well as a few small nearby buildings. In the early 1960's, a second road-line of bunkers was added further to the west. Also in the early 1960's, seven buildings (that exist at present day) were constructed in the NE quadrant of the Site, and older buildings (from 1940's & 50's) had been removed.</p> <p>1970's - By 1976, the original historical ordnance bunkers in the central portion of the Site had been removed, and the Site appeared largely in its present-day configuration.</p>			

1980's- Present – From at least 1976 through present, the Site has remained in its present-day configuration, with increasing residential development occurring to the north, west and south of the Site. Based on the reviewed historical sources, it is unknown when the ordinance complex was no longer used by the military; however, March Air Force Base was closed in 1996 (and converted to March Air Reserve Base).

From at least 1949 to present, a pipeline alignment is visible in the northern portion of the Site (transecting roughly E-W). This pipeline is currently operated by the Southern California Gas Company. From at least 1962 to 1989, an unknown U-shaped feature (likely concrete pad) and associated access road have existed near the northern edge of the Site (see **Figure 3**).

Based on the historical Site usage review, the following potential environmental concern areas are noted:

- **Building Hazardous Materials** - The present day ordnance bunkers and buildings on the Site are approximately 60 years old, and may have asbestos containing building materials, lead based paint, and other universal rule wastes. In regards to the ordnance bunkers only, they appear constructed entirely of concrete, and the potential for asbestos is limited (lead paint remains a concern). A hazardous materials survey is recommend for all existing buildings and bunkers.
- **U-Shaped Feature** - The unknown U-shaped feature in the northern portion of the Site, actively used from approximately 1962 to 1989, is a concern (see **Figure 3**). Limited shallow soil sampling (0-5 feet bgs) focused around it southern, western and northern edges is recommended.
- **Historical Storage/Cleared Areas** - Various historical areas which were cleared, used for storage, or had former buildings, existed during the late 1940's and 1950's at several locations on the Site (see **Figure 3**). These areas are a concern, and limited shallow soil sampling (0-5 feet bgs) is recommended.
- **Site 25 (former Munitions Burial Area)** - A former munitions burial area existed adjoining southeast of the Site, from at least 1967 to approximately 2002. Based on information provided in USAF documents (discussed above in Section 4.2.3 -Geotracker), it is our judgement there is a low likelihood this facility has impacted the Site with a REC.

Copies of selected documents used to assess historical Site and adjoining property usages (i.e. topographic maps, aerial photos, city directories, etc.) are provided in **Appendix H**.

5.0 SITE RECONNAISSANCE

5.1 Methodology and Limiting Conditions

On August 5, 2021, a representative of Leighton conducted a reconnaissance-level assessment of the Site. The reconnaissance consisted of observing and documenting existing conditions on the Site and adjoining properties.

Photographs of the Site are provided in **Appendix B**. The locations, orientations and designations of the photographs are shown on **Figure 2**.

5.2 General Property Setting

The Site is generally located south of Camino Del Sol Avenue, on either side (east and west) of Vista Grande Drive, in Riverside, California. The Site consists of a former military ordnance storage facility along with some undeveloped land, and is surrounded by a buffer of undeveloped land, followed by single family residences to the North, West and South of the Site. Land to the east of the Site (nearby but not adjoining) is developed, or is being developed, with commercial and industrial projects.

5.3 Exterior and Interior Observations

Seven buildings and 14 earthen-covered, concrete ordnance storage bunkers are present on the Site (see **Figure 2**).

High security fencing (see **Appendix B – Photo 49**) surrounds the ordnance bunkers and six of the seven buildings mentioned above. The seventh building is just outside the security fencing, but is related to the former military operations (former housing and associated guard dog kennels). The seven buildings are labelled as **Buildings 1-7** on attached **Figure 2**.

The seven buildings appear to have been used for various former military/industrial purposes, and access to a few of the buildings was highly limited by: Building 1 - a collapsed roof (no access at all), Building 4 - locked/rusted doors (most of interior not accessible), and Building 3 - large amounts flat cardboard stored.

Pyro Spectaculars, Inc., a fireworks manufacturer, is a tenant which uses the ordnance bunkers and one of the buildings (Building 3) for storage. All other buildings appear unused and abandoned long ago (to the extent they could be accessed/viewed). Other developments on the Site include a large above-ground water tower north of Building 2 (**Appendix B – Photo 50**), and a small water cooling tower between Buildings 1 & 2 (**Appendix B – Photo 10**) (see **Figure 2**).

5.3.1 Hazardous Substances, Drums, and Other Chemical Containers

Several small containers of used motor oil were observed in Building 3 (**Appendix B – Photo nos. 5 & 6**). The containers are on a concrete surface noted to be in fair condition, with no evidence of leakage, spillage or staining.

A flammable materials cabinet was also present in Building 3. The cabinet contained six portable diesel fuel cans (**Appendix B – Photo 7**). No evidence of leakage, spillage or staining was observed beneath the cabinet.

The fourteen observed ordnance bunkers are themselves storage areas for likely hazardous substances, both currently (i.e. fireworks products) and formerly (military ordnances). No evidence of floor staining was observed in the bunkers, and the concrete flooring was noted to be in excellent condition. The bunkers are constructed of concrete. Attached **Photos nos. 14-18 and 46 (Appendix B)** show various views of the ordnance bunkers. The western most road-line of bunkers each appear to contain a smaller concrete vault within the interior of each bunker, while the eastern most road-line do not. These bunkers were constructed at differing times (see Section 4.3, Summary of Historical Review, 1950's-1960's).

5.3.2 Storage Tanks

Three small tanks (approximately 40 to 50 gallons) containing an unknown refined petroleum product were observed attached to the interior walls of Building 2 (**Appendix B – Photo nos. 28 & 30**). The tanks are connected to various process piping within the building interior (see **Appendix B- Photo nos. 28-30**). Some limited oil staining was observed on the nearby concrete floor, however, observations were limited by the large quantities of bird feces. The amount of piping and equipment, and evidence of liquid processes, is a concern, and assessment of the soils beneath this building is recommended.

An above ground tank elevated on a tower also exists at the Site adjoining north of Building 2 (**Appendix B – Photo 50**). This is assumed to have been a water tower, and is not considered a likely environmental concern.

A potential UST vent line was noted on the exterior northern wall of Building 1 (**Appendix B – Photo 43**). Further investigation of this feature is recommended via a geophysical survey.

No other evidence of underground or aboveground storage tanks was observed on the Site.

5.3.3 Polychlorinated Biphenyls (PCBs)

Evidence of potential PCBs was noted near features and locations as follows:

- A fenced electrical substation-type enclosure is located on the east side of Building 2, with empty transformer cans on the ground, indicating possible scavenging of metals (**Appendix B - Photo nos. 44, 11 & 9**).
- A fenced electrical substation-type enclosure is also located on the east side of Building 4, with empty transformer cans on the ground, indicating possible scavenging of metals (**Appendix B - Photo 45**).
- At least many dozens of pole-mounted transformers were observed scattered throughout the Site. No specific evidence of staining was noted on the soil near selected poles which were observed. **Photo nos. 12 & 13** in **Appendix B** show a typical pole with mounted transformers and the nearby soil surface.
- Two pad-mounted transformers are located west of Building 5. Building 5 appears to have been the main electrical equipment hub for the ordnance complex. One of the pad-mounted transformers on the west side of Building 5 was observed to be leaking, and stained soil was observed around the base of the transformer (**Appendix B – Photo 24**). The interior of Building 5 also contained large scale electrical distribution equipment which appears to be many decades old (**Appendix B – Photo 23**).
- Two addition enclosures were noted to have pad-mounted transformers, generally near the northeastern-most ordnance storage bunkers. Both enclosures showed evidence of metal scavenging, but no specific staining on the adjoining soil.

Shallow soil sampling for PCBs is recommended near all of the above-mentioned features. In the interior of Building 5, this sampling may be substituted with wipe samples of the concrete flooring near the electrical switching equipment. Selected soil samples that are analyzed for PCBs should also be analyzed for TPH and Title 22 Metals.

PCBs were once used as industrial chemicals whose high stability contributed to both their commercial usefulness and their long-term deleterious environmental and health effects. PCBs can be present in coolants or lubricating oils used in older electrical transformers, hydraulic systems, and other similar equipment. In 1979, the USEPA generally prohibited the domestic manufacture of PCBs in electrical capacitors, electrical transformers, vacuum pumps, hydraulic pumps, and gas turbines.

5.3.4 Waste Disposal

No obvious visual evidence of hazardous waste disposal was observed during the Site reconnaissance.

5.3.5 Dumping

No obvious visual evidence of dumping of chemicals, hazardous substances or petroleum products was observed at the Site.

Minor quantities of inert refuse were observed in several of the buildings on the Site.

5.3.6 Pits, Ponds, Lagoons, Septic Systems, Wastewater, Drains, Cisterns, and Sumps

No obvious visual evidence of pits, ponds, lagoons, septic systems, wastewater, cisterns or sumps was observed on the Site. Based on the former usages of Building 6 (apparent guard station) and Building 7 (housing and guard dog kennels), the presence of septic systems connected to these buildings is moderately likely.

A large storm drain was observed in the central portion of the Site (**Appendix B – Photo 40**). No evidence of staining or etching was noted on the adjoining concrete. The drain is assumed to be plumbed to a storm sewer.

5.3.7 Pesticide Use

No evidence of current or past pesticide use was observed at the Site.

5.3.8 Staining, Discolored Soils, Corrosion

As mentioned above in section 5.3.3, some staining was observed on the soil at the base of a pad-mounted electrical transformer west of Building 5. The staining appears to be emanating from the transformer (**Appendix B – Photo 24**).

Staining of the concrete floor was observed in Building 2 (**Appendix B – Photos 29 & 30**), and in the west portion of Building 4 which contains refrigeration machinery (**Appendix B – Photo 21**). All of the above-mentioned staining was on concrete flooring which appeared to be in fair condition.

5.3.9 Stressed Vegetation

No stressed vegetation was observed on the Site.

5.3.10 Unusual Odors

No unusual chemical odors were detected at the Site.

5.3.11 Onsite Wells

No evidence of wells was observed at the Site.

5.3.12 Other

A water cooling tower was observed between Building 1 and Building 2 (**Appendix B – Photo 10**), with evidence of subsurface piping likely leading to one or both of the nearby buildings. Older water treatment chemicals are a concern, and limited shallow soil sampling around the base of this cooling tower is recommended, especially in regards to metals, including hexavalent chromium. Further assessment of the piping run related to this feature is also recommended (via geophysical survey). The cooling tower itself may contain asbestos containing materials, and should be sampled in this regard.

A decomposed granite stockpile is located on the western portion of the Site. No staining or odors were observed at this material (**Appendix B – Photo no. 33**). The source of this stockpile is unknown. Limited sampling of this stockpile is recommended before the material is disturbed or used.

Numerous treated wood utility poles exist at the Site. A specific count was not completed; however, it is likely more than 200. Some of the poles appear to be used for communications (attenuators), while most are for facility lighting and electrical distribution. Some of the electrical distribution poles contain small pole-mounted transformers as indicated previously in subsection 5.3.3.

A small steel and concrete bunker was observed built into a hillside adjoining southeast of the Site (**Appendix B – Photo nos. 34 & 35**). This is suspected to be small bunker (safety bunker?) for the area further southwest (munitions burial area – Site 25) at which former open air detonations and munitions were reported (see section 4.2.3 - Geotracker).

No other obvious visual evidence of potential environmental concerns was observed on the Site during the reconnaissance.

5.3.13 Non Scope – Asbestos, Lead Based Paint, Mold

No actual sampling or testing for asbestos materials was completed. Only an asbestos survey can confirm the presence or absence of asbestos containing materials. Based on the age of the various structures at the Site, the following potentials for asbestos containing materials are summarized:

- Buildings 1-7, entire buildings - moderate to high likelihood
- Buildings 2 & 4, interior piping - moderate to high likelihood
- Between Buildings 1 & 2, water cooling tower - high likelihood

It is noted that most of Building 4 (locked/rusted doors), and all of Building 1 (collapsed roof) was not accessible.

No actual sampling or testing for lead-based paint or other high lead materials was completed. Only a lead survey can confirm the presence or absence of lead containing materials. Based on the age of the various features at the Site, the following potentials for lead based paint are summarized:

- Buildings 1-7, entire buildings - moderate to high likelihood
- Water Tower - moderate to high likelihood
- Ordnance bunkers - moderate likelihood
- Traffic bollards - moderate likelihood

It is noted that most of Building 4 (locked/rusted doors), and all of Building 1 (collapsed roof) was not accessible.

No actual mold sampling, testing or laboratory analyses were completed during this assessment. Due to the abandoned and partially collapsed nature of several of the buildings, there is a moderate likelihood of mold. Only a mold survey can confirm the presence or absence of mold. It is our understanding that the buildings are not generally occupied currently, or planned to be in the future.

The present-day ordnance bunkers and buildings on the Site are approximately 60 years old, and may have asbestos containing building materials, lead based paint, and other universal rule wastes. In regards to the ordnance bunkers only, they appear constructed entirely of concrete, and the potential for asbestos is limited (lead paint remains a concern). A hazardous materials survey is recommended for all existing buildings and ammunition bunkers.

Attached **Photos 1-50 (Appendix B)** show various additional views/perspectives of the Site.

In summary, the Site reconnaissance revealed the following potential environmental concerns (i.e. potential RECs) for which additional assessment is recommended:

- **Potential UST Vent Line** - A potential UST vent line was observed on the exterior northern wall of Building 1 (**Appendix B – Photo 43**). Further investigation of this feature is recommended via a geophysical survey.
- **Water Cooling Tower** - A water cooling tower was observed between Buildings 1 and 2 (**Appendix B – Photo 10**) with evidence of subsurface piping likely leading to one or both of these nearby buildings. Older water treatment chemicals are a concern, and limited shallow soil sampling around the base of this tower recommended. Further assessment of the piping run related to this feature is recommended (via geophysical survey). The cooling tower itself may contain asbestos containing materials, and should be sampled in this regard.
- **Building 2** – The interior of Building 2 contained three tanks of what appeared to be petroleum liquids and a large amount of process piping (both above the floor and in concrete-lined subgrade trenches) indicating a manufacturing processes involving liquids. The adjoining water cooling tower may have also been connected to this building. The amount of

manufacturing piping and equipment, and evidence of liquid processes, is a concern, and assessment of the soils beneath this building is recommended.

- **Electrical Transformers / Equipment** – Fenced electrical substation-type enclosures exist east of Buildings 2 and 4, with empty electrical transformer cans on the ground, indicating they may have been scavenging for metals (**Appendix B - Photo nos. 44, 11, 9, 45**). Two pad-mounted electrical transformers exist west of Building 5, with evidence of oil leakage onto the soil adjoining one of them (**Appendix B – Photo 24**). The interior of Building 5 also contains large scale electrical distribution equipment which appears many decades old (**Appendix B – Photo 23**). Two additional pad-mounted transformer enclosures exist generally near the northeastern most ordnance storage bunkers, both with signs of metal scavenging, but no obvious evidence of nearby oil staining. Shallow soil sampling for PCBs is recommended near all of the above-mentioned features. In the interior of Building 5, this sampling may be substituted with wipe samples of the concrete flooring near the electrical switching equipment. Selected soil samples analyzed for PCBs should also analyzed for TPH and Title 22 Metals.
- **Undocumented Stockpile** - A decomposed granite stockpile is located on the western portion of the Site. No staining or odors were observed (**Appendix B – Photo no. 33**). The source of this stockpile is unknown. Limited sampling of this stockpile is recommended before the materials is disturbed or used.
- **Wood Poles** - Numerous treated wood utility poles exist at the Site. A specific count was not completed; however, it is likely more than 200. Some of the poles appear to be used for communications (attenuators), while most are for facility lighting and electrical distribution. Some of the electrical distribution poles contain small pole-mounted transformers. An inventory of the poles should be completed, and then a plan developed for representative sampling of the treated wood and soil beneath transformer poles.

Additional non-scope issues of environmental concern include:

- **Building Hazardous Materials** - potential asbestos containing building materials and lead based paint in Buildings 1-7, asbestos materials related to piping in Buildings 2 and 4, and lead based paint in the 14 ordinance bunkers and water tower.

The 14 ordinance bunkers themselves are likely to have stored hazardous materials. No evidence of floor pitting or staining was observed in the bunkers, and the concrete flooring was noted to be in excellent condition. The bunkers are fully constructed of concrete. No obvious visual evidence of a likely REC was noted in the bunkers. A potential non-scope issue associated with the bunkers (i.e. primarily lead based paint) remains a concern though.

6.0 INTERVIEWS

Leighton conducted interviews with persons having knowledge of current or past Site usage. Interviews were conducted either orally or in the form of a written questionnaire. Written responses are included as **Appendix D**.

6.1 Interview with Owners

The property Owner is March JPA, but all correspondences with them are through MERIDIAN PARK WEST, LLC (client/User). MERIDIAN PARK WEST, LLC., provided information from March JPA via a second completed User questionnaire vs. the completion of the Owner/Site Manager questionnaire. In addition, prior discussions with a client/User representative (Mr. Timothy Reeves) indicated that March JPA did not have any detailed information regarding environmental conditions of the Site. Based on the above information, and in consideration of other information obtained during this assessment, the lack of a completed Owner questionnaire is a data gap judged to have a low likelihood of significance.

The second completed User questionnaire indicated information was obtained from Dan Fairbanks of March JPA. The questionnaire indicated prior knowledge of environmental conditions on the property was limited to Environmental Impact Statements from February 1996 and September 1999. No other information was provided in this second User questionnaire which was considered to be of significance in regards the Phase I ESA. The second User questionnaire was also not signed.

6.2 Interview with Property Manager

The Site manager is considered the same as the Site owner (March JPA). No additional information could be obtained from the Site Manager.

6.3 Interviews with Occupants

A fireworks company uses of several of the former ordnance bunkers for the storage of boxed, finished firework products, and portions of Building 3 for the storage of cardboard. It was confirmed that they only use the facility for storage; otherwise, no additional interview was completed with this Site occupant.

6.4 Interviews with Local Government Officials

Leighton did not interview employees with local government agencies.

6.5 Interviews with Others

Leighton did not conduct any other additional interviews. The interview with the User of the Phase I ESA report (MERIDIAN PARK WEST, LLC) is discussed above in **Section 3.0**.

7.0 FINDINGS

Leighton performed a Phase I ESA for the property located in Riverside, California (**Figure 1**).

7.1 Onsite

Attached in **Appendix C** is a map showing the limits of the proposed Site development. The area of the proposed development is approximately 312 acres. Client has requested that an additional 100 feet around the proposed development area be included in this assessment. The Site consists of all or portions of the following 15 Riverside County APNs:

- **APN**
- 276-170-007
- 276-120-001
- 294-020-001
- 297-090-001,-002,-003,-005,-006,-007,-008,-009
- 297-080-002,-003,-004,-005

The Site is part of the former March Air Force Base, and is mostly comprised of a former ordnance storage area. This former ordnance area is surrounded by approximate 10-foot high barbed-wire-topped, chain-link fencing, and makes up approximately 70% of the Site/proposed development area. The remaining area of the Site is undeveloped land.

The former ordnance storage area is occupied by 14 single-story, concrete ordnance storage bunkers (circa 1950's and 1960's), and seven associated single-story buildings (circa late 1950's to mid-1960's) in various states of abandonment. Numerous asphalt paved roads, as well as dirt roads, exist within the ordnance storage area, and connect the various structures.

The Site elevations range from approximately 1,620 to 1,760 feet above msl. Shallow soils consists of approximately two to seven feet of topsoil (comprised of silty sand and silty clayey sand) underlain by granitic bedrock of varying degrees of weathering. Groundwater was encountered at approximately 48 feet bgs (within the bedrock) in one of six former geotechnical borings drilled at the Site. Based on topography of the Site, the flow direction of groundwater is estimated to be west to northwest beneath most of the Site, with some flow to the east beneath the eastern-most portions of the Site.

The Site is listed in various environmental databases within the context of a larger regional listing for the former March Air Force Base. Leighton staff researched other local and regional regulatory records using the current site APNs. DTSC reported no records found for the Site. The RCDEH and SARWQCB were unable to search for records without a street address.

A review of the Envirostor, Geotracker, CalGEM, and SCAQMD FINDS databases revealed no records associated with the Site. A review of the NPMS (pipelines) database revealed a SoCal Gas Co. pipeline transecting through the northern portion of the Site (E-W). Several attempts were made (via telephone and email) to contact the SoCal Gas Co. to obtain further information

on this pipeline, but no responses were received. There is a low likelihood that current operations of this natural gas pipeline has impacted the Site with a REC; however, no information could be obtained regarding historical operations.

No prior environmental reports associated with the Site were provided by the Client for review, or found during this assessment.

Based on research discussed within this report, no facilities with reported releases of VOCs were identified which would indicate a potential Vapor Encroachment Condition (VEC) for the Site, with one potential exception:

- **US Air Force, former March AFB – OU-2-Site 25 Munitions Burial Site** - This facility is located adjoining southeast of the Site. It is a former munitions burial site with reported soil contaminants that included munitions residues such as nickel, 1,3,5-trinitrobenzene, nitroglycerin, benzo(a)pyrene, RDX and 1,1-dichloroethene. In 1997, the USAF excavated 3,000 cubic yards of non-hazardous waste and soil from this facility and disposed of them in an engineered waste landfill 1.5 miles south-southeast of the subject Site. No evidence was found to indicate soil gas samples were collected during this 1997 removal action and subsequent confirmation sampling. This is not unexpected given that vapor intrusion issues were not a common concern in 1997. Despite the absence of known soil gas data for Site 25, it is our judgment it is not a VEC for the subject Site based on the reported groundwater flow direction (east), and the distance between the subject Site and the reported Site 25 remediation areas.

Historically, the Site was undeveloped and unused during the 1930's, with the exception of some dry farming along its edges. By 1949, a series of ordnance bunkers and few small buildings had been constructed in the center of the Site. In the 1950's an additional road-line of ordnance bunkers was installed west of the original bunkers, and then another (further west) in the early 1960's. Also in the early 1960's, seven buildings (that exist at present day) were constructed in the NE quadrant of the Site, and all older buildings (from 1940's or 1950's) were removed. By 1976, the original ordnance bunkers in the central portion of the Site had been removed, and the Site appeared largely in its present-day configuration. It unknown when the ordnance storage area became no longer used by the military; however, March Air Force Base was closed in 1996 (converted to March Air Reserve Base). A pipeline alignment has been visible in the northern portion of the Site (transecting E-W) since the 1940's (present-day SoCal Gas Co. natural gas pipeline).

Since 1976, increasing residential development has occurred nearby (but not adjoining) to the north, west and south. A former munitions burial area (Site 25) existed adjoining southeast of the Site from at least 1967 to approximately 2002. Based on the historical Site development review, the following potential environmental concerns are noted:

- **Building Hazardous Materials** - The present day ordnance bunkers and buildings on the Site are approximately 60 years old, and may have asbestos containing building

materials, lead based paint, and other universal rule wastes. In regards to the ordnance bunkers, they are constructed entirely of concrete, and the potential for asbestos is low.

- **U-Shaped Feature** - From at least 1962 to 1989, an unknown U-shaped feature (likely concrete pad) and associated access road existed near the northern edge of the Site. Its use is unknown.
- **Historical Storage/Cleared Areas** - Various historical areas which were cleared, used for storage, or had former small buildings, existed during the late 1940's and 1950's at several locations in the central portions of the Site (see **Figure 3**).

The Site reconnaissance revealed the following potential environmental concerns for which additional assessment is recommended:

- **Potential UST Vent Line** - A potential UST vent line was observed on the exterior northern wall of Building 1 (**Appendix B – Photo 43**).
- **Water Cooling Tower** - A water cooling tower was observed between Buildings 1 and 2 (**Appendix B – Photo 10**) with evidence of subsurface piping likely leading to one or both of these nearby buildings. Older water treatment chemicals are a concern.
- **Building 2** – The interior of Building 2 contained three tanks of what appeared to be petroleum liquids, and a large amount of process piping (both above the floor and in subgrade concrete-lined trenches) indicating manufacturing processes involving liquids. The adjoining water cooling tower may have also been connected to this building.
- **Electrical Transformers / Equipment** - Pole-mounted electrical transformer banks were observed east of Buildings 2 and Building 4, with the empty transformer cans on the ground, indicating they may have been scavenged for metals (**Appendix B - Photo nos. 44, 11, 9, 45**). Also, west of Building 5 are two large pad-mounted electrical transformers, with evidence of leakage onto the soil adjoining one of them (**Appendix B – Photo 24**). The interior of Building 5 also contains large scale electrical distribution equipment which appears many decades old (**Appendix B – Photo 23**).
- **Undocumented Stockpile** - A decomposed granite stockpile is located on the western portion of the Site. No staining or odors were observed (**Appendix B – Photo no. 33**). The source of this stockpile is unknown.
- **Wood Poles** - Numerous treated wood utility poles exist at the Site. A specific count was not completed; however, it is likely more than 200. Some of the poles appear to be used for communications (attenuators), while most are for facility lighting and electrical distribution. Some of the electrical distribution poles contain small pole-mounted transformers.

The 14 ordnance bunkers themselves are likely to have stored hazardous materials. No evidence of floor pitting or staining was observed in the bunkers, and the concrete flooring was

noted to be in excellent condition. The bunkers are constructed entirely of concrete. No likely evidence of a REC was noted. Potential non-scope issues associated with the bunkers (i.e. primarily lead based paint) remain a concern.

As of the date of this report, no interview or questionnaires were completed by the Phase ESA User or Site Owner/Manager.

7.2 Offsite

The environmental database search indicated no adjoining or nearby facilities likely to have created a REC on the Site. A review of the Envirostor, SCAQMD FINDS, CalGEM and NPMS (pipelines) databases revealed no nearby facilities likely to have created a REC on the Site. A review of the Geotracker database revealed one off Site facility of potential concern:

- **US Air Force, former March AFB – OU-2-Site 25 Munitions Burial Site** - This facility is located adjoining southeast of the Site. It is a former munitions burial site with reported soil contaminants that included munitions residues such as nickel, 1,3,5-trinitrobenzene, nitroglycerin, benzo(a)pyrene, RDX and 1,1-dichloroethene. In 1997, the USAF excavated 3,000 cubic yards of non-hazardous waste and soil from this facility and disposed of them in an engineered waste landfill 1.5 miles south-southeast of the subject Site. Based on our review of documents associated with this facility, it is our judgement there is a low likelihood it has impacted the Site with a REC.

The reconnaissance of adjoining properties revealed no evidence indicating they have likely created a REC on the Site.

8.0 CONCLUSIONS & RECOMMENDATIONS

Following are summary conclusions and recommendations for the Site:

8.1 Onsite

No likely CRECs or HRECs were identified for the Site. The follow potential RECs, and associated recommendations for Phase II assessment are provided:

- **Building Hazardous Materials** - A hazardous materials survey is recommend for all existing buildings, including the ordnance bunkers, a water tower, and a water cooling tower. It is noted that most of Building 4 (locked/rusted doors), and all of Building 1 (collapsed roof) are not accessible.
- **U-Shaped Feature** - From at least 1962 to 1989, an unknown U-shaped feature (likely concrete pad) and associated access road existed near the northern edge of the Site. Its use is unknown. Limited shallow soil sampling (0-5 feet bgs) focused around it southern, western and northern edges is recommended.

- **Historical Storage/Cleared Areas** - Various historical areas which were cleared, used for storage, or had former small buildings, existed during the late 1940's and 1950's at several locations in the central portions of the Site (see **Figure 3**). These areas are a concern, and limited shallow soil sampling (0-5 feet bgs) is recommended.
- **Potential UST Vent Line** - A potential UST vent line was observed on the exterior northern wall of Building 1 (**Appendix B – Photo 43**). Further investigation of this feature is recommended via a geophysical survey.
- **Water Cooling Tower** - A water cooling tower was observed between Buildings 1 and 2 (**Appendix B – Photo 10**) with evidence of subsurface piping. Older water treatment chemicals are a concern, and limited shallow soil sampling around the base of this tower is recommended. Assessment of the subsurface piping run is also recommended (geophysical survey). The cooling tower itself may contain asbestos containing materials, and its material should be sampled in this regard.
- **Building 2** – The interior of Building 2 contained three tanks of what appeared to be petroleum liquids, and a large amount of process piping (both above the floor and in subgrade concrete-lined trenches) indicating manufacturing processes involving liquids. The manufacturing piping and equipment, and evidence of liquid processes, is a concern, and assessment of the soils beneath this building is recommended.
- **Electrical Transformers / Equipment** - Pole-mounted electrical transformer banks were observed east of Buildings 2 and Building 4, with the empty transformer cans on the ground, indicating they may have been scavenged for metals (**Appendix B - Photo nos. 44, 11, 9, 45**). Also, west of Building 5 are two large pad-mounted electrical transformers, with evidence of leakage onto the soil adjoining one of them (**Appendix B – Photo 24**). The interior of Building 5 also contains large scale electrical distribution equipment which appears many decades old (**Appendix B – Photo 23**). Shallow soil sampling for PCBs is recommended near all of the above-mentioned features. At the interior of Building 5, this soil sampling may be substituted with wipe samples of the concrete flooring near the electrical switching equipment. Selected soil samples analyzed for PCBs should also analyzed for TPH and Title 22 Metals.
- **Undocumented Stockpile** - A decomposed granite stockpile is located on the western portion of the Site. No staining or odors were observed (**Appendix B – Photo no. 33**). The source of this stockpile is unknown. Limited sampling of this stockpile is recommended before the materials is disturbed or used.
- **Wood Poles** - Numerous treated wood utility poles exist at the Site. A specific count was not completed; however, it is likely more than 200. Some of the poles appear to be used for communications (attenuators), while most are for facility lighting and electrical distribution. Some of the electrical distribution poles contain small pole-mounted transformers. We recommend first that an inventory be completed of the approximate number and types of poles. A plan then should be developed for the representative sampling of treated wood from these poles, as well as the soil beneath those with electrical transformers (for

PCBs). This can then provide the basis for a plan for the proper disposal of the poles themselves, as well as any potential PCB impacted soils beneath them.

8.2 Offsite

No offsite properties were identified that are likely to have created a REC on the Site.

8.3 Data Gaps

The following data gaps were identified by Leighton:

- Records searches with the RCDEH and SARWQCB could not be conducted without a street address. In consideration of all other information obtained during this assessment, these data gaps are judged to have a low significance.
- As of the date of this report, no interviews or completed questionnaires were obtained from the Phase I ESA User or the Owner/Site Manager. Based on preliminary information communicated by the client indicating little information on the site history can be obtained, these data gaps are judged likely to have a low significance.

We have performed a Phase I ESA in conformance with the scope and limitations of ASTM E1527-13 for the property in Riverside, California. Any exceptions to, or deletions from, this practice are described in Section 1.5 of this report.

In general, observations should be made during future development for areas of possible contamination such as, but not limited to, the presence of underground facilities, buried debris, waste drums, and tanks, stained soil or odorous soils. Should such materials be encountered, further investigation and analysis may be necessary at that time.

9.0 DEVIATIONS

Leighton did not significantly deviate from or alter the scope of work, as defined in Section 1.3 of this report. The data gaps identified were judged likely to be insignificant, and unlikely to affect the ability of Leighton to identify RECs at the Site.

10.0 QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS

10.1 Corporate

Leighton is a California corporation, providing geotechnical and environmental consulting services throughout California. We are solely a consulting firm without interests in real property other than our offices in Southern California. We provide professional environmental consulting services including application of science and engineering to environmental compliance, hazardous materials/waste assessment and cleanup, and management of hazardous, solid and industrial waste. Phase I Environmental Property Assessments are a part of this practice area and have been conducted by us.

10.2 Individual

The qualifications of the Associate Geologist and the other Leighton environmental professionals involved in this Phase I ESA meet the Leighton corporate requirements for performing Phase I ESAs as specified by ASTM E1527-13.

10.3 Environmental Professional Statement

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental professional as defined by §312.10 of 40 CFR Part 312.

I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject site. I have developed and performed all the appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

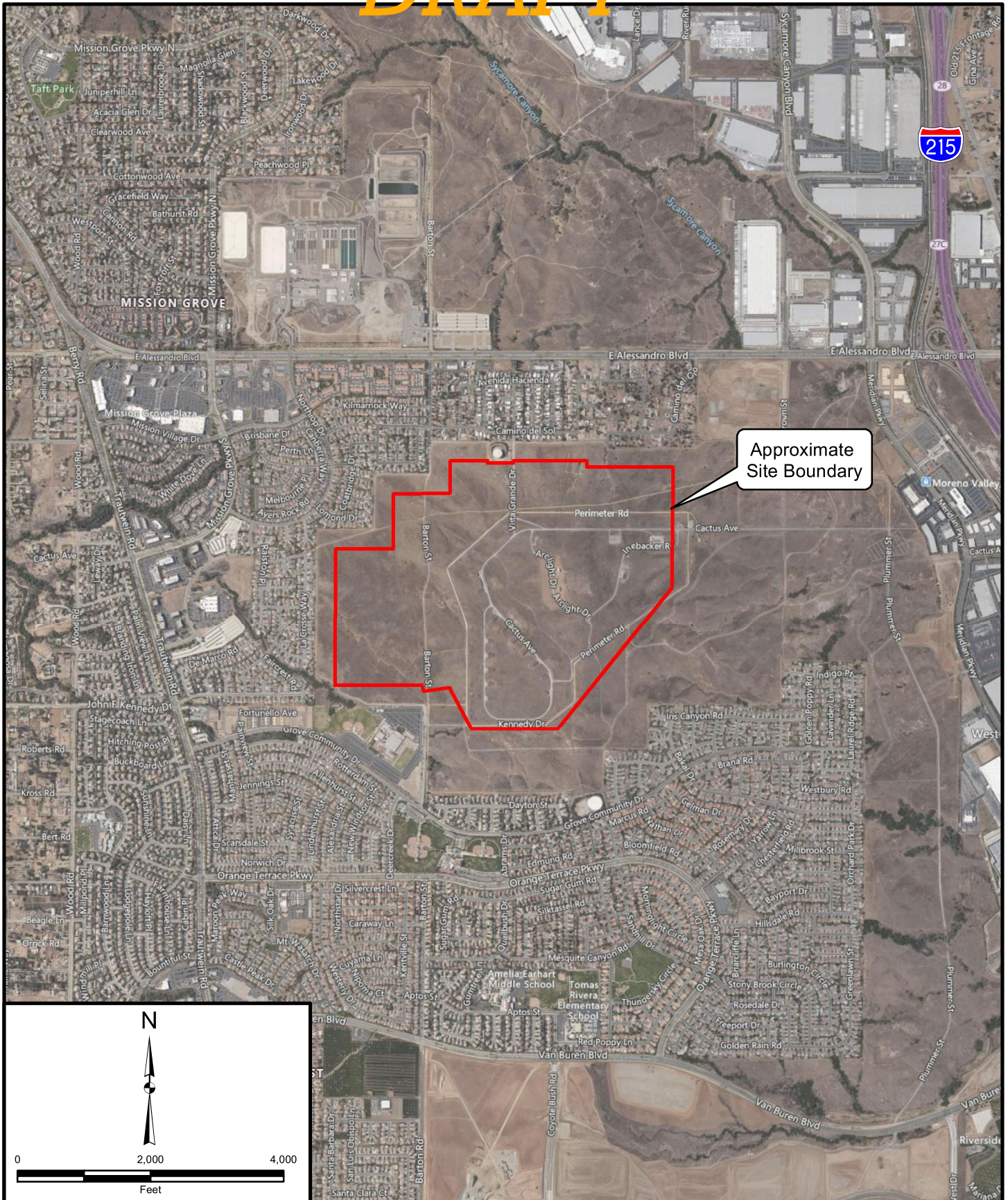
Robert B. Hansen
Associate Environmental Geologist

APPENDIX A

REFERENCES

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- NOAA (National Oceanic and Atmospheric Administration), 2021, National Centers for Environmental Information, <https://www.ncdc.noaa.gov/cdo-web/datatools/findstation>, accessed August 23, 2021.
- NPMS (National Pipeline Management System), 2021, <https://www.npms.phmsa.dot.gov/>, accessed August 19, 2021.
- SARWQCB (California Regional Water Quality Control Board, Santa Ana Region), 2019, Water Quality Control Plan for the Santa Ana River Basin (Region 8), dated 1995, with February 2008, June 2011, February 2016 and June 2019 updates.
- SCAQMD (South Coast Air Quality Management District), 2021, <https://www.aqmd.gov/nav/FIND>; accessed August 23, 2021.
- USGS (United States Geological Survey), 2012, Riverside East Quadrangle, 7.5-minute series topographic map; dated 2012.
- USAF (United State Air Force), 2004, Former March Air Force Base, California, Operable Unit 2, Air Force Real Property Agency, Record of Decision, dated April 2004.

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Approximate Site Boundary

Project: 13226.002	Eng/Geol: RBH
Scale: 1" = 2,000'	Date: October 2021
Base Map: ESRI ArcGIS Online 2021	

SITE LOCATION MAP

Meridian-West Campus Upper Plateau
Riverside, California

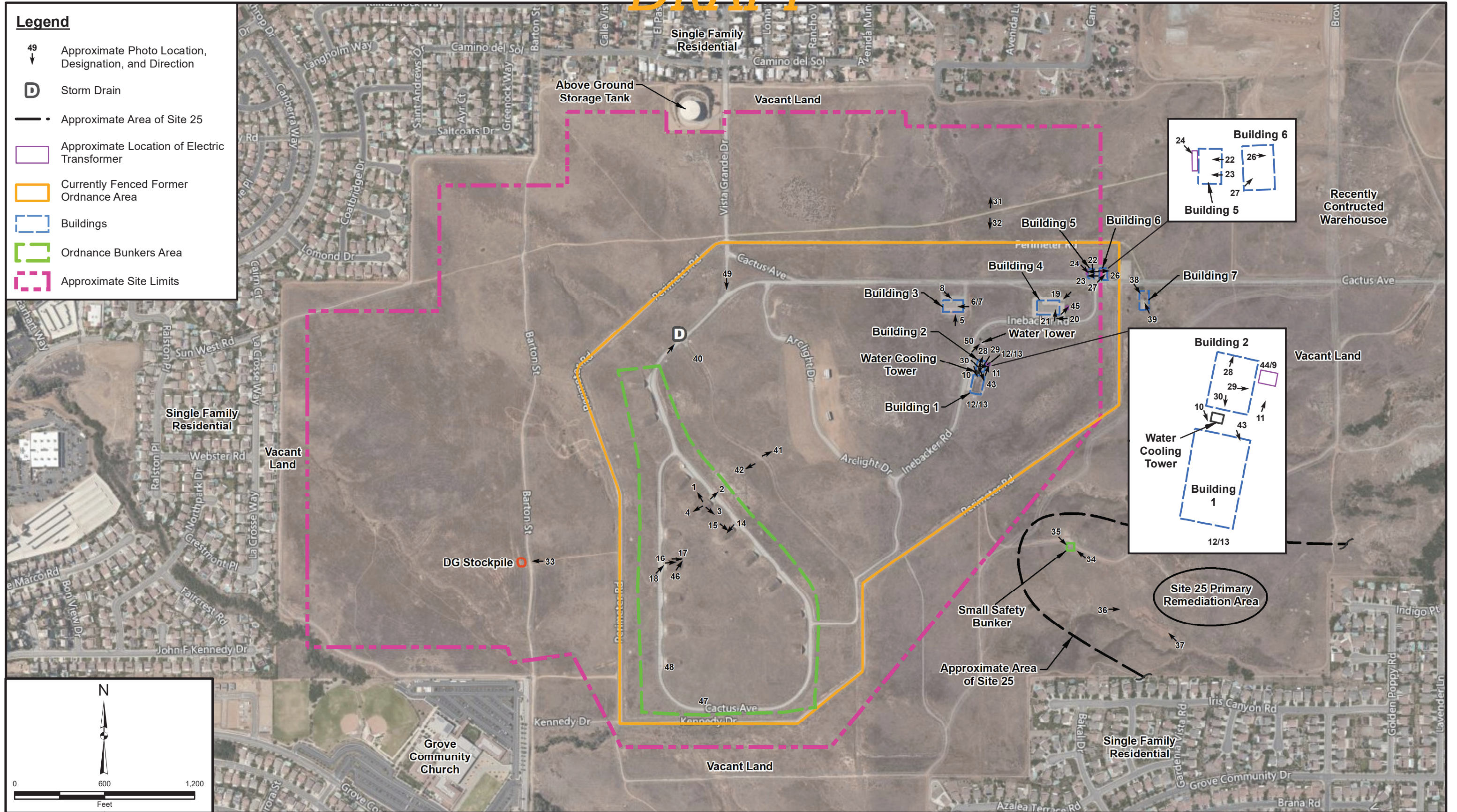
FIGURE 1



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Legend

- 49 ↓ Approximate Photo Location, Designation, and Direction
- D Storm Drain
- Approximate Area of Site 25
- Approximate Location of Electric Transformer
- ▭ Currently Fenced Former Ordnance Area
- ▭ Buildings
- ▭ Ordnance Bunkers Area
- ▭ Approximate Site Limits



Project: 13226.002	Eng/Geol: RBH
Scale: 1" = 600'	Date: October 2021
Base Map: ESRI ArcGIS Online 2021	

SITE AND ADJOINING PROPERTIES MAP




Meridian-West Campus Upper Plateau
Riverside, California

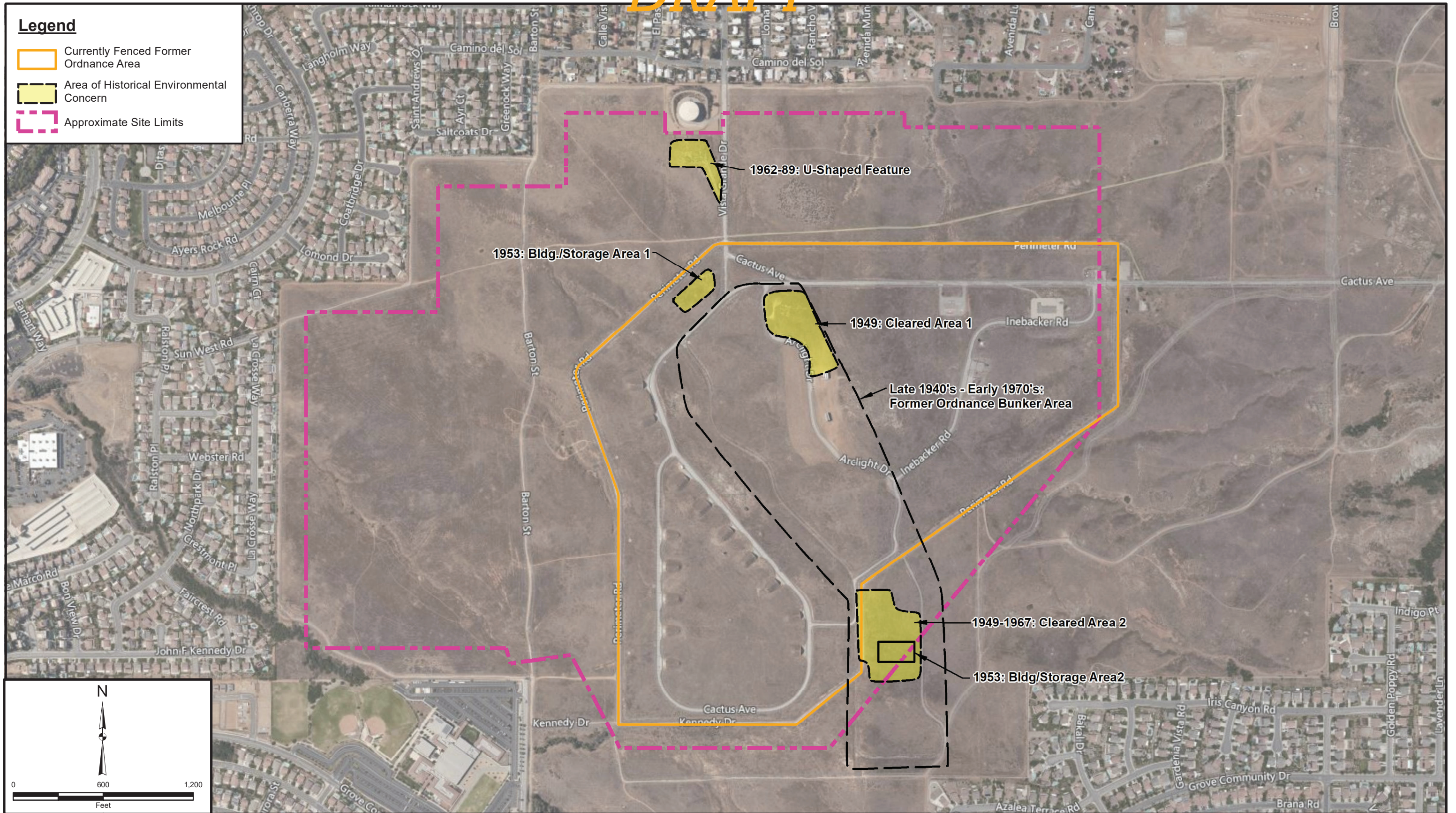
FIGURE 2



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Legend

-  Currently Fenced Former Ordnance Area
-  Area of Historical Environmental Concern
-  Approximate Site Limits



HISTORICAL FEATURES OF CONCERN

Meridian-West Campus Upper Plateau
Riverside, California

FIGURE 3



Project: 13226.002	Eng/Geol: RBH
Scale: 1" = 600'	Date: October 2021
Base Map: ESRI ArcGIS Online 2021	

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Appendix B

Site Reconnaissance Photos



Client Name:
Meridian – West Campus Upper Plateau

Site Location:
Riverside, California

Project No.
13226.002

Photo No. 1

View of Direction of Photo:

Northwest

Description:

View to the northwest across the Site.



Photo No. 2

View of Direction of Photo:

Northeast

Description:

View to the northeast across the Site.





Client Name:
Meridian – West Campus Upper Plateau

Site Location:
Riverside, California

Project No.
13226.002

Photo No. 3

View of Direction of Photo:

Southeast

Description:

View to the southeast across the Site



Photo No. 4

View of Direction of Photo:

Southwest

Description:

View to the southwest across the site.





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Client Name:
Meridian – West Campus Upper Plateau

Site Location:
Riverside, California

Project No.
13226.002

Photo No. 5

View of Direction of Photo:

North

Description:

View of the interior of Building 3. Area used for storage of automotive fluids and cleaning supplies.



Photo No. 6

View of Direction of Photo:

West

Description:

Containers of waste oil in Building 3 on concrete surface..





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07/26/21 & 08/05/2021

Client Name:
Meridian – West Campus Upper Plateau

Site Location:
Riverside, California

Project No.
13226.002

Photo No. 7

View of Direction of Photo:

West

Description:

Flammable materials storage cabinet in Building 3 containing diesel fuel cans.



Photo No. 8

View of Direction of Photo:

Southeast

Description:

View of the north side (front) of Building 3.





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Client Name:
Meridian – West Campus Upper Plateau

Site Location:
Riverside, California

Project No.
13226.002

Photo No. 9

View of Direction of Photo:

N/A

Description:

Empty transformer casing east of Building 2



Photo No. 10

View of Direction of Photo:

Southeast

Description:


Cooling tower located between Buildings 1 and 2. The intake and outlets of the cooling tower appear to be connected to subsurface pipelines.





Client Name: Meridian – West Campus Upper Plateau	Site Location: Riverside, California	Project No. 13226.002
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Photo No. 11	
View of Direction of Photo: North	
Description: Former electrical transformer area east of Building 2.	

Photo No. 12	
View of Direction of Photo: N/A	
Description: Pole-mounted transformers southeast of Building 1.	



Client Name:
Meridian – West Campus Upper Plateau

Site Location:
Riverside, California

Project No.
13226.002

Photo No. 13

View of Direction of Photo:

N/A

Description:

View of the soil beneath the pole-mounted transformers shown on Photo 12.



Photo No. 14

View of Direction of Photo:

Southwest

Description:

View of the interior of one of the ordnance bunkers on the Site.





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07/26/21 & 08/05/2021

Client Name:
Meridian – West Campus Upper Plateau

Site Location:
Riverside, California

Project No.
13226.002

Photo No. 15

View of Direction of Photo:

Southwest

Description:

View of the interior of one of the ordnance bunkers on the Site.



Photo No. 16

View of Direction of Photo:

East-northeast

Description:

Interior view of a bunker used to store empty cardboard boxes. An interior vault inside the bunker is visible behind the boxes.





Client Name:
Meridian – West Campus Upper Plateau

Site Location:
Riverside, California

Project No.
13226.002

Photo No. 17

View of Direction of Photo:

East

Description:

Interior view of one of the ordnance bunkers and exterior wall of inner vault



Photo No. 18

View of Direction of Photo:

Northeast

Description:

Exterior view of one of the ordnance bunkers entrance doors.





Client Name: Meridian – West Campus Upper Plateau	Site Location: Riverside, California	Project No.: 13226.002
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Photo No. 19	
View of Direction of Photo: Southwest	
Description: View of the exterior of Building 4.	

Photo No. 20	
View of Direction of Photo: West	
Description: Exterior view of south side of Building 4.	



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PHOTOGRAPHIC RECORD

07/26/21 & 08/05/2021

Client Name:
Meridian – West Campus Upper Plateau

Site Location:
Riverside, California

Project No.
13226.002

Photo No. 21

View of Direction of Photo:

North

Description:

Refrigeration equipment room in the interior eastern portion of Building 4. Oil staining on concrete surface.



Photo No. 22

View of Direction of Photo:

West

Description:

View of the interior of Building 5.





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07/26/21 & 08/05/2021

Client Name:
Meridian – West Campus Upper Plateau

Site Location:
Riverside, California

Project No.
13226.002

Photo No. 23

View of Direction of Photo:

West

Description:

View of electrical panels in the interior of Building 5.



Photo No. 24

View of Direction of Photo:

N/A

Description:

West side of Building 5. Large electrical transformers. View of stained soils and concrete near the base of one transformer





Client Name:
Meridian – West Campus Upper Plateau

Site Location:
Riverside, California

Project No.
13226.002

Photo No. 25

View of Direction of Photo:

East

Description:

Underground vault filled with rubber-covered cable west of Building 5.



Photo No. 26

View of Direction of Photo:

East

Description:

Interior view of a garage in Building 6





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07/26/21 & 08/05/2021

Client Name:
Meridian – West Campus Upper Plateau

Site Location:
Riverside, California

Project No.
13226.002

Photo No. 27

View of Direction of Photo:

Northeast

Description:

Exterior view of Building 6



Photo No. 28

View of Direction of Photo:

North

Description:

View of a petroleum product tank in Building 2.





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PHOTOGRAPHIC RECORD

07/26/21 & 08/05/2021

Client Name:
Meridian – West Campus Upper Plateau

Site Location:
Riverside, California

Project No.
13226.002

Photo No. 29

View of Direction of Photo:

East

Description:

View of electric motors and pumps in Building 2.

Oil staining noted on concrete surface.



Photo No. 30

View of Direction of Photo:

South

Description:

Petroleum product tank on the south wall of Building 2.





Client Name:
Meridian – West Campus Upper Plateau

Site Location:
Riverside, California

Project No.
13226.002

Photo No. 31

View of Direction of Photo:

North

Description:

View across the north of the Site. Vacant land and then single family residential in background.



Photo No. 32

View of Direction of Photo:

South

Description:

View across the northern portion of the Site.

Above-ground water tank and adjoining Bldg. 2 in background.





Client Name:
Meridian – West Campus Upper Plateau

Site Location:
Riverside, California

Project No.
13226.002

Photo No. 33

View of Direction of Photo:

West

Description:

Decomposed granite stockpile of unknown source/origin in western portion of site (foreground).

Adjoining east vacant land and residential developments (far background).



Photo No. 34

View of Direction of Photo:

Northwest

Description:

View of safety bunker adjoining southeast of the Site.





Client Name:
Meridian – West Campus Upper Plateau

Site Location:
Riverside, California

Project No.
13226.002

Photo No. 35

View of Direction of Photo:

Southeast

Description:

View of entrance to safety bunker adjoining southeast of the Site.



Photo No. 36

View of Direction of Photo:

East

Description:

View of the former landfill area southeast of the Site.





Client Name:
Meridian – West Campus Upper Plateau

Site Location:
Riverside, California

Project No.
13226.002

Photo No. 37

View of Direction of Photo:

Northwest

Description:

View of the former landfill area southeast of the Site.



Photo No. 38

View of Direction of Photo:

Southeast

Description:

View of the small house east of the Site.





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PHOTOGRAPHIC RECORD

07/26/21 & 08/05/2021

Client Name:
Meridian – West Campus Upper Plateau

Site Location:
Riverside, California

Project No.
13226.002

Photo No. 39

View of Direction of Photo:

North

Description:

View of the military working dog kennels east of the Site.



Photo No. 40

View of Direction of Photo:

West

Description:

View of a storm drain





Client Name:
Meridian – West Campus Upper Plateau

Site Location:
Riverside, California

Project No.
13226.002

Photo No. 41

View of Direction of Photo:

Northeast

Description:

View across the center of the site.



Photo No. 42

View of Direction of Photo:

Southwest

Description:

View across the center of the Site toward the ordinance bunkers.





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PHOTOGRAPHIC RECORD

07/26/21 & 08/05/2021

Client Name:
Meridian – West Campus Upper Plateau

Site Location:
Riverside, California

Project No.
13226.002

Photo No. 43

View of Direction of Photo:

Southeast

Description:

View of potential UST vent line on northern wall of Bldg 1.



Photo No. 44

View of Direction of Photo:

North

Description:

Scavenged electrical transformers on east side of Building 2.





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PHOTOGRAPHIC RECORD

07/26/21 & 08/05/2021

Client Name:
Meridian – West Campus Upper Plateau

Site Location:
Riverside, California

Project No.
13226.002

Photo No. 45

View of Direction of Photo:

Northeast

Description:

Scavenged transformers east of Building 4.



Photo No. 46

View of Direction of Photo:

Northeast

Description:

Interior of smaller vault within ordnance bunker





Client Name:
Meridian – West Campus Upper Plateau

Site Location:
Riverside, California

Project No.
13226.002

Photo No. 47

View of Direction of Photo:

South

Description:

Southern edge of Site (in foreground) and adjoining south single family residential development (in background)



Photo No. 48

View of Direction of Photo:

Southwest

Description:

Southwestern edge of Site (in foreground) and adjoining southwest Grove Community Church (in background)





Client Name:
Meridian – West Campus Upper Plateau

Site Location:
Riverside, California

Project No.
13226.002

Photo No. 49

View of Direction of Photo:

South

Description:

High security fencing around former ordnance area of Site.



Photo No. 50

View of Direction of Photo:

Northeast

Description:

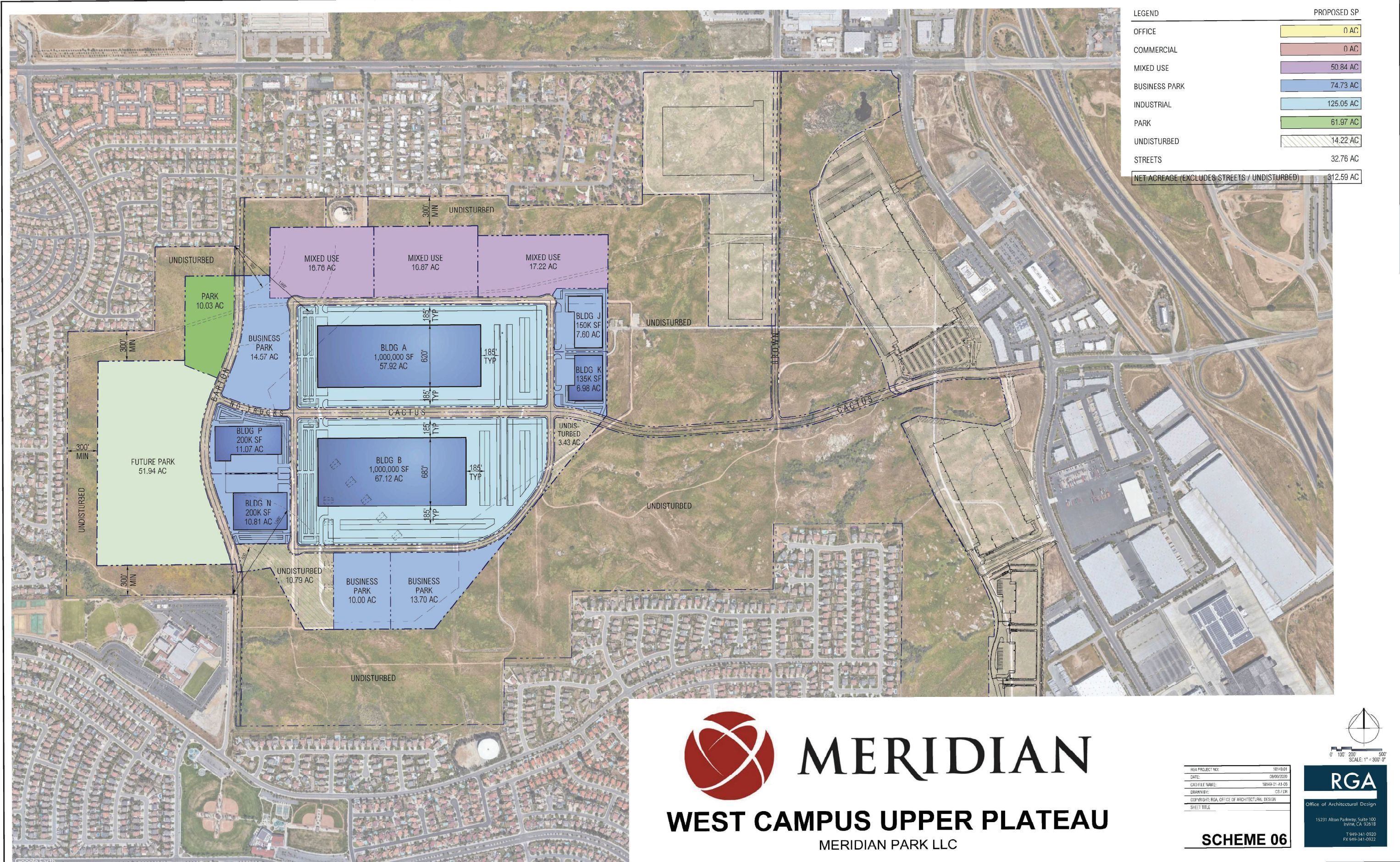
Water tower



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Appendix C

Site / Development Area Map



MERIDIAN

WEST CAMPUS UPPER PLATEAU

MERIDIAN PARK LLC

REG PROJECT NO:	18149.01
DATE:	08/09/2020
CAD FILE NAME:	18149-01-A1-05
DRAWN BY:	CS / DR
COPYRIGHT:	REG, OFFICE OF ARCHITECTURAL DESIGN
SHEET TITLE:	

SCALE: 1" = 300'-0"

REGA

Office of Architectural Design

15231 Alton Parkway, Suite 100
Irvine, CA 92618

T 949-341-9920
F 949-341-9922

SCHEME 06

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Appendix D

Phase 1 Owner and User Questionnaires



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Phase I ESA Users Questionnaire

Project Name: Meridian Upper Plateau

Complete and Correct Address(es) of the Property and APN(s):

Please refer to APN Map

User Company Name:

Meridian Park, LLC

User Name/Title:

Adam Collier, Vice President

User Phone/Email: 909-946-7593 adam.collier@lewismc.com

Interviewee Name and Relationship to Project:

Adam Collier - Project Manager

Site Owner: March Joint Powers Authority

Reason Phase I is required:

Purchasing property

Type of property:

Former military base property transferred to the March Joint Powers Authority through the Base Realignment and Closure Commission (BRAC).

Type of property transaction (e.g., Sale, purchase, exchange):

Purchase

Any scope of services beyond the ASTM Practice E 1527:

Unknown

All Parties that will rely on the Phase I report:

Unknown

Name and Contact Information for Site Contact:

Dan Fairbanks, 951-656-7000

Any special terms or conditions:

None

Any other pertinent knowledge or experience with the property (e.g., prior reports, documents, correspondence concerning the environmental conditions of the property):

None

(1). Environmental cleanup liens that are filed or recorded against the site (40 CFR 312.25).

Did a search of recorded land title records (or judicial records where appropriate identify any environmental liens filed or recorded against the property under federal, tribal, state or local law? Yes | No

If Yes, Describe: Unknown

(2). Activity and land use limitations (AULs) that are in place on the site or that have been filed or recorded in a registry (40 CFR 312.26).

Did a search of recorded land title records (or judicial records where appropriate) identify any AULs, such as engineering controls, land use restrictions or institutional controls that are in place at the property and/or have been filed or recorded against the property under federal, tribal, state or local law? Yes | No

If Yes, Describe: Unknown

(3). Specialized knowledge or experience of the person seeking to qualify for the Landowners Liability Protections (LLP) (40 CFR 312.28).

Do you have any specialized knowledge or experience related to the property or the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?

Yes | No

If Yes, Describe:

(4). Relationship of the purchase price to the fair market value of the property if it were not contaminated (40 DRF 312.29).

Does the purchase price being paid for this property reasonably reflect the fair market value of the property?

Yes | No

If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the property? Yes | No

If Yes, Describe: The Acquisition terms for the property are based on a Disposition and Development Agreement dated December 2001, and subsequently amended and assumed by Meridian Park, LLC.

(5). Commonly known or reasonable ascertainable information about the property (40 CFR 312.30).

Are you aware of commonly known or *reasonably ascertainable* information about the property that would help the *environmental professional* to identify conditions indicative of releases or threatened releases? For example, as user,

- (a.) Do you know the past uses of the property? Yes | No
- (b.) Do you know of specific chemicals that are present or once were present at the property? Yes | No
- (c.) Do you know of spills or other chemical releases that have taken place at the property? Yes | No
- (d.) Do you know of any environmental cleanups that have taken place at the property? Yes | No

If Yes, Describe: Portions of the property (bunkers) were formerly used to store weapons at March Air Force Base. Those bunkers were then re-purposed to store fireworks, and have been used for that activity for approximately 12 years.

(6). The degree of obviousness of the presence of likely presence of contamination at the property, and the ability to detect the contamination by appropriate investigation (40 CFR 312.31).

Based on your knowledge and experience related to the *property*, are there any *obvious* indicators that point to the presence or likely presence of contamination at the *property*? Yes | No

If Yes, Describe:

10/13/21

Signature

Date



DRAFT

Phase I ESA Users Questionnaire

Project Name: Meridian West Upper Plateau

Complete and Correct Address(es) of the Property and APN(s):

The property is an approximate 807.5 acre area, as identified in the RGA land use plan.

User Company Name:

Meridian Park, LLC.

User Name/Title:

Adam Collier, Vice President

User Phone/Email: (909) 946-7593 Adam.Collier@lewismc.com

Interviewee Name and Relationship to Project:

Dan Fairbanks, March JPA Planning Director

Site Owner: March Joint Powers Authority

Reason Phase I is required:

Future Development of Property

Type of property:

Former military base property transferred to the March Joint Powers Authority through the Base Realignment and Closure Commission (BRAC).

Type of property transaction (e.g., Sale, purchase, exchange):

Conveyance of public property in compliance with the Disposition and Development Agreement, dated December 2001, between the March Joint Powers Authority, the March Joint Powers Redevelopment Agency and LNR, Riverside LLC, as subsequently amended and

Any scope of services beyond the ASTM Practice E 1527:

Unknown

All Parties that will rely on the Phase I report:

Meridian Park, LLC, March Joint Powers Authority.

Name and Contact Information for Site Contact:

Adam Collier, (909) 946-7593

Any special terms or conditions:

Unknown.

Any other pertinent knowledge or experience with the property (e.g., prior reports, documents, correspondence concerning the environmental conditions of the property):

Environmental Impact Statement, February 1996, Disposal of Portions of March Air Force

(1). Environmental cleanup liens that are filed or recorded against the site (40 CFR 312.25).

Did a search of recorded land title records (or judicial records where appropriate identify any environmental liens filed or recorded against the property under federal, tribal, state or local law? Yes | No

If Yes, Describe: Unknown.

(2). Activity and land use limitations (AULs) that are in place on the site or that have been filed or recorded in a registry (40 CFR 312.26).

Did a search of recorded land title records (or judicial records where appropriate) identify any AULs, such as engineering controls, land use restrictions or institutional controls that are in place at the property and/or have been filed or recorded against the property under federal, tribal, state or local law? Yes | No

If Yes, Describe: Unknown.

(3). Specialized knowledge or experience of the person seeking to qualify for the Landowners Liability Protections (LLP) (40 CFR 312.28).

Do you have any specialized knowledge or experience related to the property or the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?

Yes | No

If Yes, Describe: The property deed from the United States of America to the the March Joint Powers Authority indicates the possible p

(4). Relationship of the purchase price to the fair market value of the property if it were not contaminated (40 DRF 312.29).

Does the purchase price being paid for this property reasonably reflect the fair market value of the property?

Yes | No

If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the property? Yes | No

If Yes, Describe: The Acquisition terms for the property are based on a Disposition and Development Agreement dated December 2001, and subsequently amendmended and assumed by Meridian Park, LLC.

(5). Commonly known or reasonable ascertainable information about the property (40 CFR 312.30).

Are you aware of commonly known or *reasonably ascertainable* information about the property that would help the *environmental professional* to identify conditions indicative of releases or threatened releases? For example, as user,

- (a.) Do you know the past uses of the property? Yes | No
- (b.) Do you know of specific chemicals that are present or once were present at the property? Yes | No
- (c.) Do you know of spills or other chemical releases that have taken place at the property? Yes | No
- (d.) Do you know of any environmental cleanups that have taken place at the property? Yes | No

If Yes, Describe: Portions of the property (bunkers) were formerly used to store weapons at March Air Force Base. Those bunkers were then re-purposed to store fireworks, and have been used for that activity for approximately 12 years.

(6). The degree of obviousness of the presence of likely presence of contamination at the property, and the ability to detect the contamination by appropriate investigation (40 CFR 312.31).

Based on your knowledge and experience related to the *property*, are there any *obvious* indicators that point to the presence or likely presence of contamination at the *property*? Yes | No

If Yes, Describe:

Signature

Date

DRAFT

Appendix E

Environmental Lien Report

DRAFT



**The NETR Environmental Lien
and AUL Search Report**

**MARCH AIR FORCE BASE
RIVERSIDE COUNTY, CALIFORNIA**

Friday, August 13, 2021

Project Number: L21-00938

2055 East Rio Salado Parkway
Tempe, Arizona 85281

Telephone: 480-967-6752
Fax: 480-966-9422

ENVIRONMENTAL LIEN AND AUL REPORT

The NETR Environmental LienSearch Report provides results from a search of available current land title records for environmental cleanup liens and other activity and use limitations, such as engineering controls and institutional controls.

A network of professional, trained researchers, following established procedures, uses client supplied property information to:

- search for parcel information and/or legal description;
- search for ownership information;
- research official land title documents recorded at jurisdictional agencies such as recorders' office, registries of deed, county clerks' offices, etc.;
- access a copy of the deed;
- search for environmental encumbering instrument(s) associated with the deed;
- provide a copy of any environmental encumbrance(s) based upon a review of key words in the instrument(s) (title, parties involved and description); and
- provide a copy of the deed or cite documents reviewed;

Thank you for your business
Please contact NETR at 480-967-6752
with any questions or comments

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ENVIRONMENTAL LIEN AND AUL REPORT

The NETR Environmental Lien Search Report is intended to assist in the search for environmental liens filed in land title records.

TARGET PROPERTY INFORMATION

ADDRESS

March Air Force Base
Riverside County, California

RESEARCH SOURCE

Source: Riverside County Assessor
Riverside County Recorder

DEED INFORMATION

Type of Instrument: Quit Claim Deed

Grantor: United States of America

Grantee: March Joint Powers Authority

Deed Dated: 02/28/2001

Deed Recorded: 05/25/2001

Instrument: 2001-234433

LEGAL DESCRIPTION

That part of Parcel 20 of Parcel Map Number 4806, according to the map or plat thereof, as filed of record in Book 7, Page 8, Riverside County, State of California

Assessor's Parcel Number(s): 276-120-001

ENVIRONMENTAL LIEN

Environmental Lien: Found Not Found

OTHER ACTIVITY AND USE LIMITATIONS (AULs)

Other AULs: Found Not Found

ENVIRONMENTAL LIEN AND AUL REPORT

TARGET PROPERTY INFORMATION

ADDRESS

March Air Force Base
Riverside County, California

RESEARCH SOURCE

Source: Riverside County Assessor
Riverside County Recorder

DEED INFORMATION

Type of Instrument: Quit Claim Deed

Grantor: United States of America

Grantee: March Joint Powers Authority

Deed Dated: 02/28/2001

Deed Recorded: 05/25/2001

Instrument: 2001-234433

LEGAL DESCRIPTION

That part of Parcel 20 of Parcel Map Number 4806, according to the map or plat thereof, as filed of record in Book 7, Page 8, Riverside County, State of California

Assessor's Parcel Number(s): 276-170-007

ENVIRONMENTAL LIEN

Environmental Lien: Found Not Found

OTHER ACTIVITY AND USE LIMITATIONS (AULs)

Other AULs: Found Not Found

ENVIRONMENTAL LIEN AND AUL REPORT

TARGET PROPERTY INFORMATION

ADDRESS

March Air Force Base
Riverside County, California

RESEARCH SOURCE

Source: Riverside County Assessor
Riverside County Recorder

DEED INFORMATION

Type of Instrument: Quit Claim Deed

Grantor: United States of America

Grantee: March Joint Powers Authority

Deed Dated: 02/28/2001

Deed Recorded: 05/25/2001

Instrument: 2001-234433

LEGAL DESCRIPTION

That part of Lot 2, Block 27, of the S. B. Alessandro Tract, according to the map or plat thereof, as filed of record in Book 6, Page 13, Riverside County, State of California

Assessor's Parcel Number(s): 294-020-001

ENVIRONMENTAL LIEN

Environmental Lien: Found Not Found

OTHER ACTIVITY AND USE LIMITATIONS (AULs)

Other AULs: Found Not Found

ENVIRONMENTAL LIEN AND AUL REPORT

TARGET PROPERTY INFORMATION

ADDRESS

March Air Force Base
Riverside County, California

RESEARCH SOURCE

Source: Riverside County Assessor
Riverside County Recorder

DEED INFORMATION

Type of Instrument: Quit Claim Deed

Grantor: United States of America

Grantee: March Joint Powers Authority

Deed Dated: 02/28/2001

Deed Recorded: 05/25/2001

Instrument: 2001-234433

LEGAL DESCRIPTION

All that certain piece or parcel of land situated and lying in the Northwest Quarter of Section 16, Township 3 South, Range 4 West of the San Bernardino Principal Meridian, Riverside County, State of California

Assessor's Parcel Number(s): 297-080-002

ENVIRONMENTAL LIEN

Environmental Lien: Found Not Found

OTHER ACTIVITY AND USE LIMITATIONS (AULs)

Other AULs: Found Not Found

ENVIRONMENTAL LIEN AND AUL REPORT

TARGET PROPERTY INFORMATION

ADDRESS

March Air Force Base
Riverside County, California

RESEARCH SOURCE

Source: Riverside County Assessor
Riverside County Recorder

DEED INFORMATION

Type of Instrument: Quit Claim Deed

Grantor: United States of America

Grantee: March Joint Powers Authority

Deed Dated: 02/28/2001

Deed Recorded: 05/25/2001

Instrument: 2001-234433

LEGAL DESCRIPTION

All that certain piece or parcel of land situated and lying in the North Half of Section 16, Township 3 South, Range 4 West of the San Bernardino Principal Meridian, Riverside County, State of California

Assessor's Parcel Number(s): 297-080-003

ENVIRONMENTAL LIEN

Environmental Lien: Found Not Found

OTHER ACTIVITY AND USE LIMITATIONS (AULs)

Other AULs: Found Not Found

ENVIRONMENTAL LIEN AND AUL REPORT

TARGET PROPERTY INFORMATION

ADDRESS

March Air Force Base
Riverside County, California

RESEARCH SOURCE

Source: Riverside County Assessor
Riverside County Recorder

DEED INFORMATION

Type of Instrument: Quit Claim Deed

Grantor: United States of America

Grantee: March Joint Powers Authority

Deed Dated: 02/28/2001

Deed Recorded: 05/25/2001

Instrument: 2001-234433

LEGAL DESCRIPTION

All that certain piece or parcel of land situated and lying in the Northeast Quarter of Section 16, Township 3 South, Range 4 West of the San Bernardino Principal Meridian, Riverside County, State of California

Assessor's Parcel Number(s): 297-080-004

ENVIRONMENTAL LIEN

Environmental Lien: Found Not Found

OTHER ACTIVITY AND USE LIMITATIONS (AULs)

Other AULs: Found Not Found

ENVIRONMENTAL LIEN AND AUL REPORT

TARGET PROPERTY INFORMATION

ADDRESS

March Air Force Base
Riverside County, California

RESEARCH SOURCE

Source: Riverside County Assessor
Riverside County Recorder

DEED INFORMATION

Type of Instrument: Quit Claim Deed

Grantor: United States of America

Grantee: March Joint Powers Authority

Deed Dated: 02/28/2001

Deed Recorded: 05/25/2001

Instrument: 2001-234433

LEGAL DESCRIPTION

All that certain piece or parcel of land situated and lying in the Northeast Quarter of Section 16, Township 3 South, Range 4 West of the San Bernardino Principal Meridian, Riverside County, State of California

Assessor's Parcel Number(s): 297-080-005

ENVIRONMENTAL LIEN

Environmental Lien: Found Not Found

OTHER ACTIVITY AND USE LIMITATIONS (AULs)

Other AULs: Found Not Found

ENVIRONMENTAL LIEN AND AUL REPORT

TARGET PROPERTY INFORMATION

ADDRESS

March Air Force Base
Riverside County, California

RESEARCH SOURCE

Source: Riverside County Assessor
Riverside County Recorder

DEED INFORMATION

Type of Instrument: Quit Claim Deed

Grantor: United States of America

Grantee: March Joint Powers Authority

Deed Dated: 02/28/2001

Deed Recorded: 05/25/2001

Instrument: 2001-234433

LEGAL DESCRIPTION

All that certain piece or parcel of land situated and lying in the Southwest Quarter of Section 16, Township 3 South, Range 4 West of the San Bernardino Principal Meridian, Riverside County, State of California

Assessor's Parcel Number(s): 297-090-001

ENVIRONMENTAL LIEN

Environmental Lien: Found Not Found

OTHER ACTIVITY AND USE LIMITATIONS (AULs)

Other AULs: Found Not Found

ENVIRONMENTAL LIEN AND AUL REPORT

TARGET PROPERTY INFORMATION

ADDRESS

March Air Force Base
Riverside County, California

RESEARCH SOURCE

Source: Riverside County Assessor
Riverside County Recorder

DEED INFORMATION

Type of Instrument: Quit Claim Deed

Grantor: United States of America

Grantee: March Joint Powers Authority

Deed Dated: 02/28/2001

Deed Recorded: 05/25/2001

Instrument: 2001-234433

LEGAL DESCRIPTION

All that certain piece or parcel of land situated and lying in the Southeast Quarter of Section 16, Township 3 South, Range 4 West of the San Bernardino Principal Meridian, Riverside County, State of California

Assessor's Parcel Number(s): 297-090-002

ENVIRONMENTAL LIEN

Environmental Lien: Found Not Found

OTHER ACTIVITY AND USE LIMITATIONS (AULs)

Other AULs: Found Not Found

ENVIRONMENTAL LIEN AND AUL REPORT

TARGET PROPERTY INFORMATION

ADDRESS

March Air Force Base
Riverside County, California

RESEARCH SOURCE

Source: Riverside County Assessor
Riverside County Recorder

DEED INFORMATION

Type of Instrument: Quit Claim Deed

Grantor: United States of America

Grantee: March Joint Powers Authority

Deed Dated: 02/28/2001

Deed Recorded: 05/25/2001

Instrument: 2001-234433

LEGAL DESCRIPTION

All that certain piece or parcel of land situated and lying in the East Half of Section 16, Township 3 South, Range 4 West of the San Bernardino Principal Meridian, Riverside County, State of California

Assessor's Parcel Number(s): 297-090-003

ENVIRONMENTAL LIEN

Environmental Lien: Found Not Found

OTHER ACTIVITY AND USE LIMITATIONS (AULs)

Other AULs: Found Not Found

ENVIRONMENTAL LIEN AND AUL REPORT

TARGET PROPERTY INFORMATION

ADDRESS

March Air Force Base
Riverside County, California

RESEARCH SOURCE

Source: Riverside County Assessor
Riverside County Recorder

DEED INFORMATION

Type of Instrument: Quit Claim Deed

Grantor: United States of America

Grantee: March Joint Powers Authority

Deed Dated: 02/28/2001

Deed Recorded: 05/25/2001

Instrument: 2001-234433

LEGAL DESCRIPTION

All that certain piece or parcel of land situated and lying in the Southeast Quarter of Section 16, Township 3 South, Range 4 West of the San Bernardino Principal Meridian, Riverside County, State of California

Assessor's Parcel Number(s): 297-090-005

ENVIRONMENTAL LIEN

Environmental Lien: Found Not Found

OTHER ACTIVITY AND USE LIMITATIONS (AULs)

Other AULs: Found Not Found

Notice of Hazardous Substances Stored or Disposed of and Notice of Remedial Actions Taken on the Property was attached as Exhibit A to Quitclaim Deed filed on 5/25/2001 as Instrument 2001-234433. Air Force Real Property Agency Record of Decision filed with the California Department of Toxic Substances Control Table D-1 "Site Status Summary" identifies whether institutional controls are required. Based on this document, the subject parcel is not subject to any Institutional Controls. Copies are attached.

ENVIRONMENTAL LIEN AND AUL REPORT

TARGET PROPERTY INFORMATION

ADDRESS

March Air Force Base
Riverside County, California

RESEARCH SOURCE

Source: Riverside County Assessor
Riverside County Recorder

DEED INFORMATION

Type of Instrument: Quit Claim Deed

Grantor: United States of America

Grantee: March Joint Powers Authority

Deed Dated: 02/28/2001

Deed Recorded: 05/25/2001

Instrument: 2001-234433

LEGAL DESCRIPTION

All that certain piece or parcel of land situated and lying in the Southeast Quarter of Section 16, Township 3 South, Range 4 West of the San Bernardino Principal Meridian, Riverside County, State of California

Assessor's Parcel Number(s): 297-090-006

ENVIRONMENTAL LIEN

Environmental Lien: Found Not Found

OTHER ACTIVITY AND USE LIMITATIONS (AULs)

Other AULs: Found Not Found

Notice of Hazardous Substances Stored or Disposed of and Notice of Remedial Actions Taken on the Property was attached as Exhibit A to Quitclaim Deed filed on 5/25/2001 as Instrument 2001-234433. Air Force Real Property Agency Record of Decision filed with the California Department of Toxic Substances Control Table D-1 "Site Status Summary" identifies whether institutional controls are required. Based on this document, the subject parcel is not subject to any Institutional Controls. Copies are attached.

ENVIRONMENTAL LIEN AND AUL REPORT

TARGET PROPERTY INFORMATION

ADDRESS

March Air Force Base
Riverside County, California

RESEARCH SOURCE

Source: Riverside County Assessor
Riverside County Recorder

DEED INFORMATION

Type of Instrument: Quit Claim Deed

Grantor: United States of America

Grantee: March Joint Powers Authority

Deed Dated: 02/28/2001

Deed Recorded: 05/25/2001

Instrument: 2001-234433

LEGAL DESCRIPTION

All that certain piece or parcel of land situated and lying in the Southeast Quarter of Section 16, Township 3 South, Range 4 West of the San Bernardino Principal Meridian, Riverside County, State of California

Assessor's Parcel Number(s): 297-090-007

ENVIRONMENTAL LIEN

Environmental Lien: Found Not Found

OTHER ACTIVITY AND USE LIMITATIONS (AULs)

Other AULs: Found Not Found

ENVIRONMENTAL LIEN AND AUL REPORT

TARGET PROPERTY INFORMATION

ADDRESS

March Air Force Base
Riverside County, California

RESEARCH SOURCE

Source: Riverside County Assessor
Riverside County Recorder

DEED INFORMATION

Type of Instrument: Quit Claim Deed

Grantor: United States of America

Grantee: March Joint Powers Authority

Deed Dated: 02/28/2001

Deed Recorded: 05/25/2001

Instrument: 2001-234433

LEGAL DESCRIPTION

All that certain piece or parcel of land situated and lying in the Southeast Quarter of Section 16, Township 3 South, Range 4 West of the San Bernardino Principal Meridian, Riverside County, State of California

Assessor's Parcel Number(s): 297-090-008

ENVIRONMENTAL LIEN

Environmental Lien: Found Not Found

OTHER ACTIVITY AND USE LIMITATIONS (AULs)

Other AULs: Found Not Found

ENVIRONMENTAL LIEN AND AUL REPORT

TARGET PROPERTY INFORMATION

ADDRESS

March Air Force Base
Riverside County, California

RESEARCH SOURCE

Source: Riverside County Assessor
Riverside County Recorder

DEED INFORMATION

Type of Instrument: Quit Claim Deed

Grantor: United States of America

Grantee: March Joint Powers Authority

Deed Dated: 02/28/2001

Deed Recorded: 05/25/2001

Instrument: 2001-234433

LEGAL DESCRIPTION

All that certain piece or parcel of land situated and lying in the Southwest Quarter of Section 16, Township 3 South, Range 4 West of the San Bernardino Principal Meridian, Riverside County, State of California

Assessor's Parcel Number(s): 297-090-009

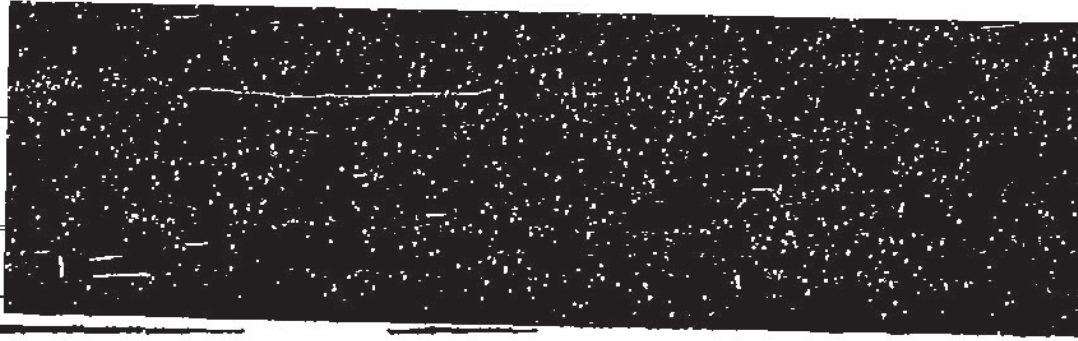
ENVIRONMENTAL LIEN

Environmental Lien: Found Not Found

OTHER ACTIVITY AND USE LIMITATIONS (AULs)

Other AULs: Found Not Found

DRAFT



DOC # 2001-234433

02/25/2001 08:08A Fee:NC

Page 1 of 11

Recorded in Official Records

County of Riverside

Gary L. Ors

Assessor, County Clerk & Recorder



Recording Requested by,
And when recorded mail to:

March Joint Powers Authority
P. O. Box 7480
Moreno Valley, California 92552

Exempt from Documentary Transfer Tax
Rev. & Tax. Code §11922

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A	R	L				COPY	LONG	REFLAD	NCHG EXAM

QUITCLAIM DEED

M
AG

I. PARTIES

THIS DEED is made and entered into this 28TH day of FEBRUARY, 2001 by and between the UNITED STATES OF AMERICA, acting by and through the Secretary of the Air Force, under and pursuant to the powers and authority contained in the Defense Base Closure and Realignment Act of 1990, as amended (10 U.S.C. § 2687 note), and delegations and regulations promulgated thereunder (the "Grantor"), and the MARCH JOINT POWERS AUTHORITY, a joint powers authority established under the laws of the State of California (the "Grantee"). The Grantee is a local redevelopment authority, as this term is defined in the Defense Authorization Amendments and Base Closure and Realignment Act of 1988, as amended. When used in this Quitclaim Deed, unless the context specifies otherwise, the use of the term "Grantor" shall include the assigns of the Grantor, and the use of the term "Grantee" shall include the successors and assigns of the Grantee.

M
TV

II. CONSIDERATION AND CONVEYANCE

FOR VALUABLE CONSIDERATION of the sum of ONE DOLLAR (\$1.00), the receipt of which is hereby acknowledged, and other good and valuable consideration, the Grantor does hereby release and forever quitclaim to the Grantee all that real property situated in County of Riverside, State of California, described as follows:

In the County of Riverside, State of California, those portions of Sections 15, 16, 17, 21, 22, 27 and 28 of Township 3 South, Range 4 West, San Bernardino Base and Meridian, more particularly described as follows:

Beginning at the common section corner to Sections 16, 17, 20 and 21 of Township 3 South, Range 4 West, San Bernardino Base and Meridian; thence along the southerly, westerly and northerly lines of Parcel 20 of Parcel Map 4806, as shown on the map filed in Book 7, Pages 8 through 12 inclusive of Parcel Maps in said County Recorder's Office, the following five courses:



1. South 89°46'32" West 1,700.03 feet;
2. North 00°31'26" East 2,647.59 feet;
3. North 89°47'13" East 860.02 feet;
4. North 00°31'26" East 840.03 feet;
5. North 89°47'12" East 840.01 feet to the easterly line of said Section 17;

thence leaving said Parcel 20, along said easterly line North 00°31'28" East 483.32 feet to the southerly line of the North half of the Northwest quarter of said Section 16; thence along said southerly line North 89°53'27" East 2,660.12 feet to easterly line of said Northwest quarter; thence along said easterly line South 00°36'25" West 99.04 feet to the southwest corner of Parcel Map 9723 filed in Book 111 Pages 54 through 56 inclusive of Parcel Maps in said County Recorder's Office; thence along the southerly line of said Parcel Map North 89°54'26" East 1,330.01 feet to the southeast corner thereof; thence along the easterly line of said Parcel Map North 00°38'08" East 99.32 feet to the most westerly corner of Parcel Map 17572 filed in Book 137, Pages 65 through 67 inclusive of Parcel Maps of said County Recorder's Office; thence along southerly and easterly lines of said Parcel Map the following two courses:

1. North 89°53'30" East 664.97 feet;
2. South 00°39'44" West 1,322.51 feet to the southerly line of the northeast quarter of said Section 16;

thence along said southerly line North 89°52'53" East 664.90 feet to the easterly quarter corner of said Section 16; thence along the easterly line of said northeast quarter, North 00°39'56" East 2,542.75 feet to the southerly right-of-way of Alessandro Boulevard as shown on California Department of Transportation Map No. 435571-7 on file with the County of Riverside as Map No. 205-253; thence along said southerly right of way North 89°53'24" East 1,201.72 feet; thence leaving said southerly right-of-way, along the easterly line of parcel 2 of said Record of Survey the following ten courses:

1. South 38°39'15" East 2,811.22 feet;
2. South 30°07'21" East 1,855.76 feet;
3. South 70°03'01" West 662.52 feet;
4. North 20°02'22" West 173.57 feet;
5. South 70°00'53" West 560.28 feet;
6. South 19°56'28" East 774.22 feet;
7. North 70°03'01" East 55.54 feet;
8. South 01°00'36" West 2,375.44 feet;
9. South 09°31'07" East 2,716.43 feet;
10. South 19°19'15" East 1,012.51 feet to a point on the southerly right-of-way of Van Buren Boulevard as described in a document filed in Book 1973 Page 74835 in said County Recorder's Office, said point being the beginning of a non tangent curve concave southeasterly having a radius of 2,944.79 feet, a radial line to said beginning of curve bears North 22°44'28" West;

thence along said southerly right of way the following seven courses:

1. Southwesterly 176.85 feet along said curve through a central angle of 03°26'28";
2. South 63°49'04" West 597.28 feet;





3. South 59°06'47" West 90.43 feet;
4. South 64°41'15" West 102.99 feet;
5. South 62°13'15" West 99.99 feet;
6. South 63°11'38" West 99.70 feet;
7. South 64°31'15" West 111.41 feet;

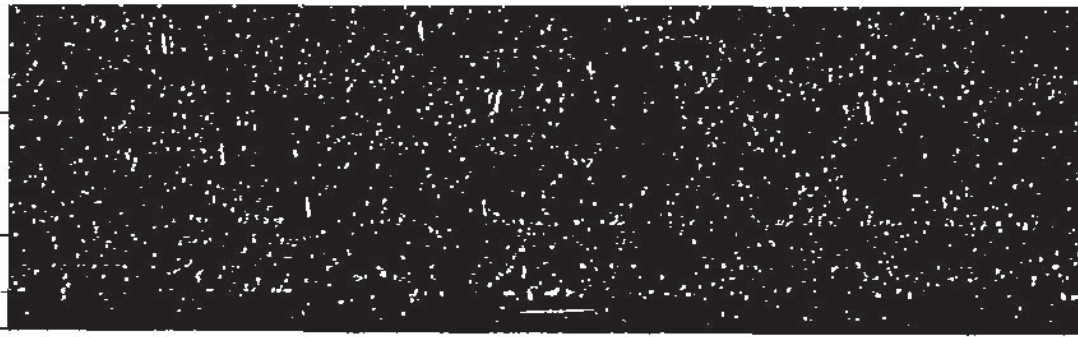
thence leaving said southerly right-of-way North 00°01'43" West 70.59 feet to the centerline of Van Buren Boulevard as shown on the map filed in Book 84, Page 37 of Records of Survey; thence along said centerline the following four courses:

1. South 63°49'04" West 94.73 feet to the beginning of a curve concave northerly having a radius of 2,999.79 feet;
2. Southwesterly, westerly and northwesterly along said curve 2,930.12 feet through a central angle of 55°57'54";
3. North 60°13'02" West 648.18 feet to the beginning of a curve concave southerly having a radius of 2,999.79 feet;
4. Northwesterly and westerly along said curve 1,542.27 feet through a central angle of 29°27'26" to the southerly line of said Section 21;

thence along said southerly line South 89°40'27" East 2,218.79 feet to the Section corner common to said Sections 21, 22, 27, and 28; thence along the southerly line of said Section 22, North 89°35'25" East 1,282.57 feet to a line that is parallel with and 1369.40 feet westerly of the east line of the southwest quarter of said Section 22; thence along said parallel line North 00°30'42" East 2,663.96 feet to the southerly line of the northwest quarter of said Section 22; thence leaving said parallel line along said southerly line South 89°35'58" West 0.09 feet to a line that is parallel with and 1369.40 feet westerly of the easterly line of the northwest quarter of said Section 22; thence along said parallel line North 00°43'30" East 2,653.93 feet to the northerly line of said section 22; thence leaving said parallel line along said northerly line South 89°56'15" East 0.03 feet to a line that is parallel with and 1369.40 feet westerly of the easterly line of the southwest quarter of said Section 15; thence leaving said northerly line along said parallel line North 00°35'14" East 659.98 feet; thence leaving said parallel line North 89°56'13" West 1,276.82 feet to the easterly line of said Section 16; thence along said easterly line South 00°39'56" West 660.00 feet to the Section corner common to said Sections 15, 16, 21 and 22; thence along the northerly line of said Section 21 South 89°51'02" West 1,992.05 feet; thence leaving said northerly line, South 00°46'26" West 664.03 feet; thence South 89°54'50" West 664.37 feet to the East line of the northwest quarter of Section 21; thence along said East line South 00°48'48" West 663.32 feet to the South line of the northerly half of the northwest quarter of said Section 21; thence along said South line South 89°58'15" West 2,657.96 feet to the West line of the northwest quarter of said Section 21; thence along said West line North 00°58'16" East 1,321.17 feet to the POINT OF BEGINNING.

Containing 57,125,475 square feet or 1,311.4205 acres, more or less, based on grid distance calculation.





The bearings and distances used in the above description are grid distances based on the California Coordinate System of 1983, Zone 6. Multiply distances shown by 1.00007058 to obtain ground distances.

III. APPURTENANCES

TOGETHER WITH all the buildings and improvements erected thereon, and all and singular the tenements, hereditaments, appurtenances, and improvements hereunto belonging, or in any wise appertaining (which, together with the real property above described, is called the "Property" in this Deed).

IV. RESERVATIONS

A. RESERVING UNTO THE GRANTOR all oil, gas, and other mineral resources of any kind or nature in the mineral estate of the Property; provided, however, that such reservation shall not include the right of access to or any right to use any portion of the surface of the Property.

B. AND FURTHER RESERVING UNTO THE GRANTOR, including the United States Environmental Protection Agency ("EPA") and the State of California (the "State"), and its and their respective officials, agents, employees, contractors, and subcontractors, the right of access to the Property (including the right of access to, and use of, utilities at reasonable cost to the Grantor), for the following purposes, either on the Property or on adjoining lands, and for such other purposes consistent with the Installation Restoration Program ("IRP") of the Grantor or the Federal Facility Agreement ("FFA"), if applicable:

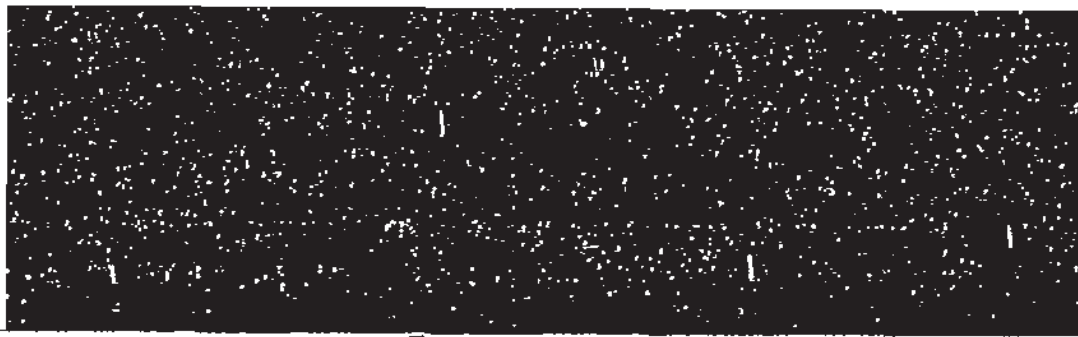
1. To conduct investigations and surveys, including, where necessary, drilling, soil and water sampling, testpitting, testing soil borings, and other activities related to the IRP or FFA, if applicable.

2. To inspect field activities of the Grantor and its contractors and subcontractors in implementing the IRP or the FFA, if applicable.

3. To conduct any test or survey required by the EPA or the State relating to the implementation of the IRP or FFA, if applicable, or environmental conditions on the Property, or to verify any data submitted to the EPA or the State by the Grantor relating to such conditions.

4. To conduct, operate, maintain, or undertake any other response, corrective, or remedial action as required or necessary under the IRP or the FFA, if applicable, or the covenant of the Grantor in Section VII.D. of this Deed, but not limited to, the installation of monitoring wells, pumping wells, and treatment facilities.





V. CONDITION

A. The Grantee agrees to accept conveyance of the Property subject to all covenants, conditions, restrictions, easements, rights-of-way, reservations, rights, agreements, and encumbrances, whether or not of record.

B. The Grantee acknowledges that it has inspected, is aware of, and accepts the condition and state of repair of the Property, and that the Property is conveyed, "as is," "where is," without any representation, promise, agreement, or warranty on the part of the Grantor regarding such condition and state of repair, or regarding the making of any alterations, improvements, repairs, or additions. The Grantee further acknowledges that the Grantor shall not be liable for any latent or patent defects in the Property, except to the extent required by applicable law.

VI. COVENANTS

A. Lead-Based Paint ("LBP").

1. The Property may include improvements that are presumed to contain LBP because they are thought to have been constructed prior to 1978. The Grantee hereby acknowledges the required disclosure in accordance with the Residential Lead-Based Paint Hazard Reduction Act of 1992, 42 U.S.C. § 4852d (Title X), of the presence of any known LBP and/or LBP hazards in target housing constructed prior to 1978. This disclosure includes the receipt of available records and reports pertaining to LBP and/or LBP hazards; receipt of the lead hazard information pamphlet; and inclusion of the 24 C.F.R. Part 35 Subpart H and 40 C.F.R. Part 745 Subpart F disclosure and lead warning language in the Title X Lead-Based Paint Disclosure Statement in the contract of sale.

2. The Grantee covenants and agrees that, in any improvements on the Property defined as target housing by Title X and constructed prior to 1978, LBP hazards will be disclosed to potential occupants in accordance with Title X before use of such improvements as a residential dwelling (as defined in Title X). Further, the Grantee covenants and agrees that LBP hazards in target housing constructed prior to 1960 will be abated in accordance with Title X before use and occupancy as a residential dwelling. "Target housing" means any housing constructed prior to 1978, except housing for the elderly or persons with disabilities (unless any child who is less than six [6] years of age resides, or is expected to reside, in such housing) or any zero-bedroom dwelling.

3. The Grantee covenants and agrees that in its use and occupancy of the Property, it will comply with Title X and all applicable Federal, State, and local laws relating to LBP. The Grantee acknowledges that the Grantor assumes no liability for damages for personal injury, illness, disability, or death to the Grantee, or to any other person, including members of the general public, arising from or incident to the purchase, transportation, removal, handling, use, disposition, or other activity causing or leading to contact of any kind whatsoever with LBP on





the Property, whether the Grantee has properly warned, or failed to properly warn, the persons injured.

B. Asbestos-Containing Materials ("ACM").

The Grantee is warned that the Property may be improved with buildings, facilities, and equipment that may contain ACM. The Grantee covenants and agrees that in its use and occupancy of the Property, it will comply with all applicable Federal, State, and local laws relating to asbestos. The Grantee acknowledges that the Grantor assumes no liability for damages for personal injury, illness, disability, or death to the Grantee, or to any other person, including members of the general public, arising from or incident to the purchase, transportation, removal, handling, use, disposition, or other activity causing or leading to contact of any kind whatsoever with asbestos on the Property, whether the Grantee has properly warned, or failed to properly warn, the persons injured.

C. Non-Discrimination.

The Grantee covenants not to discriminate upon the basis of race, color, religion, national origin, sex, age, or handicap in the use, occupancy, sale, or lease of the Property, or in its employment practices conducted thereon. This covenant shall not apply, however, to the lease or rental of a room or rooms within a family dwelling unit, nor shall it apply with respect to religion if the Property is on premises used primarily for religious purposes. The United States of America shall be deemed a beneficiary of this covenant without regard to whether it remains the owner of any land or interest therein in the locality of the Property.

D. Grantor Covenant.

1. Pursuant to Section 120(h)(3) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended (42 U.S.C. § 9620(h)(3)), the following is notice of hazardous substances on the Property and the description of remedial action taken concerning the Property:

a. The Grantor has made a complete search of its files and records. Exhibit A, Part 1, contains a table with the name of hazardous substances stored for one year or more, or known to have been released or disposed of, on the Property; the quantity in kilograms and pounds of the hazardous substance stored for one year or more, or known to have been released, or disposed of, so, on the Property; and the date(s) that such storage, release, or disposal took place.

b. A description of the remedial actions taken on the Property regarding hazardous substances is contained in Exhibit A, Part 2.

c. A map of the sites where remedial actions were taken is attached as Exhibit B.

2. The United States covenants and warrants that all remedial action necessary to protect human health and the environment with respect to hazardous substances remaining on the Property has been taken before the date of this Deed, and any additional remedial action found to





be necessary after the date of this Deed for contamination on the Property existing prior to the date of this Deed shall be conducted by the United States. The foregoing covenant shall not apply in any case in which the grantee of the Property, or any part thereof, is a potentially responsible party with respect to the Property before the date on which any grantee acquired an interest in the Property, or is a potentially responsible party as a result of an act or omission affecting the Property.

E. Endangered Species.

The Grantee acknowledges that threatened or endangered species, as those terms are defined under the Federal Endangered Species Act of 1973, as amended (the "Act") are present on certain portions of the Property and acknowledges receiving a copy of the Disposal and Reuse of March Air Force Base Biological Opinion, dated November 9, 1999. The Grantee covenants and agrees to comply with the terms of the biological opinion, including, without limitation, the obligation to consult with the United States Fish and Wildlife Service as necessary in connection with the construction and development of new improvements on the Property and mitigation of impacts to habitat of the endangered Stephens' Kangaroo Rat according to the formula set out in the biological opinion.

F. Wetlands.

The property contains wetlands protected under Federal and State laws and regulations which, among other things, restrict activities that involve the discharge of fill materials into wetlands, including, without limitation, the placement of fill materials; the building of any structure; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; and dams and dikes. The Grantee covenants and agrees that in its use of the Property, it will comply with all Federal, State, and local laws minimizing the destruction, loss, or degradation of wetlands. Before locating new construction in wetlands, the Grantee shall contact the United States Army Corps of Engineers and obtain a permit or waiver under Section 404 of the Clean Water Act of 1977 as amended. For purposes of this provision, "new construction" includes structures, facilities, draining, dredging, channelizing, filling, diking, impounding, and related activities.

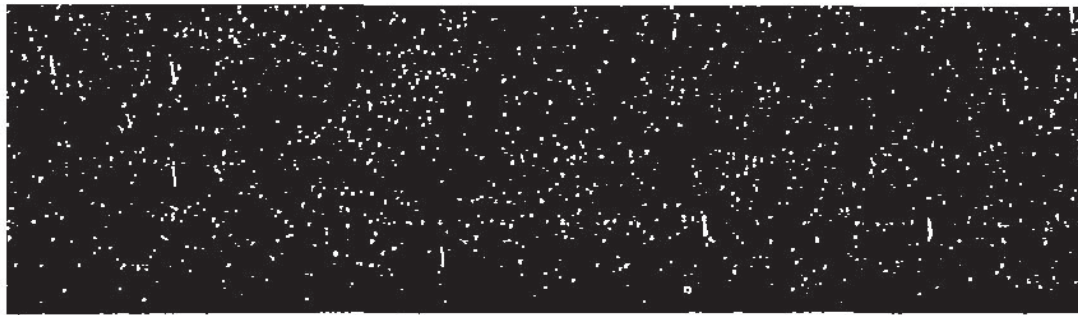
G. Hazards to Air Navigation.

Prior to commencing any construction on, or alteration of, the Property, the Grantee covenants to comply with 14 C.F.R. Part 77 entitled "Objects Affecting Navigable Air Space," or under the authority of the Federal Aviation Act of 1958, as amended.

VII. MISCELLANEOUS

A. Each covenant of this Deed shall be deemed to "touch and concern the land" and shall "run with the land."





Acceptance

The Grantee hereby accepts this Deed and agrees to be bound by all the agreements, covenants, conditions, restrictions, and reservations contained in it.

DATE: April 25, 2001

(Grantee) **March Joint Powers Authority**

By: *Daryl R. Beach*

Attest:

Herbert J. DeLo

Certificate of Grantee's Attorney

I, John Brown, acting as Attorney for the Grantee, do hereby certify that I have examined the foregoing Indenture and the proceedings taken by the Grantee relating thereto, and find that the acceptance thereof by the Grantee has been duly authorized and that the execution thereof is in all respects due and proper and in accordance with the laws of the State of California, and further, that, in my opinion, the Indenture constitutes a legal and binding compliance obligation of the Grantee in accordance with the terms thereof.

Dated at Riverside, California, this 25 day of April, 2001.

By: *John Brown*

Title: Legal Counsel





VIII. LIST OF EXHIBITS

The following Exhibits are attached to and made a part of this Deed:

- A. Notice of Hazardous Substances Released or Disposed of and Notice of Remedial Actions Taken on the Property.
- B. Map of Remedial Actions Taken on the Property.

IN WITNESS WHEREOF, I have hereunto set my hand at the direction of the Secretary of the Air Force, the day and year first above written.

UNITED STATES OF AMERICA

By: Joyce K Frank
 JOYCE K. FRANK
 Deputy Director
 Air Force Base Conversion Agency

Certificate of Acknowledgment

Commonwealth of Virginia :

ss.

County of Arlington :

On FEBRUARY 28, 2001 before me, DEBRA L. DICKSON, a Notary Public, personally appeared JOYCE K FRANK known to me to be the person whose name is subscribed to the within instrument, and acknowledged to me that (s)he executed the same in ~~(his)~~(her) authorized capacity, and that by ~~(his)~~(her) signature on the instrument, the entity on behalf of which ~~(he)~~(she) acted, executed the instrument.



Debra L. Dickson
 Notary Public

My commission expires on DECEMBER 31, 2003.

DEBRA L. DICKSON
 NOTARY PUBLIC COMMONWEALTH OF VIRGINIA
 My Commission Expires: December 31, 2003





Exhibit A to Quitclaim Deed

Notice of Hazardous Substances Stored or Disposed of

And

Notice of Remedial Actions Taken on the Property

Part 1: Hazardous Substances.

IRP Site 3, a landfill, contained household waste, demolition debris, oil, solvents, thinners, and polychlorinated biphenyls. IRP Site 25, a munitions residue burial site, contained residue from small arms ammunition, egress items (e.g., aircraft ejection seat cartridges), smoke grenades, starter cartridges and other pyrotechnics that were deactivated in the detonation pit. Approximately 300 gallons of acetone were reportedly disposed of at this site. IRP Site 40, a landfill, contained drums, battery casings, construction rubble, and other debris.

Part 2: Remedial Action Taken.

Approximately 223,300 cubic yards of landfill materials and soil were removed from IRP Site 3 in 1996. Confirmation sampling conducted after the interim removal action confirmed that the site had been cleaned to levels protective of human health and the environment.

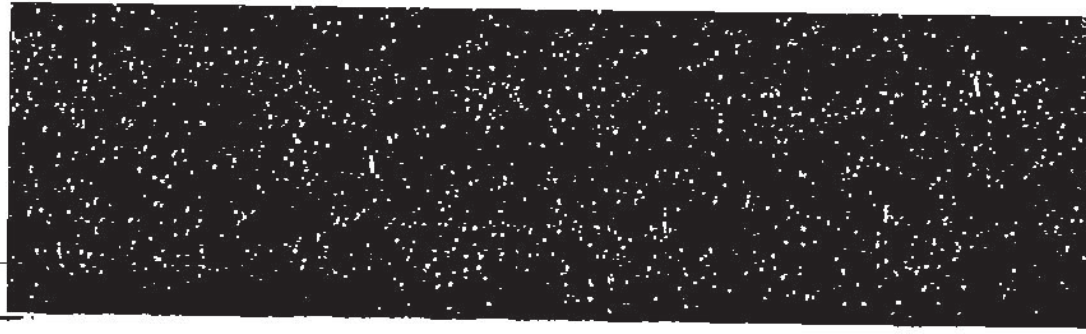
Approximately 3,000 cubic yards of non-hazardous waste and contaminated soils were removed from IRP Site 25 in 1996. Confirmation sampling conducted after the interim removal action confirmed that the site had been cleaned to levels protective of human health and the environment.

Approximately 6,800 cubic yards of non-hazardous materials were removed from IRP Site 40 in 1994. Confirmation sampling conducted after the interim removal action confirmed that the site had been cleaned to levels protective of human health and the environment. During a later site visit and evaluation of available data, levels of mercury were identified in the sediments in a pond located at Site 40 that may present a threat to ecological receptors. The EPA and Air Force have researched the current site condition and potential corrective actions and determined that any actions taken to prevent exposure to mercury in sediments may be more disruptive to wetland habitat at Site 40 than leaving the sediment in place.

IRP Site 30 is also shown on Exhibit B, "Map of the Remedial Actions Taken on the Property." That site was characterized as a "surface trash" site and was found to contain no hazardous substances that required remedial action.



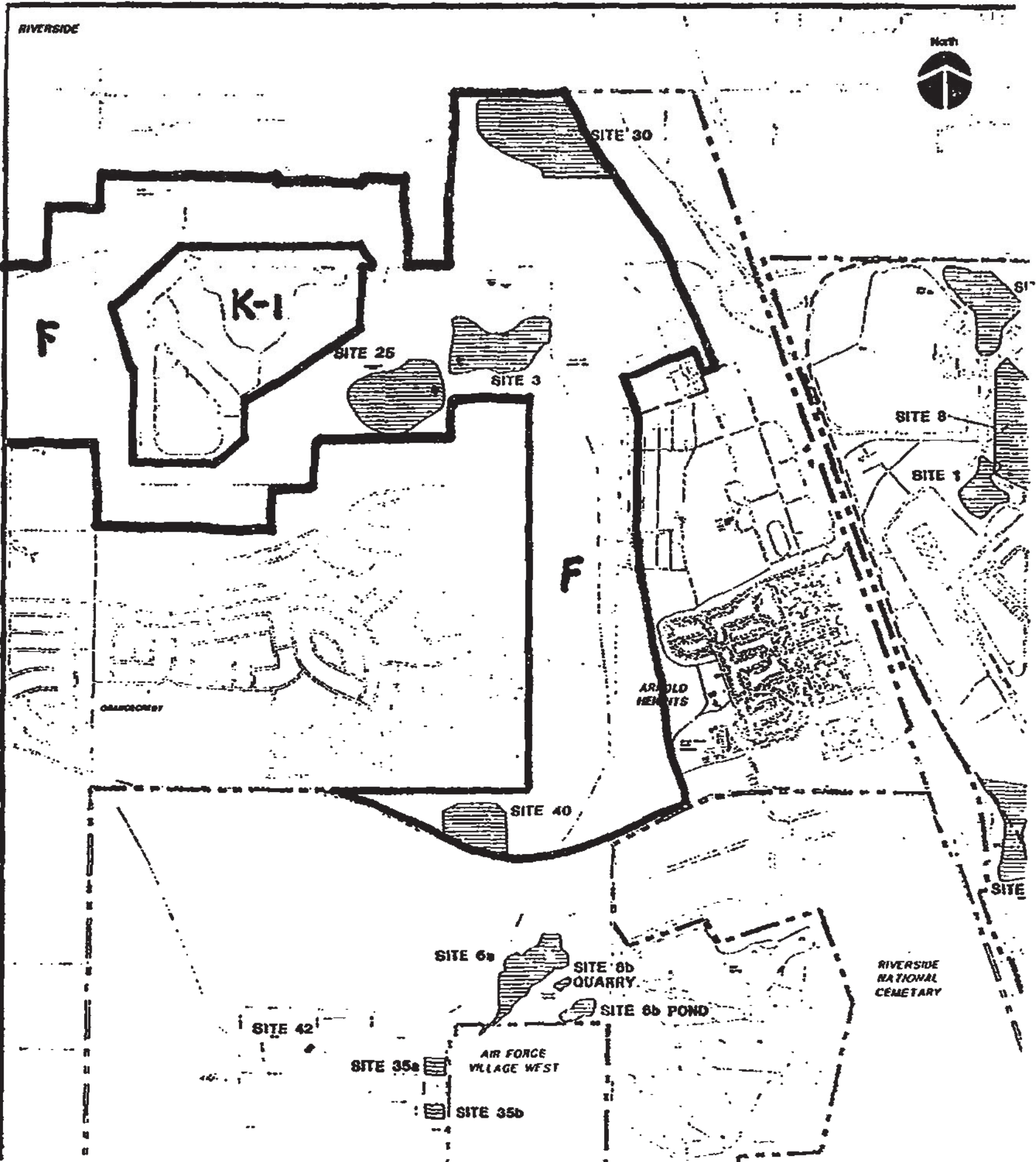
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11 of 11

Exhibit B to Quitclaim Deed

Map of Remedial Actions Taken on the Property





MARCH AFB
CALIFORNIA

ADMINISTRATIVE RECORD
COVER SHEET

AR File Number 2226

**FORMER MARCH AIR FORCE BASE, CALIFORNIA
OPERABLE UNIT 2
AIR FORCE REAL PROPERTY AGENCY
RECORD OF DECISION**



APRIL 2004

FINAL

**FORMER MARCH AIR FORCE BASE, CALIFORNIA
OPERABLE UNIT 2
AIR FORCE REAL PROPERTY AGENCY
RECORD OF DECISION
APRIL 2004**

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LIST OF ACRONYMS

1,1,1-TCA	1,1,1-trichloroethane
1,1-DCE	1,2-dichloroethene
1,2-DCA	1,2-dichlorethane
1,4-DCB	1,4-dichlorobenzene
AFB	Air Force Base
AFHQ	Air Force Headquarters
AFRC	Air Force Reserve Command
AFRPA	Air Force Real Property Agency
AMC	Air Mobility Command
ANG	Air National Guard
ARARs	Applicable or Relevant and Appropriate Requirements
bgs	below ground surface
CE	Civil Engineering
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
COPC	Chemical of Potential Concern
COPECs	Chemicals of Potential Ecological Concern
CSF	Cancer Slope Factor
DTSC	Department of Toxic Substances Control
EPA	Environmental Protection Agency
EPN	ethyl-p-nitrophenyl phenyl phosphorothioate
FFA	Federal Facilities Agreement
H&SC	Health and Safety Code
HEAST	Health Effects Assessment Summary Tables
HI	Health Index
HQ	Hazard Quotient
IC	Institutional Control
IRIS	Integrated Risk Information System
IRP	Installation Restoration Program
LOAEL	Lowest Observable Adverse Effects Level
LUC	Land Use Covenant
MCLs	Maximum Contaminant Levels

MDL	Method Detection Limit
MEK	methyl ethyl ketone
MCPA	(4-chloro – 2-methylphenoxy) acetic acid
MEPP	2- (4-chloro – 2-methylphenoxy) propanoic acid (mecoprop)
µg/kg	micrograms per kilogram
µg/L	microgram per liter
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
MSL	Mean Sea Level
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NOAEL	No Observable Adverse Effects Level
NPL	National Priorities List
O&M	Operation and Maintenance
OU	Operable Unit
PAH	polynuclear aromatic hydrocarbon
PCBs	polychlorinated biphenyls
PCE	tetrachloroethene
PRGs	Preliminary Remediation Goals
RAB	Restoration Advisory Board
RCRA	Resource Conservation Recovery Act
RDX	Explosive Residue (Cyclonile)
RfD	Reference Dose
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
RTV	Reference Toxicity Value
RWQCB	Regional Water Quality Control Board
SAC	Strategic Air Command
SARA	Superfund Amendments and Reauthorization Act
SF	Slope Factor
SKR	Stephens' Kangaroo Rat
TCE	trichloroethene
TEFs	Toxicity Equivalency Factors
TPH	Total Petroleum Hydrocarbons
TRPH	Total Recoverable Petroleum Hydrocarbons

TSDf	Treatment, Storage, and Disposal Facility
UCL	Upper Confidence Limit
USACE	United States Army Corps of Engineers
UST	Underground Storage Tank
VA	Veterans Administration
VOCs	volatile organic compounds

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DECLARATION

SITE NAME AND LOCATION

Air Force Real Property Agency Sites in Operable Unit 2
Former March Air Force Base
Riverside County, California

STATEMENT OF BASIS AND PURPOSE

This decision document presents the selected remedial actions for certain Operable Unit 2 (OU2) sites controlled by the Air Force Real Property Agency (AFRPA) at the former March Air Force Base (March AFB), Riverside County, California. The U.S. Air Force (Air Force) developed this Record of Decision (ROD), hereinafter referred to as the AFRPA OU2 ROD in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA) and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), [40 Code of Federal Regulations (CFR), Part 300]. This decision document is based on information contained in the Remedial Investigation/Feasibility Study (RI/FS) report for OU2 dated July 1997 and the administrative record for March AFB.

These AFRPA OU2 sites are in areas that have been declared excess property and will be transferred from Air Force control. The remaining OU2 sites are controlled by the Air Force Reserve Command (AFRC). The OU2 sites controlled by the AFRC will be addressed in a separate ROD.

This AFRPA OU2 ROD documents the Air Force's and EPA's selection of remedial alternatives at a total of 15 sites. Institutional Controls (ICs) are required to address waste left in place at four sites, with additional controls required to protect waste cells on one site, and 11 sites do not pose a threat to human health and the environment on the former March AFB. Many of these sites were contaminated with substances such as, solvents, polychlorinated biphenyls (PCBs), polynuclear aromatic hydrocarbons (PAHs), and landfill debris during the earlier years of base operations. These 15 sites are now the responsibility of the AFRPA, which is working to transfer former base property to the community for reuse. The Air Force and EPA are selecting these remedies with the concurrence of the U.S. Environmental Protection Agency (EPA) Region IX and the State of California, under guidelines established in the Federal Facilities Agreement (FFA), signed on 27 September 1990 by representatives of EPA Region IX, the State of California, and the Air Force.

ASSESSMENT OF THE SITES

Actual or threatened releases of hazardous substances from the AFRPA OU2 sites, if not addressed by implementation of the response actions assessed in the OU2 RI/FS and selected in this ROD, may, in some cases, present a current or potential future threat to public health and welfare, and/or the environment, including groundwater resources.

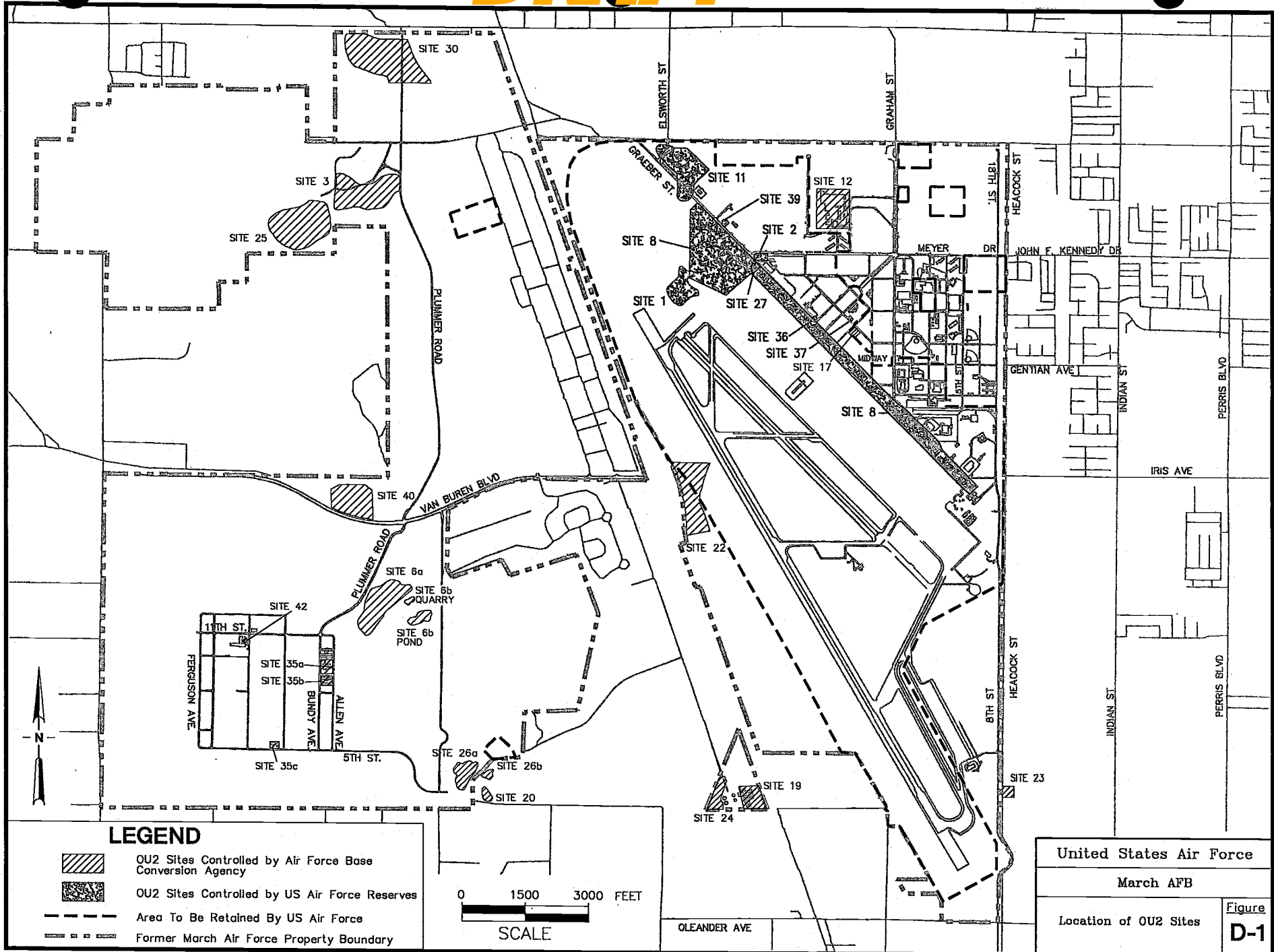
DESCRIPTION OF THE SELECTED RESPONSE ACTIONS

The response actions address the documented principal public health and environmental threats associated with 15 AFRPA sites identified as Installation Restoration Program (IRP) Sites 3, 6, 12, 17, 19, 20, 22, 23, 24, 25, 26, 30, 35, 40, and 42. The locations of these sites are shown in Figure D-1 – Location of OU2 Sites, and a brief site description is included in Table D-1 – Site Status Summary. The southern portion of Site 22 is located in AFRPA-controlled area while the northern portion is located in AFRC-controlled area. However, this site will be not discussed in the AFRPA OU2 ROD. Originally, Site 41, the Hawes site near Barstow, California, was part of OU2. It was later removed from OU2 and will be discussed under a separate decision document. As shown in Figure D-1, Sites 1, 2, 8, 11, 27, 36, 37, and 39 are located in AFRC-controlled areas.

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AFRPA OU2 ROD (former March AFB)

D-3



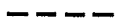
LEGEND



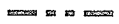
OU2 Sites Controlled by Air Force Base Conversion Agency



OU2 Sites Controlled by US Air Force Reserves



Area To Be Retained By US Air Force



Former March Air Force Property Boundary

0 1500 3000 FEET



SCALE

United States Air Force

March AFB

Location of OU2 Sites

Figure
D-1

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**TABLE D-1
SITE STATUS SUMMARY
AFRPA-CONTROLLED OU2 SITES**

Site No.	Description	Interim Removal Action Performed	Soil Cleanup Action Required	Groundwater Cleanup Action Required	ICs Required
3	Landfill No. 5	Yes	No	No	No
6	Landfill No. 4	Yes	No	No	Yes (land use restrictions, groundwater use restrictions, protection of landfill equipment or systems, and State Land Use Covenant)
12	Civil Engineering Yard	Yes	No	No	Yes (protection of groundwater monitoring equipment or systems; groundwater use restrictions, and State Land Use Covenant)
17	Swimming Pool Fill	Yes	No	No	Yes (land use restrictions, soil disturbance restriction, and State Land Use Covenant)
19	West March Sludge Drying Beds	No	No	No	Yes (land use restrictions, soil disturbance restriction, protection of fences, barriers or signs, and State Land Use Covenant)
20	Landfill No. 7	Yes	No	No	No
22	Landfill No. 2	No	No	No	No
23	East March Effluent Pond	No	No	No	No
24	Landfill No. 1	Yes	No	No	No
25	Munitions Residue Burial Site	Yes	No	No	No
26	Water Treatment Plant Sludge	Yes	No	No	No
30	Construction Rubble Burial Site	No	No	No	No
35	15 th Air Force Headquarters Leaking Underground Storage Tanks	Yes	No	No	No
40	Landfill No. 8	Yes	No	No	No
42	Building 3404 Transformers	Yes	No	No	No

Interim removal actions have been performed at 11 sites to mitigate potential risk to human health and the environment from contaminated soils and/or landfill materials. These include Sites 3, 6, 12, 17, 20, 24, 25, 26, 35, 40, and 42. Removal actions have achieved cleanup levels allowing for the unrestricted use of eight sites (3, 20, 24, 25, 26, 35, 40, and 42). Engineered waste cells were constructed at Site 6 and contain contaminated soils from several sites. Residual contamination remains in groundwater at Site 12 and in subsurface soils at Site 17. Surface and near surface soils at Site 19 are contaminated from former operations at the adjacent wastewater treatment facility.

The institutional controls (ICs) alternative, in the form of groundwater and/or land use restrictions and state land use covenants, has been selected for Sites 6, 12, 17 and 19. Site 6 also requires ongoing operations and maintenance of the engineered waste cells, maintenance of the waste cells' associated engineered structures, groundwater sampling to monitor the integrity of the engineered waste cells, and an investigation for landfill gas generation and migration. Descriptions of the selected institutional controls and other requirements for Sites 6, 12, 17 and 19 are provided in Section 9.0 of this AFRPA OU2 ROD. No contamination requiring action was found during remedial investigations at Sites 22, 23, or 30.

As a part of the selected ICs Alternative, the Air Force will execute a State Land Use Covenant with the State before transfer of title to a non-federal entity of property including one or more of Site 6, 12, 17 and 19. The State Land Use Covenant will include the restrictions described in Section 9, legal descriptions of the property and affected areas, and provisions for regulatory agency access. The State Land Use Covenant will be recorded before the recording of the federal deed.

Site descriptions, including site history and primary contaminants encountered and summaries of risk assessments and the selection of remedial alternatives, are provided in Sections 5 through 9 of this AFRPA OU2 ROD.

A variety of applicable cleanup methods were evaluated for each site requiring remediation. A preferred alternative was selected based on a variety of factors, including cost, for each site. A summary of selected alternatives is provided below on a site-specific basis. Five-year reviews to ensure the continued protection of human health and the environment will be required as specified in CERCLA and the FFA.

SOIL CONDITIONS AND CLEANUP METHODS

Sites Requiring No Further Action – Soil

Interim removal actions were conducted at 11 sites (Sites 3, 6, 12, 17, 20, 24, 25, 26, 35, 40 and 42). At Sites 3, 20, 24, 25, 26, 35, 40 and 42, cleanup goals were attained and no further action is necessary to ensure protection of human health and the environment. No further action is also selected for Sites 22, 23, and 30, because no evidence of soil contamination was found or concentrations were below levels necessary to protect human health and the environment.

Sites Requiring ICs

ICs are selected for four sites with residual contamination, including sites where removal actions have occurred.

Site 6 - Landfill No. 4. Elevated levels of polynuclear aromatic hydrocarbons (PAHs), dioxins, volatile organic compounds (VOCs), herbicides, and pesticides were found in Site 6 surface soils. Approximately 89,000 cubic yards of soil and trash were removed from Site 6. This material and non-hazardous soil and wastes removed from several other March AFB sites, approximately 600,000 cubic yards, were placed into two engineered waste cells that were constructed on a portion of Site 6. The cells were capped in January 1996. Restrictions in the deed in the form of grantee covenants will prohibit future residential land use and any activities that could jeopardize the cap or liner's ability to protect the integrity of the waste cells. Additional restrictions are detailed in the existing *Operations and Maintenance Work Plan – Operable Unit 2, Site 6, Landfill No.4 – March Air Force Base, California* (July 1999) to ensure protection of the engineered waste cells constructed during the 1996 removal action. Within 180 days of the execution of this Record of Decision, the Air Force will submit to the regulatory agencies for review and approval a revised Operations and Maintenance (O&M) Work Plan that include sampling and monitoring requirements for landfill gas in accordance with California Code of Regulations, Title 22 and Title 27. The revised O&M Work Plan will also include requirements of ICs implementation, monitoring, reporting and enforcement. In addition, prior to transfer of title to the property including Site 6, the Air Force will execute a State Land Use Covenant with the State that includes these selected land use restrictions. The State Land Use Covenant will be recorded before the deed to the property.

Site 12 - Civil Engineering Yard. Surface and near-surface soils were contaminated with a variety of hazardous substances, including PAHs and hexavalent chromium. About 2,000 cubic yards of non-hazardous soils were removed from this area and disposed of in the Site 6 engineered waste cells. Post-removal sampling results show residual soil contamination levels at acceptable residential risk levels. Low-level tetrachloroethene (PCE) and trichloroethene (TCE) contamination in the groundwater under Site 12 appears to be confined to a small area within site boundaries. Restrictions in the deed in the form of grantee covenant

will prohibit any activities that would disturb or limit any groundwater monitoring equipment or systems, and prohibit groundwater extraction for any purpose other than monitoring. In addition, prior to transfer of title to the property including Site 12, the Air Force will execute a State Land Use Covenant with the State that includes these selected land use restrictions. The State Land Use Covenant will be recorded before the deed to the property.

Site 17 - Swimming Pool Fill. Elevated levels of polychlorinated biphenyls (PCBs) were found in subsurface soils at depths of 8.5 and 11.5 feet below ground surface (bgs). The PCBs were detected in soil samples collected beneath the concrete floor of the former pool after removal of the pool contents and structures in 1994. Restrictions in the deed in the form of grantee covenants will prohibit future residential land use, and prohibit any activity that will disturb the soil at or below 7 feet below ground surface. In addition, prior to transfer of title to the property including Site 17, the Air Force will execute a State Land Use Covenant with the State that includes these selected land use restrictions. The State Land Use Covenant will be recorded before the deed to the property.

Site 19 - West March Sludge Drying Beds. PAHs, PCBs, thallium, and hexavalent chromium have affected surface and near-surface soils at Site 19. Restrictions in the deed in the form of grantee covenants will prohibit future residential land use, prohibit any activity that will disturb the soil in the former sludge drying pits, and prohibit activities that result in removal, disturbance or other interference with fences or other barriers to access to or signs notifying the public of Site 19. In addition, prior to transfer of title to the property including Site 19, the Air Force will execute a State Land Use Covenant with the State that includes these selected land use restrictions. The State Land Use Covenant will be recorded before the deed to the property.

The total conservatively estimated annual cost to implement the selected remedies (ICs) for the OU2 AFRPA sites is \$43,000. No capital costs are associated with the selected remedies for the OU2 AFRPA sites.

STATUTORY DETERMINATIONS

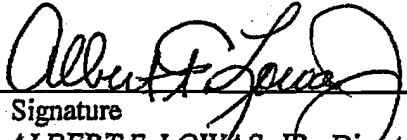
The selected remedy for soil (land use restrictions/institutional controls) for Sites 6, 17, and 19 are protective of human health and the environment. The remedy complies with federal and state requirements that are legally applicable or relevant and appropriate to the remedial actions, and is cost effective. However, this remedy does not provide permanent solutions and does not involve alternative treatment technologies. In addition, this remedy does not satisfy the statutory preference for treatment as a principal element because contaminants would be left on-site untreated.

The selected remedy for contaminated groundwater (land use restrictions/institutional controls) at Site 12 is protective of human health and the environment. The remedy complies with federal and state requirements that are legally applicable or relevant and appropriate to the remedial actions, and is cost effective. This remedy does not provide a permanent solution and alternative treatment (other than natural attenuation) or resource recovery technologies to the maximum extent practicable or satisfy the statutory preference for remedies that would result in reduction of toxicity, mobility, or volume of contaminants.

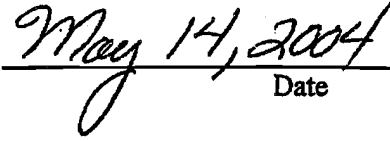
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This AFRPA OU2 ROD may be executed and delivered in any number of counterparts, each of which when executed and delivered shall be deemed to be an original, but such counterparts shall together constitute one and the same document. 198



Signature
ALBERT F. LOWAS, JR., Director
Air Force Real Property Agency
United States Air Force

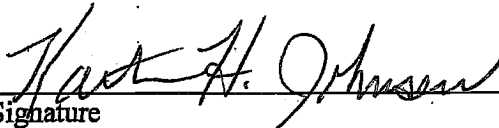


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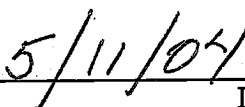
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Signature



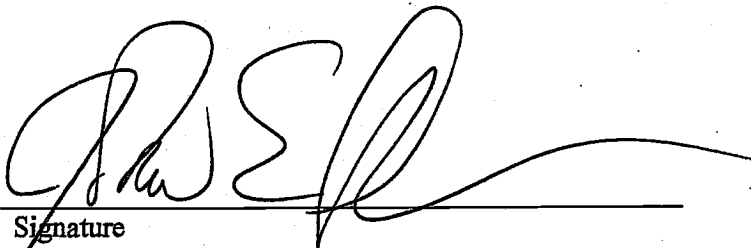
Date

KATHLEEN H. JOHNSON, Chief
Federal Facilities and Site Cleanup Branch
U.S. Environmental Protection Agency, Region IX

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May 17, 2004


Signature

Date

JOHN E. SCANDURA, Chief
Southern California Branch
Office of Military Facilities
Department of Toxic Substances Control
California Environmental Protection Agency

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This AFRPA OU2 ROD may be executed and delivered in any number of counterparts, each of which when executed and delivered shall be deemed to be an original, but such counterparts shall together constitute one and the same document.



Signature
GERARD J. THIBEAULT, Executive Officer
California Regional Water Quality Control Board
Santa Ana Region

5/12/04

Date

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DECISION SUMMARY:

1.0 SITE NAME, LOCATION & DESCRIPTION

1.0 SITE NAME, LOCATION, & DESCRIPTION

1.1 LOCATION

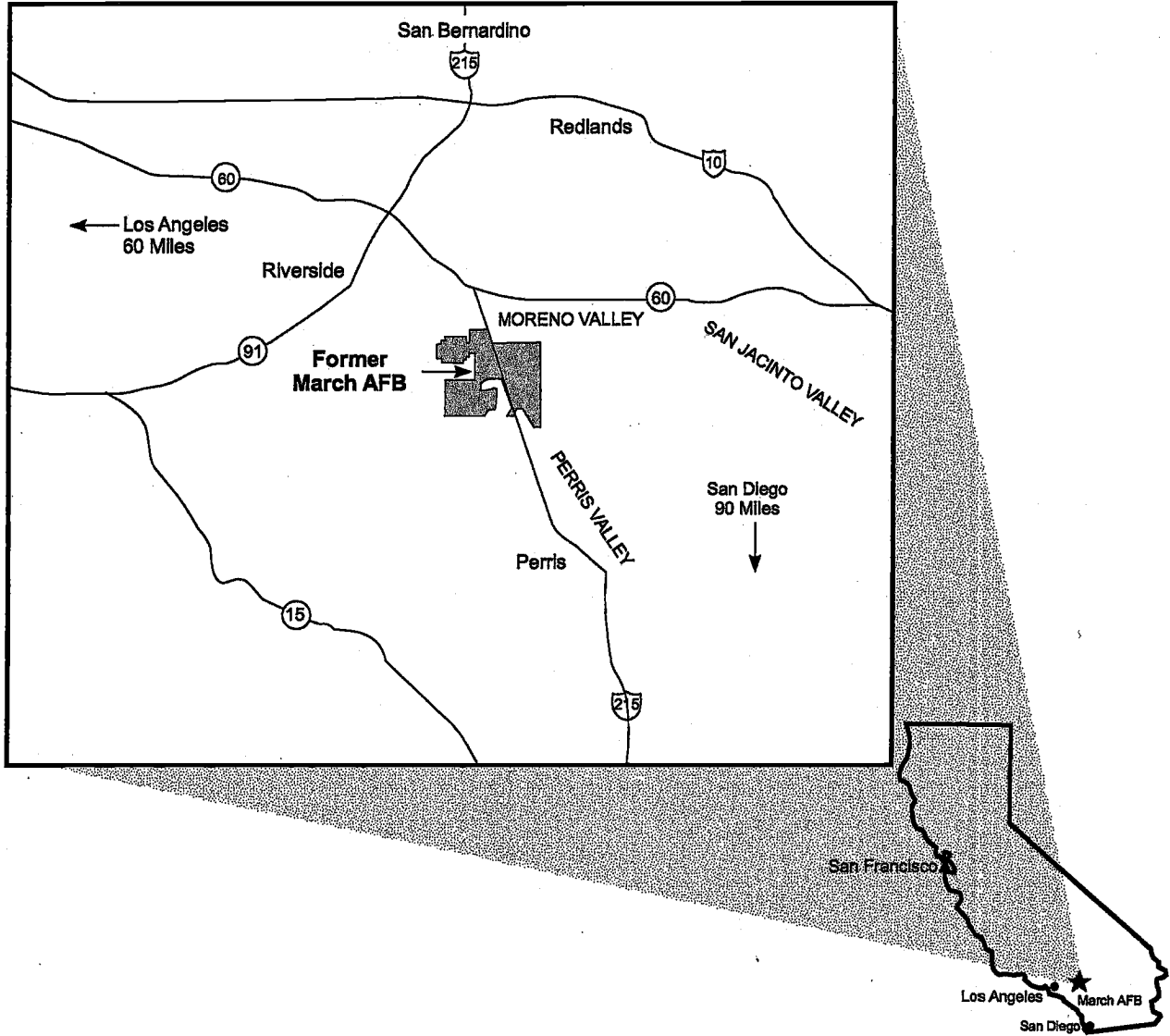
The former March AFB (or the "Base") is located at the northern end of the Perris Valley, east of the city of Riverside, in Riverside County, California. The Base is approximately 60 miles east of Los Angeles and 90 miles north of San Diego (Figure 1-1). It lies in sections of Township 3 South, Range 4 West and covers portions of the Riverside East, Steele Peak, and Sunnymead quadrangle maps. Interstate 215 (I-215) bisects the Base in a northwest-southeast direction. The portion of the Base east of the freeway is commonly referred to as the Main Base, and the portion to the west is referred to as West March. Realignment of the Base in 1996 established March Air Reserve Base (ARB), a major Air Force Reserve Command (AFRC) base that occupies a majority of the main base portion of March AFB.

When realigned (partially closed) in April 1996, March AFB covered 6,605 acres. It has been used for aircraft maintenance and repair, refueling operations, and training activities since 1918. In 1980, the Installation Restoration Program (IRP) was developed by the Department of Defense as the mechanism for the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (42 U.S.C. Section 9601) process, incorporating applicable RCRA regulations as well as meeting requirements of the National Oil and Hazardous Substance Pollution Contingency Plan (NCP) (40 CFR Part 300). The Air Force conducted a Phase I records search of 30 potentially contaminated IRP sites on the Base. There are now a total of 44 IRP sites at the former March AFB and current March ARB.

The primary contaminants identified in the IRP include chlorinated solvents, fuels, polychlorinated biphenyls (PCBs), and polynuclear aromatic hydrocarbons (PAHs). Contamination by PAHs and PCBs appears to be restricted to surface and near-surface soils whereas fuel hydrocarbons and solvents tend to be predominant contaminants in subsurface soils and groundwater.

The lead agency for cleanup of the closed portions of March AFB is the Air Force. The U.S. Environmental Protection Agency (USEPA), the California Department of Toxic Substances Control (DTSC), and the Santa Ana Regional Water Quality Control Board (RWQCB) are all support agencies for cleanup activities at the Base. The Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) identification number assigned to the Base is CA4570024527.

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United States Air Force

Former March AFB

**Location of Former March
Air Force Base**

**Figure
1-1**

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DECISION SUMMARY:

2.0 - SITE HISTORY & ENFORCEMENT ACTIVITIES

2.0 SITE HISTORY & ENFORCEMENT ACTIVITIES

March AFB opened on March 1, 1918, as the Alessandro Aviation Field. This 640-acre facility was used during World War I as a training center for Curtis JN1 "Jenny" aircraft pilots. After World War I, the Base closed for about 4 years and reopened in 1927. By 1938, March AFB was considered the central location for bombing and gunnery training on the West Coast. During World War II, Camp Haan Army Base was constructed along the west side of I-215 (then Highway 395). Camp Haan extended from Alessandro Boulevard south along the Highway to Nandina Avenue and to Barton Street to the west approximately 3 to 4 miles. Camp Haan was an anti-aircraft artillery camp and staging area for General Patton's tank force. At one time, as many as 80,000 personnel were reportedly stationed at Camp Haan, and many of the old building foundations remain. After World War II, a portion of Camp Haan became a part of March AFB. In 1949, the Base became a bomber base under command of the Strategic Air Command. In June 1991, March AFB became an Air Mobility Command installation, with primary missions of air refueling and cargo airlifts. From that time until realignment in 1996, the Base served as a main location for bombers as well as refueling and cargo aircraft. In addition, Air Force Reserve Command (AFRC) and California Air National Guard (ANG) units have operated cargo and fighter missions at the Base.

In 1993, the Base Closure and Realignment Commission designated March AFB for realignment, resulting in the transfer, by April 1996, of most active duty Air Force personnel and aircraft to Travis AFB, California. AFRC and California ANG units remained, and a portion of the Main Base was retained and redesignated as March ARB. Due to realignment, substantial areas of the Base (particularly at West March) will be transferred to civilian agencies, decreasing the 1993 area of the Base by about two-thirds.

The Air Force, at March AFB and elsewhere, has long been engaged in a wide variety of operations involving the use, storage, and disposal of hazardous materials, including fuel and solvents. Past waste disposal practices have resulted in contamination of soil and groundwater at several areas on the Main Base and on West March.

In 1980, the Air Force developed the Installation Restoration Program (IRP) to address soil and groundwater contamination at Air Force bases nationwide. The IRP process at March AFB began in 1983 with a records search that included interviews with Base personnel and research of Base records and historic aerial photographs. The records search identified 30 potentially contaminated sites and recommended further investigation of most of those sites. Since then, numerous investigations have been conducted to delineate contaminants in the soil and groundwater. There are currently 44 IRP sites at the Base, 15 of which are being addressed in the Air Force Real Property Agency (AFRPA) ROD for OU2.

In 1989, USEPA placed the Base on the USEPA National Priorities List (NPL), because of documented groundwater contamination by chlorinated solvents and other contaminants. In September 1990, the Air Force entered a Federal Facilities Agreement (FFA) with the USEPA and the State of California to facilitate the assessment and cleanup process. The FFA establishes procedures for involving federal and state regulatory agencies as well as the public in the restoration process at March AFB. This AFRPA OU2 ROD documents the appropriate institutional controls as well as the implementation and enforcement mechanisms necessary to protect human health and the environment at IRP Sites 6, 12, 17 and 19.

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DECISION SUMMARY:

3.0 - HIGHLIGHTS OF COMMUNITY PARTICIPATION

3.0 HIGHLIGHTS OF COMMUNITY PARTICIPATION

The Draft OU2 Remedial Investigation/Feasibility Study (RI/FS) report was released to the public in November 1996, followed by the Proposed Plan on September 8, 1997. This Proposed Plan will hereinafter be referred to as the 1997 OU2 Proposed Plan. These two documents were listed in the Administrative Record and taken to the information repositories at the Moreno Valley library and Chamber of Commerce. The notice of availability of these documents was published in the Press-Enterprise, the main local newspaper, on September 5, 1997. A fact sheet, condensed from the 1997 OU2 Proposed Plan, was sent to all persons on the March AFB mailing list, which includes Restoration Advisory Board (RAB) members, in May 1998.

The public comment period for the 1997 OU2 Proposed Plan was held from September 8 to October 8, 1997. In addition, a public meeting was held on September 9, 1997. Representatives of the Air Force, the U.S. Environmental Protection Agency (USEPA), the California Department of Toxic Substances Control (DTSC), and the Santa Ana Regional Water Quality Control Board (RWQCB), attended the public meeting to address questions about the OU2 RI/FS and the 1997 OU2 Proposed Plan. The Responsiveness Summary for this 1997 public comment period is included in Appendix A of the two draft OU2 RODs, produced in February 1998 and November 1998, both of which are part of the Administrative Record. Neither of these RODs was finalized or signed.

A new OU2 Proposed Plan, hereinafter referred to as the 2000 OU2 Proposed Plan, supersedes the 1997 OU2 Proposed Plan and addresses only those sites that are the responsibility of the AFRPA. The 2000 OU2 Proposed Plan, which was produced in its entirety, as a fact sheet, was sent to all persons on the March AFB mailing list. The public comment period for the 2000 OU2 Proposed Plan was held between August 23, 2000 and September 22, 2000. A public meeting was held on September 13, 2000 on the 2000 OU2 Proposed Plan. Representatives of the Air Force, USEPA, and California DTSC attended the public meeting to address questions about the 2000 OU2 Proposed Plan.

Responses to comments received during this public comment period are included in the Responsiveness Summary, contained in this AFRPA OU2 ROD (Appendix A). This AFRPA OU2 ROD presents the remedial actions for the OU2 AFRPA sites, located at March AFB, California. Remedial actions were selected in accordance with CERCLA, as amended by Superfund Amendments and Reauthorization Act, and the NCP. Documents relating to the selection of remedial actions for OU2 AFRPA sites at March AFB are listed in the Administrative Record Index, provided in Appendix B. Public participation in the decision-making process for OU2 AFRPA sites complied with the requirements of CERCLA §113(k)(2)(B)(I-v), 117, and the NCP 40 CFR §300.430(f)(3).

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March AR # 2226 Page 40 of 198

DECISION SUMMARY:

4.0 – SCOPE & ROLE OF OPERABLE UNIT 2 – AFRPA SITES

4.0 SCOPE & ROLE OF OPERABLE UNIT 2 – AFRPA SITES

At March AFB, aircraft maintenance, fuel storage operations, fire-training exercises, and regular Base operations have generated a variety of hazardous wastes. Past waste disposal practices have contaminated soil and groundwater in several areas on the Base. In 1989, March AFB became a Superfund site when it was added to the USEPA National Priorities List (NPL), encompassing 40 separate sites (Figure 4-1). As with many Superfund sites, the contamination issues at March AFB are complex. As a result, the work has been organized into operable units.

Three Operable Units (OU1, OU2, and OU3) were created to facilitate the restoration process. Categorization of OUs was based primarily on geographical location and similarities in contaminant types and distribution. The location of OU1, OU2, and OU3 sites are shown in Figure 4-1.

OU1 encompassed Sites 4, 5, 7, 9, 10, 13, 14, 15, 16, 18, 29, 31, 34, and 38. Sites 21 and 23 were initially included in OU1, but Site 23 was transferred to OU2, and Site 21 will be addressed in another AFRPA decision document. OU1 also includes the off-base portion of the groundwater plume at the eastern Base boundary. A ROD was issued for OU1 in June of 1996 which addresses: 1) soil at Sites 10, 15, 18, 31 and 34; and 2) groundwater at Sites 4, 18 and 31 and the combined OU1 groundwater plume.

OU2 originally included Sites 1, 2, 3, 6, 8, 11, 12, 17, 19, 20, 22, 23, 24, 25, 26, 27, 28, 30, 32, 35, 36, 37, 39, 40, 41 and 42. Sites 28 and 32 were originally listed in the FFA as OU2 sites. Site 28 was a network of monitoring wells (28MW1 through 28MW10) dispersed throughout the Main Base. Since Site 28 was not an identified source of contamination, a separate investigation for Site 28 was not required and this site will not be discussed further in this document. Site 32 was loosely described as areas of construction debris for which locations were not specified. Several specific construction debris sources were identified at some OU2 sites, such as Sites 17, 20, and 30. No other specific locations were identified for inclusion in the remedial investigation/feasibility study (RI/FS), and further investigation of Site 32 was not required.

An RI/FS was prepared for OU2 sites between 1992 and 1997. The main objectives of the OU2 RI were to collect additional data to confirm contaminant source areas, to delineate contaminant boundaries, to assess potential risks to human health and the environment, and to evaluate remedial alternatives for soil and groundwater cleanup. In February 1998, a draft ROD was issued for all of the OU2 sites to meet the FFA deadline. A draft final OU2 ROD was issued in November 1998.

Since issuance of the draft final OU2 ROD, the Air Force has separated the OU2 ROD into an AFRPA ROD and an AFRC ROD. This separation of the RODs is intended to expedite the transfer of AFRPA-controlled land to the community.

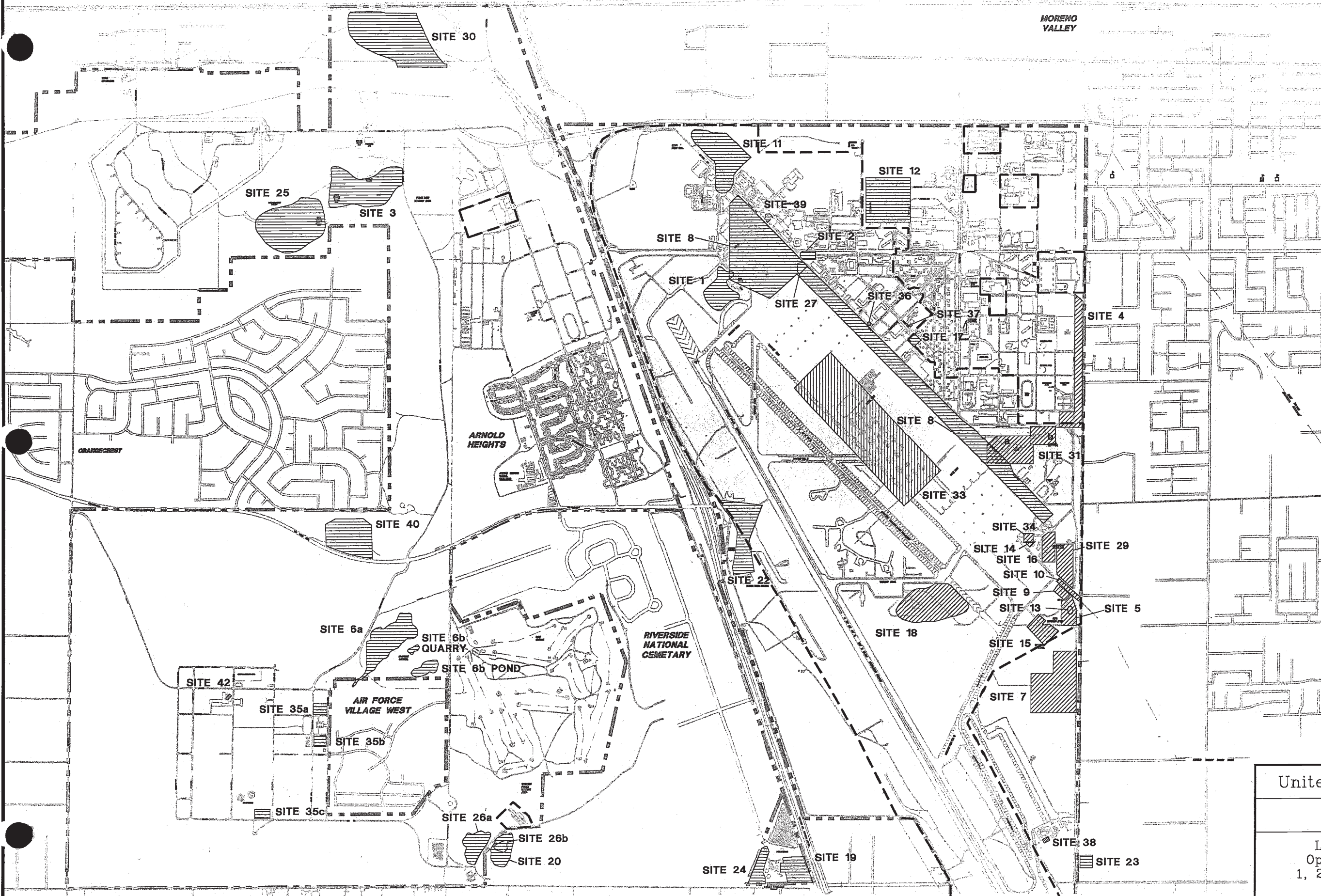
This AFRPA OU2 ROD addresses only the OU2 sites, primarily located on West March, managed by the AFRPA (Sites 3, 6, 12, 17, 19, 20, 26, 22, 23, 24, 25, 30, 35, 40, and 42 [Figure D-1]). The sites included in this document are in areas that have been declared excess property and will be transferred from Air Force control. The remaining OU2 sites are in the AFRC cantonment property. The sites in OU2 not addressed in this document will be described in a separate decision document or documents for the OU2 sites that are managed by the AFRC. A listing of the sites and the agency managing each site is provided in Table 4-1. A summary of the current status of the OU2 sites addressed in this document is included in Table 4-2.

OU3 consists of IRP Site 33 (Panero Aircraft Fueling System). Soil and groundwater in OU3 have been contaminated by jet fuel. A Decision Document was issued for OU3 in October of 1996, which addresses the soil and groundwater contamination. The Decision Document for OU3 was intended to upgrade the ongoing jet fuel removal and increase the removal rate.






Sites 21, 41, 43 and 44, Site L, and Environmental Baseline Survey sites such as former transformer areas and a former power generator facility will be addressed in a future AFRPA decision document.

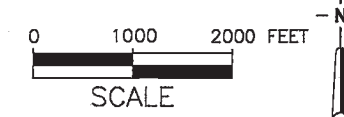
Sites 6c, 6d, and 6e were abandoned quarries located on Air Force Village West, south of Site 6b, reportedly filled with domestic solid waste, demolition debris, and, potentially, industrial wastes believed to be from March AFB activities. Site 6c was approximately 6 acres in size and Site 6d was approximately 8.7 acres in size. Wastes in Sites 6c and 6d were excavated and transported to the Site 6 engineered waste cell for disposal. The excavated materials included demolition debris, domestic wastes, and soils. Site 6c contained about 22,300 cubic yards of waste. Site 6d contained about 35 cubic yards of waste in a few small debris piles. Site 6e was reportedly about 2 acres in size and the area was developed into housing in the late 1980's. During development of Air Force Village West in approximately 1989 to 1991, the Site 6e quarry was backfilled. No information is available regarding the quantity or disposition of waste, if any, from Site 6e. (IT Corporation 1997a)

Confirmation soil samples were taken from the base of the excavations in Sites 6c and 6d. Constituent concentrations, with the exception of arsenic and beryllium, were either below EPA Region IX residential PRGs or were not detected. Arsenic concentrations in most samples were at levels above residential PRGs, but were within the range of background arsenic levels for West March AFB. Concentrations of beryllium in some samples also exceeded the residential PRGs, but were within the range of background beryllium levels for West March AFB. (IT Corporation 1997a)



LEGEND

-  OU1 Sites
-  OU2 Sites
-  OU3 Sites
-  Base Boundary
-  Areas To Be Retained By The Air Force



United States Air Force	
March ARB	
Locations of Operable Units 1, 2, and 3 Sites	Figure 4-1

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**TABLE 4-1
OU2 SITES**

Site No.	Description	Managing Agency
1	Aircraft Isolation Area	Air Force Reserve Command
2	Waste Oil Tanks/Solvent Pits	Air Force Reserve Command
3	Landfill No. 5	Air Force Real Property Agency
6	Landfill No. 4	Air Force Real Property Agency
8	Flightline Shop Zone	Air Force Reserve Command
11	Bulk Fuel Storage Area	Air Force Reserve Command
12	Civil Engineering Yard	Air Force Real Property Agency
17	Swimming Pool Fill	Air Force Real Property Agency
19	West March Sludge Drying Beds	Air Force Real Property Agency
20	Landfill No. 7	Air Force Real Property Agency
22	Landfill No. 2	Air Force Real Property Agency
23	East March Effluent Pond	Air Force Real Property Agency
24	Landfill No. 1	Air Force Real Property Agency
25	Munitions Residue Burial Site	Air Force Real Property Agency
26	Water Treatment Sludge	Air Force Real Property Agency
27	Building 422 Underground POL Tanks	Air Force Reserve Command
28 ¹	Main Base Monitoring Well Network	Air Force Reserve Command
30	Construction Rubble Burial Site	Air Force Real Property Agency
32	Construction Debris Areas	Air Force Real Property Agency
35	15 th Air Force Headquarters Leaking Underground Storage Tanks	Air Force Real Property Agency
36	Building 458 Leach Pit	Air Force Reserve Command
37	PCB Spill at Building 317	Air Force Reserve Command
39	Abandoned Gas Station	Air Force Reserve Command
40	Landfill No. 8	Air Force Real Property Agency
41	Hawes Site	Air Force Real Property Agency ²
42	Building 3404 Transformers	Air Force Real Property Agency

Notes: ¹Investigated by potential source areas such as Site 2 and Site 8. Required remedial action for these sources is provided under the site containing the source.

²Site 41 will be discussed in a separate decision document.

**TABLE 4-2
SITE STATUS SUMMARY
OU2 SITES MANAGED BY AFRPA**

Site No.	Interim Removal Action Performed	Institutional Controls Required
3	Yes	No, unrestricted land use
6	Yes	Yes (land use restrictions, SLUC ¹ and groundwater monitoring)
12	Yes	Yes (groundwater monitoring and use restrictions ² ; land use restrictions and SLUC ¹)
17	Yes	Yes (land use restrictions and SLUC ¹)
19	No	Yes (land use restrictions and SLUC ¹)
20	Yes	No, unrestricted land use
22	No	No, unrestricted land use
23	No	No, unrestricted land use
24	Yes	No, unrestricted land use
25	Yes	No, unrestricted land use
26	Yes	No, unrestricted land use
30	No	No, unrestricted land use
35	Yes	No, unrestricted land use
40	Yes	No, unrestricted land use
42	Yes	No, unrestricted land use

Notes: ¹State Land Use Covenant
²Until concentrations are below maximum contaminant levels.

DRAFT

March AR # 2226 Page 46 of 198

DECISION SUMMARY:

5.0 - SUMMARY OF CHARACTERISTICS

5.0 SUMMARY OF SITE CHARACTERISTICS

5.1 SITE CHARACTERISTICS

The following section presents a brief overview of the site characteristics of each OU2 site located outside the cantonment area and controlled by AFRPA. Detailed information is presented in Section 3.0 of the OU2 RI/FS (Tetra Tech, Inc. 1997a).

5.1.1 Site 3 – Landfill No. 5.

Site 3 is a former 23-acre landfill located south of Cactus Avenue and west of Plummer Road (Figure 4-1). The physical site setting consists of thin alluvial cover over shallow granitic bedrock at varying depth. Outcrops of granitic rock surround the site. Two major, intermittent, surface drainage channels flow through the site. Both of these drainages originate west of the site and flow northeast. A potential jurisdictional wetland occupies a portion of the site in the drainages. Groundwater at Site 3 is present within the weathered granitic rock and in the alluvium. Groundwater flow is generally towards the northeast. Aquifer conditions are unconfined. The groundwater is found at about 15 to 25 feet bgs. Riparian vegetation is found in the drainage areas. Site 3 is located in the 1,300-acre Stephens' Kangaroo Rat (SKR) reserve.

The Site 3 landfill was used from 1954 through 1974. The landfill received household and dumpster waste, construction debris, and military waste from the Base. The military wastes included empty tanks, spent munitions, and miscellaneous wastes such as parachutes, medical waste, and fire hoses. Some of the contaminants found in the wastes included volatile organic compounds, pesticides, PCBs, PAHs, and munitions residues. The Air Force was concerned that the waste in the landfill might contaminate the soil and groundwater. After discussions with the regulatory agencies and the public, a decision was made to clean up the site by removing the landfilled waste.

An interim removal action was completed in late 1995 and early 1996 (IT Corporation 1997b). Approximately 223,200 cubic yards of landfilled materials and soil were removed. Excavated materials from Site 3 to be transported to and disposed of in the engineered waste cells at Site 6 were tested for organic and inorganic constituents during the remedial investigation and monitored during the removal action according to approved work plans. According to the As-Built Construction Report OU2, Site 6a (IT Corporation 1997c), all materials from Site 3 placed in the Site 6 engineered waste cells met the requirements of CCR Title 23, Section 2523 (currently CCR Title 27, Section 20220) for a non-hazardous solid waste landfill. Materials not meeting the CCR Title 23, Section 2523 requirements were sent off base for disposal. Confirmation sampling conducted after the interim removal action confirmed that the site had been cleaned to levels protective of human health and the environment. No restrictions on land use are required. The results of the confirmation sampling are discussed in Section 6, Summary of Site Risks.

After the interim removal action, the site was restored by backfilling with clean soil and revegetating the site. In general, knolls and higher areas of excavation were covered with approximately 3 feet of soil and slopes adjacent to drainages were covered with 2 feet of soil. Low-lying drainages were covered with 6 inches of soil. The site was revegetated with a seed mix approved by the U.S. Fish and Wildlife Service. The 0.2 acres of wetland disturbed by the interim removal action were backfilled with 2 feet of soil and revegetated.

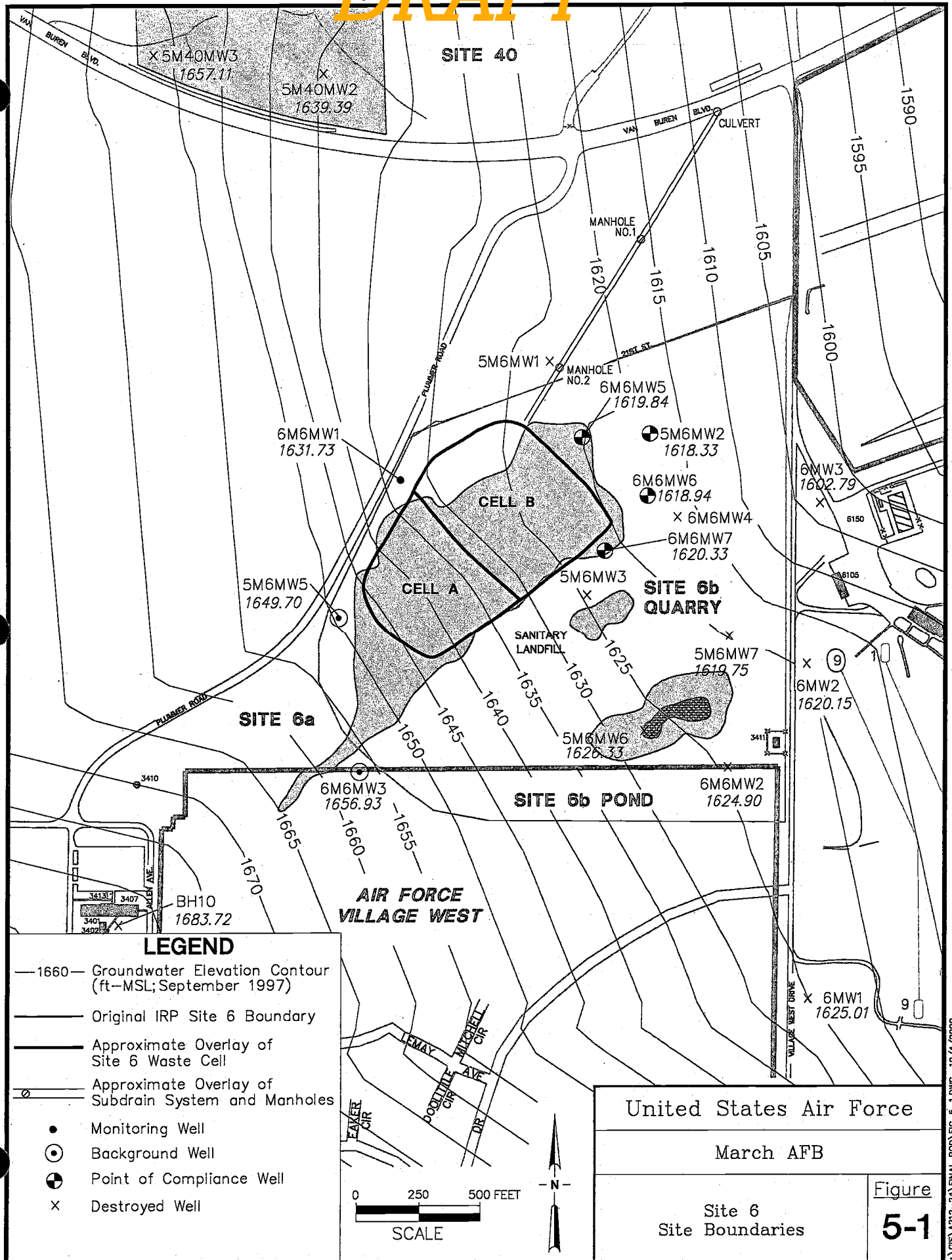
5.1.2 Site 6 – Landfill 4.

Site 6 is located on West March, north of the Air Force Village West residential development, south of Van Buren Boulevard, east of Plummer Road, and west of Air Force Village West Drive (Figure 4-1 and Figure 5-1). The landfill comprised three discrete areas: Site 6a (approximately 15 acres) the location of the main former landfill area; Site 6b Quarry (approximately 0.6 acre) the location of a former quarry; and Site 6b Pond (approximately 2.6 acres) the location of a pond.

The topography at Site 6 consists of gently rolling hills incised by drainage gullies. Rock outcrops are scattered over the area and, where covered with alluvium, the depth to weathered granitic bedrock is relatively shallow. Groundwater at Site 6 is unconfined at depths ranging from approximately 10 to 38 feet bgs. Groundwater flows toward the east-northeast. Surface water at Site 6 generally drains toward the east-northeast through two natural drainage channels. Site 6b Pond contains standing water and is surrounded by riparian vegetation. The Site 6b Pond below elevation 1,629 feet mean sea level (MSL) is a jurisdictional wetland.

Site 6 was used by March AFB from the early 1950s to the early 1980s for disposal of household waste and construction debris. Polynuclear aromatic hydrocarbons (PAHs), PCBs, pesticides, herbicides, and dioxins were found in samples of soil and water collected during the OU2 RI. An interim removal action was conducted in 1995; approximately 63,000 cubic yards of waste were removed from Site 6a and temporarily stockpiled (IT Corporation 1997c). Waste at Site 6a was removed from the vadose zone and beneath groundwater including soil contaminated with petroleum hydrocarbons. Waste was also removed from the pond, including debris and tar. Two engineered waste cells, over 12 acres in size, were constructed in the Site 6a area (Figure 5-1). No confirmation samples were taken of soils and bedrock under Site 6a because the bottom of the excavation was below the water table and sample results would not be meaningful. This site was treated as a closure in place rather than a clean closure. Stockpiled waste from Site 6a was landfilled back into the engineered waste cells over Site 6a. Excavated materials from Site 6a to be disposed of in the engineered waste cells at Site 6 were tested for organic and inorganic constituents during the remedial investigation and monitored during the removal action according to approved work plans. According to the As-Built Construction Report OU2, Site 6a (IT Corporation 1997c), all materials from Site 6a placed in the Site 6 engineered waste cells met the requirements of CCR Title 23, Section 2523 (currently CCR Title 27, Section 20220) for a non-hazardous solid waste landfill.

The engineered waste cells built at Site 6 meet federal and state environmental standards (IT Corporation 1995 and IT Corporation 1997c and d). Only non-hazardous waste, as defined in CCR Title 23, Section 2523 (currently CCR Title 27, Section 20220) from various sites, primarily Sites 1, 3, 6, 12, 20, 24, 25, 26, 40, and other sites was placed in the waste cells. The engineered waste cells at Site 6 contain: petroleum contaminated soil; domestic trash; lime sludge; construction debris; military wastes; as well as soil with PAHs, PCBs, dioxins, organochlorine pesticides; organophosphorus pesticides; lead; hexavalent chromium; cadmium, arsenic, antimony, munitions residues (RDX and nitroguanadine); and volatile and semivolatile organic compounds. The engineered waste cells have a volume of about 600,000 cubic yards. The soil cap placed over the engineered waste cells prevents potential receptor exposure to the waste. A liner, subdrain, and leachate collection systems installed beneath the landfill act as a barrier to protect the groundwater beneath the site. The site requires periodic inspections of the landfill cap and engineered structures to maintain the integrity of the engineered waste cells, as well as monitoring of groundwater.



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Landfilled debris associated with Site 6b Pond and Site 6b Quarry, approximately 19,300 cubic yards of debris and soil, was removed and deposited in the Site 6 engineered waste cells (IT Corporation 1997d). Approximately 2,480 tons of soil or sediment impacted by oil and tar and 4,770 tons of waste were removed from the sites and disposed of off the Base. Excavated materials from Site 6b to be disposed of in the engineered waste cells at Site 6 were tested for organic and inorganic constituents during the remedial investigation and monitored during the removal action according to approved work plans.

According to the As-Built Construction Report OU2, Site 6a (IT Corporation 1997c), all materials from Site 6b placed in the Site 6 engineered waste cells met the requirements of CCR Title 23, Section 2523 (currently CCR Title 27, Section 20220) for a non-hazardous solid waste landfill. Confirmation samples of the soil and bedrock were taken. The results confirmed that Site 6b Pond and Site 6b Quarry had been cleaned to levels protective of human health and the environment. No restriction on future use of the land is required. The results of the confirmation sampling are discussed in Section 6, Summary of Site Risks.

After the interim removal action, Site 6b was restored by regrading with alluvium and decomposed granite and revegetating the site. Excavation slopes were graded to a 2 to 1 ratio with a bench midway up the slope. Hydroseeding was performed and erosion mats were laid for slope protection. In the Site 6b Pond area, the existing wetland was expanded to 0.75 acres and the area was revegetated with wetland trees and plants per an approved restoration plan (IT Corporation 1997a).

5.1.3 Site 12 – Civil Engineering Yard.

Site 12, the 20-acre Base Civil Engineering Yard, is located north of MacDill Street, between Lackland Avenue and Travis Avenue (Figure 4-1 and Figure 5-2). The area is developed with numerous structures and is partially paved with asphalt. Bedrock was not encountered during investigations at Site 12. The ground surface at Site 12 is generally flat, sloping gently toward the south. Surface drainage within the paved area is collected by a system of drain inlets and pipes that drain to the south. The depth to groundwater is approximately 40 feet and has risen over 10 feet since 1993. The direction of groundwater flow is to the west and southwest.

From the 1950's to 1996, Site 12 was the civil engineering yard for general maintenance operations for March AFB (Figure 5-2). It included a carpentry shop, electrical shop, paint shop, pesticide shop, and storage areas for heavy equipment. These shops used and stored a variety of hazardous materials including paints and paint-related products, pesticides, solvents, acids, and drums labeled hazardous waste.

During the OU2 RI, PAHs and hexavalent chromium were found in soil samples. The contaminant 1,1-dichloroethene (1,1-DCE) was found in soil vapor samples in a small area in deeper soils near Building 2507 (Figure 5-2). Groundwater beneath Site 12 has become impacted by trichloroethene (TCE) and tetrachloroethene (PCE). The groundwater contamination is in a small area and is only slightly above maximum contaminant levels (MCLs). Periodic monitoring of the groundwater to observe changes in contaminant concentrations is being conducted.

After discussions with the regulatory agencies and the public, a limited interim removal action was taken in 1996 to ensure that the site could be used for industrial purposes by removing soils contaminated with PAHs and hexavalent chromium at the northwest portion of Site 12 (IT Corporation 1997e). Approximately 2,000 cubic yards (erroneously reported as 3,000 cubic yards in the 2000 Proposed Plan) of non-hazardous contaminated soil was excavated from a small area in the northwest portion of the site and placed in the engineered waste cells at Site 6. Excavated materials from Site 12 to be transported to and disposed of in the engineered waste cells at Site 6 were tested for organic and inorganic constituents during the remedial investigation and prior to excavation activities for the removal action according to approved work plans. According to the As-Built Construction Report OU2, Site 6a (IT Corporation 1997c), all materials from Site 12 placed in the Site 6 engineered waste cells met the requirements of

CCR Title 23, Section 2523 (currently CCR Title 27, Section 20220) for a non-hazardous solid waste landfill. The excavations were backfilled with clean soil. Soil contaminated with petroleum hydrocarbons was not removed from areas under a drum storage area and beneath the asphalt paving near a removed washbasin (Figure 5-2). Confirmation soil samples were collected from the base of the excavations and the excavation sidewalls under the drum storage area and asphalt paving after the interim removal action. The results of the confirmation sampling confirmed that an industrial land use is appropriate. The results of confirmation sampling demonstrate that industrial PRGs were met. The results are discussed in Section 6, Summary of Site Risks.

5.1.4 Site 17 – Swimming Pool Fill.

Site 17 is a former Base swimming pool located on the Main Base on U Street between DeKay and K Streets (Figure 4-1 and Figure 5-3). The area is vacant land, adjoining Base housing to the east and south. Bedrock was not encountered during investigations at Site 17. The ground surface at Site 17 is generally flat. The depth to groundwater is approximately 45 to 50 feet and has risen since 1993. The direction of groundwater flow is to the south.

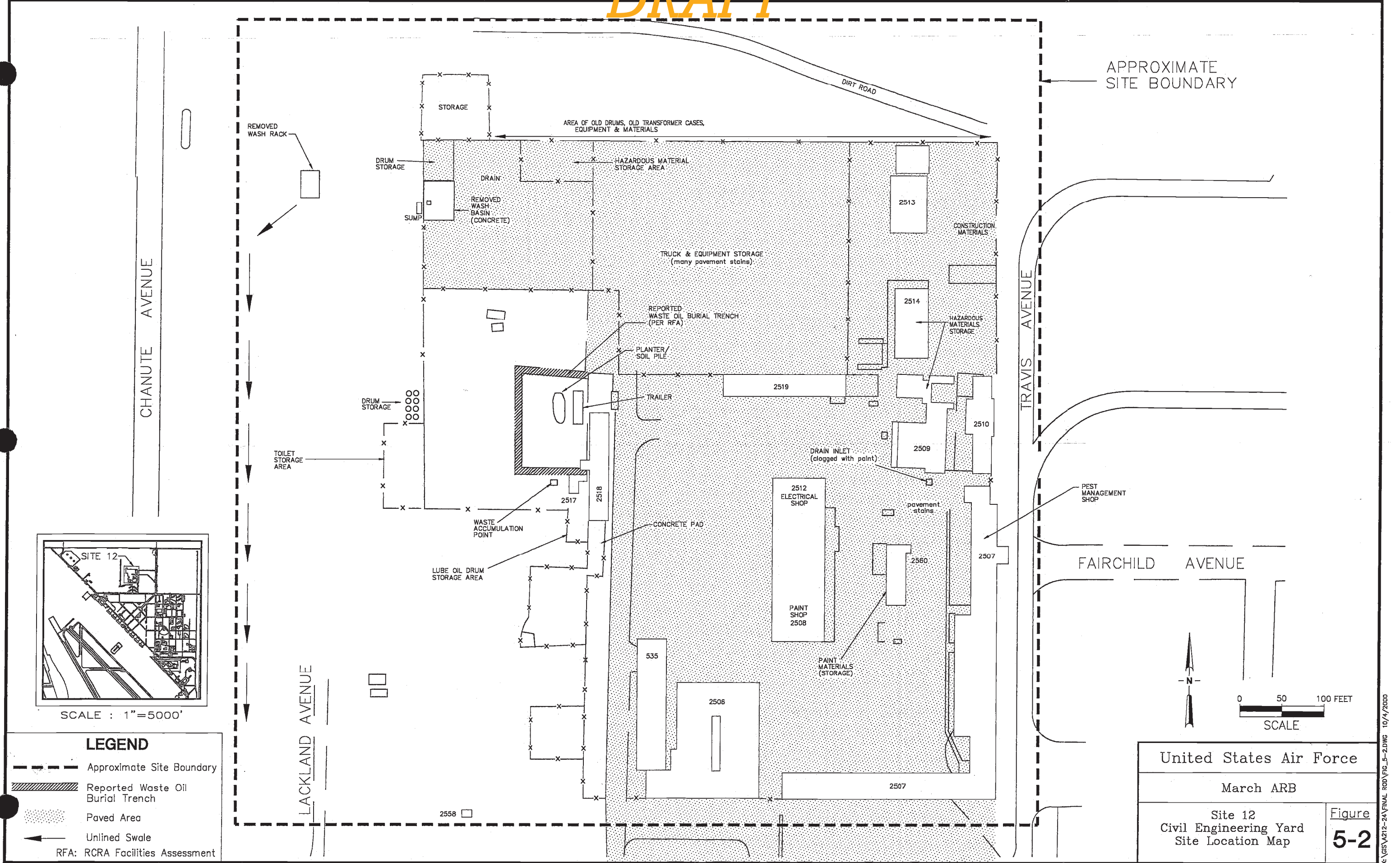
The former swimming pool at Site 17 was closed in the 1970s. After it was closed, the pool was used as a disposal site and the wastes were covered with soil. After discussions with the regulatory agencies and the public, a decision was made to clean the site by removing the waste. The pool and its contents were removed during a 1994 interim removal action (Tetra Tech, Inc 1994). The wastes were taken off the Base for disposal. After the interim removal action, low levels of PCBs were still detected in soils at least 8 feet beneath the ground surface. The pool excavation was filled with clean soil, leaving the PCBs in place. No PCB contamination has been found in the groundwater and the PCBs are not expected to migrate to groundwater. Confirmation sampling conducted after the interim removal action demonstrated that PCBs remain at the site at levels of concern to human health (Tetra Tech, Inc. 1994 and 1997a). The results of confirmation sampling are further discussed in Section 6, Summary of Site Risks.

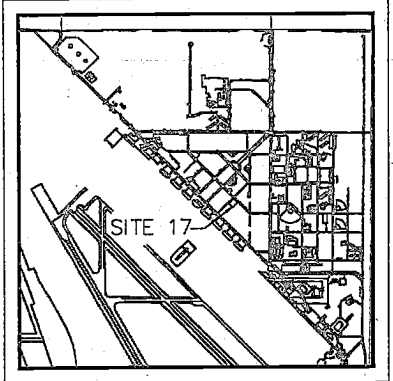
5.1.5 Site 19 – West March Sludge Drying Beds.

Site 19 is about 7 acres in size, located at the southern end of West March (Figure 4-1 and Figure 5-4), east of the active wastewater treatment plant. The site is generally vacant land with four concrete lined drying beds in the western portion of the site. Bedrock was not encountered during investigations at the site. The topography of the site is flat with a gentle slope to the east. Surface water drains toward the east into an unlined channel. Groundwater beneath Site 19 is in unconfined conditions at a depth of about 15 feet. Water levels show significant seasonal fluctuations, with higher levels measured during and after wet seasons. Groundwater flow direction is primarily to the east.

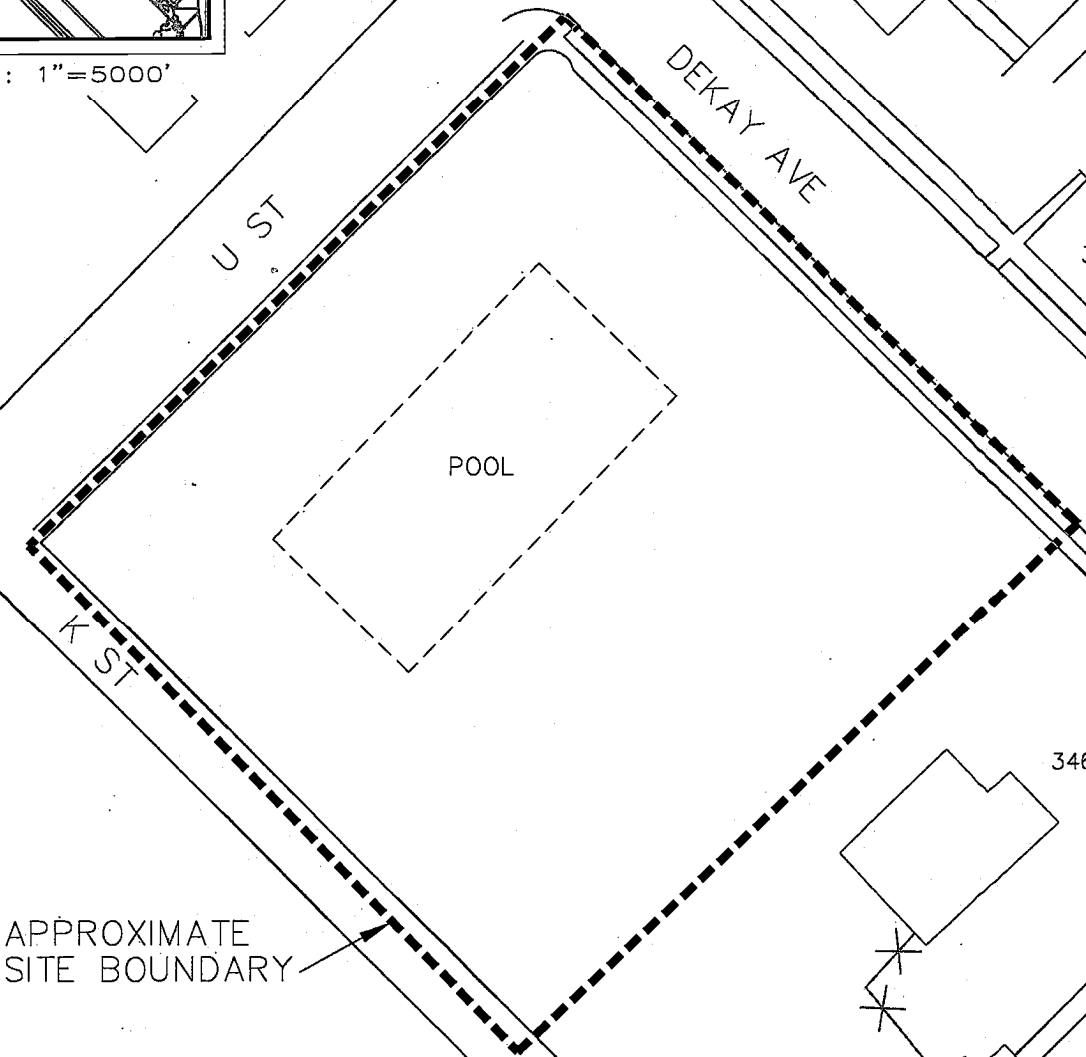
Site 19 contains the four active lined sludge-drying beds and three inactive, unlined sludge-drying beds associated with the wastewater treatment plant (Figure 4-1 and Figure 5-4). The plant was constructed in 1941 and used to process the wastewater from Camp Haan and March AFB. A total of 10 sludge-drying beds have historically been used at the site. Three of these beds have been backfilled. In 1990 when the plant was upgraded, four lined drying beds were constructed at the location of previously unlined beds.

In the past, wastewater treatment sludge was spread out in the unlined drying beds to dry. When dry, the sludge was removed from the drying beds. Recently, the dried sludge has been removed from the Base for disposal. Past disposal practices are unknown. PAHs, PCBs, hexavalent chromium, and thallium were found in soil samples in the area of the unlined sludge beds at levels above residential PRGs. The sampling results for Site 19 are discussed in Section 6, Summary of Site Risks.

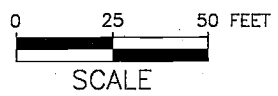
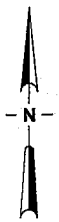




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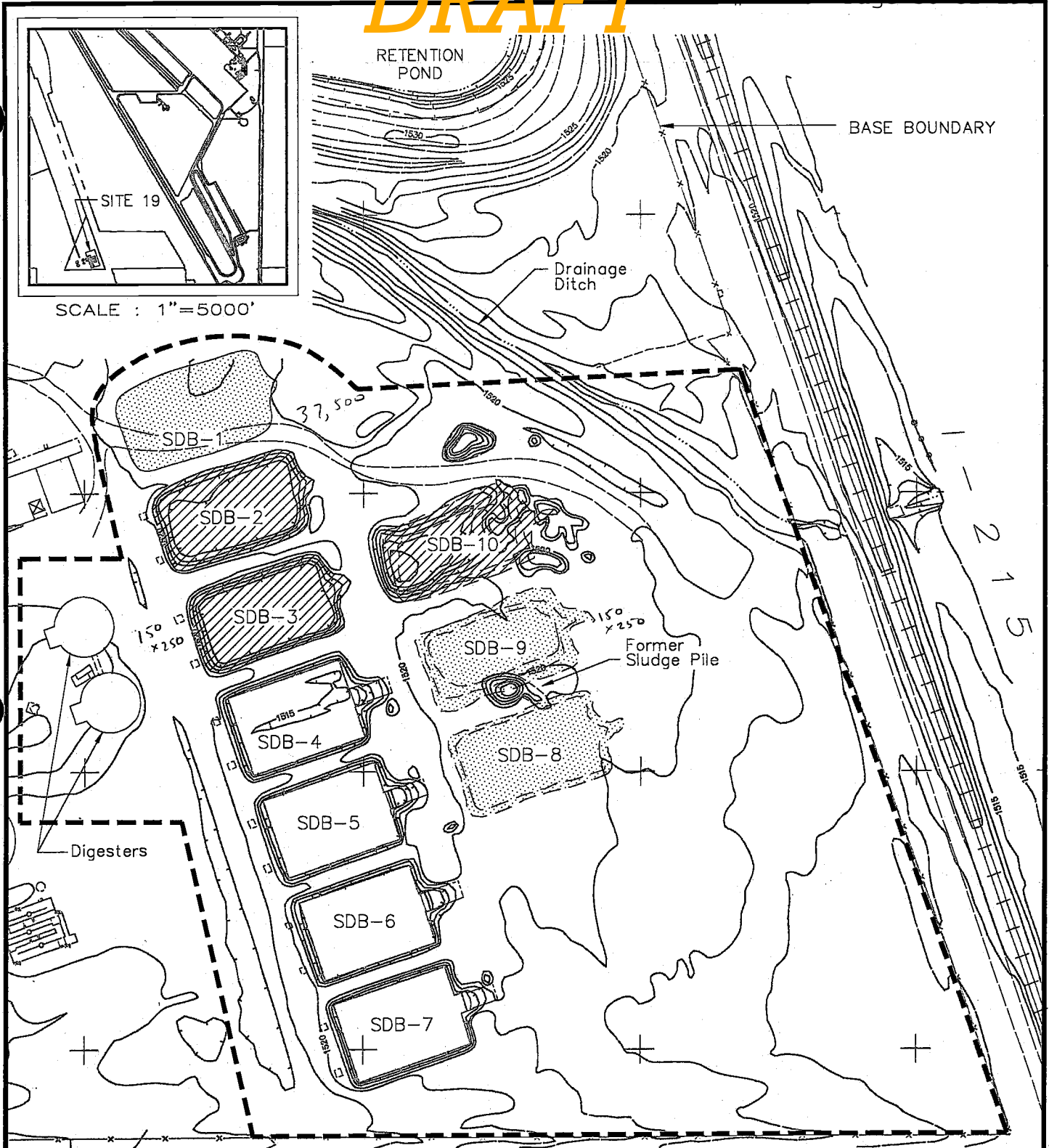
APPROXIMATE SITE BOUNDARY



United States Air Force	
March ARB	
Site 17 Swimming Pool Fill Activity Locations	Figure 5-3





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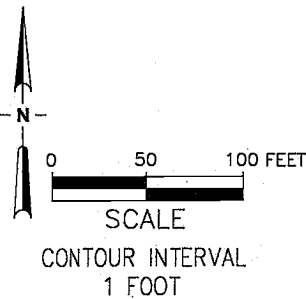
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LEGEND

-  Approximate Site Boundary
-  Active Sludge Drying Bed
-  Inactive Sludge Drying Bed
-  Former Sludge Drying Bed (backfilled)
SDB=Sludge Drying Bed



United States Air Force

March ARB

Site 19
West March
Sludge Drying Beds
Site Plan

Figure
5-4

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5.1.6 Site 20 – Landfill No. 7.

Site 20 is located adjacent to the southwest portion of March AFB, on the property acquired by the Department of Veterans Affairs from the Air Force in the 1970s (Figure 4-1). The topography at Site 20 consists of gently rolling hills incised by drainage gullies. Rock outcrops are scattered over the area and, where covered with alluvium, the depth to weathered granitic bedrock is relatively shallow. Groundwater at Site 20 is in unconfined conditions at depths ranging from approximately 12 to 43 feet bgs. Groundwater flows toward the northeast. Surface water drains to a prominent east-west ravine south of the landfill, which drains to the east.

Site 20 is a former landfill about 7 acres in size used between 1958 and 1965 as a disposal site for household waste and construction debris. Some of the chemicals found in the soils at Site 20 included PAHs, dieldrin, PCBs, and 1,4-dichlorobenzene. The Air Force was concerned the waste in the landfill could contaminate soil and groundwater. After discussions with the regulatory agencies and the public, a decision was made to clean up the site by removing the landfilled waste. The interim removal action at Site 20 was conducted in conjunction with the removal of dried sludge at Site 26a and 26b. Dried sludge of Site 26b covered a portion of Site 20.

Approximately 116,000 cubic yards of non-hazardous soil, debris, and dried sludge were removed from Sites 20 and 26 in 1996 and placed in the engineered waste cells at Site 6 (IT Corporation 1997f). Excavated materials from Site 20 to be transported to and disposed of in the engineered waste cells at Site 6 were tested for organic and inorganic constituents during the remedial investigation and monitored during the removal action according to approved work plans. According to the As-Built Construction Report OU2, Site 6a (IT Corporation 1997c), all materials from Site 20 placed in the Site 6 engineered waste cells met the requirements of CCR Title 23, Section 2523 (currently CCR Title 27, Section 20220) for a non-hazardous solid waste landfill. After the waste was removed from Site 20, confirmation samples from beneath the former landfill were tested. The results confirmed that the site had been cleaned to levels protective of human health and the environment. No restriction on future use of the land is required. The results of the confirmation sampling are further discussed in Section 6, Summary of Site Risks.

After the interim removal action, Sites 20 and 26b were restored by grading the sites and reseeded with a seed mix approved by the U.S. Fish and Wildlife Service.

5.1.7 Site 22 – Landfill No. 2.

Site 22 is a suspected former landfill east of and adjacent to Interstate 215 (Figure 4-1). The site occupies essentially flat terrain. The general surface water drainage in the area is to the southeast following the gently sloping terrain. Bedrock was not encountered during investigations at Site 22. Groundwater at Site 22 is unconfined at a depth of about 25 feet bgs and the depth to groundwater has decreased since 1993.

The original 7-acre area of Site 22 was expanded to 15 acres by extending the northern site boundary to ensure all potential areas of concern were investigated. The location of the landfill was based on limited evidence. Investigations could not locate any landfilled materials or debris. Geophysical surveys were used to find buried metal or disturbed soils. Soil gas sampling was also conducted at this site. Finally, soil and groundwater were sampled. No contaminants were found in any of the samples and the geophysical surveys found no buried waste. This evidence showed that a landfill did not exist in this area. This site was investigated during the OU2 remedial investigation and levels of contamination requiring remedial action were not identified. There was no risk assessment completed on Site 22 because no contaminants were found and the site poses no risk to human health or the environment. No restriction on future use of the land is required.

5.1.8 Site 23 – East March Effluent Pond.

Site 23 is located off-Base to the east, near the intersection of Nandina Avenue and Heacock Street in the City of Moreno Valley (Figure 4-1). The site occupies essentially flat terrain. The general surface water drainage in the area is to the southeast following the gently sloping terrain. Bedrock was not encountered during investigations at Site 23. Groundwater at Site 23 is at a depth of over 90 feet bgs and flows to the southeast.

Between 1938 and 1977, Site 23 was a 1-acre holding pond for wastewater that had been treated and used for irrigation of agricultural crops. In 1991, the pond was filled in, and it and the surrounding areas were leveled. The land is now used as a commercial sod farm and irrigated with reclaimed water from the Moreno Valley wastewater treatment plant. This site was investigated during the OU1 remedial investigation and no contamination requiring remedial action was identified. There was no risk assessment completed on Site 23 because no contaminants were found and the site poses no risk to human health or the environment. No restriction on future use of the land is required.

5.1.9 Site 24 – Landfill No. 1.

Site 24 is a former 3-acre landfill, west of Site 19 (Figure 4-1). The topography of the site is generally flat with a ridge to the west of the site. Bedrock was not encountered during drilling or trenching at Site 24, but is expected to be shallow because bedrock is exposed to the west of the site. Surface water flows to a wash along the western portion of the site that directs runoff water to an eastward-trending channel north of the wastewater treatment plant. Groundwater is at a depth of about 20 to 30 feet. Groundwater flows towards the east and southeast.

Site 24 was reportedly used between 1941 and 1965 to dispose of household waste and military waste. A small amount of soil from bullet backstop berms may have been placed in the landfill as well as some ash from an incinerator. Some of the contaminants found in the waste included PAHs, PCBs, antimony, barium, and cadmium.

The Air Force was concerned that the waste in the landfill could contaminate groundwater. After discussions with the regulatory agencies and the public, a decision was made to clean up the site by removing the landfilled waste. In December 1996, approximately 19,300 cubic yards of non-hazardous, landfilled waste was removed and placed in the engineered waste cells at Site 6 (IT Corporation 1997g). Excavated materials from Site 24 to be transported to and disposed of in the engineered waste cells at Site 6 were tested for organic and inorganic constituents during the remedial investigation and monitored during the removal action according to approved work plans. According to the As-Built Construction Report OU2, Site 6a (IT Corporation 1997c), all materials from Site 24 placed in the Site 6 engineered waste cells met the requirements of CCR Title 23, Section 2523 (currently CCR Title 27, Section 20220) for a non-hazardous solid waste landfill. Confirmation sampling conducted after the interim removal action confirmed that the site had been cleaned to levels protective of human health and the environment. No restriction on future use of the land is required. The results of the confirmation sampling are further discussed in Section 6, Summary of Site Risks.

After the interim removal action, the site was restored by backfilling with clean soil and revegetating the site. Site 24 was backfilled to grade and the soil contoured to drain as before the interim removal action. The site was revegetated with a seed mix approved by the U.S. Fish and Wildlife Service.

5.1.10 Site 25 – Munitions Residue Burial Site.

Site 25 covers approximately 33 acres and is located south of Cactus Avenue (Figure 4-1). The physical site setting consists of thin alluvial cover over shallow granitic bedrock at varying depth. Outcrops of granitic rock are west and north of the site. One major intermittent surface drainage in the southern portion of the site channels flows through the site. Groundwater at Site 25 is present within the weathered granitic rock and in the alluvium at 15 to 45 feet below ground surface. Groundwater at Site 25 flows toward the east.

Site 25 was used in the past for open air detonation and burning of munitions. Three areas with shallow trenches were used to bury munitions residue after destruction. Some of the contaminants found in the soils at this site included nickel, 1,3,5-trinitrobenzene, nitroglycerin, benzo(a)pyrene, and RDX, all of which are munition residues. Additionally, 1,1-dichloroethene was also found. The Air Force was concerned that the contaminants in soil would cause groundwater contamination. After discussions with the regulatory agencies and the public, a decision was made to clean up the site by removing the debris and contaminated soils. Approximately 3,000 cubic yards of non-hazardous waste from the trenches and contaminated soils were removed and disposed of in the engineered waste cells at Site 6 (IT Corporation 1997h). Excavated materials from Site 25 to be transported to and disposed of in the engineered waste cells at Site 6 were tested for organic and inorganic constituents at a rate of about 1 sample for every 200 cubic yards of excavated materials during the removal action. Testing was also performed as part of the remedial investigation. According to the As-Built Construction Report OU2, Site 6a (IT Corporation 1997c), all materials from Site 25 placed in the Site 6 engineered waste cells met the requirements of CCR Title 23, Section 2523 (currently CCR Title 27, Section 20220) for a non-hazardous solid waste landfill. Focused groundwater monitoring was completed at the site and no contaminants of concern were detected in groundwater. Confirmation sampling conducted after the interim removal action confirmed that the site had been cleaned to levels protective of human health and the environment. No restriction on future use of the land is required. The results of the confirmation sampling are further discussed in Section 6, Summary of Site Risks.

After the interim removal action, the site was restored by backfilling with clean soil and revegetating the site. Alluvial material from the areas surrounding the trenches was used to bring the excavations back to original grade. The site was revegetated with a seed mix approved by the U.S. Fish and Wildlife Service.

5.1.11 Site 26 – Water Treatment Sludge.

Site 26 covers approximately 3 acres and is located in the southwest portion of March AFB (Figure 4-1). Site 26 is subdivided into two areas, Site 26a and 26b. Site 26b is located over a portion of the Site 20 landfill. Site 26a is located on property controlled by the AFRPA and Site 26b is on the property of the Department of Veterans Affairs. The topography at Site 26 consists of gently rolling hills incised by drainage gullies. Rock outcrops are scattered over the area and, where covered with alluvium, the depth to weathered granitic bedrock is relatively shallow. Groundwater at Site 26 is unconfined at depths ranging from approximately 17 to 39 feet bgs. Groundwater flows toward the northeast. Surface water drains to a prominent east-west ravine, which drains to the east.

Site 26 was used for disposal of lime sludge that was a waste from the treatment of drinking water for March AFB. From 1941 to 1984, the water treatment plant treated Colorado River water used to supplement the drinking water supply for the Base. Arsenic from the treated Colorado River water was found in the lime sludge at low levels. After discussions with the regulatory agencies and the public, a decision was made to clean up the site by removing the sludge. As mentioned in the description of the landfill at Site 20, approximately 116,000 cubic yards of non-hazardous soil and dried sludge were removed from Sites 20 and 26 in 1996 and disposed of in the engineered waste cells at Site 6 (IT Corporation 1996, 1997f and 1997i). Excavated materials from Site 26 to be transported to and

disposed of in the engineered waste cells at Site 6 were tested for organic and inorganic constituents during the remedial investigation and monitored during the removal action according to approved work plans. According to the As-Built Construction Report OU2, Site 6a (IT Corporation 1997c), all materials from Site 26 placed in the Site 6 engineered waste cells met the requirements of CCR Title 23, Section 2523 (currently CCR Title 27, Section 20220) for a non-hazardous waste landfill. The area was then backfilled with clean soil and reseeded. No confirmation samples were collected at Site 26a because all visible wastes were removed to bedrock. Wastes of the Site 20 landfill were located under Site 26b and confirmation sampling was conducted as part of the interim removal action at Site 20. The results of these confirmation samples will be discussed in Section 6, Summary of Site Risks under the discussion for Site 20. The site contaminants have been totally removed. Thus, current site conditions are protective of human health and the environment. No restriction on future use of the land is required.

5.1.12 Site 30 – Construction Rubble Burial Site.

Site 30 covered approximately 40 acres, south of Alessandro Boulevard and west of Interstate 215. The physical site setting consists of thin alluvial cover over shallow granitic bedrock at varying depth. Exposed bedrock is west of the site. The general site topography slopes toward the northeast. Site 30 contains a pond that collects surface drainage from the surrounding area and is normally, though not continuously, filled with water. The pit may be fed by groundwater in certain seasons of the year and is heavily vegetated. The pond is a potential jurisdictional wetland. Groundwater elevations vary seasonally, but are generally within 20 feet of ground surface, with the highest groundwater levels recorded in early Spring. The groundwater flow direction is to the northeast. Weathered bedrock appears to support a discontinuous water table in the north and central portion of the site. Site 30 is located in the 1,300 acre SKR reserve.

There is no evidence that Site 30 ever operated as a March AFB-controlled landfill, but illegal dumping of domestic waste from the surrounding community has occurred and some minor amounts of construction debris were found. Soil and groundwater samples taken at the site did not detect contaminants at levels not protective of human health. After discussions with the regulators and the public, a decision was made to clean up the site by removing the domestic and construction debris. Domestic and construction debris was removed from the site in April 1997 and disposed of off the Base (OHM Remediation Services Corporation 1996). The Air Force has installed gates on access roads to prevent vehicular traffic to the site. Warning signs were placed in several areas, and gates remain padlocked to help prevent access by unauthorized persons.

The site conditions are protective of human health and the environment. No restriction on future use of the land is required. The results of sampling are discussed in Section 6, Summary of Site Risks.

5.1.13 Site 35 – 15th Air Force Headquarters Leaking Underground Storage Tanks.

Site 35 consisted of three subareas (Sites 35a, 35b, and 35c) located in the former 15th Air Force Headquarter complex on West March (Figure 4-1). The subareas were locations of former underground storage tanks (USTs) associated with Buildings 3409 (Site 35a), 3417/3418 (Site 35b), and 3406 (Site 35c). Bedrock was not encountered at any of the Site 35 subareas during investigations. These sites are generally flat with a general slope to the southeast and east. Runoff of surface water is to the southeast. Groundwater occurs beneath the sites at depths ranging from approximately 5 to 20 feet. The groundwater levels fluctuate with water levels dropping steadily after Spring highs, apparently caused by rainfall. Based on available data, groundwater flows to the east or northeast at Sites 35a and 35b and to the south or west at Site 35c.

The tanks at these locations were of various sizes and contained either fuel oil or diesel. Site 35a, a former 8,000-gallon fuel oil tank, was located west of Allen Avenue and south of 11th Street, east of Building 3409. Site 35b, two former diesel tanks of 6,650-gallon and 3,500-gallon, was located between Building 3417 and 3418, west of Allen Avenue and Bundy Avenue. Site 35c, a former 1,000-gallon diesel tank, was located north of 5th Street and west of Dalla Avenue, east of Building 3406. All tanks have been removed and the locations closed without restrictions in accordance with state and county regulations.

Fuel leaks have been associated with the tanks at Site 35. Sites 35a and 35b were investigated during the OU2 remedial investigation and other studies and levels of contamination requiring remedial action were not identified. After discussions with the regulatory agencies, the Air Force decided to clean up the soil by bioventing at Site 35c where fuel had leaked. Bioventing has reduced diesel fuel contamination to levels protective of human health and the environment at Site 35c (Parsons Engineering-Science 1997). No restriction on future use of the land is required. The results of sampling are discussed in Section 6, Summary of Site Risks.

There is no threat to groundwater at any of the Site 35 subareas.

5.1.14 Site 40 – Landfill No. 8.

Site 40 covers approximately 49 acres on West March, north of Van Buren Boulevard and west of Plummer Road (Figure 4-1). The most prominent feature at the site is the abandoned quarry, containing a pond with riparian vegetation. The pond is replenished by groundwater and by surface flow from an intermittent stream channel entering the pond from the west. The surface water drains from a housing area to the west of the site, flows through the pond, and then exits the site to the east. The pond is a potential jurisdictional wetland. Outcrops of granitic bedrock occur in several areas of the site. Bedrock is generally shallow with a thin mantle of soil. Groundwater at the site is generally within 10 to 40 feet of ground surface with minor seasonal fluctuations. The groundwater flow direction is to the east. Site 40 is located in the 1,300 acre SKR reserve.

Site 40 was used as a disposal location for drums, construction debris, battery casings, and motor vehicle parts. After discussions with the regulatory agencies, a decision was made to complete an expedited cleanup of the area exposed by the erosion and other debris at the site. The time-critical removal action completed in 1994 included removal of the drums, miscellaneous waste, and contaminated soil. Hazardous waste from the site was taken off the Base for proper disposal (OHM Remediation Services Corporation 1995). Approximately 6,800 cubic yards of non-hazardous materials were disposed of at the Site 6 engineered waste cells. Excavated materials from Site 40 to be transported to and disposed of in the engineered waste cells at Site 6 were tested for organic and inorganic constituents at a rate of about one sample for every 100 cubic yards of excavated materials during the removal action. Testing was also performed as part of the remedial investigation. According to the As-Built Construction Report OU2, Site 6a (IT Corporation 1997c), all materials from Site 40 placed in the Site 6 engineered waste cells met the requirements of CCR Title 23, Section 2523 (currently CCR Title 27, Section 20220) for a non-hazardous solid waste landfill. Following this time-critical removal action, confirmation sampling results confirmed that the site has been cleaned to levels protective of human health and the environment. The results of the confirmation sampling are discussed in Section 6, Summary of Site Risks. As part of the removal action, the upgradient channel was lined and a concrete weir was installed at the pond outfall to prevent erosion. The weir raised the permanent water level in the pond about 1.5 feet as recommended by the California Fish and Game, expanding the wetlands. The excavations were backfilled with clean soil and reseeded (OHM 1995).

During a recent site visit and evaluation of available data for OU2 sites, levels of mercury were identified in sediments of a pond located at Site 40 that may present a threat to ecological receptors. The EPA and AFRPA have researched the current site conditions and potential corrective actions and determined that any actions taken to prevent exposure to mercury in sediments would be more disruptive to the wetland habitat at Site 40 than leaving the sediments in place. The efficacy of leaving these sediments in place will be reviewed during the first CERCLA 5-year review, and subsequent reviews as appropriate.

Groundwater testing has shown there is no contamination of groundwater (AFRPA 2000).

5.1.15 Site 42 – Building 3404 Transformers.

Building 3404 is located on less than one acre near the intersections of 11th Street and Davis Avenue on West March (Figure 4-1). The surface topography is flat with limited surface water flow. No bedrock was encountered during investigations on the site. Groundwater occurs beneath the site at depths of about 20 feet. Groundwater flow at the site is to the south.

Transformers located in Building 3404 reportedly leaked oils containing PCBs onto the floor of the transformer room. These oils were also spilled onto the soil surrounding the building. After discussions with the regulatory agencies and the public, a decision was made to clean up the area outside of Building 3404 by removing the contaminated soil. In the interim removal action, the contaminated soils were excavated and taken offsite for proper disposal. A total of 330 tons of contaminated soils were removed from the site. The PCB concentrations were low enough to allow disposal of 292 tons of contaminated soils as non-hazardous waste. An additional 38 tons was disposed of off the Base as hazardous waste. Clean fill was placed in the excavation to grade and a gravel cover was placed on top of the previously excavated area. Confirmation sampling conducted after the interim removal action confirmed that the site had been cleaned to levels protective of human health and the environment (The Earth Technology Corporation 2000). No restriction on future use of the land is required. The results of the confirmation samples are discussed in Section 6, Summary of Site Risks.

Transformer oils may be present in the concrete floor of Building 3404. The Air Force attempted to remove the PCBs from the concrete. Minimal levels of PCBs were left and have been encapsulated. The concrete is not addressed in this AFRPA OU2 ROD because building interiors are not regulated under CERCLA. The current landowner, the County of Riverside, has entered into a land use covenant with the State that restricts use of the building to industrial activities and contains other measures to prevent exposure to residual contamination.

5.2 PROPOSED LAND USE FOR OU2 SITES CONTROLLED BY AFRPA

The current land use and adjacent land use for most of the OU2 AFRPA sites is vacant land/open space with limited commercial and residential land use adjacent to some of the sites as discussed below (Figure 5-5). Site 3 and the adjacent areas are undeveloped land. Site 6 contains an engineered waste cell. There is a residential area to the south and a golf course is to the east of Site 6. Site 12 was the former civil engineering yard with numerous structures. Site 12 is not currently utilized. Residential land use occurs to the east of Site 17. Air Force commercial facilities such as offices are located to the north and west of the Site 17. Site 19 is currently a part of the operating wastewater treatment plant. Structures relating to plant operations are located on-site and to the west and north. Site 20 and 26 and the adjacent areas are undeveloped land. A former water treatment plant is south of Site 26 and west of Site 20. This facility is no longer used. Site 23 is an active agricultural area, surrounded by currently vacant land to the north, south and east. Air Force land consisting of open space is west of Site 23. Site 25 and the adjacent areas is undeveloped land, with nearby residential development to the south. The three Site 35 subareas and Site 42 are former UST locations within landscaped areas adjacent to structures. The areas near Site 35a, 35b and Site 42 are still actively used as office and dormitory areas, but the Site 35c area is no longer

used. Sites 30 and 40 are open space with some riparian vegetation. A residential area is located to the north and west of Site 40.

The OU2 sites other than site 23 discussed in this AFRPA OU2 ROD are located on that portion of March AFB that may be converted to non-Air Force use. Site 23 is on private land. The anticipated land use for most of the OU2 AFRPA sites is commercial or industrial use as shown in Table 5-1. Alternative land uses have also been assessed and areas of West March could remain open space such as the SKR Conservation Area.

March AFB is located in the North Perris Groundwater Basin. Currently, there are no potable groundwater resources extracted at the OU2 AFRPA sites. The relatively thin water-bearing zone on West March is not anticipated to yield substantial quantities of water. Therefore, the potential for extraction and use of groundwater from the West March AFRPA sites is limited, both now and in the foreseeable future. Water-bearing zones producing sufficient groundwater for use may be present at AFRPA sites on the Main Base and Site 23, and should be considered a potential potable water source.

Surface water is not currently used at the OU2 AFRPA sites. Surface water areas such as at Site 6, 30 and 40 may remain as wetlands depending on future site development.

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**TABLE 5-1
POTENTIAL FUTURE LAND USE FOR OU2 SITES CONTROLLED BY AFRPA**

	Site 3	Site 6	Site 12	Site 17	Site 19	Site 20/ Site 26	Site 22	Site 23	Site 24	Site 25	Site 30	Site 35	Site 40	Site 42
Preferred Land Use														
Agricultural ⁽¹⁾								X						
Business Park	X									X				X
Commercial												X	X	
Industrial					X				X		X			
Mixed Use ⁽²⁾			X	X										
Public Facilities/ Recreational		X ⁽⁶⁾				X ⁽³⁾	X							
Alternative Land Uses														
Agriculture ⁽¹⁾								X						
Business Park				X								X		
Commercial			X		X						X			
Industrial					X				X		X			
Mixed Use ⁽²⁾												X		X
Public Facilities/ Recreational	X	X ⁽⁶⁾				X ⁽³⁾	X							
Residential										X				
SKR ⁽⁴⁾ Conservation	X					X ⁽⁵⁾				X	X	X	X	X

Notes:

¹Current land use is agricultural. Future land use for this area would be decided by the City of Moreno Valley.

²Mixed use: Industrial and Commercial enterprises.

³Proposed use of Site 26a would be as public facilities/recreation.

⁴Stephens' Kangaroo Rat, a Federally endangered species.

⁵Based on new Biological Opinion, the proposed use of Site 26a as SKR conservation would not be required. Site 26b and Site 20 are on land currently part of the National Cemetery.

⁶Proposed use of Site 6 is passive open space.

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DECISION SUMMARY:
6.0 - SUMMARY OF SITE RISKS

6.0 SUMMARY OF SITE RISKS

A baseline human health risk assessment was conducted for the AFRPA OU2 sites using data collected during the OU2 RI. The human-health evaluation methodology is provided in Section 2 of the final OU2 RI report for these sites. Ecological risk assessments were also conducted. The methodology is provided in Section 2 of the final OU2 RI. (Tetra Tech, Inc. 1997a)

6.1 BASELINE RISK ASSESSMENT

6.1.1 Baseline Risk Assessment Methodology

During the OU2 RI, the Air Force considered the potential human health risks associated with the sites. The baseline risk assessment for these sites was performed using both current and future industrial/construction worker and future residential scenarios. In accordance with EPA guidance, it was assumed future site residents and workers could be exposed to chemicals of potential concern detected in surface soils. Accidental ingestion and incidental dermal contact with surface soil (0 to 2 feet) were therefore considered to be potentially complete exposure pathways and were selected for quantitative evaluation, as appropriate. Because DTSC is concerned with the surficial redistribution of near-surface soils during residential development, it was conservatively assumed that future residents may also contact chemicals of potential concern detected in soils up to 10 feet deep.

During future site development, construction workers may be exposed to chemicals in soils. To conform to California EPA guidance, it was conservatively assumed that future construction workers may be exposed to chemicals measured in either surface soils (0 to 2 feet) or near surface soil (0 to 10 feet). The specific soil interval used in the exposure analyses depended on the determination of exposures and risks to future residential receptors. The data from the more substantially affected soil interval (i.e., highest risk to receptors) was used in evaluating exposures to future construction workers.

As described in the RI, the groundwater basin is a potential municipal water source; groundwater could possibly be used for potable purposes in the future. Thus, despite the extremely low likelihood, potential future residential exposure to chemicals of potential concern in groundwater was selected for quantitative evaluation, including ingestion of groundwater, and inhalation of vapors emitted from water during showering. Future residential groundwater exposures were evaluated for on-site residents. It was assumed that off-site residential exposures (if groundwater is used at off-site locations) would be identical to those for on-site residents.

Chemicals in soil can migrate to the atmosphere through volatilization or suspension of soil particles. Chemicals that may be involved in both of these processes may be detected in soil and soil gas samples. The presence of a receptor that might inhale the resulting airborne compounds would complete the air exposure pathway.

Airborne dust may be dispersed to off-site locations such as the nearby industrial workers and residents. They may inhale the airborne dust and thereby be exposed to the chemicals released from soils. Future on-site workers and residents may also inhale fugitive dusts emitted from surface soils, thereby completing the inhalation exposure route. Workers involved with future construction operations may also be exposed to dust generated by excavation or other soil handling activities. If excavated soils were redistributed at the surface, DTSC has indicated a concern for future residents being exposed to the compounds in these soils. Inhalation of airborne dusts was, therefore, identified as a potentially complete exposure pathway. Quantitative evaluation of this soil-related pathway was conducted in conjunction with ingestion and dermal contact of soils.

Whenever chemicals of potential concern are detected in site soils, the potential exists for surface water to be affected by surface runoff. As appropriate, this pathway was also evaluated.

The potential exposure pathways listed in the RI for chemicals of potential concern (COPCs) in surface soil at the AFRPA OU2 sites were ingestion of soil, inhalation of vapors and dust, and direct contact with the skin. Possible exposure pathways for COPCs in groundwater were ingestion, inhalation of vapors, and direct contact with the skin.

Exposure conditions used in the estimation of risk were chosen to represent what is known as "reasonable maximum exposure." Use of these exposure conditions tends to overestimate risk. This effort to overestimate risk is deliberate; it provides risk managers a margin of safety when making cleanup decisions. The combination of the intake variables, expressing the exposure conditions for each receptor at each site, results in a chronic daily dose. The dose is an estimate of exposure for each pathway.

Risks were calculated by integrating the chronic daily dose with toxicity factors. Toxicity factors are numbers that indicate the toxicity of chemicals and are developed by the EPA. The toxicity factor for carcinogenic effects is called a cancer slope factor (CSF) and the toxicity factor for non-carcinogenic effects is called a reference dose (RfD). Compounds that show a potential for both carcinogenic and non-carcinogenic health effects are assigned both slope factors and RfDs. In addition to the EPA-derived slope factors, California EPA (Cal-EPA) has developed CSFs. Toxicity values were obtained from several primary sources, according to the following order of priority: (1) a listing of carcinogenic Slope Factors (SFs) developed by Cal-EPA; (2) the computer files of the EPA's Integrated Risk Information System (IRIS), if toxicity data were not available from Cal-EPA or the toxicity values from IRIS were more conservative than those developed by Cal-EPA, and (3) the annual version of the EPA's Health Effects Assessment Summary Tables (HEAST). Other sources were used where appropriate.

Excess lifetime cancer risks are probabilities that are generally expressed in scientific notation (e.g., 1×10^{-6} or $1E-6$). An excess lifetime cancer risk of 1×10^{-6} indicates that, as a plausible upper bound, an individual has a one-in-a-million additional chance of developing cancer as a result of site-related exposure to a carcinogen over a 70-year lifetime under the specific exposure conditions at a site. Guidelines for managing cancer risks are promulgated in the NCP (40 *Code of Federal Regulations* [CFR] 300.430 [e][2][I][A][2]). According to these regulations, excess carcinogenic risks ranging between 10^{-4} and 10^{-6} may be allowable. Excess cancer risks below 10^{-6} are generally allowable.

Potential non-carcinogenic effects of a single contaminant in a single medium are expressed as hazard quotients (HQs). By adding the HQs for all contaminants within a medium or across all media to which a given population may reasonably be exposed, the hazard index (HI) can be generated. The HI provides a useful reference point for gauging across media. The EPA has also established guidelines for non-cancer risks.

Using these guidelines, an HI of less than 1 is generally considered protective of human health. If the HI is greater than 1, an assessment of the COPCs contributing to the HI is performed to determine whether the HI represents a non-carcinogenic human health risk above the range identified in the NCP.

The results of the risk assessment for the OU2 AFRPA sites for the contaminants found *prior* to removal actions are summarized in Tables 6-1, 6-2, and 6-3. These tables identify the cancer and/or non-cancer risk for receptors. In addition, they identify the COPCs contributing to the majority of the cancer risk and HI. The site-specific discussions below contain a brief summary of the findings of the baseline human health risk assessment followed by the post-removal action risk evaluation.

**Table 6-1
Carcinogenic and Non-Carcinogenic Health Risks
From Soil and Soil Vapor
AFRPA OU 2 Sites, March AFB Before Removal Actions**

Site No.	Site Name	Carcinogenic Risks >10E ⁻⁴		Carcinogenic Risks Between 10E ⁻⁶ and 10E ⁻⁴		Non-Carcinogenic Health Risks (HI>1)	
		Chemical of Concern	Receptor	Chemical of Concern	Receptor	Chemical of Concern	Receptor
3	Landfill No. 5	PAHs, PCBs	Future Residents	PAHs	Industrial Workers and Construction Workers	Azinphos methyl (Risks to)	Future Residents and Construction Workers
6a	Landfill No. 4	PAHs, Dioxins	Future Residents and Industrial Workers	PAHs, Dioxins	Construction Workers	MCPA	Future Residents
6b Quarry	Landfill No. 4	PAHs	Future Residents and Industrial Workers	PAHs, 4,4'-DDE, 4,4'-DDT	Future Residents and Construction Workers	Aspon, Azinphos methyl, EPN, Mevinphos, Vanadium	Future Residents, Industrial Workers, and Construction Workers
6b Pond	Landfill No. 4	None Identified		PAHs, Dioxins	Industrial Workers and Future Residents	Antimony, MCPA	Future Residents and Construction Workers
12	CE Storage Yard	Wash Rack/Sump Area: PAHs, Chromium VI	Future Residents, Industrial Workers, and Construction Workers	None Identified	Future residents and Industrial Workers	None Identified	
17	Swimming Pool Fill ⁽¹⁾	PCB	Future Residents and Construction Workers	None Identified		None Identified	
19	West March Sludge ⁽²⁾ Drying Beds	PAHs,	Future Residents	PAHs, PCBs, Chromium VI	Future Residents, Industrial Workers, and Construction Workers	Thallium	Residential Child
20	Landfill No. 7	PCB, PAHs	Future Residents	PAHs, Dieldrin, PCBs, 1,4-Dichloro-benzene (vapor)	Future Residents, Industrial Workers and Construction Workers	None Identified	
24	Landfill No. 1	PCBs, PAHs	Future Residents	PAHs	Industrial Workers and Construction Workers	Antimony	Future Residents
25	Munitions Residue Burial Site	None Identified		Benzo(a)pyrene	Future Residents	None Identified	
26	Water Treatment Sludge	Arsenic	Future Residents and Industrial Workers	Arsenic	Construction Workers	Arsenic	Future Residents and Construction Workers
30	Construction Rubble Site	None Identified		None Identified		None Identified	
35	15th Air Force USTs	None Identified		None Identified		None Identified	

Notes: ⁽¹⁾Based on sampling after the removal action. The removal action was conducted prior to the baseline risk assessment.

⁽²⁾No removal action conducted. Risks based on conditions at the time of the OU2 RI

HI = Hazard Index

CE = Civil Engineering

UST = Underground storage tank

Sites 22, 23, 40 and 42 are not included on this table, because no quantitative risk assessment was performed.

Table 6-1
Carcinogenic and Non-Carcinogenic Health Risks to Future On-Site Residents
From Measured Concentrations in Groundwater
AFRPA OU2 Sites, March AFB Before Removal Actions

Site No.	Site Name	Base Area	Major Contributors to Carcinogenic Risks >10E ⁻⁴	Major Contributors to Carcinogenic Risks Between 10E ⁻⁶ and 10E ⁻⁴	Major Contributors to Non-Carcinogenic Health Risks (HI>1)
3	Landfill No. 5	West March	None Identified	Atrazine, Benzene, Heptachlor epoxide, Stirophos	Antimony, Thallium, 1,3,5-Trinitrobenzene
6a	Landfill No. 4	West March	None Identified	None Identified	None Identified
6b	Landfill No. 4 Quarry	West March	None Identified	None Identified	None Identified
6b	Landfill No. 4 Pond	West March	None Identified	None Identified	None Identified
12	CE Storage Yard	Main Base	None Identified	PCE, TCE	PCE, TCE
17	Swimming Pool Fill ⁽¹⁾	Main Base	None Identified	Chloroform	None Identified
19	West March Sludge Drying Beds ⁽²⁾	West March	Arsenic	None Identified	None Identified
20	Landfill No. 7	West March	None Identified	None Identified	None Identified
24	Landfill No. 1	West March	None Identified	None Identified	None Identified
25	Munitions Residue Burial Site	West March	None Identified	RDX	Nickel
26	Water Treatment Sludge	West March	Arsenic	None Identified	Antimony
30	Construction Rubble Site	West March	None Identified	Arsenic (groundwater & surface water)	None Identified
35	15th Air Force UST	West March	None Identified	None Identified	None Identified

Notes: ⁽¹⁾Based on sampling after the removal action. The removal action was conducted prior to the baseline risk assessment.

⁽²⁾No removal action conducted. Risks based on conditions at the time of the OU2 RI.

HI = Hazard Index

USTs = Underground storage tanks

Sites 22, 23, 40 and 42 are not included on this table because no quantitative risk assessment was performed.

**Table 6-3
Carcinogenic and Non-Carcinogenic Health Risks
from Chemicals Predicted to Migrate to Groundwater
AFRPA OU2 Sites, March AFB Before Removal Actions**

Site No.	Site Name	Base Area	Major Contributors to Carcinogenic Risks >10E ⁻⁴ from Predicted Groundwater Concentrations	Major Contributors to Carcinogenic Risks Between 10E ⁻⁶ and 10E ⁻⁴ from Predicted Groundwater Concentrations	Major Contributors to Non-Carcinogenic Health Risks (HI>1) from Predicted Groundwater Concentrations
3	Landfill No. 5	West March	PAHs, PCBs, Dieldrin	None Identified	Azinphos methyl, Demeton, Dichloroprop, Disulfoton, MCPP, Naphthalene, 1,3,5-Trinitrobenzene
6a	Landfill No. 4		None Identified	1,1-DCE, PCE	MCPA, MCPP
6b Quarry	Landfill No. 4		None Identified	Heptachlor epoxide	Azinphos methyl, Demeton, Mevinphos
6b Pond	Landfill No. 4		None Identified	Dieldrin	MCPA
12	CE Storage Yard	Main Base	None Identified	1,4-Dichlorobenzene	Wash Rack: MCPA
17	Swimming Pool Fill ⁽¹⁾	Main Base	None Identified	None Identified	None Identified
19	West March Sludge Drying Beds ⁽²⁾	West March	Dieldrin, Heptachlor epoxide	None Identified	4-Chloroaniline
20	Landfill No. 7	West March	None Identified	1,4-Dichlorobenzene	None Identified
24	Landfill No. 1	West March	Benzene, PCBs	None Identified	None Identified
25	Munitions Residue Burial Site	West March	None Identified	None Identified	None Identified
26	Water Treatment Sludge	West March	None Identified	None Identified	None Identified
30	Construction Rubble	West March	None Identified	None Identified	None Identified
35	15th Air Force USTs	West March	None Identified	None Identified	None Identified

Notes: ⁽¹⁾ Based on sampling after the removal action. The removal action was conducted prior to the baseline risk assessment.

⁽²⁾ No removal action conducted. Risks based on conditions at the time of the OU2 RI.

HI = Hazard Index

USTs = Underground Storage Tanks

Sites 22, 23, 40 and 42 are not included on this table because no quantitative risk assessment was performed.

6.1.2 Screening Risk Assessment Methodology Using RPRGs

The post-removal action risk evaluation was conducted using preliminary remediation goals or PRGs. As defined in EPA's 1991 *Risk Assessment Guidance for Superfund Volume 1, Part B: Development of Risk-Based Preliminary Remediation Goals*, "PRGs are goals which provide remedial design staff with long-term targets to use during analysis and selection of remedial alternatives. Ideally, the PRGs, if achieved, should both comply with applicable or relevant and appropriate requirements [i.e., maximum contaminant levels (MCLs), National Ambient Water Quality Criteria (NAWQCs), etc.] and result in residual risks that fully satisfy the NCP requirements for the protection of human health and the environment."

PRGs are concentration targets for individual chemicals for specific medium and land use combinations. There are two sources generally used for the derivation of chemical-specific PRGs: 1) concentrations based upon applicable or relevant and appropriate requirements and 2) concentrations based upon risk assessment or risk-based calculations. The risk-based *Residential* PRGs (RPRGs) found in EPA's 1999 *Region 9 Preliminary Remediation Goals (PRGs)* were used to evaluate risk during and after removal action efforts at March AFB. This approach follows the methodology discussed and approved by Air Force, EPA, DTSC, and RWQCB and documented in the Administrative Record.

6.1.3 Summary of Human Health Risks at the AFRPA OU2 Sites

Site 3 – Landfill No. 5

The results of the baseline risk assessment for the contaminants detected in the soil, landfilled material, and groundwater prior to the removal action indicated carcinogenic and non-carcinogenic risks to future industrial workers, future construction workers and future on-site residents (Table 6-1, 6-2, and 6-3) that were above the manageable risk range identified in the NCP. To mitigate these risks and protect groundwater, a removal action was performed as previously described. Non-hazardous contaminated soils and landfilled debris have been removed from Site 3 and disposed of in the Site 6 waste cells. Hazardous waste was removed from the Base and properly disposed. After completion of excavation activities for the removal action, 27 confirmation samples were taken to confirm that any residual contamination would not pose a risk to human health (Figure 6-1) (IT Corporation 1997b).

The sampling showed residual PAHs and one PCB in surface/near-surface soils and sediments (Table 6-4). The PCB detected in one sample (Aroclor 1242) was at concentrations lower than the 1999 RPRG of 0.22 milligram per kilogram (mg/kg). Most PAHs were orders of magnitude less than their respective RPRGs, except for one sample (S001) with benzo(a)pyrene at about one order of magnitude above the RPRG. A second sample (S001a) taken in this area did not show detectable PAHs. Additionally, this area is periodically burned to improve SKR habitat and PAHs could result from this activity. No other volatile organics, semivolatile organics, organochlorine pesticides, chlorinated herbicides, organophosphorus pesticides, or nitroaromatics/nitroamines were detected in the confirmation samples. Therefore, the residual organic compounds in soils and sediments after the removal action are not pervasive and some may be related to non-landfilling activities. Based on the maximum concentrations of detected organics the reasonable maximum exposure carcinogenic risks to future residents are within the manageable risk range of 10^{-4} to 10^{-6} and less than 1 for non-carcinogenic risks.

Metals concentrations in soil samples were below RPRGs for all detected metals except arsenic (Table 6-5). Most metals concentrations are orders of magnitude below their respective RPRGs. Arsenic exceeds the RPRG, but is within the range of background for arsenic in soils for the OU2 West March Base as documented in the OU2 RI. Therefore, potential residual metals in soils after the removal action do not pose a risk above the manageable risk range identified in the NCP to residential receptors based on RPRGs and background soil concentrations.

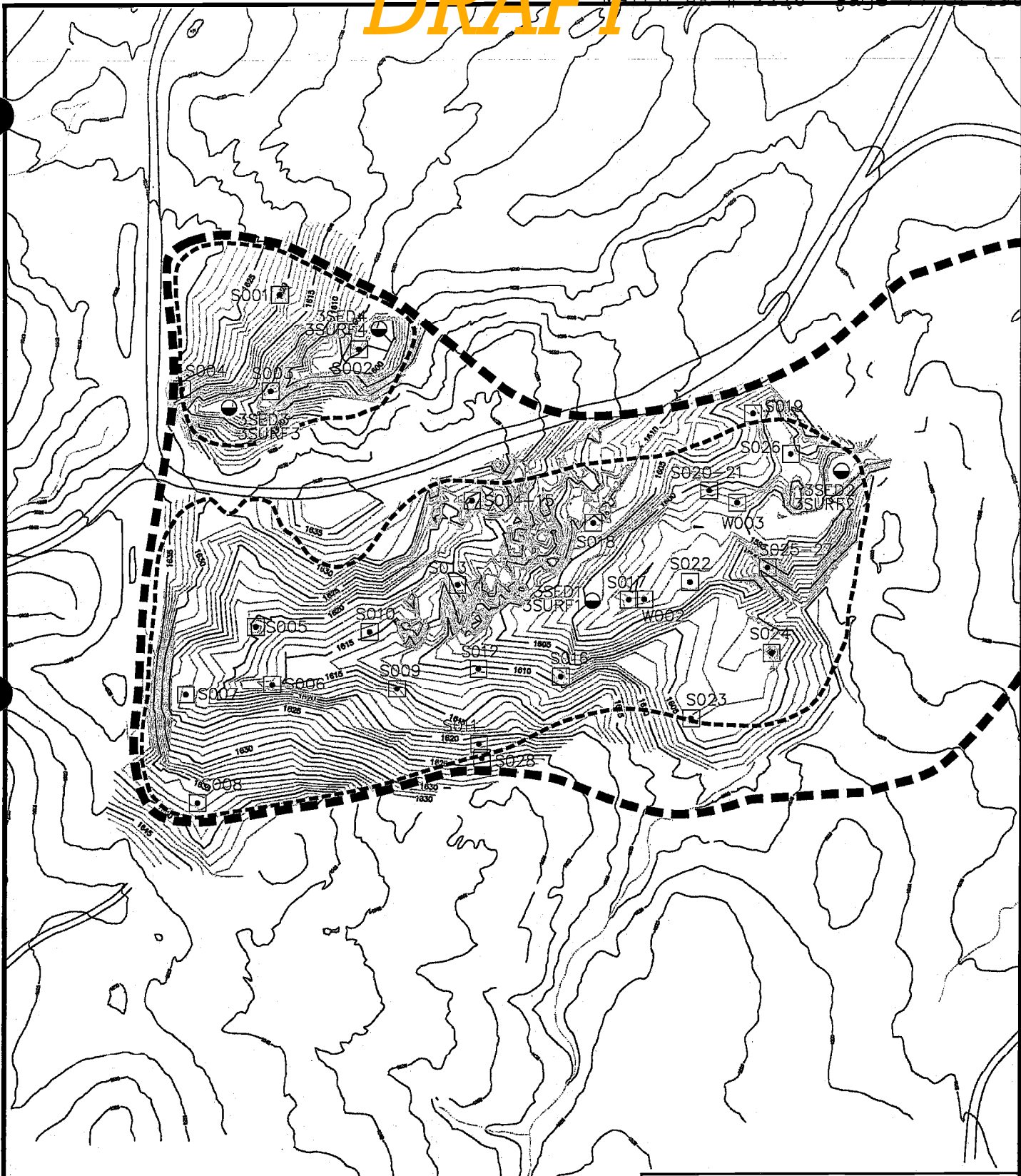
Metals concentrations in sediment and surface water samples were below RPRGs for all detected metals except arsenic and iron (Table 6-6). Most metals concentrations are orders of magnitude below their respective RPRGs. However, arsenic exceeds the RPRG but is within the range of background for arsenic in soils for the OU2 West March as documented in the OU2 RI. One sediment sample exceeds the RPRG for iron by a factor of slightly over 2, resulting in a non-carcinogenic risk of about 2, but the average is within the range of iron concentrations in background samples.

The mafic dikes associated with the geology of West March have high iron concentrations and could result in isolated locations with elevated iron content, especially in sediments where heavy elements would be concentrated. Therefore, potential residual metals in sediments and surface water after the removal action do not pose a risk above the manageable risk range identified in the NCP to residential receptors based on RPRGs and background soil concentrations.

Groundwater sampling conducted at Site 3 after the removal action has shown no detectable concentrations of the contaminants that were detected prior to the removal action. The removal action at Site 3 has eliminated the potential for migration of contaminants to groundwater.

Based on the results of confirmation samples, Site 3 no longer poses a threat to human health above the manageable range identified in the NCP and no further action is required. Contaminated soil and debris have been removed and confirmation samples confirm that the residual risk is currently within the manageable risk range. The estimated risk level is based on maximum detected concentrations and likely overestimates the actual exposures to residents. Additionally, the proposed future use of this area is commercial, and commercial receptors would have limited soil and sediment contact. A proposed alternative land use is as a SKR conservation area. For this land use, limited human exposures are anticipated. The site also has been covered with clean backfill, interrupting the exposure pathway for any receptor.

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LEGEND

- Site Boundary
- Landfill Boundary
- IT Corp Confirmation Sample Location
- Tetra Tech Sediment & Surface Water Sample Location (both at same location)

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United States Air Force	
March ARB	
Site 3 Landfill No.5 Post-Excavation Topography & Confirmation Sample Locations	Figure 6-1

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**Table 6-4
Analytical Results for Organics Detected in Confirmation Soil Samples
Site 3 – Landfill No. 5
(mg/kg)**

Analyte	Method	Sample No.				RPRG ⁽¹⁾
		S001	S012	S021	S028	
Aroclor 1242	8080	<0.0034	0.059	<0.0034	<0.0034	0.22
Acenaphthylene	8310	2.900	<0.002	<0.002	NR	3,700
Phenanthrene	8310	0.510	<0.0006	<0.0006	NR	56 ⁽²⁾
Fluoranthene	8310	1.000	<0.0002	<0.0002	NR	2,300
Pyrene	8310	0.750	<0.0003	<0.0003	NR	2,300
Benzo(a)anthracene	8310	0.470	<0.00008	<0.00008	NR	0.62
Chrysene	8310	0.590	<0.0002	0.46	NR	62 (6.1*)
Benzo(b)fluoranthene	8310	0.410	<0.0002	<0.0002	NR	0.62
Benzo(k)fluoranthene	8310	0.300	<0.00002	<0.00002	NR	6.2 (0.61*)
Benzo(a)pyrene	8310	0.590	<0.00005	<0.00005	NR	0.062
Indeno(1,2,3-cd)pyrene	8310	0.440	<0.0002	<0.0002	NR	0.62

Notes: Only those samples with detectable concentrations of the analytes are listed.

- ¹ = RPRGs (Preliminary Remediation Goal) Residential Soil (set to 1×10^{-6} , or HQ of 1), EPA Region IX, 1999.
- ² = Naphthalene used as surrogate.
- < = Concentration less than listed method detection limit.
- mg/kg = milligrams per kilogram
- * = Cal-Modified RPRG
- NR = Not Requested

DRAFT
Table 6- Analytical Results for Metals Detected in Confirmation Soil Samples
Site 3 - Landfill No. 5
(mg/kg)

Analyte	Method	Sample No.												
		S001	S002	S003	S004	S005	S006	S007	S008	S009	S010	S012	S013	
As	7060	0.47	0.81	0.8	0.45	<0.38	0.47	0.7	0.72	0.66	0.78	0.81	1	
Ba	6010	211	208	260	242	705	339	320	296	403	378	279	349	
Be	6010	<0.14	<0.14	<0.14	<0.14	0.21	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	
Cr	6010	18.2	19.2	20.5	16.1	26.1	15.3	14.2	21.1	40.2	24.2	16.6	17.1	
Co	6010	9.4	12.5	13	10.9	18.8	11	11.4	13.5	16	15.2	11.3	12.2	
Cu	6010	9.5	16.8	8.6	11.3	3.9	11.6	6.8	15	21.2	13.6	11.2	10.8	
Pb	6010	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	
Ni	6010	4.5	6.7	6.5	5.5	7.3	4.2	5.3	5.7	16	7.2	5.7	6.5	
V	6010	36	49.6	56.4	39.5	65.3	47.2	43.1	62.6	55.6	58.8	43.5	43.7	
Zn	6010	28.9	39.2	44.2	33.9	70.7	35	36.2	51.6	52.3	47.2	40.6	33.8	

Analyte	Method	Sample No.												
		S014	S015	S016	S017	S018	S019	S020	S021	S022	S023	S024	S025	
As	7060	0.91	0.61	1.4	2.3	0.39	0.76	0.81	0.57	0.76	0.94	0.72	0.64	
Ba	6010	367	306	189	116	338	266	197	286	355	199	322	484	
Be	6010	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	
Cr	6010	20	17.8	19.4	20.2	19.5	16	14.8	21.9	15.1	16.6	13.5	21.5	
Co	6010	15.7	12.5	22.4	8.4	15.7	11.4	11.5	17.5	11.6	11.5	12.4	14.5	
Cu	6010	13	7.9	45.2	10.5	5.8	7.2	12.4	6	5.1	10.2	10.8	2	
Pb	6010	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	
Ni	6010	6	5.9	6.1	<4	6.3	5	4.7	6.9	5.2	5.4	5.4	5.8	
V	6010	42.7	47.3	48.6	52.6	50.7	46.5	42.5	62.7	40.7	42.7	39.9	55	
Zn	6010	36	37.6	38.1	34.7	42.6	34.7	45.7	108	37.2	35.3	35.9	51.9	

Analyte	Method	Sample No.		Maximum Concentration	Mean Concentration	RPRGs ⁽¹⁾	Background Maximum Concentration
		S026	S027				
As	7060	1.2	<0.38	2.3	0.77	0.39	5.26
Ba	6010	189	408	705	308.15	5400	552
Be	6010	<0.14	<0.14	0.27	0.087	150	10.95
Cr	6010	23.1	16.1	40.2	19.4	210	29.1
Co	6010	14.9	11.9	22.4	13.35	4700	16.1
Cu	6010	8.8	7.1	45.2	11.24	2900	17
Pb	6010	<5	<5	<5	ND	400	17.2
Ni	6010	5.8	4.2	16	5.99	150	10.4
V	6010	61.5	43.5	65.3	49.17	550	75.4
Zn	6010	42	42.3	108	43.68	23,000	65.2

Notes:
¹ For the purpose of calculating mean concentrations, non-detects are considered equal to 1/2 the reporting limit.
 = RPRG (Preliminary Remediation Goal), Residential Soil (set to 1x10⁻⁶ or HQ of 1), EPA Region IX, 1999.
 < = Concentration less than listed method detection limit.
 mg/kg = milligrams per kilogram

Table 6-6
Analytical Results for Metals in Confirmation
Sediment and Surface Water Samples
Site 3 - Landfill No. 5
(mg/kg or mg/L)

Analyte	Sediment Sample No.				Mean Concentration	RPRGs ¹	Background Maximum Concentration	Surface Water (filtered) Sample No.				Mean Concentration	Surface Water (unfiltered) Sample No.				Mean Concentration	Tap Water RPRGs ²
	3SED-1	3SED-2	3SED-3	3SED-4				3SURF1-F	3SURF2-F	3SURF3-F	3SURF4-F		3SURF1-U	3SURF2-U	3SURF3-U	3SURF4-U		
	mg/kg							mg/L					mg/L					
Al	9,100	31,000	8,600	7,500	14,050	76,000	27,900	BJ	0.12 J	BJ	BJ	0.12	9.3	27	4.5	0.20 J	10.25	36,000
Sb	0.82 J	<0.3	1.0 J	0.97 J	0.735	31		<0.0026	<0.0026	<0.0026	<0.0026	<0.0026	<0.0026	<0.0026	0.0037 J	<0.0026	0.0019	15
As	1.1	3.2	B	1.5 J	1.933	0.39	5.26	0.0034 J	0.0085	0.0026 J	0.0041 J	0.0047	0.0037	0.014	0.0030 J	0.0042 J	0.0062	0.045
Ba	260	690	260	200	352.5	5400	552	0.34	0.17	0.13	0.11	0.188	0.61	0.69	0.24	0.11	0.4125	2600
Be	B	0.53	BJ	BJ	0.53	150	10.95	BJ	BJ	BJ	BJ		BJ	0.00095 J	BJ	BJ	0.00095	73
Cd	<0.38	0.34 J	<0.38	<0.053	0.1933	37 (9.0*)		<0.00053	<0.00053	<0.00053	<0.00053	<0.00053	<0.00053	<0.00053	<0.00053	<0.00053	<0.00053	18
Cr	12	40	14	12	19.5	210	29.1	0.0019 J	0.0019 J	0.0017 J	0.0018 J	0.0018	0.013	0.029	0.0085 J	0.0017 J	0.0131	
Co	9.5	29	10	8.9	14.35	4700	16.1	0.0043 J	0.0024 J	<0.0023	<0.0023	0.0023	0.014 J	0.022	0.0025 J	<0.0023	0.0099	2200
Cu	9.2	42	.11	8.2	17.6	2900	17	0.0058 J	0.011	0.0014 J	0.0045 J	0.0057	0.017	0.046	0.011	0.0066 J	0.0202	1400
Fe	14,000	53,000	17,000	13,000	24,250	23,000	31,000	0.032 J	0.12	0.018 J	0.018 J	0.047	15	34	7.2	0.21	14.1	11,000
Pb	1.3	21	3.2	1.9	6.85	400	17.2	<0.0027	<0.0027	<0.0027	<0.0027	<0.0027	<0.0027	0.023	0.0039	<0.0027	0.0074	
Mg	6,100	17,000	5,900	5,300	8,575		9,940	55	83	21	35	48.5	57	93	24	36	52.5	
Mn	280	810	190	230	377.5	1800	561	0.5	0.12	0.088	0.0080 J	0.179	0.9	1	0.39	0.072	0.5905	880
Mo	<0.28	0.66 J	<0.28	<0.28	0.27	390	11.2	0.018 J	0.027 J	<0.0027	0.0097 J	0.014	0.019 J	0.025 J	0.0032 J	0.0098 J	0.0143	180
Ni	5.1	18	5.9	4.9	8.475	1600(150*)	10.4	0.014	0.0051 J	0.0037	0.030 J	0.0132	0.014	0.0036 J	0.007	0.021 J	0.0456	730
Se	0.56 J	<0.34	1.6	<1.4	0.7575	390		<0.0029	0.0040 J	0.0030 J	<0.0029	0.0025	<0.0029	<0.0029	<0.0029	<0.0029	<0.0029	180
Ag	<0.15	0.47	3.1	0.19 J	0.959	390		<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	180
Tl	0.90 J	<0.65	<0.65	<3.2 J	0.78	6.3		<0.0064	<0.0064	<0.0064	<0.0064	<0.0064	<0.0064	<0.0064	<0.0064	<0.0064	<0.0064	2.9
V	38	120	40	37	58.75	550	75.4	0.023	0.04	0.014	0.027	0.026	0.064	0.12	0.029	0.027	0.06	260
Zn	37	140	43	31	62.75	23,000	65.2	0.017	0.03	0.0050 J	0.011	0.0158	0.055	0.12	0.04	0.027	0.0605	11,000

Notes: < = Analyte not detected followed by the Method Detection Limit.
 J = Result is between the PQL and MDL. Analyte was positively identified, but the concentration is uncertain.
 B = Analyte was detected in the associated method or field blank(s).
 NC = Not calculated.
 1 = RPRG (Preliminary Remediation Goal), Residential Soil (set to 10⁴, or HQ of 1), EPA Region IX, 1999.
 2 = RPRG (Preliminary Remediation Goal), Tap Water, EPA Region IX, 1999.
 * = Cal-Modified RPRG
 mg/L = milligrams per liter.
 mg/kg = milligrams per kilogram.

Site 6a - Landfill No. 4

The results of the baseline risk assessment based on the contaminants detected in the soil and landfilled materials prior to the removal action indicated carcinogenic and non-carcinogenic risks above the manageable risk range identified in the NCP to future industrial workers, future construction workers and future on-site residents (Table 6-1, 6-2, and 6-3). To mitigate these risks and protect groundwater, a removal action was performed as previously described. Confirmation samples were not collected at Site 6a because the removal action was implemented as a closure in place, rather than a clean closure. A capping system was placed over the waste cells containing the consolidated waste and soil to prevent infiltration of surface water and subsurface migration of contaminants (IT Corporation 1997c). The capping system also isolates the contained waste material from potential human and ecological receptors. Capping of the material has disrupted the exposure pathway. The removal action at Site 6a has eliminated the potential for migration of contaminants to groundwater.

Therefore, no further removal of soil or cleanup of groundwater is required at Site 6a to protect human health. The existing waste cells and related systems require operation and maintenance, and regularly scheduled monitoring of groundwater in accordance with the regulatory approved post closure plans.

Site 6b Quarry - Landfill No. 4

The results of the baseline risk assessment based on the contaminants detected in the soil and landfilled materials prior to the removal action indicated carcinogenic and non-carcinogenic risks above the manageable risk range identified in the NCP to future industrial workers, future construction workers and future on-site residents (Table 6-1, 6-2, and 6-3). To mitigate these risks and protect groundwater, a removal action was performed as previously described. Three confirmation samples (including one duplicate) were collected (IT Corporation 1997d).

The sampling detected only one organic compound, the dioxin OCDD at 0.000024 mg/kg in soil in one sample. Based on a Toxicity Equivalence Factor (TEF) of 0.0001 for OCDD, the equivalent dioxin TCDD concentration is 2.4×10^{-9} mg/kg, orders of magnitude below the residential RPRG of 3.9×10^{-6} mg/kg. No other volatile organic compounds, semivolatile organic compounds, organochlorine pesticides, PCBs, chlorinated herbicides, organophosphorus pesticides, dioxins/furans or nitroaromatics/nitroamines were detected in the confirmation samples. The removal action at Site 6b Quarry has eliminated the potential for migration of contaminants to groundwater. Based on the maximum concentrations, risks from organic compounds at Site 6b quarry after the removal action are within the manageable risk range identified in the NCP.

Metals concentrations in soil samples were below RPRGs for all detected metals except arsenic (Table 6-7). Most metals concentrations are orders of magnitude below their respective RPRGs. Arsenic exceeds the RPRG, but is within the range of background for arsenic in soils for the OU2 West March Base as documented in the OU2 RI. Therefore, potential residual metals in soils after the removal action do not pose a risk above the manageable range to residential receptors based on RPRGs and background soil concentrations.

Based on the results of confirmation samples, the Site 6b Quarry no longer poses a threat to human health and no further action is required. Contaminated soil and debris have been removed and confirmation samples confirm that the carcinogenic and non-carcinogenic risk has been reduced to less than 10^{-6} and 1, respectively, for residential receptors.

Table 6-7
Analytical Results for Metals in Confirmation Sediment Samples
Site 6b Quarry – Landfill No. 4
(mg/kg)

Analyte	Method	Sample No.			Maximum Background Level	RPRGs
		MAFBS6B'S010	MAFBS6B'S011	MAFBS6B'S012		
Sb	6010	<6	<6	<6	ND	31
As	7060	0.82	0.66	0.86	5.26	0.39
Ba	6010	294	376	493	552	5400
Be	6010	0.17	0.16	0.19	10.95	150
Cd	6010	<0.5	<0.5	<0.5	ND	37 (9.0*)
Cr	6010	16.7	27.2	31.9	29.1	210
Co	6010	12.9	19.1	24.7	16.1	4700
Cu	6010	12.5	21	28.8	17	2900
Pb	6010	<5	<5	<5	17.2	1600(150*)
Hg	7471	<0.1	<0.1	<0.1	0.077	23
Ni	6010	5.8	7.9	10.3	10.4	400
Se	7740	<0.5	<0.5	<0.5	ND	390
Ag	6010	<1	<1	<1	ND	390
Tl	6010	<50	<50	<50	ND	6.3
V	6010	46.6	70.2	92.5	75.4	550
Zn	6010	42.7	61.4	81.4	413	23,000

- Notes:
- NA = Not Analyzed
 - ND = Not Detected
 - < = Analyte not detected, followed by Method Detection Limit (MDL).
 - ¹ = RPRGs (Preliminary Remediation Goal), Residential Soil (set to 1x10⁻⁶, or HQ of 1) EPA Region IX, 1999.
 - * = Cal-modified RPRG
 - mg/kg = milligrams per kilogram

Site 6b Pond - Landfill No. 4

The results of the baseline risk assessment based on the contaminants detected in the soil and landfilled materials prior to the removal action indicated carcinogenic and non-carcinogenic risks above the manageable range identified in the NCP to future industrial workers, future construction workers and future on-site residents (Table 6-1, 6-2, and 6-3). To mitigate these risks and protect groundwater, a removal action was performed as previously described. Confirmation samples were collected from Site 6b Pond after removal of soil and debris (Figure 6-2). Seven soil samples, seven sediment samples, and two surface water samples were collected (IT Corporation 1997d).

Organic compounds were detected in several soil and sediment samples. 4,4'-DDT and 4,4'-DDD were detected in one soil sample at concentrations of 0.0037 mg/kg and 0.0052 mg/kg, respectively, several orders of magnitude less than the respective RPRGs of 1.7 and 2.4 mg/kg. PAHs were detected in soil samples (Tables 6-8), but no concentrations exceeded RPRGs. Some long-chain hydrocarbons were also detected in soil and sediment samples (Table 6-9). Dioxins and furans were detected in soil samples (Table 6-10). Based on the sample with the maximum concentrations, the equivalent dioxin TCDD concentration is 1×10^{-5} mg/kg, approximately one order of magnitude above the residential RPRG of 3.9×10^{-6} mg/kg, but within the manageable carcinogenic risk range of 10^{-4} to 10^{-6} . The concentration of dioxins and furans in the remaining samples is generally orders of magnitude less. No other volatile organic compounds, semivolatile organic compounds, organochlorine pesticides, PCBs, chlorinated herbicides, organophosphorus pesticides, dioxins/furans or nitroaromatics/nitroamines were detected in the confirmation soil or sediment samples. Based on the maximum concentrations, there are no risks above the manageable risk range to residential receptors from organic compounds at Site 6b Pond.

The removal action at Site 6b Pond has eliminated the potential for migration of contaminants to groundwater. Metals concentrations in soil and sediment samples were below RPRGs for all detected metals except arsenic and thallium (Table 6-11). Most metals concentrations are orders of magnitude below their respective RPRGs. Arsenic exceeds the RPRG, but is within the range of background for arsenic in soils for the OU2 West March Base as documented in the OU2 RI. Thallium is not believed to be elevated because the test methodology at the time of the RI caused overestimation of thallium concentrations due to iron interference. Therefore, potential residual metals in soils after the removal action do not pose a risk above the manageable range to residential receptors based on RPRGs and background soil concentrations at Site 6b Pond.

No volatile organic compounds, semivolatile organic compounds, organochlorine pesticides or PCBs were detected in the surface water samples from the Site 6b Pond. Only two metals were detected, barium and zinc (Table 6-12). No MCLs or RPRGs were exceeded. MCLs were used as action levels in this case because this pond is recharged by groundwater.

Based on the results of confirmation samples, the Site 6b Pond no longer poses a threat to human health above the manageable range identified in the NCP and no further action is required. Contaminated soil and debris have been removed and confirmation samples confirm that the risk has been reduced to levels within the manageable range. The estimated risk level is based on conservative exposure assumptions and maximum detected concentrations; and therefore, likely overestimates the actual exposures to residents.

Site 12 - Civil Engineering Yard

The results of the baseline risk assessment based on the contaminants detected in the soil prior to the removal action indicated carcinogenic and non-carcinogenic risks above the manageable risk range identified in the NCP to future industrial workers, future construction workers and future on-site residents (Table 6-1, 6-2, and 6-3). To mitigate these risks and protect groundwater, a removal action was performed in the wash rack area as previously described. Confirmation samples were taken to document the effectiveness of the removal action in mitigating risk (Figure 6-3) (IT Corporation 1997e).

The confirmation samples show residual PAHs and pesticides (Table 6-13). All detected compounds were orders of magnitude less than the RPRGs. Petroleum hydrocarbons were detected in the soil samples. The regulators agreed that residual petroleum hydrocarbons could remain in place because the physical setting would limit exposure. Additionally, petroleum hydrocarbons are excluded under CERCLA. No other volatile organics, semivolatile organics, organochlorine pesticides, chlorinated herbicides, organophosphorus pesticides, or nitroaromatics/nitroamines were detected in the confirmation samples. Therefore, no organic compounds show risk above the manageable range at the washrack area after the removal action.

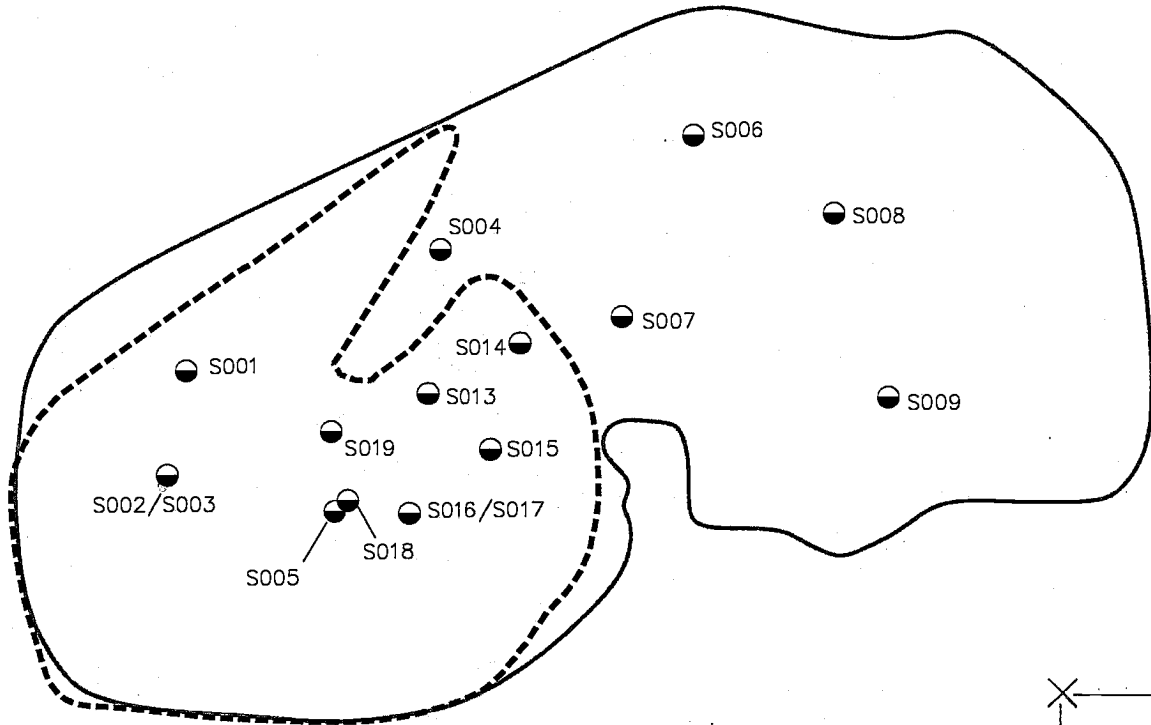
Metals testing in the excavation at the washrack show some metals may continue to be a risk to residential receptors. Metals concentrations in soil samples were below RPRGs for all detected metals except arsenic, cadmium and hexavalent chromium (Table 6-14). Most metals concentrations are orders of magnitude below their respective RPRGs. Cadmium concentrations (to 20 mg/kg) are higher than the Cal Modified RPRG of 9 mg/kg but well below the industrial PRG of 810 mg/kg. Hexavalent chromium concentrations (1.8 mg/kg) are higher than the Cal Modified residential RPRG of 0.2 RPRG but well below the industrial RPRG of 64 mg/kg.

Some arsenic concentrations exceed the RPRG, but are within the background levels for soils on the Main Base established in the OU2 RI. As with the residual petroleum hydrocarbons, the regulators agreed that these metals could remain in place because the physical setting would limit exposure.

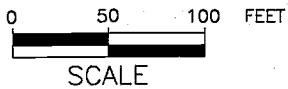
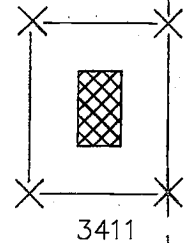
In the past, the 1-1 DCE vapors concentrations found in shallow soils at Site 12 were thought to pose an unacceptable cancer risk to potential future residents. Recently (circa 2002), 1-1 DCE was determined to not be a suspected human carcinogen. The RPRG is now approximately 1000 times less stringent. Therefore, the 1-1 DCE vapors in shallow soils at Site 12 do not pose a risk to potential future residents or industrial workers.

Based on analytical results from samples taken after the removal action at the wash rack and residual contamination in the groundwater, Site 12 continues to show a risk within the risk range identified in the NCP to potential future residents. Carcinogenic risk to industrial workers, if no controls are imposed, is slightly above 1×10^{-6} risk but within the risk range identified in the NCP. Contact and ingestion of soil, and use of the groundwater may cause levels of risk above the range identified in the NCP to residents. Remedial alternatives were evaluated to control potential risks. Remedial alternatives are described in Section 7, Description of Alternatives.

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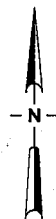


SITE 6b POND



LEGEND

- APPROXIMATE LIMIT OF EXCAVATION
- SAMPLE LOCATION
- APPROXIMATE SITE BOUNDARY



United States Air Force

March ARB

Site 6b
Landfill No.4
Confirmation Sample Locations

Figure
6-2

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Table 6-8
Analytical Results for Volatile/Semivolatile Organics in Confirmation Soil and Sediment Samples
Site 6b Pond - Landfill No. 4
(mg/kg)

Analyte	Method	Sample No.									Maximum Concentration	Mean Sample Concentration	RPRGs ⁽¹⁾
		MAFB S6B'S001	MAFB S6B'S002	MAFB S6B'S003	MAFB S6B'S004	MAFB S6B'S005	MAFB S6B'S006	MAFB S6B'S007	MAFB S6B'S008	MAFB S6B'S009			
2-Butanone	8260	<0.01	<0.01	<0.01	<0.01	0.012					0.012	0.006	7,300
Phenanthrene	8310/8270	<0.12	<0.12	<0.12	<0.12	1.9	0.49	<0.33	<0.33	<0.33	1.9	0.33	56 ⁽²⁾
Anthracene	8310	<0.14	<0.14	<0.14	<0.14	0.41					0.41	0.14	22,000
Pyrene	8270						0.58	<0.33	<0.33	<0.33	0.58	0.25	2,300
Fluoranthene	8270						0.69	<0.33	<0.33	<0.33	0.69	0.27	2,300
Chrysene	8270						0.35	<0.33	<0.33	<0.33	0.35	0.2	62 (6.1*)
Benzo(k)fluoranthene	8270						<0.004	0.0089	<0.004	<0.004	0.0089	0.003	6.2 (0.61*)
Benzo(b)fluoranthene	8310						<0.004	0.014	<0.004	<0.004	0.014	0.004	0.62
Benzo(b)fluoranthene	8370						0.4	<0.33	<0.33	<0.33	0.4	0.21	0.62

- Notes: * = Cal-modified RPRG
 1 = RPRG (Preliminary Remediation Goal), Residential Soil (set to 1×10^{-6} or HQ of 1), EPA Region IX, 1999.
 2 = Naphthalene used as surrogate
 < = Concentration less than listed method detection limit.
 mg/kg = milligrams per kilogram.

Analytical Results for Hydrocarbon Fuel Tests in Soil and Sediment Samples
Site 6b Pond - Landfill No. 4
(mg/kg)

Analyte	Method	Sample No.														Maximum Concentration	
		MAFB S6B'S 002	MAFB S6B'S 003	MAFB S6B'S 004	MAFB S6B'S 005	MAFB S6B'S 006	MAFB S6B'S 007	MAFB S6B'S 008	MAFB S6B'S 009	MAFB S6B'S 014	MAFB S6B'S 015	MAFB S6B'S 016	MAFB S6B'S 017	MAFB S6B'S 018	MAFB S6B'S 019		
Kerosene	MOD 8015	<10	<10	<10	<10	<10	<10	<10	<10	<10	NA	NA	NA	NA	NA	NA	
Stoddard Solvent	MOD 8015	<10	<10	<10	<10	<10	<10	<10	<10	<10	NA	NA	NA	NA	NA	NA	
Jet Fuel	MOD 8015	<10	<10	<10	<10	<10	<10	<10	<10	<10	NA	NA	NA	NA	NA	NA	
Diesel Fuel #2	MOD 8015	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
TPH (gasoline)	MOD 8015	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	
TRPH	418.1	<10	15	<10	4,800	<10	130	<10	<10	<10	11	12	10	13	<10	4,800	

Notes: NA = Not Analyzed
 < = Concentration less than listed method detection limit
 mg/kg = Milligrams per kilogram.

Table 6-10
Analytical Results for Dioxins and Furans in Confirmation Soil and Sediment Samples
Site 6b Pond - Landfill No. 4¹
(mg/kg)

Analyte	Method	Sample No.									Maximum Concentration	TEF
		MAFBS6B' S001	MAFBS6B' S002	MAFBS6B' S003	MAFBS6B' S004	MAFBS6B' S005	MAFBS6B' S006	MAFBS6B' S007	MAFBS6B' S008	MAFBS6B' S009		
TCDFs (total)	8290	5.10E-06	1.10E-06	<6.00E-07	<6.00E-07	<6.00E-07	1.20E-06	7.50E-06	1.70E-05	1.40E-06	1.70E-05	
PeCDFs (total)	8290	9.90E-06	<1.00E-06	<1.00E-06	<1.00E-06	<1.00E-06	<1.00E-06	<1.00E-06	<1.00E-06	5.70E-06	5.70E-06	
HxCDFs	8290	1.50E-04	<6.00E-07	<6.00E-07	<6.00E-07	<6.00E-07	<6.00E-07	<6.00E-07	<6.00E-07	2.90E-05	2.90E-05	
1,2,3,4,7,8-HxCDF	8290	2.10E-05	<6.00E-07	<6.00E-07	<6.00E-07	<6.00E-07						1.00E-02
HpCDF(total)	8290	6.40E-04	<9.00E-07	<9.00E-07	<9.00E-07	<9.00E-07	<9.00E-07	2.00E-04	1.40E-05	5.00E-05	2.00E-04	
1,2,3,4,6,7,8-HpCDF	8290	1.10E-04	<9.00E-07	<9.00E-07	<9.00E-07	<9.00E-07	<9.00E-07	6.70E-06	5.60E-06	1.70E-05	1.70E-05	1.00E-02
1,2,3,4,7,8,9-HpCDF	8290	1.50E-05	<2.00E-07	<2.00E-07	<2.00E-07	<2.00E-07						1.00E-02
OCDF	8290		<2.20E-06	<2.20E-06	<2.20E-06	<2.20E-06	<2.20E-06	2.40E-05	1.40E-05	3.00E-05	3.00E-05	1.00E-03
TCDDs (total)	8290		<7.00E-07	<7.00E-07	<7.00E-07	<7.00E-07	<7.00E-07	<7.00E-07	2.70E-06	<7.00E-07	2.70E-06	
HxCDDs (total)	8290		<1.30E-06	<1.30E-06	<1.30E-06	<1.30E-06	<1.30E-06	<1.30E-06	<1.30E-06	7.60E-05	7.60E-05	
1,2,3,6,7,8-HxCDD	8290		<7.00E-07	<7.00E-07	<7.00E-07	<7.00E-07	<7.00E-07	<7.00E-07	<7.00E-07	9.40E-06	9.40E-06	1.00E-01
1,2,3,7,8,9-HxCDD	8290		<7.00E-07	<7.00E-07	<7.00E-07	<7.00E-07	<7.00E-07	<7.00E-07	<7.00E-07	6.80E-06	6.80E-06	1.00E-01
HpCDDs (total)	8290		<3.00E-06	<3.00E-06	<3.00E-06	<3.00E-06	2.00E-05	9.10E-05	5.10E-05	8.00E-04	8.00E-04	
1,2,3,4,6,7,8-HpCDD	8290		<2.20E-06	<2.20E-06	<2.20E-06	<2.20E-06	9.00E-06	3.20E-05	2.00E-05	3.90E-04	3.90E-04	1.00E-02
OCDD	8290		7.90E-05	3.10E-05	3.00E-05	<1.60E-06	7.90E-05	3.40E-04	2.40E-04	5.30E-03	5.30E-03	1.00E-03

Notes: < = Concentration less than listed method detection limit.
¹ = This table presents the results for tested congeners of dioxins and furans in these samples.
 mg/kg = milligrams per kilogram.
 TEF = Toxicity Equivalency Factor.

Table 6-11
Analytical Results for Metals in Confirmation Soil and Sediment Samples
Site 6b Pond – Landfill No. 4
(mg/kg)

Analyte	Method	Soil Sample No.									Sediment Sample No.						Maximum Concentration	Mean Sample Concentration	Maximum Background Levels	RPRGs
		MAFB S6B'S002	MAFB S6B'S003	MAFB S6B'S004	MAFB S6B'S005	MAFB S6B'S006	MAFB S6B'S007	MAFB S6B'S008	MAFB S6B'S009	MAFB S6B'S014	MAFB S6B'S015	MAFB S6B'S016	MAFB S6B'S017	MAFB S6B'S018	MAFB S6B'S019					
Sb	6010	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6		3	ND	31
As	7060	<0.38	0.50	0.65	0.68	0.57	1.0	2.5	1.2	0.64	0.66	0.39	0.45	0.49	0.31		2.5	0.73	5.26	0.39
Ba	6010	354	323	259	84.8	397	121	349	291	680	320	550	330	170	170		550	322	552	5,400
Be	6010	<0.14	<0.14	0.21	<0.14	0.24	0.4	0.7	0.25	0.42	0.2	0.36	0.29	0.12	0.34		0.7	0.23	10.95	150
Cd	6010	<0.5	<0.5	<0.5	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		1.2	0.3	ND	37 (9.0*)
Cr	6010	17.3	13.7	16.4	5.9	21.5	14.7	33.5	19.2	29	15	23	20	11	15		33.5	18.7	29.1	210
Co	6010	14	11.4	13	5	17.7	9.4	20.1	12.7	18	11	19	16	7.2	<1		24.7	13.1	16.1	4,700
Cu	6010	8.7	9.8	9.2	9.7	13.7	10.7	27.2	11.1	28.8	28.8	28.8	9.4	10	7.4		28.8	15.5	17	2,900
Pb	6010	<5	<5	<5	18.7	12.7	12.8	18.2	12.2	7.5	<5	5.5	6.4	<5	<5		18.7	6.6	17.2	400
Hg	7471	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1			0.005	0.077	23
Ni	6010	6	4.7	6.2	4	8.1	8.7	14.9	7.1	26	8	11	11	5.2	<4		26	8.3	10.4	1600 (150*)
Se	7740	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			0.25	ND	390
Ag	6010	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1			0.5	ND	390
Tl	6010	<50	<50	<50	<50	<50	<50	<50	<50	<50	13	18	20	<50	<50		20	23.7		6.3
V	6010	50.2	39.6	43.1	15.3	61.7	32.9	83.4	48.1	110	50	92	72	30	38		110	55.3	75.4	550
Zn	6010	50.2	39.4	43	114	66	44.8	89.5	63.5	82	41	69	65	23	24		114	57.7	413	23,000

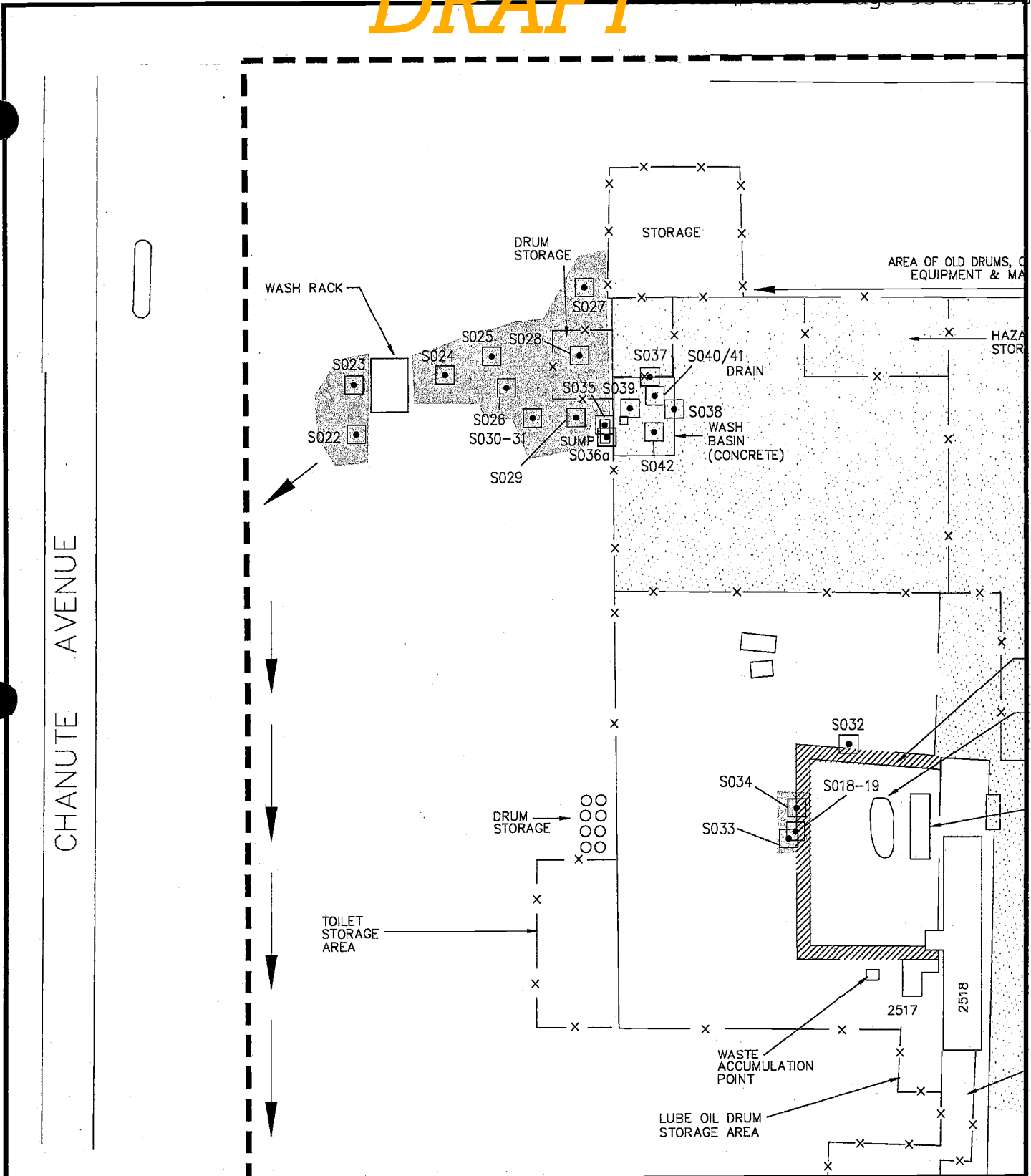
Notes: ND = Not Detected
 < = Analyte not detected, followed by method detection limit.
 mg/kg = milligrams per kilogram
 † = RPRG (Preliminary Remediation Goal), Residential Soil (set to 1x10⁻⁶ or HQ of 1), EPA Region IX, 1999.

Table 6-12
Analytical Results for Metals in Confirmation Surface Water Samples
Site 6b Pond - Landfill No. 4
(µg/L)

Analyte	Method	Sample No.	
		MAFBS6B'W001	MAFBS6B'W002
Sb	6010	<5	<5
As	7060	<5	<5
Ba	6010	81	170
Be	6010	<2	<2
Cd	6010	<2	<2
Cr	6010	<5	<5
Co	6010	<10	<10
Cu	6010	<20	<20
Pb	6010	<3	<3
Hg	7471	<0.5	<0.5
Mo	6010	<20	<20
Ni	6010	<40	<40
Se	7740	<5	<5
Ag	6010	<5	<5
Tl	6010	<10	<10
V	6010	<10	<10
Zn	6010	<20	22

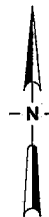
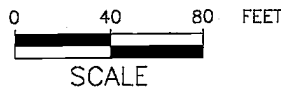
Notes: < = Concentration less than listed method detection limit.
 µg/L = micrograms per liter

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LEGEND

- Approximate Site Boundary
- Reported Waste Oil Burial Trench
- Approximate Extent of Excavation
- Confirmation Sample Location
- Paved Area
- Unlined Earth Swale



United States Air Force

March ARB

Site 12
Civil Engineering Yard
Areas Removed During
the Removal Action

Figure
6-3

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Table 6-13
Analytical Results for Organic Compounds in Confirmation Soil Samples
Site 12 - Civil Engineering Yard
(mg/kg)

Analyte	Sample No.								
	S035	S036a	S037	S038	S039	S040	S041(D)	S042	RPRGs ¹
Phenanthrene	<0.022	NA	0.899	0.91	<0.022	<0.022	<0.022	<0.022	56 ⁽²⁾
Fluoranthene	<0.022	NA	<0.022	<0.022	<0.022	<0.022	<0.022	<0.022	2300
Pyrene	<0.022	NA	0.051	<0.022	<0.022	<0.022	<0.022	<0.022	2300
Benzo(k)fluoranthene	<0.022	NA	<0.022	<0.022	<0.022	<0.022	<0.022	<0.022	6.2(0.61)*
Fluorene	<0.022	NA	1.4	0.678	<0.022	<0.022	<0.022	<0.022	2600
Chrysene	<0.022	NA	<0.022	<0.022	<0.022	<0.022	<0.022	<0.022	62(6.1*)
Benzo(a)anthracene	<0.022	NA	<0.022	<0.022	<0.022	<0.022	<0.022	<0.022	0.62
Benzo(a)pyrene	<0.022	NA	<0.022	<0.022	<0.022	<0.022	<0.022	<0.022	0.062
Benzo(b)fluoranthene	<0.022	NA	<0.022	<0.022	<0.022	<0.022	<0.022	<0.022	0.62
Indeno(2,3,3-c,d)pyrene	<0.022	NA	<0.022	<0.022	<0.022	<0.022	<0.022	<0.022	0.62
2-Methyl naphthalene	<0.022	NA	1.4	<0.022	<0.022	<0.022	<0.022	<0.022	56 ⁽²⁾
Benzo(g,h,i)perylene	<0.022	NA	<0.022	<0.022	<0.022	<0.022	<0.022	<0.022	56 ⁽²⁾
4,4'-DDD	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	2.4
4,4'-DDE	0.016	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	1.7
4,4'-DDT	0.021	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	1.7
Dieldrin	0.012	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.03
TRPH	14	NA	7,200	3,000	15	25	20	19	NE
TPH (D)	<1	NA	7,800	5,100	<1	<1	<1	<1	NE
TPH (G)	<1	NA	1.2	2.7	0.1	<1	<1	<1	NE
TPH (J)	<10	NA	<10	<10	<10	<10	<10	<10	NE

Notes: NA = Not analyzed
 NE = Not established
 (D) = Diesel
 (G) = Gasoline
 (J) = Jet Fuel
¹ = RPRG (Preliminary Remediation Goal), Residential Soil (Set at 1x10⁻⁶ and HQ of 1), EPA Region IX, 1999.
² = Naphthalene used as surrogate
 < = Concentration less than listed method detection limit

Table 5-14
Analytical Results for Metals in Confirmation Soil Samples
Site 12 - Civil Engineering Yard
(mg/kg)

Analyte	Sample No.													
	S022	S023	S024	S025	S026	S027	S028	S029	S030	S031	S032	S033	S034	
Cd	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
As	1	1.3	2	3.1	1.4	1.2	1.4	1.6	1.9	2.5	1.8	1.2	2.9	
Ba	67.2	97.9	116	103	103	94.4	93.9	103	78.4	132	75.4	52.7	152	
Be	0.39	0.49	0.56	0.72	0.62	0.5	0.54	0.63	0.57	0.85	0.42	0.37	0.98	
Cr	16.5	16.7	17.6	22.6	18.3	17.6	15.1	18.4	17.7	27.5	13.7	10.1	24.2	
Co	9.2	9.7	11.6	13.1	13.3	11.1	10.1	12.2	9.1	8.6	9.5	7.4	13.3	
Cu	9.5	9	11.4	11.7	9.6	11.2	9.5	12.6	8.1	13.2	9.5	7.5	14.1	
Pb	<5	<5	<5	6.6	5.3	<5	<5	5.5	5	5.4	<5	<5	7.4	
Ni	8.8	9.8	10.5	12.5	11.9	10.4	9.5	11.8	9.8	11.4	7.9	5.7	16.1	
V	29.2	32	38.4	48.5	40.7	34.7	33.8	40.9	36.6	53.3	31.4	24	27.3	
Zn	35.2	41.2	46.3	50.8	41.3	42.8	43.2	49.9	36.6	59.1	36.6	27.3	54.9	
CrVI	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	

Analyte	Sample No.										Maximum Main Base Background Concentrations (all depths)	RPRGs ⁽¹⁾
	S022	S035	S036	S037	S038	S039	S040	S041	S042			
Cd	<0.5	11	14	18	14	11	20	11	17	1.3	37 (9*)	
As	1	0.8	1.1	0.95	0.75	0.51	0.72	0.74	0.75	6.5	0.39	
Ba	67.2	67	120	91	80	48	110	150	120	916	5,400	
Be	0.39	0.29	0.34	0.43	0.34	0.31	0.52	0.33	0.51	1.3	150	
Cr	16.5	7.4	16	12	8.9	6.2	11	7.2	10	21	210	
Co	9.2	7.5	9.1	9.8	8.6	5.8	8.3	6.3	10	16	4,700	
Cu	9.5	7.7	20	13	10	5.3	9.1	4.9	8.8	16.1	2,900	
Pb	<5	7.2	71	7.1	6.1	8	10	6.8	8.6	40.7	400	
Ni	8.8	4.6	<4	6.3	5.8	<4	6.6	<4	9.1	10.3	1600 (150*)	
V	29.2	22	27	32	26	21	33	25	33	62.8	550	
Zn	35.2	33	69	46	42	24	46	25	44	512	23,000	
CrVI	NA	0.25	0.61	<0.1	<0.1	<0.1	<0.1	1.8	<0.1	NE	30 (0.2*)	

Notes: NA = Not analyzed
 < = Less than the listed method detection limit
 * = Cal-Modified RPRG
 mg/kg = milligrams per kilogram
 (1) = RPRGs (Preliminary Remediation Goals), Residential Soil (Set to 10⁻⁶ or HQ of 1), EPA Region IX, 1999.

Site 17 - Swimming Pool Fill

The results of the baseline risk assessment based on the contaminants detected in the soil after the removal action indicated carcinogenic risks above the risk range identified in the NCP to future on-site residents and construction workers (Table 6-1, 6-2, and 6-3). The baseline risk assessment reflects the conditions after the removal action since the removal action was conducted (Tetra Tech, Inc. 1994) prior to the completion of the OU2 RI (Tetra Tech, Inc. 1997a). Soil contact and ingestion of PCBs were the major contributor to carcinogenic risks to future residents and future construction workers with risks between 10^{-4} and 10^{-6} . As with all sites at March AFB, groundwater in the area of Site 17 is not currently consumed, and no receptors were identified to be at increased risk from exposure to groundwater. For future on-site residents, increased risk was identified from ingestion and dermal contact with groundwater affected by chloroform. Risks to future residents from chloroform detected in the Site 17 groundwater monitoring wells was between 10^{-4} and 10^{-6} for carcinogenic risk and less than 1 for non-carcinogenic risks. Based on the basewide groundwater sampling, the chloroform is part of a larger plume within the Main Base area of March Air Force Reserve Base and is not believed to be related to contaminants at Site 17. Additionally, the chloroform levels do not exceed MCLs. Modeling did not show any impact to groundwater from contaminants detected in the soils.

Based on the results of confirmation samples (Table 6-15 and Figure 6-4), the site may pose a threat to human health if soils beneath 8 feet below the ground surface are exposed. The detected concentrations are above residential RPRGs and most exceed the industrial RPRG of 1.0 mg/kg. Remedial alternatives were evaluated to control risks from exposure to the soils below 8 feet. Remedial alternatives are described in Section 7, Description of Alternatives.

Site 19 - West March Sludge Drying Beds

The results of the baseline risk assessment indicated carcinogenic and non-carcinogenic risks above the risk range identified in the NCP to future on-site residents, industrial workers, and construction workers (Table 6-1, 6-2, and 6-3). A major contributor to this risk is the hypothetical use of the groundwater as a potable source.

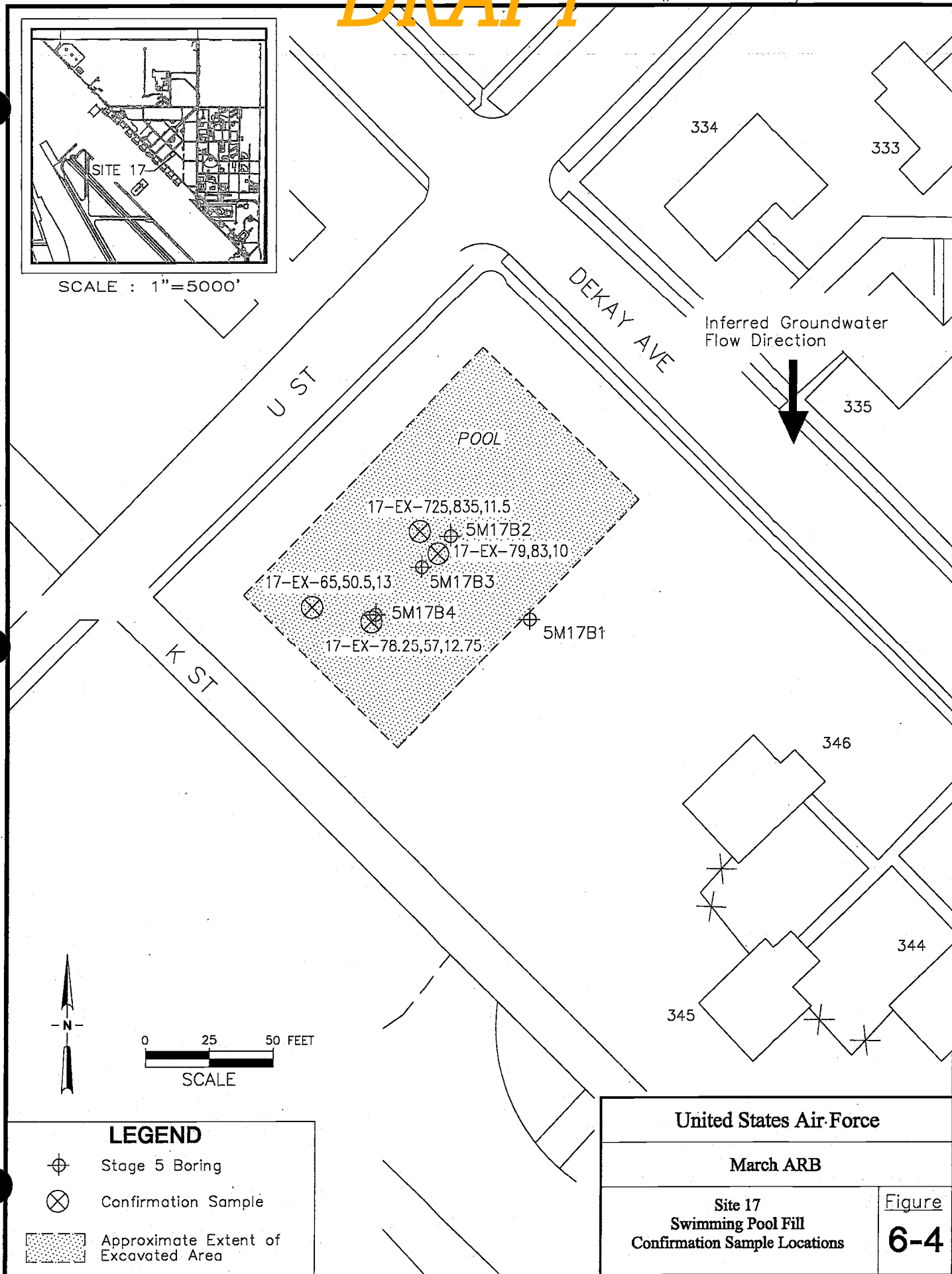
Groundwater in the area of Site 19 is not currently consumed, and no current receptors were identified to be at increased risk from exposure to groundwater. For future on-site residents, risks above the manageable range were identified from the ingestion and dermal contact with groundwater contaminated by arsenic, dieldrin, heptachlor epoxide, and 4-chloroaniline. Further analysis of arsenic under a basewide groundwater monitoring program has shown the levels to be consistent with background levels of arsenic in the area of March AFB. Therefore, the levels of arsenic detected in the groundwater are believed to be indicative of background and not a result of Air Force activities at the site. Additionally, groundwater and bedrock are shallow in this area and the potential for future use of groundwater as a potable source is extremely unlikely.

If the site remains as a sludge drying area, risks to future workers may be overestimated because of assumptions on the frequency and duration of exposures. However, if no remediation were performed, on-site residents could be exposed to risks above the manageable risk range identified in the NCP. Based on the expected use of the site as an industrial area and uncertainties in the risk assessment, industrial risks may be within the manageable range. Remedial alternatives were evaluated to control risks above the NCP range. Remedial alternatives are discussed in Section 7.0, Description of Alternatives.

Table 6-15
Analytical Results for PCBs in Soil Confirmation Samples
Site 17 - Swimming Pool Fill
(mg/kg)

Analyte	Soil Boring/Sample No.													Residential RPRGs	
	5M17B1			5M17B2		5M17B3		5M17B4		17-EX-79,83	17-EX-65,50	17-EX-64,50,5	17-EX-78,25,57		17-EX-72,5,83,5
Depth (feet)	5	10	15	7.5	12.5	8.5	13.5	11.5	16.5	10	13	13	12.75	11.5	
Aroclor 1254	<0.012	<0.012	<0.012	<0.012	<0.012	0.021	<0.012	<0.012	<0.012	3.8	0.8	<1.1	2.8	4.4	0.22
Aroclor 1260	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	0.014	<0.012	<1.1	<1.2	<1.1	<1.2	<1.1	0.22

Notes: < = Analyte not detected followed by the method detection limit.
 1 = RPRG (Preliminary Remediation Goal), Residential Soil (Set at 1×10^{-6} and HQ of 1), EPA Region IX, 1999.
 Tests performed by EPA Method 8080
 mg/kg = milligrams per kilogram



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Site 20 - Landfill No. 7

The results of the baseline risk assessment for the contaminants detected in the soil, landfilled materials, and groundwater prior to the removal action indicated carcinogenic risks above the range identified in the NCP to future industrial workers, future construction workers and future on-site residents (Table 6-1, 6-2, and 6-3). To mitigate these risks and protect groundwater, a removal action was performed as previously described. After completion of excavation activities for the removal action, 13 confirmation samples were taken to confirm that any residual contamination would not pose a risk to human health (Figure 6-5) (IT Corporation 1997f).

Metals concentrations in soil confirmation samples were below RPRGs for all detected metals except arsenic (Table 6-16). Most metals concentrations are orders of magnitude below their respective RPRGs. Arsenic exceeds the RPRG, but is within the range of background for arsenic in soils for the OU2 West March Base as documented in the OU2 RI. Therefore, potential residual metals in soils after the removal action do not pose a risk above the range identified in the NCP to residential receptors based on RPRGs and background soil concentrations.

Benzo(b)fluoranthene and benzo(k)fluoranthene were detected in one sample at concentrations less than the RPRG (Table 6-16). Chrysene was not detected during the site investigation but was detected in two confirmation samples at concentrations well below the RPRGs. No other volatile organics, semivolatile organics, organochlorine pesticides, chlorinated herbicides, organophosphorus pesticides, or nitroaromatics/nitroamines were detected in the confirmation samples. Therefore, potential residual organics in soils after the removal action do not pose a risk above the range identified in the NCP to residential receptors based on RPRGs.

The removal action at Site 20 has eliminated the potential for migration of contaminants to groundwater.

Based on the results of confirmation samples, the Site 20 no longer poses a threat to human health and no further action is required. Contaminated soil and debris have been removed and confirmation samples confirm that the carcinogenic risk has been reduced to less than 10^{-6} for residential receptors.

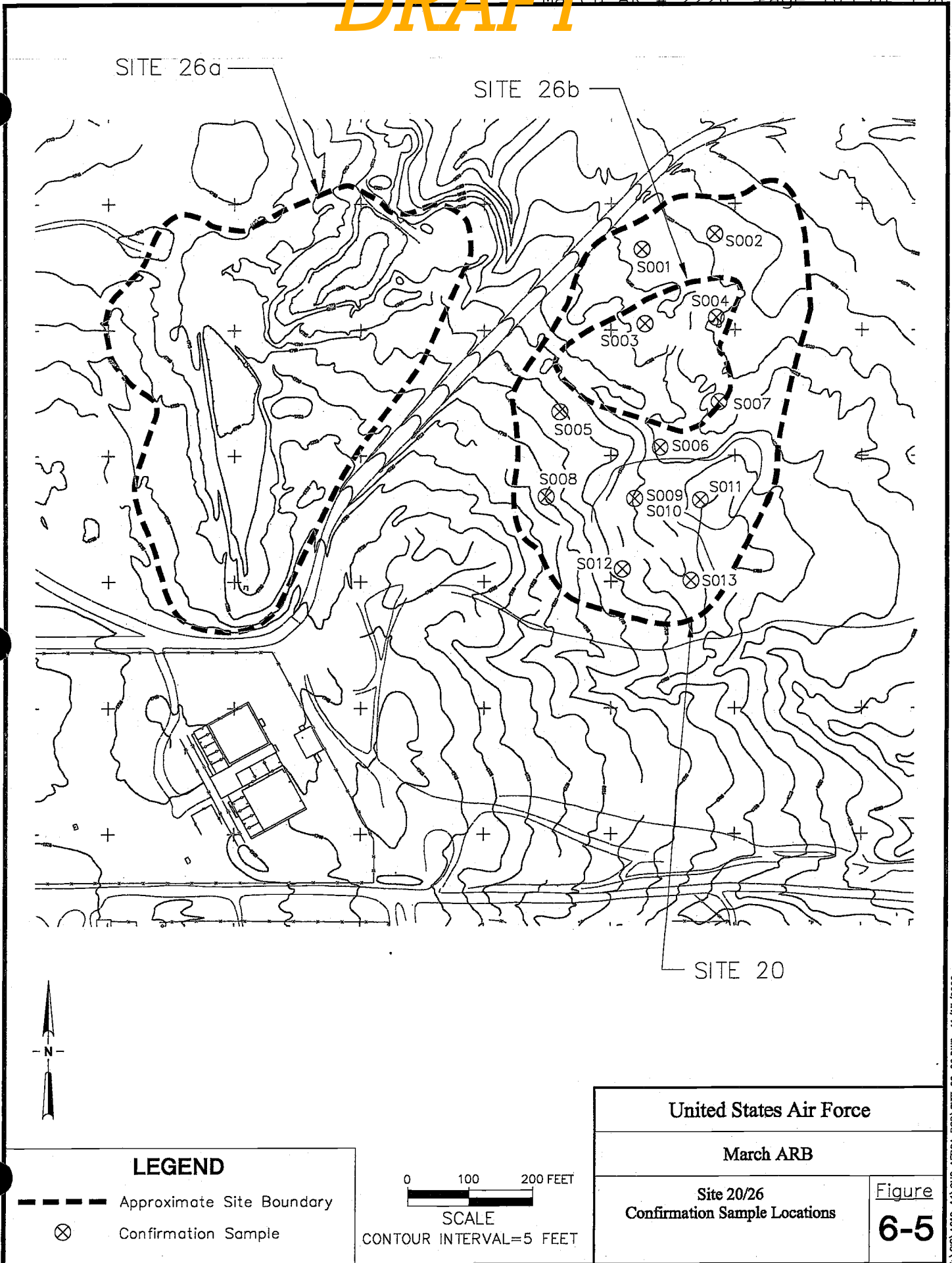
Site 22 - Landfill No. 2

Based on information obtained during the OU2 RI and basewide groundwater sampling programs, there was no evidence of a landfill and/or buried wastes at Site 22. Soil and groundwater sampling did not detect contaminants above background values or from a source such as landfilling activities. Therefore, a baseline risk assessment was not performed and no further action is required.

Site 23 - East March Effluent Pond

Based on information obtained during the OU1 RI and basewide groundwater sampling programs, residual contamination attributable to past activities by the Air Force was not detected. Silver may be above background levels in surface soils (the soils backfilled into the pond), but subsurface samples did not show elevated concentrations of silver or any other metal. Pesticides were detected at concentrations typical of Main Base background levels and this area has been used for agricultural purposes. Other detected organic compounds were known common laboratory contaminants. Therefore, a baseline risk assessment was not performed and no further action is required.

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Table 6-16
Analytical Results for Metals and PAHs in Soil Confirmation Samples
Site 20 - Landfill No. 7
(mg/kg)

Analyte	Method	Sample No.													Average Confirmation Sample Concentration	Maximum West March Background Concentration (all depths)	RPRGs ¹
		S001	S002	S003	S004	S005	S006	S007	S008	S009	S010	S011	S012	S013			
As	7060	1.2	1.2	1	0.91	1	0.84	1.2	1	1.2	0.8	1.4	0.94	0.8	1.04	5.28	0.39
Ba	6010	494	285	627	859	670	526	504	553	452	345	531	429	104	452	552	5400
Be	6010	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	0.2	0.14	<0.14	<0.14	0.21	0.1	10.9	150
Cr	6010	20.6	14.7	26.2	22.3	29.4	21.3	24.7	18.8	24.2	19.2	31.2	18.4	2.3	21	29.1	210
Co	6010	17.3	14	22.8	19.3	26	17.4	17.8	16.7	20.8	16.1	20.1	18.4	3.7	17.7	16.1	4700
Cu	6010	5	20.9	11.9	10.3	5.8	6.5	12.5	9.9	8.9	8.7	8.7	4.9	2.2	8.9	17	2900
None identified	6010	7.1	4.9	9.2	7.7	10.2	7.1	6.8	6.3	8.5	6.6	10	6.8	2	7.2	10.4	1600 (150*)
V	6010	60.7	47.2	80.5	67.1	94.8	58.8	66.2	62.4	76.1	58.4	64	60.9	14.2	62.4	75.4	550
Zn	6010	53.1	36.8	72	53.7	78.5	52.7	56.4	52.2	76.4	58	58.1	52.9	33.8	56.5	413	23,000
Chrysene	8270	<0.04	0.061	<0.04	0.75	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.08		62 (6.1*)
Benzo(b)fluoranthene	8270	<0.004	0.005	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	0.002		0.62
Benzo(k)fluoranthene	8270	<0.004	0.005	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	0.002		6.2 (0.61*)

Notes: < = Analyte not detected followed by the method detection limit.
¹ = RPRG (Preliminary Remediation Goal), Residential Soil (Set at 1x10⁻⁶ and HQ of 1), EPA Region IX, 1999.
* = Cal-modified RPRG
mg/kg = milligrams per kilogram

Site 24 - Landfill No. 1

The results of the baseline risk assessment for the contaminants detected in the soil, landfilled materials, and groundwater prior to the removal action indicated carcinogenic and non-carcinogenic risks above the range identified in the NCP to future industrial workers, future construction workers and future on-site residents (Table 6-1, 6-2, and 6-3). To mitigate these risks and protect groundwater, a removal action was performed as previously described. After completion of excavation activities for the removal action, confirmation samples were taken to confirm that any residual contamination would not pose a risk to human health (Figure 6-6) (IT Corporation 1997g).

No volatile organics, semivolatile organics, organochlorine pesticides, chlorinated herbicides, PCBs, PAHs, organophosphorus pesticides, or nitroaromatics/nitroamines were detected in the confirmation samples. Two confirmation samples had low levels of total recoverable petroleum hydrocarbons (to 37 mg/kg). Therefore, potential residual organics in soils after the removal action do not pose a risk above the range identified in the NCP to residential receptors based on RPRGs.

Metals concentrations in soil confirmation samples were below RPRGs for all detected metals except arsenic (Table 6-17). Most metals concentrations are orders of magnitude below their respective RPRGs. Arsenic exceeds the RPRG, but is within the range of background for arsenic in soils for the OU2 West March Base as documented in the OU2 RI. Therefore, potential residual metals in soils after the removal action do not pose a risk above the range identified in the NCP to residential receptors based on RPRGs and background soil concentrations. The removal action at Site 24 has eliminated the potential for migration of contaminants to groundwater.

Based on the results of confirmation samples, the Site 24 no longer poses a threat above the range identified in the NCP to human health and no further action is required. Contaminated soil and debris have been removed and confirmation samples confirm that the carcinogenic and non-carcinogenic risk has been reduced to less than 10^{-6} and 1, respectively, for residential receptors.

United States Air Force

March ARB

Site 24
Landfill No.1
Post-Excavation Topography &
Confirmation Sample Locations

Figure
6-6

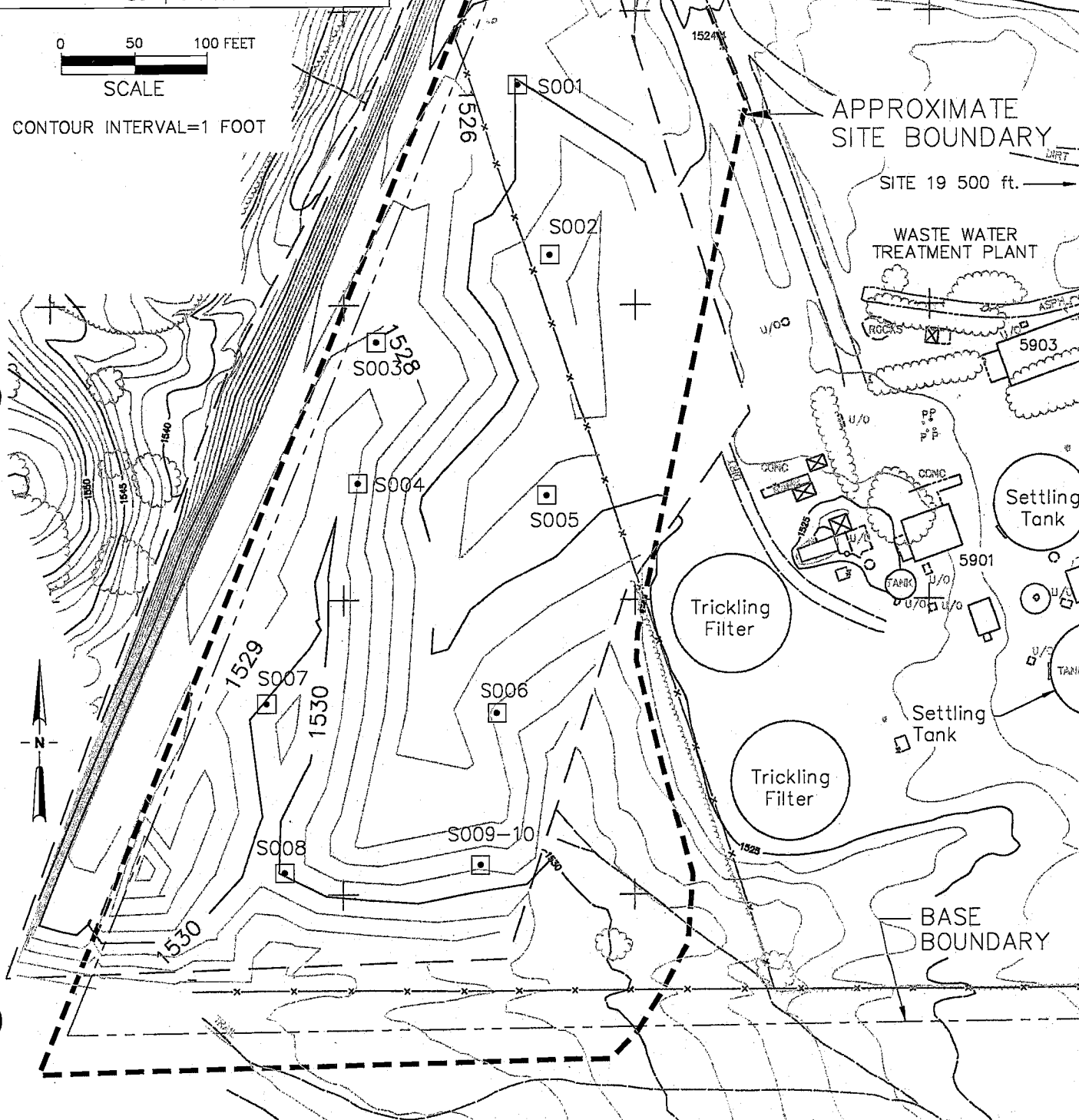
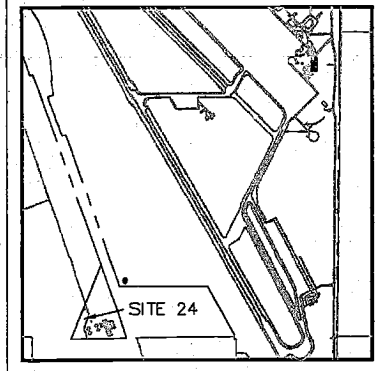
LEGEND

- - - - - Approximate Site Boundary
- Limits of Excavation
- IT Confirmation Sample Location

0 50 100 FEET

SCALE

CONTOUR INTERVAL=1 FOOT



APPROXIMATE SITE BOUNDARY

SITE 19 500 ft. →

WASTE WATER TREATMENT PLANT

Settling Tank

Trickling Filter

Trickling Filter

Settling Tank

BASE BOUNDARY

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Table 6-17
Analytical Results for Metals Detected in Confirmation Soil Samples
Site 24 - Landfill No.1
(mg/kg)

Analyte	Method	Sample No.										Average Confirmation Sample Concentration	Maximum West March Background Concentration	RPRGs ¹
		S001	S002	S003	S004	S005	S006	S007	S008	S009	S010			
As	7060	1.8	0.88	1.2	1.8	1.8	1.6	1.8	1.3	2	2	1.618	5.28	0.39
Hg	7471	<0.10	<0.10	<0.10	<0.10	<0.10	0.11	<0.10	<0.10	<0.10	<0.10	0.056	0.08	23
Ba	6010	207	425	395	157	248	144	160	203	230	242	241.1	552	5400
Be	6010	0.32	0.19	0.19	0.3	0.18	0.28	0.3	0.28	0.4	0.38	0.282	10.9	150
Cr	6010	16.9	25.8	19.9	16.6	21	14.8	15.9	16.6	22.7	21.6	19.18	29.1	210
Co	6010	10.5	21.2	13.5	10.9	17.5	8.9	10	11.4	15	14.3	13.32	16.1	4700
Cu	6010	14.7	36.3	45.3	11.2	18.6	10.8	10.8	12.6	17.6	16.2	19.41	17	2900
Pb	6010	<5.0	<5.0	<5.0	<5.0	6	7.4	<5.0	5.3	<5.0	5.2	3.89	17.2	400
Ni	6010	7.7	8.4	6.8	7.6	8.5	9.3	6.5	7.5	10.5	10.1	8.29	10.4	1600 (150*)
V	6010	41.8	74.7	52	38.5	63.5	37.2	42.2	40.6	56.7	53.2	50.04	75.4	550
Zn	6010	35.1	59.1	39.5	37.5	60.2	37.4	32.4	41.3	52.5	51.9	44.69	413	23,000

Notes: < = Analyte not detected above the indicated reporting limit.
 For the purpose of calculating mean concentrations, non-detects are considered equal to 1/2 the reporting limit.
 * = Cal-modified RPRG.
 1 = RPRG (Preliminary Remediation Goal), Residential Soil (Set at 1×10^{-6} and HQ of 1), EPA Region IX, 1999.
 mg/kg = milligrams per kilogram

Site 25 - Munitions Residue Burial Site

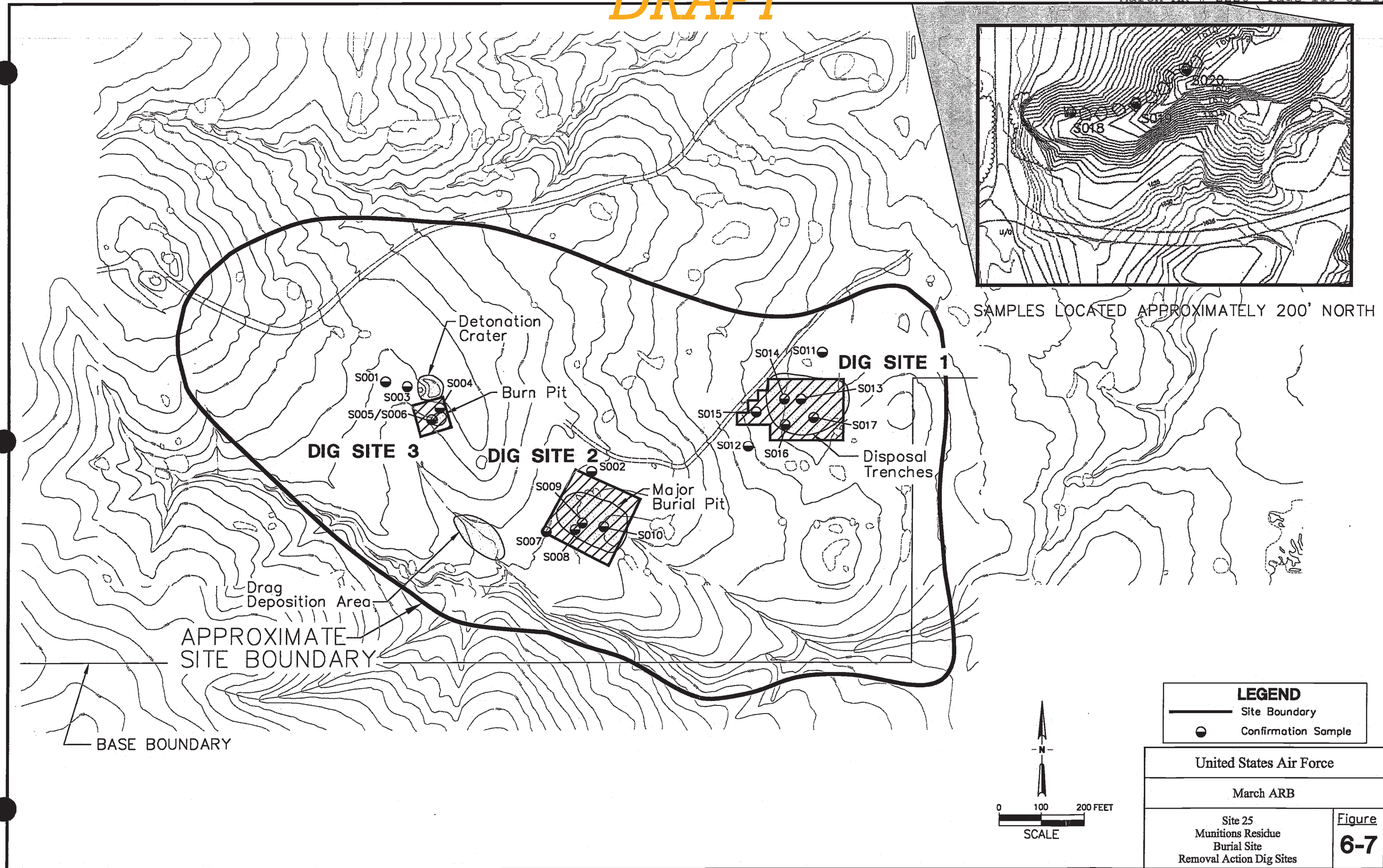
The results of the baseline risk assessment for the contaminants detected in the soil, buried materials, and groundwater at Site 25 prior to the removal action indicated carcinogenic risks above the range identified in the NCP to future on-site residents (Table 6-1, 6-2, and 6-3). To mitigate these risks and protect groundwater, a removal action was performed as previously described. Additionally, the removal action mitigated physical hazards that are not considered in the baseline risk assessment that could arise from undetonated munitions that might have been buried in the disposal trenches. After completion of excavation activities for the removal action, 13 confirmation samples were taken to confirm that any residual contamination would not pose a risk to human health (Figure 6-7) (IT Corporation 1997h).

The sampling showed residual dioxins, 4,4'-DDT, and 4,4'-DDE in soils (Table 6-18). Based on the toxicity equivalency factors (TEFs) shown in Table 6-18, the dioxin TCDD equivalent concentration for the sample with the maximum concentrations of dioxins and furans is 2×10^{-6} mg/kg, less than the RPRG of 3.9×10^{-6} mg/kg. The detected 4,4'-DDT and 4,4'-DDE are orders of magnitude less than their RPRGs. No additional volatile organic compounds, semivolatile organic compounds, chlorinated herbicides, PCBs, PAHs, organophosphorus pesticides, or nitroaromatics/nitroamines were detected in the confirmation samples. Therefore, potential residual organic compounds in soils after the removal action do not pose a risk above the range identified in the NCP to residential receptors based on RPRGs.

Metals concentrations in soil confirmation samples were below RPRGs for all detected metals except arsenic (Table 6-19). Most metals concentrations are orders of magnitude below their respective RPRGs. Arsenic exceeds the RPRG, but is within the range of background for arsenic in soils for the OU2 West March Base as documented in the OU2 RI. Therefore, potential residual metals in soils after the removal action do not pose a risk above the range identified in the NCP to residential receptors based on RPRGs and background soil concentrations.

Groundwater sampling conducted at Site 25 after the removal action has shown no detectable concentrations of the contaminants that were previously detected. The removal action at Site 25 has eliminated the potential for migration of contaminants to groundwater.

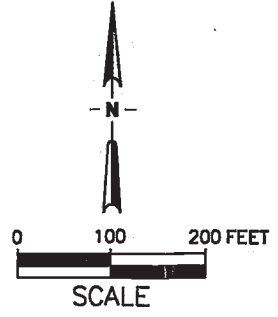
Based on the results of confirmation samples, the Site 25 no longer poses a threat to human health above the range identified in the NCP and no further action is required. Contaminated soil and munitions residues have been removed and confirmation samples confirm that the carcinogenic and non-carcinogenic risk has been reduced to less than 10^{-6} and 1, respectively, for residential receptors.



SAMPLES LOCATED APPROXIMATELY 200' NORTH

LEGEND	
	Site Boundary
	Confirmation Sample

United States Air Force	
March ARB	
Site 25 Munitions Residue Burial Site Removal Action Dig Sites	Figure 6-7



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Table 6-18
Analytical Results for Dioxins and Furans Detected in Confirmation Soil Samples
Site 25 – Munition Residue Burial Area
(mg/kg)

Analyte	Sample No.																RPRGs ⁽¹⁾	TEF ⁽²⁾
	S003	S004	S005	S006	S007	S008	S009	S010	S013	S014	S015	S016	S017	S018	S019	S020		
HpCDFs	<5E-07	<5E-07	<5E-07	<5E-07	<5E-07	<5E-07	8.8E-06	<5E-07	<5E-07	<5E-07	<5E-07	<5E-07	<5E-07	<5E-07	<5E-07	<5E-07		
TCDFs (total)	<8E-06	1.2E-06	<8E-06	<8E-06	<8E-06	<8E-06	<8E-06	<8E-06	<8E-06	<8E-06	<8E-06	<8E-06	<8E-06	<8E-06	<8E-06	<8E-06		
OCDF	<8E-06	1.1E-05	<8E-06	<8E-06	<8E-06	<8E-06	1.5E-05	<8E-06	<8E-06	<8E-06	<8E-06	<8E-06	<8E-06	<8E-06	<8E-06	<8E-06		0.001
HxCDDs (total)	<2.7E-06	6.1E-07	<2.7E-06	<2.7E-06	<2.7E-06	<2.7E-06	<2.7E-06	<2.7E-06	<2.7E-06	<2.7E-06	<2.7E-06	<2.7E-06	<2.7E-06	<2.7E-06	<2.7E-06	<2.7E-06		
HpCDDs (total)	<9E-07	5.4E-05	<9E-07	<9E-07	<9E-07	<9E-07	3.6E-05	<9E-07	<9E-07	<9E-07	<9E-07	<9E-07	<9E-07	<9E-07	<9E-07	<9E-07		
1,2,3,4,6,7,8-HpCDD	<2.6E-06	3E-05	<2.6E-06	<2.6E-06	<2.6E-06	<2.6E-06	1.4E-05	<2.6E-06	<2.6E-06	<2.6E-06	<2.6E-06	<2.6E-06	<2.6E-06	<2.6E-06	<2.6E-06	<2.6E-06		0.01
OCDD	2.9E-05	2.2E-04	<1.3E-06	<1.3E-06	<1.3E-06	2E-05	8.7E-05	<1.3E-06	<1.3E-06	6E-05	<1.3E-06	<1.3E-06	1.5E-05	4.1E-05	<1.3E-06	<1.3E-06		0.001
4,4'-DDE	1.7E-03	<3E-03	<3E-03	<3E-03	<3E-03	<3E-03	<3E-03	<3E-03	<3E-03	<3E-03	<3E-03	<3E-03	<3E-03	<3E-03	<3E-03	<3E-03	1.7	
4,4'-DDT	3.5E-03	<3E-03	<3E-03	<3E-03	<3E-03	<3E-03	<3E-03	<3E-03	<3E-03	<3E-03	<3E-03	<3E-03	<3E-03	<3E-03	<3E-03	<3E-03	1.7	

Notes:

- < ¹ = Analyte not detected above the indicated reporting limit.
- = RPRG (Preliminary Remediation Goal), Residential Soil (Set at 1x10⁻⁶ and HQ of 1), EPA Region IX, 1999.
- ² = TEF (Toxicity Equivalency Factor)
- mg/kg = milligrams per kilogram

Table 6-19
Organic Chemical Concentrations in Confirmation Samples
Site 25 Munition Residue Burial Area
(mg/kg)

Analyte	Sample No.																Maximum West March Background Concentrations (all depths)	RPRGs ¹
	S003	S004	S005	S006	S007	S008	S009	S010	S013	S014	S015	S016	S017	S018	S019	S020		
As	1.2	1.1	1	1.4	1.4	1.1	2.1	1.4	1.5	0.87	0.96	1.7	1.9	0.72	0.78	1.4	5.26	0.39
Ba	175	452	137	271	174	344	530	308	147	218	252	195	178	257	188	212	552	5400
Be	0.23	0.25	ND	0.23	0.22	0.22	0.37	0.34	0.32	ND	0.23	0.43	0.37	ND	0.14	0.14	10.95	150
Cd	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	37 (9.0*)
Cr	13.3	22.8	9	17	13	18.7	19.6	17.1	17.5	15.4	18	19.1	18.2	18.8	13.8	15.9	29.1	210
Co	8.6	10.5	6.2	12.2	8.4	12.9	11.3	9.1	10.3	12.7	13.9	11.9	11.1	11.9	9.2	11.4	16.1	4700
Pb	9.4	14.4	<5.0	15.6	<5.0	<5.0	<5.0	30.6	<5.0	<5.0	<5.0	<5.0	5.3	<5.0	<5.0	<5.0	17.2	400
Mo	<2.0	17.7	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	11.2	390
Ni	5.6	6.1	ND	6.9	5.9	7.9	7.6	5.8	7.1	4.2	5.8	8.7	8.4	7.5	4.5	5.1	10.4	1600 (150*)
V	30.7	36.1	20.5	41.3	33.7	51.7	48.8	36.7	40.7	42.3	51	47.1	44	38.9	38.5	46.8	75.4	550
Zn	44.3	64.6	18.2	59.2	33.6	116	40.4	135	38.2	38.9	48.6	43.3	41.8	35.8	32.3	37.8	413	23,000

Notes: 1 = RPRG (Preliminary Remediation Goal), Residential Soil (Set at 1×10^{-6} and HQ of 1), EPA Region IX, 1999.
 * = Cal-modified RPRG
 < = Concentration less than the listed method detection limit.
 mg/kg = milligrams per kilogram

Site 26 - Water Treatment Plant Sludge

The baseline risk assessment was performed for Site 26a and Site 26b. The results of the baseline risk assessment for the contaminants detected in the lime sludge and groundwater prior to the removal action indicated carcinogenic and non-carcinogenic risks above the range identified in the NCP to future industrial workers, future construction workers and future on-site residents (Table 6-1, 6-2, and 6-3). To mitigate these risks and protect groundwater, a removal action was performed. The removal action at Site 26a excavated all visible lime sludge to bedrock and Site 26b (i.e., lime sludge over Site 20 wastes were removed) (IT Corporation 1996, 1997f and 1997i). Therefore, no residual affected soils or sludge remain at either Site 26a or Site 26b, eliminating the exposure pathway. Since all soil and sludge to bedrock was excavated, no confirmation samples were taken at Site 26a after the removal action. Site 26b was located on top of the landfilled material of Site 20. Therefore, confirmation sampling at Site 20 is indicative of post-removal action conditions at Site 26b. Groundwater samples taken since the RI have indicated that the previously detected arsenic is indicative of background concentrations (Tetra Tech, Inc. 1997b). The area was backfilled with clean soil and no further action is required.

Site 30 - Construction Rubble Burial Site

The results of the baseline risk assessment for the contaminants detected in the soil prior to the trash and debris removal indicated carcinogenic or non-carcinogenic risk within the acceptable range identified in the NCP to future industrial workers, future construction workers or future on-site residents (Table 6-1, 6-2, and 6-3). For soils, carcinogenic health risks were less than 10^{-6} and non-carcinogenic health risks were less than 1.

Risks from arsenic to future residents from usage of groundwater and swimming in surface water were within the manageable risk range. No non-carcinogenic risks were greater than 1 from groundwater usage at Site 30. Further analysis of arsenic in groundwater under a basewide groundwater monitoring program has shown the levels to be consistent with background levels in the area of March AFB. Therefore, the levels of arsenic detected in the groundwater and surface water, since the pond is fed by groundwater, are believed to be indicative of background and not a result of Air Force activities at the site. Additionally, groundwater and bedrock are shallow in this area and the potential for future use of groundwater as a potable source is extremely unlikely. No contaminants modeled to migrate to groundwater showed risks above the range identified in the NCP.

As previously discussed, Site 30 has been used for illegal dumping. The Air Force has removed accumulated trash and debris from the site.

Based on the results of investigations and analyses performed during the OU2 RI and basewide groundwater investigations, the site poses no threat to human health and no further action is required.

Site 35 - 15th Air Force Headquarters Leaking Underground Storage Tanks

The results of the baseline risk assessment for the contaminants detected in the soil and groundwater indicated no carcinogenic or non-carcinogenic risks above the range identified in the NCP to future industrial workers, future construction workers or future on-site residents (Table 6-1, 6-2, and 6-3). Carcinogenic health risks were less than 10^{-6} and non-carcinogenic health risks were less than 1 for all receptors. Human health risk levels from groundwater usage were within the range identified in the NCP.

However, long-chain petroleum hydrocarbons were detected in soils at Site 35c. These petroleum hydrocarbon contaminants could potentially degrade water quality at the site. To mitigate this concern, the Air Force installed and operated a bioventing system at Site 35c. Upon completion of bioventing, the soils were sampled and hydrocarbon concentrations had decreased to manageable levels allowing for regulatory closure of the petroleum hydrocarbon concern at Site 35c. No further action is required for Site 35.

Site 40 - Landfill No. 8

A quantitative baseline risk assessment was not conducted at Site 40 because the removal action was being performed at the time of the RI. The removal action was performed to mitigate concerns regarding drums exposed in a drainage by erosion. After completion of excavation activities for the removal action, confirmation samples were taken to confirm that any residual contamination would not pose a risk to human health. (Figures 6-8 and 6-9) (OHM Remediation Services Corporation 1995)

The sampling showed residual volatile organics, organochlorine pesticides and petroleum hydrocarbons in soils and sediments (Table 6-20). The concentrations of detected organics were less than their respective RPRGs, usually by several orders of magnitude. No other volatile organics, semivolatile organics, organochlorine pesticides, or PCBs were detected in the confirmation samples. Therefore, potential residual organic compounds in soils after the removal action do not pose a risk above the range identified in the NCP to residential receptors based on RPRGs. Metals concentrations in soil and sediment samples were below RPRGs for all detected metals except arsenic (Table 6-21). Most metals concentrations are orders of magnitude below their respective RPRGs. Arsenic exceeds the RPRG, but is within the range of background for arsenic in soils for the OU2 West March Base as documented in the OU2 RI. Therefore, potential residual metals in soils after the removal action do not pose a risk above the range identified in the NCP to residential receptors based on RPRGs and background soil concentrations.

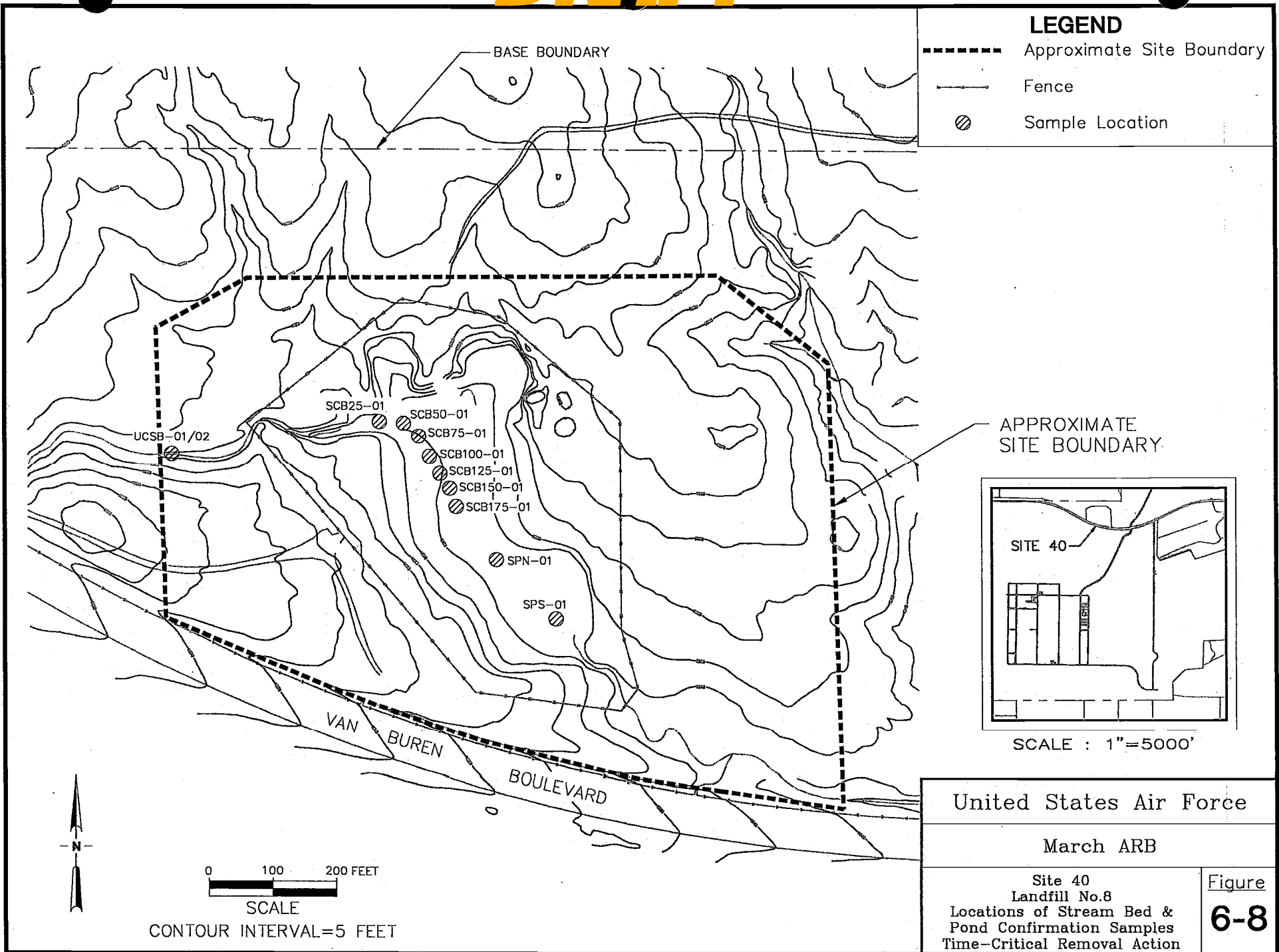
Metals concentrations in surface water samples were below RPRGs for all detected metals except arsenic and antimony (Table 6-22). Most metals concentrations are orders of magnitude below their respective RPRGs. However, arsenic exceeds the RPRG but is less than the MCL. Antimony exceeds both the RPRG and MCL. Additionally, the concentration of antimony is uncertain because the test methodology at the time of the RI caused overestimation of antimony concentrations due to interferences from several metals including aluminum and vanadium. It is very unlikely that pond water would be used as a potable source. Therefore, there are limited risks related to human receptors for surface water at Site 40.

No contamination has been detected in groundwater at Site 40.

Based on the results of confirmation samples, Site 40 no longer poses a risk above the range identified in the NCP to human health and no further action is required. Contaminated soil and debris have been removed and confirmation samples confirm that the risk has been reduced to less than 10^{-6} for residential receptors.

AFRPA OU2 ROD (former March AFB)

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AFRPA 0U2 ROD (Former March AFB)

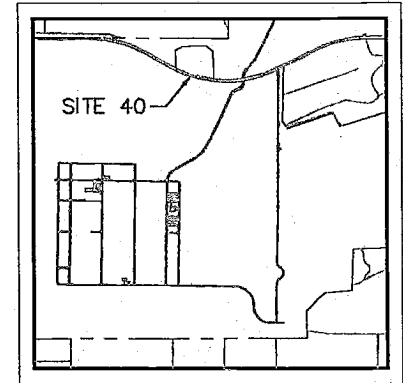
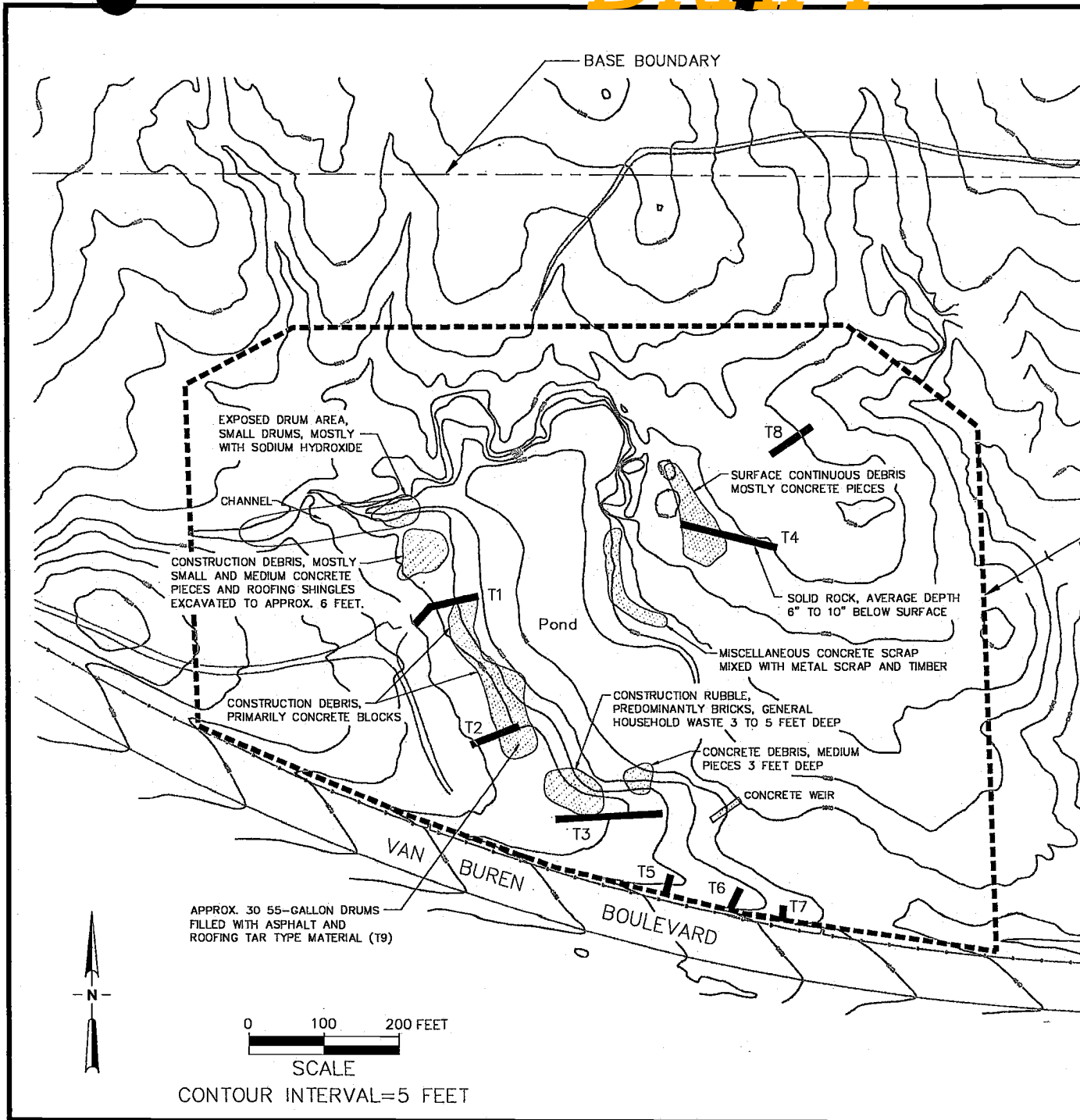
6-53

LEGEND

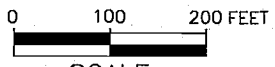
 Trench (Removal Action)

NOTES:

1. All noted debris and waste were removed from Site 40 during the Time-Critical Removal Action.
2. See Table 6-21 for description of sample locations in trenches.



SCALE : 1"=5000'



SCALE

CONTOUR INTERVAL=5 FEET

United States Air Force

March ARB

Site 40
Landfill No.8
Trench Locations
Time-Critical Removal Action

Figure
6-9

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Table 6-20
Organic Compounds in Creek and Pond Confirmation Samples (Soil and Sediment)
Site 40 – Landfill No. 8
(mg/kg)

Analyte	Method	Sample No. and Location															RPRGs	
		CBS-A-01 Creek NE bank	CBS-B-01 Creek SE bank	CBS-C-01 Creek NW bank	CBS-D-01 Creek SW bank	CBS-E-01 Creek SW bank	USCB-01 Upstream	USCB-02 Upstream	SCB25-01 Pond	SCB50-01 Pond	SCB75-01 Pond	SCB100-01 Pond	SCB125-01 Pond	SCB150-01 Pond	SCB175-01 Pond	SPN-01 Pond		SPS-01 Pond
Benzene	8240	<0.01	0.00215	0.00212	0.00155	<0.011	0.013	<0.012	<0.012	NA	NA	NA	NA	NA	NA	<0.019		0.67
Toluene	8240	<0.01	0.00561	<0.011	<0.011	<0.011	0.013	<0.012	<0.012	NA	NA	NA	NA	NA	NA	<0.019		520
4,4'-DDT	8080	0.00108	0.0086	<0.0037	<0.0036	<0.0036	<0.0041	<0.0039	0.079	NA	<0.0039	NA	<0.0043	NA	<0.0048	0.0046	<0.007	1.7
4,4'-DDE	8080	<0.0033	0.00189	<0.0037	<0.0036	<0.0036	<0.0041	<0.0039	<0.0041	NA	<0.0039	NA	<0.0043	NA	<0.0048	0.0031	<0.007	1.7
MEK	8080	<0.01	<0.01	<0.011	<0.011	<0.011	<0.013	<0.012	<0.012	NA	NA	NA	NA	NA	NA	0.026		7,300
TRPH	8015M	13.4	8.3	11	7.2	10.8	71.3	101	46.6	21.5	25	68.7	57.8	25.5	66	33.3	11.2	

Notes:

- = RPRG (Preliminary Remediation Goal), Residential Soil (Set at 1×10^{-6} and HQ of 1), EPA Region IX, 1999.
- < = Concentration less than the listed method detection limit.
- NA = Not Analyzed
- mg/kg = milligrams per kilogram

Table 6-21
Metals Concentrations in Confirmation Samples (Soil and Sediment)
Site 40 - Landfill No. 8
(mg/kg)

Analyte	Trench Soil Sample No. and Location						
	T1-S-1-01 Trench 1, Pile A	T1-S-1-01 Trench 1, Pile B	T2-S-1-01 Trench 2, North End	T2-S-2-01 Trench 2 South End	T2-S-3-01 Trench 2 Middle	T3-S-1-01 Trench 3 North End	T3-S-2-01 Trench 3 South End
Ag	<0.2	<0.23	<0.21	<0.2	<0.2	<0.21	<0.21
As	1.5	1	2.1	1.4	1.3	1.3	1
Ba	270	442	185	194	400	187	186
Be	0.73	<0.23	0.74	0.58	0.34	0.82	0.68
Cd	1.7	<0.68	<0.62	<0.61	<0.61	3.8	1.6
Cr	17.1	20.9	18.6	16.6	16.3	17.1	16.6
Co	14.9	20.6	14.8	14	17.2	14.3	13.8
Cu	16	18.2	15.4	13.5	17.1	17.3	17.7
Hg	0.1	0.11	0.1	0.1	0.1	0.15	0.16
Ni	5.3	6.7	11.4	7.6	6.8	11.4	15.5
Pb	18.4	2.5	7.4	4.7	3.4	28.3	20.9
Sb	6.3	5	<4.1	6.9	9.1	4.7	6.3
Se	0.61	0.61	0.49	0.43	0.45	0.66	0.57
Tl	0.36	0.3	0.33	0.31	0.51	0.21	0.36
V	52.9	76.4	52.1	52.2	61.2	55.8	58.5
Zn	59.6	67.2	54.8	50	55.8	69.4	71.6

Table 6-21 (Cont. page 2)

Analyte	Trench Soil Sample No. and Location (Cont.)						
	T4-S-1-01 Trench 4	T5-S-1-01 Trench 5	T6-S-1-01 Trench 6	T6-S-1-01 Trench 6	T7-S-1-01 Trench 7	T8-S-1-01 Trench 8 North End	T8-S-2-01 Trench 8 North End
Ag	<0.2	0.29	<0.21	<0.2	<0.2	<0.21	<0.21
As	0.71	1.4	3	0.99	1.1	1.6	1.1
Ba	193	284	452	323	298	495	421
Be	0.34	0.49	0.34	0.33	0.33	0.34	0.34
Cd	1.6	<0.61	<0.62	<0.6	<0.6	<0.62	<0.62
Cr	12.5	18.8	16.7	17.6	15.8	15.9	17.4
Co	11.3	17.6	13.8	16.7	15	17.5	15.9
Cu	13.9	34.2	39.5	26.5	16.4	12.7	12.3
Hg	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1
Ni	6	7.5	10.7	7.5	6	6.9	4.6
Pb	26.6	158	310	67.2	8	5.3	3.4
Sb	4.5	6.7	5.3	8.4	5.6	4.4	6.1
Se	0.35	0.49	0.68	0.42	0.48	<0.14	<0.14
Tl	0.2	0.26	0.19	0.34	0.18	0.23	0.16
V	38.9	58.7	52	59.2	49.9	62.4	64
Zn	64.5	124	164	84.5	53.4	53	54.4

Analyte	Trench Soil Sample No. and Location (Cont.)					Average Concentrations (Trench Soil Samples)
	T8-S-3-01 Trench 8 South End	ST-3-01 Trench 9 SE/NE Floor	ST-2-01 Trench 9 SW/NW Floor	ST-5-01 Trench 9 Floor Center	ST-5-02 Trench 9 Floor Center	
Ag	<0.21	<0.63	<0.63	<0.63	<0.64	
As	1.2	1.8	1.5	1.4	1.2	1.4
Ba	432	286	386	263	204	311
Be	0.34	0.53	0.53	0.54	0.54	0.49
Cd	<0.62	<0.84	<0.84	<0.85	<0.85	
Cr	16.3	20.3	18	21.2	17.9	17.5
Co	15.3	18.6	15.8	19	15.7	15.9
Cu	11	16.4	15.9	15.5	14.6	18.1
Hg	<0.1	0.16	0.11	0.05	0.11	0.07
Ni	6.9	8.1	<6.3	8.1	9.3	8.1
Pb	3.7	10.4	9.2	7.3	6.1	36.9
Sb	4.8	6.3	9.4	4.8	5.2	6.1
Se	<0.15	<0.15	<0.15	<0.15	<0.15	0.33
Tl	<0.15	0.23	0.25	0.25	0.32	0.28
V	58.3	61.5	53.2	64.9	50.3	57
Zn	51.1	95	109	96.8	74.3	77.7

Table 6-21 (Cont. page 3)

Analyte	Creek Bed Soil Sample No. and Location							Average Concentrations (Creek Bed Soil Samples)
	CBS-A-01	CBS-B-01	CBS-C-01	CBS-D-01	CBS-E-01	USCB-01	USCB-02	
	Creek NE bank	Creek SE bank	Creek NW bank	Creek SW bank	Creek SW bank	Upstream	Upstream	
Ag	<0.2	<0.2	<0.22	<0.22	<0.22	<0.75	<0.72	
As	1.3	0.92	0.93	1.5	1.3	0.38	0.53	1
Ba	291	467	256	486	312	238	205	322
Be	<0.20	<0.20	<0.22	<0.22	<0.22	0.36	0.34	
Cd	<0.6	<0.6	<0.66	<0.66	<0.65	<1	<0.96	0.18
Cr	18.7	21.5	15.2	21.2	15.9	15.6	13.6	17.4
Co	16	17.3	14.1	25	13.8	14.3	12.7	16.2
Cu	23.6	20.9	12.2	22.1	16.3	13.9	11.4	17.2
Hg	0.1	0.2	0.22	0.28	0.27	<0.03	<0.03	0.2
Ni	9	10.6	5.6	7.8	6.6	<7.5	<7.2	5.7
Pb	26.1	18.7	8.9	10.2	3.6	4.8	3.5	10.8
Sb	6.4	6.2	<4.4	11.3	8.8	8.1	6.4	6.7
Se	0.22	0.22	0.18	0.29	<0.15	<0.18	<0.22	0.1
Tl	0.38	0.56	0.24	0.15	0.63	0.28	0.31	0.4
V	54.8	65	50.5	77.6	56.3	49.6	43.9	56.8
Zn	85.8	68.8	48.6	70.7	53.6	55.8	51.1	62.1

Table 6-21 (Cont. page 4)

Analyte	Pond Sediment Sample No.										Average Concentrations (Sediment Samples)	Maximum Soil Background Levels (all depth category)	RPRGs ⁽¹⁾
	SCB25-01	SCB50-01	SCB75-01	SCB100-01	SCB125-01	SCB150-01	SCB175-01	SPN-01	SPS-01				
Ag	<0.74	<0.73	<0.71	<0.7	<0.79	<0.72	<0.86	<1.1	<1.3			ND	390
As	0.4	6.24	0.57	0.35	0.34	0.29	0.55	2.3	1.7	1.42		5.26	0.39
Ba	187	205	135	163	204	148	231	336	416	225		552	5400
Be	0.35	<0.24	<0.24	<0.23	0.3	<0.24	<0.29	0.54	0.6	0.22		10.95	150
Cd	<0.99	<0.97	<0.94	<0.94	<1.1	<0.96	<1.2	<1.5	<1.7			ND	37 (9.0*)
Cr	10.6	9.7	7.7	7.7	11.5	7.2	9.6	29	25.8	13.2		29.1	210
Co	11.6	9.3	7.6	7.7	12.5	7.7	10.1	19.1	21.9	11.9		16.1	4700
Cu	7.9	11.3	10.6	8.9	11.2	5.4	10.1	99.1	43	23.1		17	2900
Hg	0.06	0.06	0.12	0.12	0.13	0.12	0.14	0.09	0.21	0.12		0.077	23
Ni	<7.4	<7.3	<7.1	<7.0	<7.9	<7.2	<8.6	68.6	<12.6			10.4	1600(150*)
Pb	10.1	11.7	9.7	36.8	27.3	8.3	14	324	43.9	54		17.2	400
Sb	8.1	6.2	5.6	5.8	6.5	<4.6	<5.5	8.4	8.6	5.5		ND	31
Se	0.27	<0.17	<0.17	<0.16	<0.18	<0.17	<0.20	0.68	0.51	0.16		ND	390
Tl	0.3	<0.22	<0.21	0.21	<0.24	<0.22	0.4	<0.34	0.59	0.17		ND	6.3
V	40	34.3	25.7	28.8	45.1	27.6	36.5	61	83.8	42.5		75.4	550
Zn	82.8	81.8	68.2	59.6	76.4	39.6	105	390	189	121.4		413	23,000

- Notes:
- < = Analyte not detected, followed by method detection limit
 - NL = RPRG not listed
 - MEK = Methyl ethyl ketone
 - TRPH = Total Recoverable Petroleum Hydrocarbons
 - ¹ = RPRG (Preliminary Remediation Goal), Residential Soil (Set at 1×10^{-6} and HQ of 1), EPA Region IX, 1999
 - * = Cal-Modified RPRG
 - mg/kg = milligrams per kilogram

Table 6-22

**Metals Concentrations in Pond Surface Water Confirmation Samples
Site 40 - Landfill No. 8
(µg/L)**

Analyte	Sample No.		Spring 1994	Ambient Water Quality Criteria Aquatic Life (Chronic or 4-Day Average)	RPRGs (Tap Water)/MCL	Maximum West March Background-Groundwater
	AW-YA-01 North Pond Surface Water	AW-YA-02* North Pond Surface Water				
Ag	2.8 J	24.1 J	ND	0.12	180/100	ND
As	1.6 J	1.2 J	ND	190	0.045/50	ND
Ba	192 J	193 J	318	NL	2,600/1,000	516
Cu	12.3 J	11.5 J	ND	28**	1,400/1,000	ND
Pb	0.65 J	0.63 J	ND	7.8**	NL/50	ND
Sb	46.8 J	50.1 J	ND	30	15/6	35.5
Tl	0.99 J	<0.7 J	ND	40	2.9/2	183
V	5.1 J	5.8 J	57	NL	260	68.4
Zn	32.5 J	29 J	58	260	11,000	58.8

- Notes: Only those metals which were detected in at least one sample are shown
- < = Analyte not detected, followed by method detection limit
 - * = Duplicate
 - J = Result is between the PQL and MDL. Analyte was positively identified, but the concentration is uncertain.
 - NL = RPRG not listed
 - ND = Not detected
 - ** = Based on hardness of 290 mg/L CaCO₃
 - MCL = Maximum Contaminant Level (not listed where none established).
 - ¹ = RPRG (Preliminary Remediation Goal), Tap Water, EPA Region IX, 1999.

Site 42 - Building 3404 Transformers

A quantitative risk assessment was not performed for Site 42 because of an impending removal action at the time of the RI. However, based on comparison to RPRGs, carcinogenic risks from exposure to PCB-contaminated soil were above the manageable risk range for residents and 2×10^{-5} for industrial workers, indicating a need to mitigate the risk. A removal action was conducted and contaminated soils removed and disposed of off-Base. Confirmation samples showed minor residual PCB contamination in soils at Site 42 (Table 6-23 and Figure 6-10). Residential risk to residual PCBs in soil is within the manageable risk range for carcinogenic risks and less than 1 for non-carcinogenic risks. The carcinogenic risk to industrial receptors is less than 10^{-6} based on a RPRG of 0.74 mg/kg (updated 2002 RPRG). The site is currently owned by the County of Riverside.

There are no detected contaminants in groundwater at Site 42 and the removal action has eliminated the potential for contaminants to migrate to groundwater. Therefore, the site has been cleaned to within the manageable risk range as identified by the NCP. No further action is required for Site 42.

Transformer oils may be present in the concrete floor of Building 3404. The Air Force attempted to remove the PCBs from the concrete. Minimal levels of PCBs were left and have been encapsulated to prevent exposure. The concrete is not addressed in this AFRPA OU2 ROD. The County of Riverside has entered into a land use covenant with DTSC to ensure that the use of the building remains restricted to industrial activities.

6.1.4 Summary of Sites with Residual Contamination

As discussed above, four OU2 AFRPA sites have residual contamination above the risk range identified in the NCP. A summary of the site risks is provided in Table 6-24. Table 6-24 includes the location of each site, the residual risk if any, and the identification of the contaminated media. The Administrative Record contains documents with additional details regarding the site, locations, investigations, and, as applicable, the removal actions at the OU2 AFRPA sites. Included in the documents are figures and descriptions of all activities including the confirmation sampling locations and results. The selected controls and the description of the protectiveness to human health of these controls are discussed in Sections 7 and 9.

Summary of Sites with Residual Risks

Site 6 – Landfill No. 4

Approximately 600,000 cubic yards of non-hazardous waste is wholly contained within the engineered waste cells. The engineered waste cells are located on the footprint of the former Landfill No. 4 and occupy 12 acres (see Figure 5-1). Currently, the site is fenced and maintained. Exposures to the contained materials have not occurred. However, exposure to these contained wastes could occur if the waste cells are damaged or not properly maintained.

Site 12 – Civil Engineer Yard

The Civil Engineering yard occupies approximately 20 acres. A non-CERCLA petroleum hydrocarbon action was completed in the former wash rack area. Although some amount of petroleum and metals were left in place, this cleanup action was closed without restrictions. The 1-1 DCE vapor in shallow soil was considered to pose a potential threat in the past. However, as previously stated, 1-1 DCE is no longer considered a suspected human carcinogen, and 1-1 DCE vapors at Site 12 are no longer a threat to human health or the environment. The only remaining contaminated media at Site 12 is a small area of groundwater contamination existing in the northwest section of the site. A precise volume and area of contaminated soil and groundwater is not known. However, the area of contamination does not extend beyond the site boundaries. There are no current exposures because groundwater is not extracted. If groundwater extraction wells were drilled, water users could be exposed to TCE and PCE by drinking and other uses of the water.

Table 6-23
Analytical Results for PCBs by Isomer in Soil Samples
Site 42 - Building 3404 Confirmation Samples
(mg/kg)

Sample No.	MARCH-42-TS S-SL01	MARCH-42-TS S-SL02	MARCH-42-TS S-SL2-02	MARCH-42-TS S-SL03	MARCH-42-TS S-SL04	MARCH-42-TS S-SL05	MARCH-42-TS S-SL06	MARCH-42-TS S-SL08
Test Method	8082	8082	8082	8082	8082	8082	8082	8082
Aroclor 1016	<0.0034	<0.0034	<0.0034	<0.0033	<0.0034		<0.0033	<0.02
Aroclor 1221	<0.0034	<0.0034	<0.0034	<0.0033	<0.0034		<0.0033	<0.02
Aroclor 1232	<0.0034	<0.0034	<0.0034	<0.0033	<0.0034		<0.0033	<0.02
Aroclor 1242	<0.0035	<0.0034	<0.0034	<0.0033	<0.0034		<0.0033	<0.02
Aroclor 1248	<0.0034	<0.0034	<0.0034	<0.0033	<0.0033		<0.0033	<0.02
Aroclor 1254	<0.0082	<0.0082	<0.0082	<0.008	<0.008	<0.01	<0.008	<0.04
Aroclor 1260	0.21	0.23	0.2	0.03	0.036	0.2	0.0065	0.096

Sample No.	MARCH-42-TS S-SL11	MARCH-42-TS S-SL12	MARCH-42-TS S-SL2-12	MARCH-42-TS S-SL14	MARCH-42-TS S-SL15	MARCH-42-TS S-SL18	MARCH-42-TS S-SL19	MARCH-42-TS S-SL20
Test Method	8082	8082	8082	8082	8082	8082	8082	8082
Aroclor 1016				<0.0035	<0.0038		<0.0035	<0.0037
Aroclor 1221				<0.0035	<0.0038		<0.0035	<0.0037
Aroclor 1232				<0.0035	<0.0038		<0.0035	<0.0037
Aroclor 1242				<0.0035	<0.0033	<0.02	<0.0035	<0.0037
Aroclor 1248				<0.0035	<0.0038		<0.0035	<0.0037
Aroclor 1254	<0.01	<0.01	<0.01	<0.0084	<0.0091	<0.01	<0.0084	<0.0088
Aroclor 1260	0.64	0.031	0.041	0.061	0.056	0.017	0.008	0.23

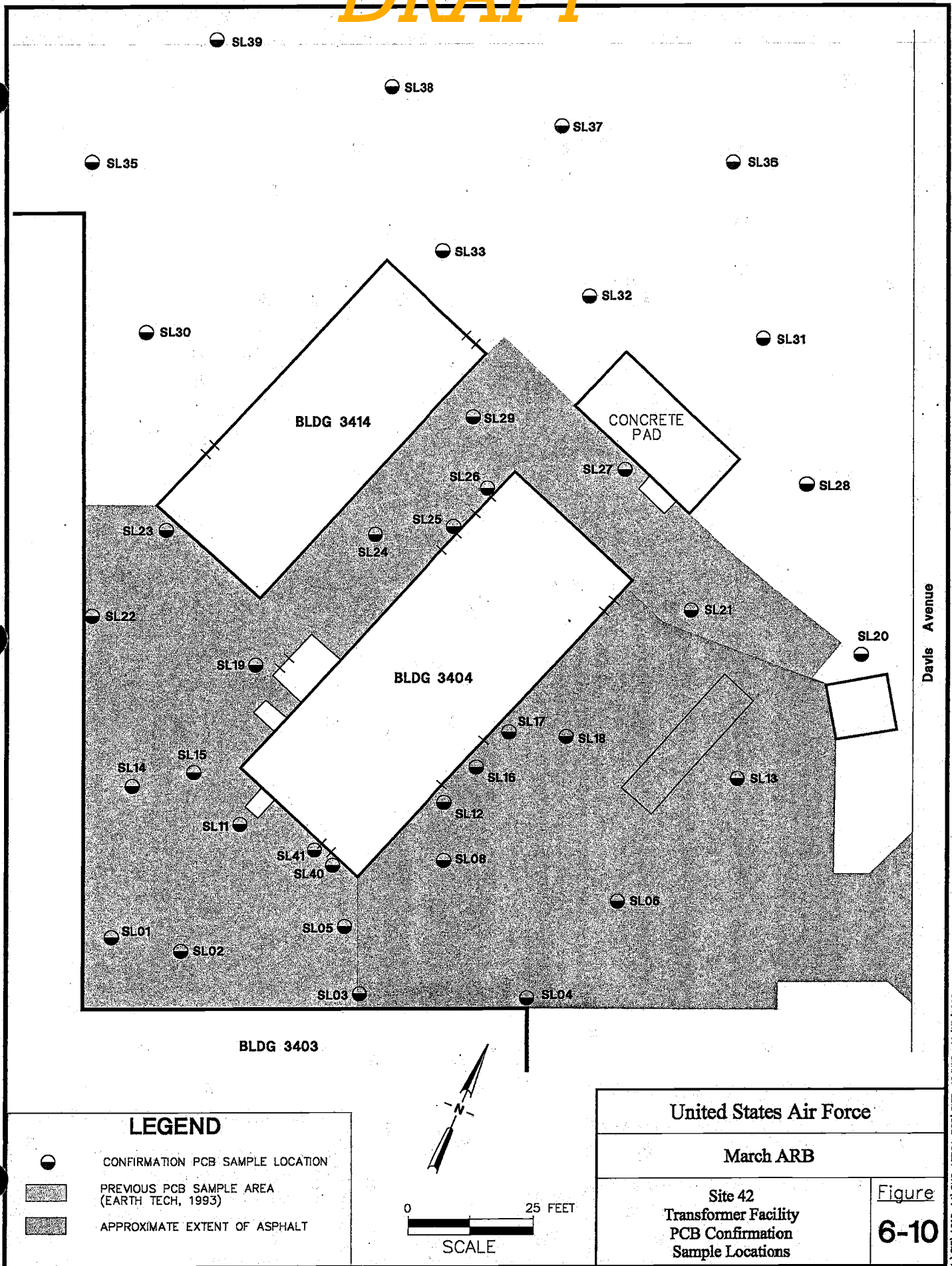
Sample No.	MARCH-42-TS S-SL21	MARCH-42-TS S-SL22	MARCH-42-TS S-SL23	MARCH-42-TS S-SL24	MARCH-42-TS S-SL2-24	MARCH-42-TS S-SL28	MARCH-42-TS S-SL29	MARCH-42-TS S-SL30
Test Method	8082	8082	8082	8082	8082	8082	8082	8082
Aroclor 1016	<0.0035	<0.0036	<0.0036			<0.0034		<0.0036
Aroclor 1221	<0.0035	<0.0036	<0.0036			<0.0034		<0.0036
Aroclor 1232	<0.0035	<0.0036	<0.0036			<0.0034		<0.0036
Aroclor 1242	<0.0035	<0.0036	<0.0036	<0.07		<0.0038		<0.0036
Aroclor 1248	<0.0035	<0.0036	<0.0036			<0.0034		<0.0036
Aroclor 1254	<0.0084	<0.0086	<0.0087	<0.01	<0.01	<0.0082	<0.01	<0.0085
Aroclor 1260	0.015	<0.0036	<0.0036	0.026	0.031	0.015	0.025	<0.0036

Table 6-23 (Cont. page 2)

Sample No.	MARCH-42-TS S-SL31	MARCH-42-TS S-SL35	MARCH-42-TS S-SL36	MARCH-42-TS S-SL39	MARCH-42-TS S-SL40	MARCH-42-TS S-SL41	RPRG(1)
Aroclor 1016	0.031	<0.0034	0.031	<0.0034	<0.0035	<0.0034	3.9
Aroclor 1221	<0.0034	<0.0034	<0.0034	<0.0034	<0.0035	<0.0034	0.22
Aroclor 1232	<0.0034	<0.0034	<0.0034	<0.0034	<0.0035	<0.0034	0.22
Aroclor 1242	<0.0034	<0.0034	<0.0034	<0.0034	<0.0035	<0.0034	0.22
Aroclor 1248	<0.0034	<0.0034	<0.0034	<0.0034	<0.0035	<0.0034	0.22
Aroclor 1254	<0.008	<0.008	<0.008	<0.0081	<0.0083	<0.0082	0.22
Aroclor 1260	0.0052	0.18	0.063	0.066	0.12	0.006	0.22

Notes: < = Analyte not detected, followed by method detection limit
(1) = RPRG (Preliminary Remediation Goal) Residential Soil, EPA Region IX, 1999

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**Table 6-24
Summary of Sites with Residual Risk**

Site No.	Site Location	Action Based On Residual Risk	Contaminated Media Identification
3	West March	None	Not Applicable
6	West March	Yes	Regulatory Approved Engineered Waste Cells
12	Main Base	Yes	Groundwater, and Surface and Subsurface Soils
17	Main Base	Yes	Subsurface Soil
19	West March	Yes	Surface and Near Surface Soils
20	Main Base	None	Not Applicable
22	West March	None	Not Applicable
23	Off-Base	None	Not Applicable
24	West March	None	Not Applicable
25	West March	None	Not Applicable
26	West March	None	Not Applicable
30	West March	None	Not Applicable
35	West March	None	Not Applicable
40	West March	None	Not Applicable
42	West March	None	Not Applicable

Notes: All sites are located on Figure D-1.

Site 17 – Swimming Pool Fill

Approximately 1,000 cubic yards of PCB contaminated soil remains in the subsurface over an area of approximately 5,000 square feet beneath the former swimming pool structure (see Figure 5-3). There are no current exposures because the contaminated soil is covered with over 8 feet of uncontaminated soil. However, exposures could occur if excavation over 8 feet in depth came in contact with the contaminated soils or brought these soils to the surface where additional exposures could occur by contact or inhalation of dust.

Site 19 West March Sludge Drying Beds

Approximately 7,000 cubic yards of surface and near-surface soil contamination (PAHs, PCBs, hexavalent chromium, and thallium) is estimated to exist over the approximate 7.5 acre site in the area of the sludge drying beds (see Figure 5-4). There is no consistent pattern to the contamination throughout the site. However, sampling showed the contamination was concentrated near the sludge beds. Exposures to the contaminated soil could occur to current or future workers at the site if they come in contact with the contaminated soils or inhale dust.

6.2 ECOLOGICAL RISK ASSESSMENT

An ecological risk assessment was conducted, as appropriate, to evaluate the potential for site contamination to adversely affect the local ecological receptors. Ecological risk was evaluated for West March sites only. Main Base areas are highly developed (Sites 12 and 17), primarily comprised of landscaping, buildings and/or pavement. These areas offer habitat to very few wildlife species compared to the open areas of rural West March. Routine Main Base activities are also likely to disturb the majority of wildlife. Similarly, ecological risks were not evaluated for West March Sites 35 and 42, which are in developed areas. Like the Main Base, potential habitats at these sites are restricted by buildings, pavement, and human activities. No ecological risk assessments were performed for sites where no contamination was found (Sites 22 and 23). A quantitative

ecological risk assessment was conducted for three West March sites: Site 19, Site 25, and Site 30. No quantitative ecological risk assessments were performed for the following sites where removal actions were completed: Sites 3, 6, 20, 24, 26, and 40.

Site-specific ecological risk assessments at OU2 included problem formulation and preliminary scoping assessment of the potential for adverse ecological impacts.

If the preliminary scoping assessment indicated that the potential for adverse ecological impacts exists, either a quantitative ecological risk assessment or a risk management action was recommended. If a removal was conducted at a site, the Air Force, EPA, and DTSC agreed that a quantitative ecological risk assessment for pre-removal conditions would be of limited value (given that the contaminated material no longer exists) and would not be included, except for Site 25. However, if no removal action had been conducted, a quantitative predictive ecological risk assessment was performed. The quantitative predictive ecological risk assessment built upon information developed in problem formulation and consisted of exposure assessment, effects assessment, and risk characterization.

Prior to the quantitative risk assessment, problem formulation was used to identify the major factors to be considered and established the focus of the ecological risk assessment. Problem formulation set the scope of the risk assessment and ensured that exposure scenarios most likely to contribute to ecological risk were evaluated.

Findings and conclusions for quantitative and qualitative ecological risk assessments are summarized below on a site-specific basis.

6.2.1 Qualitative Risk Assessments

The qualitative risk assessments included a preliminary scoping analysis and evaluation of potential impacts. This preliminary scoping assessment evaluated whether there are any habitats or biological receptors of concern present at the site; potentially harmful chemicals released from or present at the site; and finally, any potentially complete exposure pathways through which biological receptors may be exposed to chemicals. A potential for adverse ecological impacts existed prior to removal actions at sites including Site 3, 6, 20, 24, 25, 26, and 40 because receptors of regulatory and ecological concern had been identified.

The qualitative ecological risk assessment performed for the sites where removal actions have occurred concluded that, in general, the removal actions had removed primary contaminants of ecological concern.

Data collected from the sediments in the pond at Site 40 after the removal action, indicate that the mercury, at the detected concentrations, may present a threat to ecological receptors. The Air Force has reviewed the matter with the regulators and concluded that the available information does not indicate that a response action is required at this time. Although there is some reason for concern regarding the mercury levels in the sediment, a mitigation action such as removing sediments or lining the pond with insert material such as rock such that ecological receptors will not be exposed to the sediments, would adversely impact a substantial portion of the wetlands ecosystem. The Air Force has determined that actions taken to prevent ecological exposures would be more detrimental to the wetland habitat at Site 40 than leaving the sediment in place. In light of the existing uncertainty, however, the Air Force will monitor the condition of the pond sediments. Within 2 years, the Air Force will conduct a further ecological evaluation to determine if the above conclusion remains valid. This evaluation will include a screening ecological risk assessment, i.e., the first two steps described in EPA's 1997 Ecological Risk Assessment Guidance.

6.2.2 Quantitative Ecological Risk Assessments

Quantitative ecological risk assessments were prepared for Sites 19, 25, and 30 by the methods previously described. The quantitative ecological risk assessment performed for Site 25 showed negligible potential for adverse ecological impact to SKR using conservative assumptions. None of the other representative species for which sufficient applicable toxicity data are available had HI values above 1. The majority of HIs are two to five orders of magnitude less than 1. The results of the conservative, quantitative and predictive risk assessment, therefore, point to a negligible potential for adverse ecological impacts. In addition, all landfilled materials and some soils were removed after the risk assessment was completed and the site has been backfilled, reducing potential risk from past site activities beyond that reported in the risk assessment. Because of the removal action and the low HIs calculated for Site 25, a further discussion of the quantitative risk assessment for Site 25 will not be presented.

Site 19 - West March Sludge Drying Beds

The purpose of the ecological risk assessment was to evaluate the potential for adverse ecological effects that may occur as a result of past activities at Site 19, the Sludge Drying Beds. This site supports small areas of highly disturbed, sparse non-native grassland vegetation with no sensitive habitats. I-215 lies to the east of Site 19 and private cultivated land lies to the south. Areas immediately surrounding Site 19 are either developed or dominated by non-native grassland vegetation. Although the planned use of Site 19 is industrial (i.e., wastewater treatment), the ecological risk assessment was performed assuming that this site will support non-native grassland species.

The potential biological receptors of concern and the assessment endpoint were selected to evaluate to reflect concerns at respective levels of biological organization, including individual level impacts for receptors of regulatory concern and population level impacts for receptors of ecological concern.

The selected receptors of concern are listed in Table 6-25. Based on historical observations, recent surveys, and interviews with Base and regulatory biologists, Site 19 supports no receptors of commercial or recreational concern. Therefore, no assessment endpoints for receptors of commercial or recreational concern were established.

The preliminary scoping assessment evaluated whether there were any habitats or biological receptors of concern present at the site and potentially harmful chemicals released from or present at the site. Also evaluated was the potentially complete exposure pathways through which biological receptors may be exposed to chemicals.

A potential for adverse ecological impacts exists at Site 19 as receptors of regulatory and ecological concern have been identified. Also, chemicals of potential ecological concern (COPECs) were identified in biologically accessible soils and confined air spaces of burrows with the potential for an adverse ecological impact. Additionally, the potentially complete exposure pathways linking secondary sources of COPECs to biological receptors of concern were identified for this site. The primary ecological concerns at varying exposure pathways at Site 19 included the potential for a decline in populations of grassland plants due to the uptake of COPECs in soils or a decline in populations of invertebrate decomposers due to the uptake of COPECs in soils. Another primary ecological concern at Site 19 was the potential for decline in populations of herbivorous birds and mammals due to the ingestion of COPECs in soils and plant tissues. Dermal contact with COPECs in soils and the potential for inhalation of volatile COPECs emitted from soils into confined air spaces of burrows were also exposure pathways of ecological concern at this site for herbivorous birds and mammals. Decline in populations of predatory birds and mammals due to ingestion of COPECs in soils and prey tissues and dermal contact by burrowing species with COPECs in soils are also exposure pathways that required assessment at Site 19. Finally, decline in populations of burrowing species of predatory birds and

mammals due to inhalation of volatile COPECs emitted from soils into confined air spaces of burrows was a exposure pathway of ecological concern at Site 19.

The ecological risk assessment for Site 19 also included an analysis of health impacts to individuals for species of regulatory concern due to ingestion of COPECs in soils and prey tissues, dermal contact by burrowing species with COPECs in soils, and/or inhalation by burrowing species of volatile COPECs emitted from soils into confined air spaces of burrows.

The exposure evaluations provided conservative estimates of environmental COPEC exposures to representative species. Concentrations of COPECs were modeled for inhalation exposures. Chemical-specific bioconcentration and/or biotransfer factors were used to calculate exposures to the selected representative receptors of ecological concern.

Toxicity data for each COPEC was obtained from a review of available literature and toxicity databases. Whenever available, chronic No Observable Adverse Effect Level (NOAEL) data for mortality or reproductive effects were used to develop the reference toxicity value (RTV). Chronic NOAEL data for physiological or pathological effects were also used, as these responses are protective of mortality and reproduction. The uncertainty factors used to extrapolate from the observed endpoint to an estimated mean chronic NOAEL are detailed in Table 6-26.

**Table 6-25
Assessment Endpoints for Site 19**

Receptor of Concern	Status	Assessment Endpoint
Receptors of Regulatory Concern		
Red diamond rattlesnake	CSC	<ul style="list-style-type: none"> • Potential adverse health effects to individuals, including but not limited to mortality, reproductive impairment, and developmental abnormalities.
California horned lark	CSC	
Loggerhead shrike	FC2	
Cooper's hawk	CSC	
Ferruginous hawk	CSC, FC2	
Northern harrier	CSC	
Golden eagle	CSC	
Burrowing owl	CSC	
Stephens' kangaroo rat	FE/SE	
Los Angeles little pocket mouse	CSC, FC2	
San Diego black-tailed jackrabbit	CSC, FC2	
Receptors of Ecological Concern		
Non-native grassland plants		<ul style="list-style-type: none"> • Potentially significant reduction in population abundance or reproduction for member populations of receptors of ecological concern.
Invertebrate decomposers		
Herbivorous birds		
Herbivorous mammals		<ul style="list-style-type: none"> • Potentially significant reduction in abundance of plant and animal populations that are required habitat or important food items for identified receptors of regulatory concern.
Predatory birds		
Predatory mammals		

Notes: CSC = California Species of Special Concern
 FC2 = Federal Candidate 2, Threatened and Endangered Species
 FE/SE = Federal Endangered Species and State Endangered Species

**Table 6-26
Uncertainty Factors Used to Extrapolate from Observed Endpoint
to Estimated Mean Chronic NOAEL**

NOAEL	Uncertainty Factors
Acute (50% Lethal Dose) LD ₅₀ to chronic NOAEL	100
Acute Lowest observable adverse effects level (LOAEL) to chronic NOAEL	50
Acute to chronic	10
LOAEL to NOAEL	10

These endpoint-to-chronic NOAEL uncertainty factors were developed based on a review of a toxicity database and were always used to lower available toxicity values to a chronic NOAEL-equivalent (i.e., a more sensitive toxicity value).

Based on these conservative assumptions and the calculated exposure point concentrations, the quantitative risk assessment for Site 19 identified risk to some of the selected ecological receptors from exposure to contaminated soils (Table 6-27).

For each representative species, three HIs were calculated for each COPEC as defined as follows. For the maximally exposed individual who is the most sensitive to COPEC exposures, and to estimate the upper bound of risks, maximum HI is calculated as follows:

$$\text{Maximum HI} = \Sigma(\text{Maximum Exposure} / \text{Minimum RTV}) \quad (1)$$

When the risk for the typically exposed individual who has an average sensitivity to COPEC exposures and to estimate the average risk, mean HI is determined as follows:

$$\text{Mean HI} = \Sigma(\text{Mean Exposure} / \text{Mean RTV}) \quad (2)$$

Finally, to estimate risks for the minimally exposed individual who is the least sensitive to COPEC exposures and estimate the lower bound of risks, minimum HI is calculated as follows:

$$\text{Minimum HI} = \Sigma(\text{Minimum Exposure} / \text{Maximum RTV}) \quad (3)$$

These endpoint-to-chronic NOAEL uncertainty factors were developed based on a review of a toxicity database and were always used to lower available toxicity values to a chronic NOAEL-equivalent (i.e., a more sensitive toxicity value).

Based on these conservative assumptions and the calculated exposure point concentrations, the quantitative risk assessment for Site 19 identified risk to some of the selected ecological receptors from exposure to contaminated soils (Table 6-27).

For each representative species, three HIs were calculated for each COPEC as defined as follows. For the maximally exposed individual who is the most sensitive to COPEC exposures, and to estimate the upper bound of risks, maximum HI is calculated as follows:

$$\text{Maximum HI} = \Sigma(\text{Maximum Exposure} / \text{Minimum RTV}) \quad (1)$$

When the risk for the typically exposed individual who has an average sensitivity to COPEC exposures and to estimate the average risk, mean HI is determined as follows:

$$\text{Mean HI} = \Sigma(\text{Mean Exposure} / \text{Mean RTV}) \quad (2)$$

Finally, to estimate risks for the minimally exposed individual who is the least sensitive to COPEC exposures and estimate the lower bound of risks, minimum HI is calculated as follows:

$$\text{Minimum HI} = \Sigma(\text{Minimum Exposure} / \text{Maximum RTV}) \quad (3)$$

Table 6-27
Summary of Ecological Risk, HI>1
Site 19

Species	HI>1			COPEC
	Minimum	Mean	Maximum	
Animal Species				
Invertebrate Decomposers				
Earthworms	2.4	87.8	878	Copper
Herbivorous Birds				
House Finch	-	18.1	298	Mercury
Herbivorous Mammals				
SKR	-	5.3	68.6	Mercury
		3.18	41.5	4-Chloroaniline
Deer Mouse	-	15.4	475	Mercury
		1.0	304	4-Chloroaniline
Plant Species				
Non-native Plants				
Foxtail Chess and Redstem Filaree	-	8.08	80.8	Copper

Notes: HI = Hazard Index
COPEC = Chemical of Potential Ecological Concern

The maximum and minimum HIs sets upper and lower bounds on risks likely to be experienced by representative species. For Site 19, HIs were found to be less than 1 for most representative species for which sufficient toxicity data are available. This indicates that, for most receptors of concern, the potential for adverse impacts from exposure to most COPECs is negligible.

The quantitative risk assessment conducted at Site 19 identified the copper, hexavalent chromium, mercury, molybdenum, nickel, toluene, PAHs, PCBs, chlorinated pesticides, and 4-chloroaniline in soil as chemicals of concern. For most non-native grassland and riparian representative species, the risk assessment identified a negligible potential for adverse ecological effects from exposure to hexavalent chromium, molybdenum, nickel, toluene, PAHs, PCBs, and chlorinated pesticides (i.e., HI less than 1).

Potential adverse ecological impacts were identified to invertebrate decomposers from exposures to copper; herbivorous birds from exposures to mercury; herbivorous mammals from exposures to mercury, and 4-chloroaniline; and non-native grassland plants from exposures to copper as shown in Table 6-27.

There is likelihood that the calculated values overestimate risk to receptors at Site 19. Risks from exposure to mercury, detected in eight of 28 soil samples analyzed, are likely overestimated because the maximum concentration (2.12 mg/kg) was used in the risk evaluation. The average concentration of the remaining 21 samples was 0.05 mg/kg, nearly 40 times less than the value used to determine risk. Furthermore, distribution patterns of mercury in soil indicate that occurrences may be localized and would, therefore, probably not cause population-wide impacts. The maximum concentration of copper was also used, which would likely overestimate risks. In addition, risks from exposure to 4-chloroaniline were likely also overestimated because the compound was found in only two of 37 (or about five percent) soil samples analyzed. Conservative assumptions have also been used when estimating risk from volatile organic compounds in burrow areas by assuming lack of air circulation in burrows.

The risk assessment concluded that damage to receptors of concern from remediation of the entire site would probably cause more damage, due to destruction and loss of habitat, than if the contaminants were left in place. Further, the unfavorable conditions at Site 19, produced by current and continued human activities, would prevent the establishment of significant populations of wildlife species and that any wildlife routinely seen at the site is likely tolerant of human activity and disturbance. Finally, the distribution of COPECs in

Table 6-27 indicates that deleterious exposures would be localized and therefore not likely to cause population-wide impacts to species of concern.

Site 30 - Construction Rubble Burial Site

The purpose of the ecological risk assessment was to evaluate the potential for adverse ecological effects that may occur as a result of past activities at Site 30, Construction Rubble Site. This site is located in the SKR management area. Site 30 and areas surrounding the site are dominated by disturbed non-native grassland vegetation. The site includes an ephemeral pond, bordered by willows.

The potential biological receptors of concern and the assessment endpoint were selected to evaluate concerns at respective levels of biological organization, including individual level impacts for receptors of regulatory concern, and population level impacts for receptors of ecological concern.

The selected receptors of concern are listed in Table 6-28. Based on historical observations, recent surveys, and interviews with Base and regulatory biologists, Site 30 supports no receptors of commercial or recreational concern. Therefore, no assessment endpoints for receptors of commercial or recreational concern were established.

A preliminary scoping assessment was performed, as discussed under the ecological risk assessment for Site 30. The potential for adverse ecological impacts due to exposure to groundwater in non-native grassland habitat at Site 30 does not exist because groundwater is inaccessible to non-native grassland receptors of concern. However, the potential for adverse ecological impacts due to exposure to soils to terrestrial receptors of regulatory and ecological concern existed at Site 30. Also, COPECs were identified in biologically accessible soils and confined air spaces of burrows with the potential for an adverse ecological impact.

Additionally, the potentially complete exposure pathways linking secondary sources of COPECs to biological receptors of concern were identified for this site.

The primary ecological concerns in non-native grassland habitat at Site 30 included the potential for a decline in populations of non-native grassland plants due to the uptake of COPECs in soils or a decline in populations of invertebrate decomposers due to the uptake of COPECs from soil. Another primary ecological concern at Site 30 was the potential for decline in populations of herbivorous birds and mammals due to the ingestion of COPECs in soils, surface water (at the ephemeral pond), and plant tissues. Dermal contact with COPECs in soils and the potential for inhalation of volatile COPECs emitted from soils into confined air spaces of burrows were also exposure pathways of ecological concern at this site for herbivorous birds and mammals.

Decline in populations of predatory birds and mammals due to ingestion of COPECs in soils, surface water (at the ephemeral pond), and prey tissues and dermal contact by burrowing species with COPECs in soils are also exposure pathways that required assessment at Site 30. Finally, decline in populations of burrowing species of predatory birds and mammals due to inhalation of volatile COPECs emitted from soils into confined air spaces of burrows was an additional exposure pathway of ecological concern at Site 30.

Potential health impacts to individuals for species of regulatory concern are also ecological concerns in the non-native grassland habitat at Site 30. This was based on ingestion by the individual of COPECs in soils, surface water (at the ephemeral pond), and prey tissues and dermal contact by burrowing species with COPECs in soils plus the inhalation by burrowing species of volatile COPECs emitted from soils into confined air spaces of burrows.

**Table 6-28
Assessment Endpoints for Site 30**

Receptor of Concern	Status	Assessment Endpoint
Non-native Grassland Habitat		
Receptors of Regulatory Concern		
Western spadefoot toad	CSC	<ul style="list-style-type: none"> • Potential adverse health effects to individuals, including but not limited to mortality, reproductive impairment, and developmental abnormalities.
Red diamond rattlesnake	CSC	
California horned lark	CSC	
Loggerhead shrike	FC2	
Cooper's hawk	CSC	
Ferruginous hawk	FC2	
Northern harrier	CSC	
Golden eagle	CSC	
Burrowing owl	CSC	
Stephens' kangaroo rat	FE/SE	
Los Angeles little pocket mouse	CSC,FC2	
San Diego black-tailed jackrabbit	CSC,FC2	
Receptors of Ecological Concern		
Non-native grassland plants		<ul style="list-style-type: none"> • Potentially significant reduction in population abundance or reproduction for member populations of receptors of ecological concern. • Potentially significant reduction in abundance of plant and animal populations that are required habitat or important food items for identified receptors of regulatory concern.
Invertebrate decomposers		
Herbivorous birds		
Herbivorous mammals		
Predatory birds		
Predatory mammals		
Willow Riparian Habitat (Ephemeral Pond at Site 30)		
Receptors of Regulatory Concern		
Coastal western whiptail	FC2	<ul style="list-style-type: none"> • Potential adverse health effects to individuals, including but not limited to mortality, reproductive impairment, and developmental abnormalities.
Orange-throated whiptail	FC2	
San Diego horned lizard	CSC	
Least Bell's vireo	FE/SE	
Yellow warbler	CSC	
Willow flycatcher	FCE/SE	
California horned lark	CSC	
Loggerhead shrike	FC2	
Cooper's hawk	CSC	
Ferruginous hawk	CSC,FC2	
Northern harrier	CSC	
Golden eagle	CSC	
San Diego black-tailed jackrabbit	CSC,FC2	
Receptors of Ecological Concern		
Willow riparian and aquatic plants		<ul style="list-style-type: none"> • Potentially significant reduction in population abundance or reproduction for member populations of receptors of ecological concern. • Potentially significant reduction in abundance of plant and animal populations that are required habitat or important food items for identified receptors of regulatory concern.
Invertebrate decomposers		
Amphibians		
Aquatic birds		
Herbivorous birds		
Herbivorous mammals		
Predatory birds		
Predatory mammals		

Notes: CSC = California Species of Special Concern
 FC2 = Federal Candidate 2, Threatened and Endangered Species
 FE /SE = Federal Endangered Species and State Endangered Species
 FSE /SE = Federal Sensitive Species and State Endangered Species

Although shallow groundwater in riparian habitat at Site 30 is accessible to deeper-rooted riparian plants (e.g., willows), the potential for adverse ecological impacts due to exposures to groundwater did not exist because no chemicals were identified as COPECs in shallow groundwater. In addition, no volatile organic compounds were detected in soils or shallow groundwater in this habitat; therefore, the inhalation of air in underground burrows poses no risk to fossorial animals in the willow riparian habitat at Site 30. However, a potential for adverse ecological impacts exists in willow riparian habitat at Site 30 because receptors of regulatory and ecological concern were identified at this site. Also, COPECs were identified in biologically accessible soils and confined air spaces of burrows. Finally, potentially complete exposure pathways linking secondary sources of COPECs to biological receptors of concern were identified.

The primary ecological concerns in willow riparian habitat surrounding the ephemeral pond at Site 30 included the potential for decline in populations of emergent aquatic plants due to the uptake of COPECs in sediments. Decline in populations of willow riparian herbaceous plants and trees due to the uptake of COPECs in soils was also an ecological concern in this habitat as was the decline in populations of willow riparian invertebrate decomposers due to the uptake of COPECs in soils.

For the willow riparian habitat at Site 30, potential decline in populations of waterfowl due to ingestion of COPECs in sediments, pond surface water, and aquatic plant tissues was another ecological concern. The potential for decline in populations of willow riparian herbivorous birds and mammals due to ingestion of COPECs in soils, pond surface water, and plant tissues, and dermal contact by burrowing species with COPECs in soils were other ecological concerns at Site 30. Potential decline in populations of predatory birds and mammals due to ingestion of COPECs in soils, pond surface water, and prey tissues, and dermal contact by burrowing species with COPECs in soils were also ecological concerns at Site 30. Finally, health impacts to individuals for species of regulatory concern due to ingestion of COPECs in soils, pond surface water, and prey tissues, and dermal contact by burrowing species with COPECs in soils were considered concerns during the ecological risk assessment at Site 30.

Exposure evaluations, selection of toxicity data, and the quantitative risk assessment for Site 30 were performed as discussed for Site 19 above.

The quantitative risk assessment conducted at this site identified arsenic, molybdenum, selenium, silver, 1,1,1-trichloroethane (1,1,1-TCA) and dioxins/furans as chemicals of concern in soil, and ethylbenzene, toluene, and xylene as chemicals of concern in soil gas. For most non-native grassland and riparian representative species, the risk assessment identified a negligible potential for adverse ecological effects from exposure to arsenic, selenium, silver, 1,1,1-TCA, and dioxin/furans. Negligible risk was also identified to resident aquatic wildlife from arsenic and selenium in surface water with maximum concentrations of these substances below the EPA National Ambient Water Quality Criteria for the Protection of Freshwater Life. Exposure to ethylbenzene, toluene, and xylene was considered infrequent because these compounds were detected in only two of 111 soil gas samples. These compounds are, therefore, not expected to have an adverse impact on ecological receptors.

Potential adverse ecological impacts were identified to plant species, herbivorous birds, herbivorous mammal from exposures to COPECs identified at Site 30 as detailed in Table 6-29.

There is a likelihood that the calculated values overestimate risk to receptors at Site 30. The COPEC, 1,1,1-TCA, was detected in two of nine soil samples collected in non-native grassland habitat at Site 30.

**Table 6-29
Summary of Ecological Risk, HI>1
Site 30**

Species	HI>1			Habitat	COPEC
	Minimum	Mean ¹	Maximum		
Animal Species					
Herbivorous Birds					
House Finch	-	-	4.92	Grassland	Molybdenum
	-	-	1.51	Riparian	Selenium
Herbivorous Mammals					
Deer Mouse	-	1.54	46.2	Grassland	Molybdenum
	-	5160	150,000	Grassland	1,1,1-TCA
SKR	-	-	7.54	Grassland	Molybdenum
	-	-	2.4	Riparian	Selenium
	-	1760	22,300	Grassland	1,1,1-TCA
Plant Species					
Non-native Plants					
Foxtail Chess and	-	2.58	25.8	Grassland	Molybdenum
Redstem Filaree		2.54	25.4		Silver

Notes: HI = Hazard Index
 COPEC = Chemical of Potential Ecological Concern
 1 = The mean HI provides an estimate of risk to the average individual of a population, i.e., risk due to COPEC exposures.

A review of the laboratory analysis indicated that this compound may be a laboratory contaminant, but for conservatism, the compound was carried through the risk assessment process. For 1,1,1-TCA, a maximum concentration of 0.003 mg/kg and a minimum concentration of 0.0002 mg/kg were reported and the 95% Upper Confidence Limit (UCL) was calculated to be approximately 441 mg/kg, over 170,000 times the maximum observed concentration. Based on soil properties for Site 30, soils would be saturated with 1,1,1-TCA at a concentration of 252 mg/kg. Therefore, due to this statistical aberration the exposure concentration used in the risk assessment exceeded soil saturation levels, which is impossible. When using the maximum observed soil concentration, the maximum HIs were reduced by over 10,000, resulting in maximum HIs less than one. Selenium was detected in only the sediment samples collected at Site 30. The selenium is expected to be concentrated in the pond sediments. It is probably indicative of background concentrations and comparison to soil background would show elevated concentrations. Therefore, sediment exposures would likely be overestimated by use of the detected concentration and further overestimated by use of 95% UCL concentrations. Silver was detected in only two samples out of 28 and molybdenum in seven samples out of 28 samples from the depth of interest for ecological risk assessments, and as with selenium use of the 95UCL concentrations would overestimate risks.

The risk assessment concluded that damage to receptors of concern from remediation of the entire site would probably cause more damage, due to destruction and loss of habitat, than if the contaminants were left in place. Additionally, if the site is developed for industrial purposes, no habitat would remain. Therefore, no further action is appropriate for Site 30. Finally, the distribution of COPECs in Table 6-29 indicates that deleterious exposures would be localized and therefore not likely to cause population-wide impacts to species of concern.

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DECISION SUMMARY:

7.0 - DESCRIPTION OF ALTERNATIVES

7.0 DESCRIPTION OF ALTERNATIVES

The following sections are summaries of groundwater and soil cleanup alternatives evaluated during the OU2 FS. Remedial alternatives were developed for those sites with identified risk.

As previously discussed, some of the sites addressed in the AFRPA OU2 ROD will not require action for one or more of the following reasons: (1) no contamination was found during the OU2 RI; (2) contamination found at the site does not pose a risk to human health or the environment; or (3) contamination has been removed and the remaining contamination, if any, is within the risk range identified in the NCP and does not pose an unacceptable risk.

Contamination was not detected at Site 22 or 23 during the OU2 RI. The risk assessment for Site 30 shows no risk above the risk range identified in the NCP. Sampling following the removal action at Site 40 shows no human health risk above the risk range identified in the NCP. Mercury detected in pond sediments may be a concern for ecological receptors and will be addressed as previously discussed (Section 5.1.14, Page 5-17). Sampling following removal actions at Sites 3, 20, 24, 25, 26, 35, and 42 confirmed that the residual contamination levels are protective of human health and the environment. Details of the investigation are provided in Sections 5 and 6 of this ROD. The remaining sites (Sites 6, 12, 17, and 19), which have contamination requiring response actions, are discussed below.

7.1 REMEDIAL ACTION OBJECTIVES

The objective of the remedial actions for the AFRPA OU2 ROD sites at March AFB is to assure that human health and the environment will be protected before and after the property is transferred and used for the expected future use. This objective will be achieved at the four sites requiring further response actions by limiting future use of the property and the groundwater underlying them, as applicable. To prevent unacceptable risks to human health and the environment, the selected restrictions will, among other things, prohibit residential and other uses.

At Site 6, there are additional restrictions detailed in the *Operations and Maintenance Work Plan - Operable Unit 2, Site 6, Landfill No. 4 - March Air Force Base, California* (July 1999) ("Site 6 O&M Work Plan") to assure protection of the engineered waste cells constructed during the removal action and to ensure that the wastes will be contained. Requirements for maintenance and monitoring of the engineered waste cells are described in Title 27 of the California Code of Regulations ("Title 27"). The groundwater at the AFRPA OU2 sites is not now used for drinking, irrigation or any other purpose. However, the groundwater is considered a potential drinking water source, and as such, the objective of any remedial actions for groundwater for the AFRPA OU2 ROD sites at March AFB that require action, is to restrict the use of groundwater until monitoring shows the concentration of contaminants are below MCLs. Of the OU2 sites, only Sites 6 and 12 require action for groundwater. At Site 6, engineering controls are in place to prevent groundwater contact with the waste. Groundwater monitoring is and will be performed as required by Title 27 and the Site 6 O&M Work Plan. At Site 12, restrictions will be placed on groundwater use until contaminant levels in groundwater decline to below MCLs. The groundwater monitoring at Site 12 is and will be performed as part of the comprehensive groundwater-monitoring program under the *Quality Program Plan - Long-Term Groundwater Monitoring, Long-Term Operation, and Long-Term Operation and Maintenance Programs, March ARB, California* (September 2000), as amended and supplemented ("March ARB Quality Program Plan").

The site-specific remedial action objectives are:

Site 6

- Limit use of the property to prevent unacceptable risk
- Prevent exposure to landfill waste and landfill gases
- Prevent or minimize migration of landfill contaminants to vadose zone and to groundwater and protect water quality
- Protect remedial system from damage and ensure the integrity of waste cells and associated systems

Site 12

- Prevent exposure to contaminated groundwater
- Ensure the integrity of the groundwater monitoring system

Site 17

- Limit use of the property to prevent unacceptable risk
- Prevent exposure to contaminated soil

Site 19

- Limit use of the property to prevent unacceptable risk
- Prevent exposure to contaminated soil

7.2 REMEDIAL ALTERNATIVES FOR SOIL AND GROUNDWATER

This section discusses response actions to address the AFRPA OU2 soil and groundwater. Not all response actions described below were evaluated for each site. The actions evaluated for each site were selected based on current site conditions, including the results of previous removal actions at Sites 6, 12 and 17. If removal actions were completed for the site, only the No Action Alternative and ICs Alternative were evaluated. The removal action process evaluated other remedial alternatives, including alternatives resulting in unrestricted land use. Detailed descriptions of the evaluated treatment methodologies are provided in Section 2.5 of the *Final Remedial Investigation/Feasibility Study (RI/FS) Operable Unit #2, March Air Force Base (AFB)*, July 1997. The Air Force will conduct five-year reviews to ensure the continued protection of human health and the environment, as specified in CERCLA and the FFA.

Selected remedies must comply with applicable or relevant and appropriate requirements (ARARs). The ARARs for Sites 6, 12, 17, and 19 are listed in Appendix C. In accordance with the March AFB Federal Facilities Agreement, the parties agree that the selected remedies meet or exceed all applicable or relevant and appropriate federal and state laws and regulations to the extent required by CERCLA Section 121 (42 U.S.C. § 9621). Subject to that prior agreement and the selection of remedies for the sites in this ROD, the State's authority to bring actions based on violations of State law or regulation that may threaten human health or the environment, or to otherwise enforce such State legal authority, is not impaired by that authority not being listed as an ARAR in this ROD.

No Action.

The No Action Alternative must be evaluated at each site as a basis for comparison of existing site conditions with other proposed alternatives. Under this alternative, no action would be taken to address groundwater or soil contamination or to minimize further contaminant releases.

ICs Alternative.

ICs are being applied to only four sites (see figure 7-1). ICs for Site 6 and Site 12 are intended to preserve the engineering controls and groundwater monitoring systems previously implemented through removal actions and to prevent or limit exposure to contaminants. The ICs are non-technical, non-engineering actions that support or complement the required landfill post-closure actions and groundwater monitoring being performed under the March ARB Quality Program Plan. At Sites 17 and 19, the ICs are the only remaining component of the remedy.

Specific language is included in this ROD regarding implementation, monitoring, and enforcement of the selected ICs. Therefore, compliance with the terms of this ROD will be protective of human health and the environment. Because the restrictions are specifically described in Section 9 and the means for implementing the restrictions are detailed in Section 7, it is not necessary for the Air Force to submit any new post-ROD, IC implementation documents, such as a Land Use Control Implementation Plan (LUCIP), a new O&M plan or a Remedial Action (RA) work plan. The existing Site 6 O&M Work Plan will be revised to include the restrictions as well as the implementation, monitoring, reporting and enforcement measures described in Section 7.2.1, "ICs Alternative." The Air Force in its discretion, may develop one or more such documents, and will provide USEPA and the State of California any implementation documents it develops.

As part of the NPL deletion process, EPA must make the determination that the remedial action for OU2 has achieved its objectives. In this case, because the OU2 remedy consists of ICs only, EPA's determination that the remedy achieved its protectiveness objectives will be made based on the IC annual monitoring reports, so long as adequate information is provided in the reports.

The ICs Alternatives include various enforceable use restrictions and land use controls on the use of the property and groundwater. The Air Force is responsible for implementing, maintaining, monitoring and reporting the remedial actions (including institutional controls) before and after property transfer. The Air Force will exercise this responsibility in accordance with CERCLA and the National Contingency Plan (NCP). Any grantee of property constrained by ICs imposed in their deed may request modification or termination of the ICs. Any modification or termination must be approved by the Air Force, USEPA, and the State of California.

The regulatory agencies may conduct inspections of operations and maintenance activities and ICs at Sites 6, 12, 17, and 19 and groundwater monitoring at Sites 6 and 12. The Air Force will continue to provide access to the property for those purposes, as required under the Federal Facilities Agreement, and the deed transferring the property will reserve a right of access to the property for those purposes for itself, USEPA, and the State of California.

During the time between adoption of this ROD and deeding of the property, equivalent restrictions are implemented by lease terms. The parcels of property encompassing Sites 12, 17 and 19 are currently leased in furtherance of conveyance to the March Joint Powers Authority under Air Force Lease No. BCA-MAR-13-00-0101 (2000) ("Master Lease"). The lease restrictions are in place and operational and will remain in place until the property is transferred by deed. At the moment of deed transfer, the lease restrictions will be superseded by the restrictions to be included in the federal deed and the State Land Use Covenant described in this ROD.

The property encompassing Site 6 is currently retained by the Air Force. The existing Site 6 O&M plan prohibits access and use except for activities directly related to the operation and maintenance of the landfill remedy. Upon deed transfer, the lease and its restrictions will terminate and the restrictions the federal deed and the State Land Use Covenant described in this ROD will become effective. For any property transferred to another federal agency, the transfer document will provide that the agency will incorporate the restrictions into its land use comprehensive plan and include the restrictions in any transfer to another federal agency or future deed to a non-federal entity.

Meeting remedial action objectives shall be the primary and fundamental indicator of performance, the ultimate aim of which is to protect human health and the environment. Performance measures for ICs are the remedial action objectives, plus the actions necessary to achieve those objectives. It is anticipated that successful implementation, operation, maintenance, and completion of these measures will achieve protection of human health and the environment and compliance with all legal requirements.

Descriptions of the ICs for Sites 6, 12, 17, and 19 are provided in site-specific discussions below and in Section 9 of this ROD. The maintenance requirements for the Site 6 landfill engineered waste cells are further described in the Site 6 Operations and Maintenance (O&M) Work Plan (Tetra Tech, Inc and Black & Veatch, 1999). One task within the Site 6 O&M is the monitoring of landfill gas migration. Very recent monitoring results indicate that a landfill gas control action may be necessary. As appropriate, the OU2 ROD or Site 6 O&M Work Plan will be modified (e.g. explanation of significant differences, modification, or addendum) to include any future landfill gas remedial action(s) in compliance with CCR Titles 22 and 27 and relevant South Coast Air Quality Management District Rules.

Within 180 days of the execution of this Record of Decision, the Air Force will submit to the regulatory agencies for review and approval a revised O&M Work Plan that will include sampling and monitoring requirements for landfill gas, including frequency, location, analytical methods and field procedures in accordance with California Code of Regulations, Title 22 and Title 27. If the sampling and monitoring of landfill gas reveals that the concentrations of hazardous constituents are above regulatory limits, the Air Force will submit a plan to control the release of such substances to the regulatory agencies for review and approval. As appropriate, the OU2 ROD will be modified (e.g., explanation of significant differences or amendment) to include any future landfill gas remedial action(s).

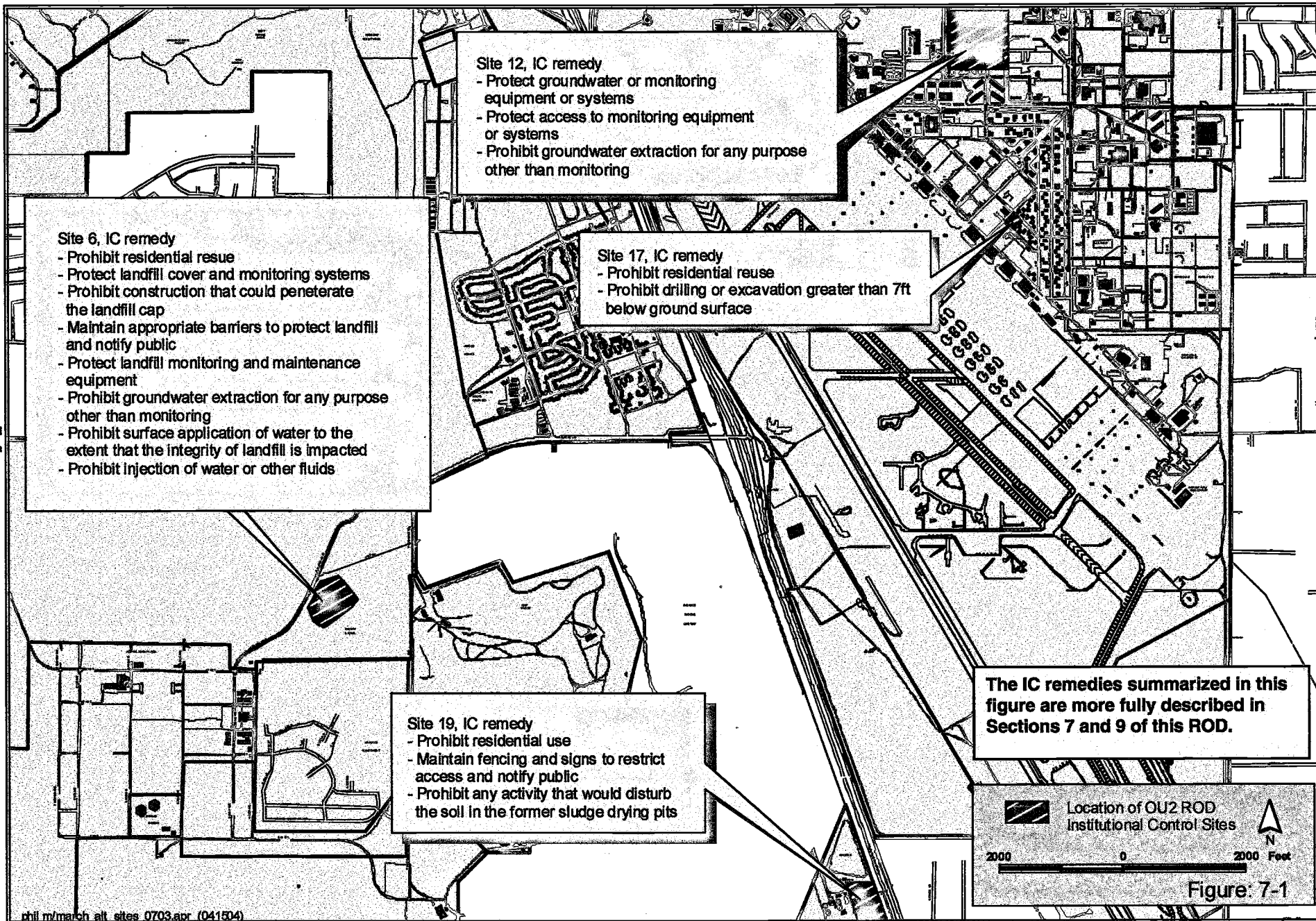
The Air Force may contractually arrange for third parties to perform any and all of the above actions, although the Air Force is ultimately responsible under CERCLA for the successful implementation of the ICs, including monitoring, maintenance, review, and reporting of ICs.

Deed Restrictions and Reservation of Access

Each federal deed or letter of transfer to another federal agency will include a description of the residual contamination on the property, as described in the discussions of the sites below, and the specific restrictions set forth in Section 9. The ICs, in the form of deed restrictions, are "environmental restrictions" under California Civil Code section 1471. Letters of transfer to other federal agencies will also include a requirement that further transfers of the property, whether by deed or letter of transfer, will contain appropriate provisions to ensure that the restrictions continue to run with the land, as provided in California Civil Code section 1471. Deeds and letters of transfer will include legal descriptions of the sites covered by restrictions and of the locations of monitoring wells at Site 6 and Site 12.

AFRPA OU2 ROD (former March AFB)

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Each deed will also contain a reservation of access to the property as required under CERCLA for the Air Force, USEPA, and the State of California, and their respective officials, agents, employees, contractors, and subcontractors for purposes consistent with the Air Force Installation Restoration Program ("IRP") or the Federal Facility Agreement ("FFA").

The environmental restrictions are the basis for part of the CERCLA 120(h)(3) covenant that the United States is required to include in the deed for any property that has had hazardous substances stored for one year or more, known to have been released or disposed of on the property. During the time between adoption of this ROD and deeding of the property, appropriate restrictions are implemented by the lease between the Air Force and the March Joint Powers Agency.

Notice of Institutional Controls

The Air Force will include the specific deed restriction language set forth in Section 9 in any FOST for a parcel that includes one of the sites for which ICs are selected pursuant to this Record of Decision, and will provide a copy of the deeds to the regulatory agencies as soon as practicable after the transfer of fee title. The deed restriction language and State Land Use Covenant language incorporating those restrictions will be consistent. The Air Force will provide information to the property owners regarding necessary ICs in the FOST and the draft deed. The signed deed will also include the specific land use restrictions. The information will also be communicated to appropriate state and local agencies with authority regarding any of the activities or entities addressed in the controls to ensure that such agencies can factor the information into their oversight, approval, and decision-making activities.

Annual Evaluations/Monitoring:

The Air Force will conduct annual monitoring and undertake prompt action to address activity that is inconsistent with the IC objective or use restrictions, exposure assumptions (such as industrial use, rather than residential use) or any action that may interfere with the effectiveness of the ICs. The Air Force will submit to the regulatory agencies annual monitoring report on the status of the ICs and how any IC deficiencies or inconsistent uses have been addressed. The report will also address whether the owners and affected state and local agencies were notified of the controls affecting the property. The IC monitoring reports will not be subject to approval and/or revision by the regulatory agencies. The annual monitoring reports will be used as part of the Five Year Review to evaluate the effectiveness of the remedy. The Five-Year Review report will make recommendations on the continuation, modification, or elimination of annual reports and IC monitoring frequencies. The Five-Year Review report will be submitted to the regulatory agencies for review and comment.

Response to Violations:

The Air Force will notify EPA and the State via e-mail or telephone as soon as practicable, but no later than 2 weeks after discovery of any activity that is inconsistent with the IC objective or use restrictions, exposure assumptions or any action that may interfere with the effectiveness of the ICs. Not later than 10 days following such notice, the Air Force will provide EPA and the State with a description of the corrective actions taken or planned (including proposed enforcement actions, if any) to address the conditions described in the notice. This description is not subject to regulator review. Any violations that breach federal, state or local criminal or civil law will be reported to the appropriate civilian authorities, as required by law.

Enforcement:

The regulatory agencies may conduct inspections of the ICs at Sites 6, 12, 17 and 19. Prior to property transfer, the Air Force will provide access to the regulatory agencies for the purpose of inspections. The deed transferring property or letter of transfer to another federal agency will provide for such access to the regulatory agencies.

Any activity that is inconsistent with the IC objective or use restriction, exposure assumptions or any action that may interfere with the effectiveness of the ICs will be addressed by the Air Force as soon as practicable after the Air Force becomes aware of the violation, but in no event will the process be initiated later than 14 days after the Air Force discovers the violation. The Air Force will exercise such rights as it retained under the transfer documents to direct that activities in violation of the controls be immediately halted. To the extent necessary, the Air Force will engage the services of the Department of Justice to enforce such rights. State law gives the State separate enforcement authority against future landowners. See "State Land Use Covenants," below.

Approval of Land Use Modification:

The recipient of the property will obtain joint approval from the Air Force, USEPA and the State of California for any proposals for modification of ICs or for any proposal for a modification of land use at a site inconsistent with the use restrictions and assumptions described in the ROD.

State Land Use Covenants

Before transfer of title to the property including one or more of the sites at which ICs are selected to a non-federal entity, the Air Force will execute a State Land Use Covenant with the State that includes the restrictions described in Section 9, legal descriptions of the property and affected areas, and provisions for regulatory agency access for purposes of inspections, monitoring and other activities. The State Land Use Covenant will be recorded before the recording of the federal deed. The State will enter into the State Land Use Covenant pursuant to State law, including California Code of Regulations, Title 22, Section 67391.1. The State Land Use Covenant will be based on the model Covenant to Restrict Use of Property developed by DTSC. Modifications or termination of the State Land Use Covenant must be undertaken in accordance with State law, CERCLA, the National Contingency Plan, and the Installation Restoration Program. In addition, Title 22, California Code of Regulations Section 67391.1 imposes certain obligations and restrictions on DTSC, including prohibitions on DTSC's certifying satisfactory completion of response actions, or approving or concurring in certain response action decision documents, or considering property suitable for transfer to non-federal entities, unless appropriate land use covenants will be executed and recorded when hazardous substances will remain at the property at levels that are not suitable for unrestricted use. This regulation also provides for modification and termination of State Land Use Covenants. The Air Force will pay the State of California reasonable, nondiscriminatory costs associated with administration of the State Land Use Covenants, subject to appropriation of funds through the Defense State Memorandum of Agreement or some alternative payment mechanism. "Nondiscriminatory costs" means costs similar to those paid by other parties for such land use covenant administration.

Excavation and Offsite Incineration Alternative

Under the Excavation and Offsite Incineration Alternative for Site 19, the soils with residual contamination above levels protective of human health and the environment would be excavated and treated by incineration. The excavated soils would be transported to an offsite incineration facility in compliance with appropriate state and federal regulations. The excavations would be restored by backfilling or regrading and reseeded of the area disturbed during the remedial action. Wastes may be incinerated in an inclined rotating kiln incinerator. Waste and auxiliary fuels are introduced to the high end of the kiln, and the rotation of the kiln agitates the

solid materials being burned. The primary combustion chamber is maintained at temperatures of 1,000°F to 1,800°F. Exhaust gases from the kiln are passed to a secondary chamber or afterburner where they are exposed to temperatures around 2,200°F. Residual ash and exhaust vapors generally require further treatment.

Excavation and Off-Base Landfill Disposal Alternative

Under the Excavation and Off-Base Landfill Disposal Alternative for Site 19, the soils with residual contamination above levels protective of human health and the environment would be excavated. The excavated soils would be transported to and disposed of in a licensed waste treatment, storage and disposal facility (TSDF). The excavations would be restored by backfilling or regrading and reseeding of the area disturbed during the remedial action.

7.2.1 Site 6 – Soil and Groundwater

At Site 6, contamination is contained within the engineered waste cells. A removal action including the construction of these engineered waste cells, was conducted in accordance with the Site Specific Action Memorandum, Site 6, OU-2, February 1995 and the Modification to the Site-Specific Removal Action Memorandum, Site 1, 9, 25 and 12 UST Locations and Consolidation to OU2 Site 6, February 1996. This ROD recognizes the completion of that action and selects the addition of ICs as the final remedy for the site. Operation, maintenance and monitoring of the Site 6 landfill closure are ongoing per the approved O&M Work Plan (Tetra Tech, Inc and Black & Veatch, 1999) and the March ARB Quality Program Plan. The Air Force will continue to implement the O&M Work Plan to protect the waste cells and cap and to ensure continued proper operation of the liner and leachate control system. The Air Force will also revise the O&M Work Plan to include monitoring of possible migration and control of the landfill gases. Additional information regarding Site 6 site characteristics is provided in Section 5.1.2 and in Section 6.1.3.

The following remedial alternatives were evaluated for Site 6:

- No Action, and
- ICs Alternative.

The anticipated future land use for Site 6 is passive use associated with open space use specified in the March reuse plan (March Joint Powers Authority, 2003). The site currently is open space with no structures except the engineered waste cells and associated features. The passive use associated with open-space land use is the exposure scenario used to select the remedy.

Description of Remedy Components.

No Action.

Under this alternative, the engineered waste cells and the existing monitoring and other systems could be more vulnerable to disturbance or removal. This alternative would not address the potential for direct exposure to construction or industrial workers or residents should the site be developed, prevent migration of the contaminants should future construction expose contaminated materials in the waste cells, or protect the waste cells from damage from any type of construction activities or natural forces such as erosion. Therefore, it does not provide overall protection of human health and the environment.

ICs Alternative.

The ICs imposed at Site 6 will include controls to limit exposure to contaminated soil, prevent or minimize migration of landfill contaminants, and protect the integrity of the engineered waste cells and associated structures.

The institutional controls imposed on Site 6 would:

Limit use of the property to prevent unacceptable risk by -

- prohibiting use for residential purposes, hospitals for human care, public or private schools for persons under 18 years of age, or day care centers for children.

Prevent exposure to landfill waste and gases and ensure the integrity of the waste cells by -

- prohibiting construction, excavation, drilling, grading, removal, trenching, filling earth movement, mining, or planting that would disturb the soil or the landfill cover, including the vegetative cap, except for the purpose of monitoring groundwater or landfill gas.
- prohibiting extraction of groundwater for any purpose other than monitoring.
- prohibiting disturbance or removal of fencing or, signs, or other barriers intended to exclude the public from the landfill.

Prevent or minimize migration of landfill contaminants to vadose zone and to groundwater and protect water quality by -

- prohibiting the surface application of water (e.g. irrigation) to the extent that the integrity of the landfill is impacted and injection of water or other fluids that might affect groundwater flow direction.
- prohibiting activities that could affect the drainage, sub-drainage, or erosion controls for the landfill cover.

Protect remedial system from damage and protect the integrity of waste cells and associated systems by -

- prohibiting disturbance of any equipment and systems associated with monitoring and maintenance or settlement monuments.
- prohibiting activities that would limit access to any equipment and systems associated with monitoring and maintenance or settlement monuments.

This alternative will not reduce contaminant toxicity, mobility or volume of contaminants. However, offsite migration is considered unlikely under the specified restrictions because the waste has been contained within engineered waste cells.

This alternative complies with ARARs as listed in Appendix C. ARARs for landfill operation and maintenance are included in the Site 6 O&M Closure/Post Closure Maintenance Plan, Site 6, OU-2, Final, May 1995 and continue to be valid requirements despite not being repeated here as ARARs. Additional ARARs for inclusion in the Site 6 O&M Work Plan are also listed in Appendix C.

Costs for this alternative consist of the estimated annual costs of institutional controls and reporting. The cost of landfill operations and maintenance (cap maintenance, groundwater monitoring, leachate collection/disposal, and reporting) is not included in the cost estimate for the ICs alternative. These existing, ongoing costs are estimated at \$50,000 per year.

ICs would be required until modified or terminated with the approval of the regulatory agencies. Because there are no historical cost data on maintenance of ICs, the estimated cost of doing so has a high degree of uncertainty. Because it does not include considerations such as probable economies of scale that would be realized by combining like activities for numerous sites, it must be considered a conservative (high) estimate. No capital costs are associated with this alternative.

Estimated Annual Cost of ICs Remedy \$20,000

7.2.2 Site 12 – Groundwater and Surface and Subsurface Soil

At Site 12, residual petroleum hydrocarbon contamination remains near a washbasin. Excavation during a removal action was halted on the north and east sides of the washbasin before all petroleum hydrocarbon residues were removed. With the agreement of the regulators that the contamination levels were acceptable because the physical setting of the contaminated areas minimized the chance for human exposure to the soils, the excavation was backfilled with clean soil. Confirmation sampling demonstrated that the metals cadmium and chromium were removed to below industrial PRGs, but remain above residential PRGs. However, the risk is within the risk range identified in the NCP and no restrictions on use are required for metals. Additional information is provided in Sections 5.1.3 and 6.1.3. No ICs are required for that petroleum hydrocarbon contamination, because the residual contamination levels of those contaminants are acceptable for unrestricted use.

Groundwater beneath Site 12 has become impacted by TCE and PCE. The groundwater contamination is in a small area and is only slightly above maximum contaminant levels (MCLs).

The anticipated future land use for Site 12 is mixed use which includes a variety of complementary land uses such as commercial, business park, offices, medical, vocational, research and development, and services (March JPA, 1999). The site currently is developed with multiple structures formerly used as work areas and office space for civil engineering operations on March AFB. Mixed use is the exposure scenario used to select the remedy. The following remedial alternatives were evaluated for the residual contamination remaining after the removal action at Site 12:

- No Action, and
- ICs Alternative.

Description of Remedy Components.

No Action.

Under this alternative, existing monitoring systems would be more vulnerable to disturbance or removal and nothing would prevent withdrawal and usage of contaminated groundwater with subsequent exposures from drinking or bathing. Therefore, it provides no overall protection of human health and the environment.

ICs Alternative.

The ICs imposed at Site 12 will include controls to limit exposure to TCE- and PCE-contaminated groundwater and protect groundwater-monitoring systems.

Institutional controls at Site 12 would:

Protect the groundwater-monitoring system by-

- prohibiting disturbance of any equipment and systems associated with groundwater monitoring.
- prohibiting activities that would limit access to any equipment and systems associated with groundwater monitoring.

Prevent exposure to contaminated groundwater by -

- prohibiting groundwater extraction for any purpose other than monitoring.

This alternative will not reduce contaminant toxicity, mobility or volume of contaminants. However, offsite migration is considered unlikely because of the low concentrations and limited extent of contamination in the groundwater.

This alternative complies with ARARs, as listed in Appendix C. ARARs for monitoring are included in the March ARB Quality Program Plan and continue to be valid requirements, despite not being repeated here as ARARs. Additional ARARs for inclusion in the March ARB Quality Program Plan are also listed in Appendix C.

Costs for this alternative consist of the costs of ICs site inspections and reporting, but do not include the costs of groundwater monitoring, which is being performed under the March ARB Quality Program Plan. ICs would be required until modified or terminated. Because there are no historical cost data on maintenance of ICs, the estimated cost of doing so has a high degree of uncertainty. Because it does not include considerations such as probable economies of scale that would be realized by combining like activities for numerous sites, it must be considered a conservative (high) estimate.

Estimated Annual Cost of ICs Remedy	\$6,000
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7.2.3 Site 17 - Subsurface Soil

At Site 17, low levels of PCBs are present in soils at least 8 feet beneath the ground surface. No PCB contamination has been found in the groundwater. Additional information regarding the remedial contamination at Site 17 is provided in Sections 5.1.4 and 6.1.3.

The anticipated future land use for Site 17 is part of the historic district that includes the adjacent Green Acres Housing Area (March JPA, 1999). The site currently is open space with no structures.

The following remedial alternatives were evaluated for Site 17 subsurface soil:

- No Action, and
- ICs Alternative.

Description of Remedy Components

No Action.

Under this alternative, the site would be unprotected. This alternative would not reduce the potential for exposure to construction or industrial workers or residents should the site be developed, or prevent migration of the contaminants should future construction expose the contaminated materials that are below the surface. Therefore, it provides no overall protection of human health and the environment.

ICs Alternative.

The ICs imposed at Site 17 will include controls to limit exposure to contaminated soil and to ensure that the property is safe for industrial or commercial use.

Institutional controls at Site 17 would:

Reduce risk to acceptable level by -

- prohibiting use for residential purposes, hospitals for human care, public or private schools for persons under 18 years of age, or day care centers for children.

Prevent exposure to contaminated soil by -

- prohibiting any activity that will disturb the soil at or below 7 feet below ground surface.

This alternative will not reduce contaminant toxicity, mobility or volume of contaminants. However, offsite migration is considered unlikely because of the low mobility of the residual contamination.

This alternative complies with ARARs (Appendix C).

Costs for this alternative consist of the estimated annual cost of ICs such as site inspections and reporting. ICs would be required until modified or terminated. Because there are no historical cost data on maintenance of ICs, the estimated cost of doing so has a high degree of uncertainty. Because it does not include considerations such as probable economies of scale that would be realized by combining like activities for numerous sites, it must be considered a conservative (high) estimate. No capital costs are associated with this alternative.

Estimated Annual Cost of ICs Remedy	\$6,000
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7.2.4 Site 19 - Surface and Near-surface Soil

In the past at Site 19, sludge from the wastewater treatment facility was spread in unlined drying beds. Surface and near-surface soils contaminated with PAHs, PCBs, hexavalent chromium, and thallium were found sporadically throughout the site. Additional information regarding Site 19 is found in Sections 5.1.5 and 6.1.3.

The current and anticipated future land use for Site 19 is a public wastewater treatment facility (March JPA, 1999). The western portion of the site currently contains sludge drying beds associated with the adjacent wastewater treatment facility. The eastern portion of the site is undeveloped open space.

The following remedial alternatives were evaluated for Site 19 surface and near-surface soil:

- No Action,
- ICs Alternative,
- Excavation and Off-Base Landfill Disposal, and
- Excavation and Off-Base Incineration.

Description of Remedy Components.

No Action.

Under this alternative, affected soils would remain in place untreated. This alternative would not reduce the potential for exposure to industrial workers or construction or residents should the site be developed, or prevent migration of the contaminants should future construction cause dispersion of contaminated soils. Therefore, it provides no overall protection of human health and the environment.

ICs Alternative.

The ICs imposed at Site 19 will include controls to limit exposure to contaminated soil and to ensure that the property is safe for industrial or commercial use.

Institutional controls at Site 19 would:

Limit use of the property to prevent unacceptable use by -

- prohibiting use for residential purposes, hospitals for human care, public or private schools for persons under 18 years of age, or day care centers for children.

Prevent exposure to contaminated soil by -

- prohibiting any activity that would disturb the soil in the former sludge drying pits.
- prohibiting removal, disturbance, or other interference with fences or other barriers to access to or signs notifying the public of Site 19.

This alternative will not reduce contaminant toxicity, mobility or volume of contaminants. However, offsite migration is considered unlikely due to the low mobility of the contaminants involved.

This alternative complies with ARARs (Appendix C).

Costs for this alternative consist of the estimated annual cost of maintaining the fence and of ICs site inspections and reporting. ICs would be required until modified or terminated. Because there are no historical cost data on maintenance of ICs, the estimated cost of doing so has a high degree of uncertainty. Because it does not include considerations such as probable economies of scale that would be realized by combining like activities for numerous sites, it must be considered a conservative (high) estimate. No capital costs are associated with this alternative.

Estimated Annual Cost of ICs Remedy	\$7,000
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Excavation and Off-Base Disposal.

This alternative would include the excavation, transport, and disposal of affected soil in an off-site landfill. The excavation would be backfilled with clean soil. This alternative would be protective of human health for all exposure scenarios and the environment because contaminants would be removed from the site. The soil would not be treated, and there would be no change in the volume and toxicity of the material. The material would be confined in a closed cell, and the mobility would be reduced. Short-term effects during excavation and handling of contaminated soil would be controlled by implementing engineering controls and by using proper personal protective equipment. The cost of this alternative would be relatively high compared to the reduction in risk that would be achieved especially as related to use as a public facility.

Costs for this alternative consist of the one-time costs for excavation, transport and off-site disposal in the estimated one-year implementation period. No recurring operation and maintenance costs are associated with this alternative.

Total Project Cost/Present Worth:	\$3,402,700
Capital Cost:	\$3,402,700
Annual O&M Cost:	\$0

(One-time cost, assuming 7,000 cubic yards of soil)

Excavation and Off-Site Incineration.

This alternative would include the excavation of affected soil, transport of this soil to an off-site licensed treatment facility, and treatment by incineration. The excavation would be backfilled with clean soil. This alternative would be protective of human health for all exposure scenarios and the environment because contaminants would be removed from the site providing long-term effectiveness and permanence. The cost of this alternative would be relatively high compared to the reduction in risk that would be achieved especially as related to use as a public facility. Long-term effectiveness and permanence and reduction of toxicity, mobility, and volume of contaminants would be achieved. Short-term effects during excavation and handling of contaminated soil would be controlled by implementing engineering controls and by using proper personal protective equipment.

Costs for this alternative consist of the one-time costs for excavation, transport and off-base incineration in the estimated one-year implementation period. No recurring operation and maintenance costs are associated with this alternative.

Total Project Cost/Present Worth:	\$3,772,800
Capital Cost:	\$3,772,800
Annual O&M Cost:	\$0

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DECISION SUMMARY:

8.0 - SUMMARY OF COMPAR. ANALYSIS OF ALTERNATIVES

8.0 SUMMARY OF COMPARATIVE ANALYSIS OF ALTERNATIVES

Each of the remedial alternatives identified in this ROD has been evaluated against the nine evaluation criteria set forth in the NCP (*see* 40 C.F.R. § 300.430(e)(9)). The nine criteria are organized into three categories; threshold criteria, primary balancing criteria, and modifying criteria. Threshold criteria must be satisfied in order for a remedy to be eligible for selection. Primary balancing criteria are used to weigh major trade-offs between remedies. Modifying criteria are formally taken into account after public comment is received on the Proposed Plan. The criteria, as well as the evaluation of the alternatives against such criteria, are set forth below.

THRESHOLD CRITERIA

- *Overall protection of human health and the environment* determines whether an alternative can adequately protect human health and the environment, in both the short- and long-term, from unacceptable risks posed by hazardous substances present at the sites.
- *Compliance with Applicable or Relevant and Appropriate Requirements ("ARARS")* evaluates whether the alternative attains Federal and State environmental statutes, regulations, and other requirements that pertain to the Site.

PRIMARY BALANCING CRITERIA

- *Long-term Effectiveness and Permanence* considers the ability of an alternative to maintain protection of human health and the environment over time.
- *Reduction of Toxicity, Mobility, or Volume of Contaminants through Treatment* evaluates an alternative's use of treatment to reduce the harmful effects of contaminants, reduce their ability to move in the environment, and reduce the amount of contamination present.
- *Short-term Effectiveness* considers the length of time needed to implement an alternative and the risks the alternative poses to workers, residents, and the environment during implementation.
- *Implementability* considers the ease or difficulty of implementing an alternative and includes, among other things, technical feasibility, administrative feasibility, and availability of services and materials.
- *Cost* includes estimated capital and operation and maintenance costs expressed as present worth costs. Present worth cost is the total cost of an alternative over time in today's dollars.

MODIFYING CRITERIA

- *State Acceptance* considers whether the State concurs with, opposes, or has no comment on the Selected Remedies.
- *Community Acceptance* considers whether the community agrees with the Selected Remedies. This is assessed in detail in the ROD responsiveness summary (attached), which addresses public comments received on the Proposed Plan.

8.1 COMPARATIVE ANALYSIS OF ALTERNATIVES

This section presents the results of comparative analyses of remedial alternatives for sites where further control of contamination is required.

Eleven of the subject sites (Sites 3, 6, 12, 17, 20, 24, 25, 26, 35, 40 and 42) have undergone interim removal actions. Eight of these sites (Sites 3, 20, 24, 25, 26, 35, 40 and 42) have been adequately mitigated to protect human health and the environment and require no further remediation. To ensure permanence, three removal action sites (Sites 6, 12, and 17) require land use restrictions, implemented by institutional controls (ICs). Remedial alternatives were evaluated for Site 19 with the ICs Alternative as the selected alternative. Sites 22, 23, and 30 did not show evidence of contamination caused by Air Force activities and do not require mitigation.

8.1.1 Site 6 Comparative Analysis of Alternatives

A comparative analysis was completed using the alternatives and criteria previously identified. The alternatives are:

- No Action; and
- ICs Alternative.

Overall Protection of Human Health and the Environment. The No Action Alternative would not provide for control of future risks by preventing exposure to landfill wastes or protect the engineered waste cells cap from damage by either human or natural causes. The ICs Alternative (i.e., land use restrictions) will prevent exposures by precluding any use of the site except as passive open space. There are no known residual wastes that present unacceptable risks on Site 6 outside of the engineered waste cells.

Compliance With ARARs. ARARs do not need to be addressed under the No Action Alternative. The ICs Alternative would comply with ARARs (Appendix C, Table C-1).

Long-term Effectiveness and Permanence. The No Action and ICs Alternatives provide no reduction in risk since contaminants are not actively removed. The No Action Alternative would not ensure the long-term effectiveness and permanence of the controls currently in place for the engineered waste cells at Site 6. The ICs Alternative long-term protects human health by restricting groundwater and land use, and provides controls to ensure the waste remains within the waste cells. Maintenance of the institutional controls under the ICs Alternative would ensure long-term effectiveness and permanence. The tools that will be used to ensure the long-term effectiveness of the institutional controls include monitoring for the statutorily required 5-year review, and the use of overlapping mechanisms to establish the controls and education of the stakeholders (property owners and the community). The waste cells were installed as part of a removal action and maintenance of the waste cells is being conducted under the approved Operation and Maintenance Work Plan (Tetra Tech, Inc and Black & Veatch, 1999). The active components of this alternative provides long-term effectiveness by ensuring the waste remains within the waste cells through maintenance of the waste cells.

Reduction of Toxicity, Mobility, or Volume Through Treatment. The No Action and ICs Alternatives do not actively reduce the toxicity, mobility or volume of contaminants. At Site 6, there are no known residual contaminants outside of the engineered waste cells that would cause risk to human health or the environment. The wastes placed within the waste cells were not hazardous wastes as defined by State or Federal regulations.

Short-term Effectiveness. The No Action and ICs Alternatives do not pose a risk to workers, residents, and the environment during implementation. It is estimated that approximately 6 months will be required to implement the IC Alternative.

Implementability. The No Action and ICs Alternatives are easy to implement. Use restrictions will be placed on property use to limit the exposure of individuals to residual contamination. Under the ICs Alternative, use restrictions will be placed on property use to either protect the integrity of the engineering/technical control and/or to limit the exposure of individuals to residual contamination. These use restrictions will be established using institutional controls, which are described in Sections 7 and 9. A layering strategy, which identifies and combines mutually reinforcing controls, is being used by the Air Force including: combinations of use restrictions in deeds, zoning maps, physical barriers, notices to the community, local permit systems, community master plans, and airport layout plans.

Cost. No Action is a no-cost alternative. The estimated annual cost for the ICs Alternative is \$20,000 and includes monitoring, maintaining, notification, inspection and reporting of the institutional controls. The cost of landfill operation and maintenance (cap maintenance, groundwater monitoring, leachate collection/disposal, and reporting) is not included in the IC alternative. These existing, ongoing costs are estimated at \$50,000 per year.

State Acceptance. The State of California was actively involved in the OU2 RI/FS and remedy selection process and participated in the public meetings held to inform the public of the Proposed Plan. While the State concurs with the OU2 RI/FS, final acceptance will occur with the concurrence of this AFRPA OU2 ROD.

Community Acceptance. The public comment period for the 2000 OU2 Proposed Plan was from August 23 through September 22, 2000. In addition, a public meeting was held on September 13, 2000. Representatives of the Air Force, EPA, and DTSC attended the public meeting to address questions concerning the OU2 RI/FS and 2000 OU2 Proposed Plan. A Responsiveness Summary is included as Appendix A.

8.1.2 Site 12 Comparative Analysis of Alternatives

A comparative analysis was completed using the alternatives and criteria previously identified. The alternatives are:

- No Action; and
- ICs Alternative.

Overall Protection of Human Health and the Environment. The No Action Alternative would not protect human health. Exposure by direct contact, ingestion and inhalation of dust particles would remain at current levels because the site would remain unprotected. Future residents and workers would remain at risk. The ICs Alternative will protect human health by limiting use of groundwater and preventing exposure to contaminated soil. Future land use will be restricted to non-residential uses. These actions would control risk by preventing exposures to the residual contamination.

Compliance With ARARs. ARARs do not need to be addressed under the No Action Alternative. The ICs Alternative would comply with ARARs (Appendix C).

Long-term Effectiveness and Permanence. The No Action and ICs Alternatives provide no active reduction in risk since residual contamination is not removed. The No Action Alternative would not ensure the long-term effectiveness and permanence. The ICs Alternative protects human health by restricting groundwater use and land use. Maintenance of the institutional controls under the ICs Alternative would ensure long-term effectiveness and permanence.

Reduction of Toxicity, Mobility, or Volume Through Treatment. The No Action and ICs Alternatives do not actively reduce the toxicity, mobility or volume of contaminants in the groundwater or soil. Some contaminants may decrease in concentration with natural attenuation.

Short-term Effectiveness. The No Action and ICs Alternatives do not pose a risk to workers, residents, and the environment during implementation. It is estimated approximately 6 months will be required to implement the IC Alternative.

Implementability. The No Action and ICs Alternatives are easy to implement. Use restrictions will be placed on property use to limit the exposure of individuals to residual contamination. These use restrictions will be established using institutional controls: legal, governmental and administrative methods. A layering strategy which identifies and combines mutually reinforcing controls is being used by the Air Force including: combinations of use restrictions in deeds, zoning maps, physical barriers, notices to the community, local permit systems, community master plans, and airport layout plans.

Cost. No Action is a no-cost alternative. The estimated annual cost for the ICs Alternative is \$6,000 and includes monitoring, maintaining, notification, inspection and reporting of the institutional controls.

State Acceptance. The State of California was actively involved in the OU2 RI/FS and remedy selection process and participated in the public meetings held to inform the public of the Proposed Plan. While the State concurs with the OU2 RI/FS, final acceptance will occur with the concurrence of this AFRPA OU2 ROD.

Community Acceptance. The public comment period for the 2000 OU2 Proposed Plan was from August 23 through September 22, 2000. In addition, a public meeting was held on September 13, 2000. Representatives of the Air Force, EPA, and DTSC attended the public meeting to address questions concerning the OU2 RI/FS and 2000 OU2 Proposed Plan. A Responsiveness Summary is included as Appendix A.

8.1.3 Site 17 Comparative Analysis of Alternatives

A comparative analysis was completed using the alternatives and criteria previously identified. The alternatives are:

- No Action; and
- ICs Alternative.

Overall Protection of Human Health and the Environment. The No Action and ICs Alternatives will not actively reduce the risk posed by contaminated soil. The No Action Alternative would not protect human health. Exposure by direct contact, ingestion and inhalation of dust particles would remain at current levels because the site would remain unprotected. Future construction workers would remain at risk. The ICs Alternative will protect human health by preventing exposure to contaminated soil protecting human health. Future land use will be restricted. These actions would control risk by preventing exposures to the residual contamination.

Compliance With ARARs. ARARs do not need to be addressed under the No Action Alternative. The ICs Alternative would comply with ARARs (Appendix C).

Long-term Effectiveness and Permanence. The No Action and ICs Alternatives provide no active reduction in risk since contaminants are not removed. The No Action Alternative would not ensure the long-term effectiveness and permanence. The ICs Alternative provides long-term protection of human health by restricting land use. Maintenance of the institutional controls under the ICs Alternative would ensure long-term effectiveness and permanence. The tools that will be used to ensure the long-term effectiveness of the institutional controls include monitoring for the statutorily required 5-year review and the use of overlapping mechanisms to establish the controls and education of the stakeholders (property owners and the community).

Reduction of Toxicity, Mobility, or Volume Through Treatment. The No Action and ICs Alternatives do not actively reduce the toxicity, mobility or volume of contaminants in the soil. However, PCBs are not mobile contaminants and are not expected to migrate.

Short-term Effectiveness. The No Action and ICs Alternatives do not pose a risk to workers, residents, and the environment during implementation. It is estimated that approximately 6 months will be required to implement the IC Alternative.

Implementability. The No Action and ICs Alternatives are easy to implement. Use restrictions will be placed on property use to limit the exposure of individuals to residual contamination. Use restrictions will be placed on property use to limit the exposure of individuals to residual contamination. These use restrictions will be established using institutional controls: legal, governmental and administrative methods. A layering strategy, which identifies and combines mutually reinforcing controls, is being used by the Air Force including: combinations of use restrictions in deeds, zoning maps, physical barriers, notices to the community, local permit systems, community master plans, and airport layout plans.

Cost. No Action is a no-cost alternative. The estimated annual cost for the ICs Alternative is \$6,000 and includes monitoring, maintaining, notification, inspection and reporting of the institutional controls.

State Acceptance. The State of California was actively involved in the OU2 RI/FS and remedy selection process and participated in the public meetings held to inform the public of the Proposed Plan. While the State concurs with the OU2 RI/FS, final acceptance will occur with the concurrence of this AFRPA OU2 ROD.

Community Acceptance. The public comment period for the 2000 OU2 Proposed Plan was from August 23 through September 22, 2000. In addition, a public meeting was held on September 13, 2000. Representatives of the Air Force, EPA, and DTSC attended the public meeting to address questions concerning the OU2 RI/FS and 2000 OU2 Proposed Plan. A Responsiveness Summary is included as Appendix A.

8.1.4 Site 19 Comparative Analysis of Alternatives.

A comparative analysis was completed of applicable alternatives against the selection criteria described above. The evaluated alternatives for cleanup of surface and near-surface soils are:

- No Action;
- ICs Alternative;
- Excavation and Off-Base Disposal; and
- Excavation and Off-Base Incineration.

Overall Protection of Human Health and the Environment. The No Action Alternative would not protect human health. Chances of ingestion and inhalation of dust particles would remain because the soil surface would remain unprotected. Construction workers and potential future residents would be at risk. The ICs Alternative will provide protection of human health and the environment, because no use of the property is allowed.

The excavation and off-Base disposal or incineration alternatives would provide adequate protection of human health and the environment by removing the source. No treatment would take place with landfill disposal, but the elimination of the source would reduce the risk to future site receptors through inhalation or ingestion of dust particles at the site. Excavation and treatment by incineration would reduce risks by destruction of contaminants.

Compliance with ARARs. ARARs do not need to be addressed under the No Action Alternative. The ICs Alternative would comply with the ARARs (Appendix C).

Long-term Effectiveness and Permanence. The No Action Alternative does not provide a mechanism to prevent direct access to contaminated soils and will not provide long-term effectiveness and permanence of risk reduction. The ICs Alternative would restrict land use. Access controls are already in place and would be maintained under the ICs Alternative. Maintenance of all institutional controls under the ICs Alternative would provide long-term effectiveness and permanence. Excavation and ex-situ alternatives would eliminate the risk of human exposure by removing the soil to an off-Base landfill or destroy contaminants by incineration. Both excavation and disposal off the Base or incineration provide long-term effectiveness and permanence of risk reduction at the site. The tools that will be used to ensure the long-term effectiveness of the institutional controls include monitoring for the statutorily required 5-year review, and the use of overlapping mechanisms to establish the controls and education of the stakeholders (property owners and the community).

Reduction of Toxicity, Mobility, and Volume Through Treatment. The No Action and ICs Alternatives would provide no reduction of toxicity, mobility, or volume through treatment because no treatment system would be implemented at the site. Off-Base landfilling would reduce the mobility of the contaminants at Site 19 by removing the contaminants from the site and placing them in an engineered landfill. No contaminated soil would remain on the site reducing contaminant toxicity and volume at the site. This alternative, however, would not include any treatment of the contaminants. Incineration would reduce the toxicity, mobility, and volume of contaminants.

Short-term Effectiveness. The No Action and ICs Alternatives would not present short-term risk to workers because no excavation or treatment would be implemented for these alternatives. It is estimated that approximately 6 months will be required to implement the IC Alternative. In the Excavation and Off-Base Disposal or Incineration Alternatives, worker protection during excavation, transportation and treatment poses a minor concern. Engineering controls can be used for worker protection (i.e., dust suppression, hearing protection) and therefore, the short-term risks are judged to be controllable. Community risks presented as a result of the transportation of the soils either on-Base or off-Base, are considered negligible. Incineration presents a risk of contaminated air emissions; however, these can be controlled. Excavation and Off-Base Disposal or Incineration Alternatives are estimated to require one year for implementation.

Implementability. The No Action and ICs Alternatives are easily implemented. Use restrictions will be placed on property use to either protect the integrity of the engineering/technical control and/or to limit the exposure of individuals to residual contamination. These use restrictions will be established using institutional controls: legal, governmental and administrative methods. A layering strategy, which identifies and combines mutually reinforcing controls, is being used by the Air Force including: combinations of use restrictions in deeds, zoning maps, physical barriers, notices to the community, local permit systems, community master plans, and airport layout plans.

Excavation and off-site incineration would involve excavation and backfilling. Permitted off-Base Class II landfills and incinerators are available. No sophisticated equipment or materials would be needed to implement the Off-Base Disposal Alternative. Construction and safety procedures would be simple, and a number of experienced contractors are available who could perform this type of work. Construction delays would be unlikely. Use of an off-Base incinerator would require trial burns.

Cost. The No Action and ICs Alternatives are very cost effective, with no cost for No Action and an estimated annual cost of \$7,000 for the ICs Alternative. The costs for the ICs Alternative include monitoring, maintaining, notification, inspection and reporting of the institutional controls. Excavation and Off-Base Incineration is the highest cost alternative, at \$3,772,800, with Excavation and Off-Base Disposal only slightly less expensive, at \$3,402,700. These costs would be one-time only costs.

State Acceptance. The State of California was actively involved in the OU2 RI/FS and remedy selection process and participated in the public meeting held to inform the public of the Proposed Plan. While the State concurs with the recommendations in OU2 RI/FS, final State acceptance will occur with the concurrence of this AFRPA OU2 ROD.

Community Acceptance. The public comment period for the 2000 OU2 Proposed Plan was from August 22 through September 22, 2000. In addition, a public meeting was held on September 13, 2000. Representatives of the Air Force, EPA, and DTSC attended the public meeting to address questions concerning the OU2 RI/FS and 2000 OU2 Proposed Plan. A Responsiveness Summary is included as Appendix A.

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DECISION SUMMARY:
9.0 - SELECTED REMEDIES

9.0 SELECTED REMEDIES

Selected groundwater and soil remedies will limit exposures or meet the cleanup standards. The selected remedial alternative for the sites requiring action is the ICs Alternative. In addition, the operations, maintenance, and monitoring of the engineered waste cells at Site 6 and groundwater monitoring at Site 12 will continue. The ICs will limit exposure of contaminants to future landowner(s) and/or user(s) and to maintain the integrity of the existing engineering controls.

Descriptions of the required actions and restrictions on activities for Sites 6, 12, 17 and 19 are provided in site-specific discussions below and in Section 7 of this ROD. The required actions and restrictions are intended to apply to affected areas, not necessarily to the entire sites as originally defined in the feasibility study. Affected areas are areas where hazardous substances remain at levels that make the property unsuitable for unrestricted use. Legal descriptions of the affected areas and monitoring well locations associated with Sites 6 and 12 will be included in deeds or letters of transfer for each parcel. Survey of monitoring well locations and settlement monuments for purposes of identifying their locations in the deed and State land use covenant will occur prior to property transfer. Except for restrictions related to groundwater extraction and use, that portion of the property that is not within the affected area will not be restricted or otherwise constrained by institutional controls. The groundwater use prohibition applies to the entirety of the parcels containing Site 6 and Site 12.

The following sites at March AFB will be restricted by ICs. The indented language in Sections 9.1, 9.2, 9.3, and 9.4 ("Restrictions") will be incorporated into (a) each deed transferring all or any part of any of the listed sites from the Air Force to a non-federal entity and a state land use covenant to be recorded in the land records of the County of Riverside prior to recording of the deed, or (b) the base management plan (or equivalent document) of any federal entity that accepts all or any part of one of the sites from the Air Force.

9.1 SELECTED REMEDY FOR SITE 6 - LANDFILL NO. 4

At Site 6, contamination, consisting of non-hazardous wastes from old landfills is consolidated in engineered waste cells in accordance with the final *Closure/Post Closure Maintenance Plan, Site 6, OU 2 March Air Force Base*, May 1995 and the *Final Closure/Post Closure Maintenance plan, Site 6, OU-2, Cell B Expansion, March Air Force Base*, September 1995. Site use, access, and activity restrictions will protect the cover and associated drainage and monitoring systems of the engineered waste cells of this consolidated, non-hazardous waste landfill. Hazardous substance contamination found at the site before construction of the engineered waste cells was removed and disposed of before construction. The use, access, and activity restrictions will protect persons from exposure to the wastes in the engineered cells. A prohibition on the extraction and use of groundwater under the Property will prevent exposure to contaminated groundwater.

The ICs Alternative is the selected remedy for Site 6. Land use restrictions will be incorporated in the deed as grantee covenants. In the State Land Use covenant, the restrictions will be expressed in a different format, but they will be consistent with the grantee covenants in the deed. As presented in Section 7.2.1, this remedy adds ICs to the continuing operations, maintenance and monitoring of the Site 6 landfill as specified in the existing, regulatory approved O&M Plan (Tetra Tech, Inc and Black & Veatch, 1999). The selected remedy is consistent with the anticipated future land use for Site 6 as passive open space (March JPA, 2003).

- Grantee covenants and agrees that it will not use Site 6 for residential purposes, hospitals for human care, public or private schools for persons under 18 years of age, or day care centers for children.

- Grantee covenants and agrees that it will not conduct or allow others to conduct any construction, excavation, drilling, grading, removal, trenching, filling earth movement, mining, and planting that would disturb the soil or the landfill cover, including the vegetative cap, or the injection or release of water or other fluids except for the purpose of monitoring groundwater or landfill gas.
- Grantee covenants and agrees that it will not extract groundwater from the property for any purpose other than monitoring.
- Grantee covenants and agrees that it will not conduct or allow others to conduct activities that would cause disturbance or removal of fencing or signs intended to exclude the public from the landfill.
- Grantee covenants and agrees that it will not conduct or allow others to conduct activities that would cause the surface application of water (e.g. irrigation) to the extent that the integrity of the landfill is impacted and injection of water or other fluids that might affect groundwater flow direction.
- Grantee covenants and agrees that it will not conduct or allow others to conduct activities that would cause disturbance of any landfill equipment or systems, including the leachate collection system, the groundwater monitoring systems, and settlement monuments; or that could affect the drainage, sub-drainage, or erosion controls for the landfill cover.
- Grantee covenants and agrees that it will not conduct or allow others to conduct activities that limit access to any landfill equipment and systems, including the leachate collection system, the groundwater monitoring systems, settlement monuments, or the drainage, sub-drainage, or erosion controls for the landfill cover.

9.2 SELECTED REMEDY FOR SITE 12 - CIVIL ENGINEERING YARD

At Site 12, residual petroleum hydrocarbon contamination remains near a washbasin. Confirmation sampling demonstrated that the metals cadmium and chromium were removed to below Industrial PRGs, but remain above Residential PRGs. However, the risk was found to be within the risk range identified in the NCP and no use restrictions are required. Restrictions on construction and other activities will reduce the risk of destruction of, or limitation on access to, groundwater monitoring wells on the site. A prohibition on the extraction and use of groundwater under the Property will prevent potential exposure to contaminated groundwater. No ICs are required for the petroleum hydrocarbon contamination, because the contamination levels are acceptable for unrestricted use.

The ICs Alternative is the selected remedy for Site 12. Land use restrictions will be incorporated into the letter of transfer to another federal agency as conditions of the transfer or in the deed to a non-federal entity as grantee covenants in the form below. In the State Land Use covenant, the restrictions will be expressed in a different format, but they will be consistent with the grantee covenants in the deed. As presented in section 7.2.2, groundwater monitoring at Site 12 will continue as specified in the "Quality Program Plan - Long-Term Groundwater Monitoring, Long-Term Operation, and Long-Term Operation and Maintenance Programs, March ARB, California" (September 2000), as amended and supplemented. The selected remedy is consistent with the anticipated future land use for Site 12 as mixed use (March JPA, 1999).

- Grantee covenants and agrees that it will not conduct or allow others to conduct activities that would cause disturbance of any equipment or systems associated with groundwater monitoring.
- Grantee covenants and agrees that it will not conduct or allow others to conduct activities that would limit access to any equipment or systems associated with groundwater monitoring.

- Grantee covenants and agrees that it will not extract groundwater from the property for any purpose other than monitoring.

9.3 SELECTED REMEDY FOR SITE 17 - SWIMMING POOL FILL

At Site 17, low levels of PCBs are present in soils at least 8 feet beneath the ground surface. No PCB contamination has been found in the groundwater. A prohibition on use of the property for residential, school, day care, or hospital use will reduce to acceptable levels human exposure to the low-level, residual contamination from PCBs that were previously disposed of in an abandoned swimming pool on the site. The pool and all but some low-level residual soil contamination were excavated and disposed of in a previous removal action. A prohibition against drilling or excavation more than 7 feet below current ground surface will prevent possible on-site exposure or off-site migration of the contaminated soils.

The ICs Alternative is the selected remedy for Site 17. Land use restrictions will be incorporated in the deed as grantee covenants. In the State Land Use Covenant, the restrictions will be expressed in a different format, but they will be consistent with the grantee covenants in the deed. As presented in Section 7.2.3, the selected remedy is consistent with the anticipated future land use for Site 17 as part of the Green Acres Historic District (March JPA, 1999).

- Grantee covenants and agrees that it will not use Site 17 for residential purposes, hospitals for human care, public or private schools for persons under 18 years of age, or day care centers for children.
- Grantee covenants and agrees that it will not conduct or allow others to conduct any activity that will disturb the soil at or below 7 feet below ground surface

9.4 SELECTED REMEDY FOR SITE 19 - WEST MARCH SLUDGE DRYING BEDS

In the past at Site 19, sludge from the wastewater treatment facility was spread in unlined drying beds. Surface and near-surface soils contaminated with PAHs, PCBs, hexavalent chromium, and thallium were found sporadically throughout the site. A prohibition on use of the property for residential, school, day care, or hospital use and restrictions on soil disturbance activities during any future construction will prevent unacceptable levels of human exposure to the low-level, residual contamination.

The ICs Alternative is the selected remedy for Site 19. Land use restrictions will be incorporated in the deed as grantee covenants. In the State Land Use Covenant, the restrictions will be expressed in a different format, but they will be consistent with the grantee covenants in the deed. As presented in Section 7.2.4, the selected remedy is consistent with the anticipated future land use for the parcel surrounding Site 19 as a wastewater treatment plant (March JPA, 2003).

- Grantee covenants and agrees that it will not use Site 19 for residential purposes, hospitals for human care, public or private schools for persons under 18 years of age, or day care centers for children.
- Grantee covenants and agrees that it will not conduct or allow others to conduct any activity that would disturb the soil in the former sludge drying pits.
- Grantee covenants and agrees that it will not conduct or allow others to conduct activities that would result in removal, disturbance, or other interference with fences or other barriers to access to or signs notifying the public of Site 19.

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DECISION SUMMARY:

10.0 - STATUTORY DETERMINATIONS

10.0 STATUTORY DETERMINATIONS

Under the authority delegated to it by Executive Order 12580, the Air Force is selecting remedial actions at these sites with the concurrence of EPA and the State, that achieve adequate protection of human health and the environment. Under CERCLA §121 and the NCP, the lead agency must select remedies that are protective of human health and the environment, comply with applicable or relevant and appropriate requirements (unless a statutory waiver is justified), are cost-effective, and utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable. In addition, CERCLA includes a preference for remedies that employ treatment that permanently and significantly reduces the volume, toxicity, or mobility of hazardous wastes as a principal element and a bias against off-site disposal of untreated wastes. The following sections discuss how the selected remedies meet these statutory requirements.

10.1 SITE 6 SOIL AND GROUNDWATER - ICs ALTERNATIVE

Protection of Human Health and the Environment. The selected remedy protects human health and the environment prohibiting activities which would interfere with the integrity of the cap, limiting exposure to materials contained within the engineered waste cells, maintaining the waste cells and associated systems, and monitoring for potential releases from the engineered waste cells as discussed in Section 9.0. Principal threats identified during the OU2 RI were addressed in the removal action. The IC/land use restrictions will protect the waste containment system (cap and liner), which limit the threat of exposure via direct contact and ingestion. Monitoring will be conducted to detect any migration from the engineered waste cells. Until land transfer, the AFRPA will continue to enforce procedures for protection of the site and perform any required on-going maintenance. The Federal deed(s) will retain a right of access for the Air Force, USEPA, and the State for monitoring, maintenance and inspection of the remedy, and any necessary environmental investigations.

Compliance with Applicable or Relevant and Appropriate Requirements. The selected remedy complies with all ARARs (refer to Appendix C).

Cost Effectiveness. In the judgment of the Air Force, the selected remedy is cost-effective and represents a reasonable value for the money to be spent. In making this determination, the following definition was used: "A remedy shall be cost-effective if its costs are proportional to its overall effectiveness." (NCP §300.430(f)(1)(ii)(D)). This was accomplished by evaluating the "overall effectiveness" of those alternatives that satisfied the threshold criteria of protectiveness of human health and the environment and compliance with ARARs. Overall effectiveness was evaluated by assessing, in combination, long-term effectiveness and permanence; reduction in toxicity, mobility, and volume through treatment; and short-term effectiveness. Overall effectiveness was then compared to costs to determine cost-effectiveness. The relationship of the overall effectiveness of this remedial alternative was determined to be proportional to its costs and thus this alternative represents a reasonable value for the money to be spent. The estimated annual cost of ICs and State Land Use Covenant (SLUC) shows the ICs Alternative is a cost-effective method of protecting the engineered waste cells and controlling exposures at Site 6.

Utilization of Permanent Solutions and Alternative Treatment Technologies (for Resource Recovery Technologies) to the Maximum Extent Practicable. The selected remedy does not utilize permanent solutions or alternative treatment technologies, but appropriately balances those considerations with relative costs and other relevant criteria.

The selected remedy achieves the objectives of protecting the engineered waste cells and limiting exposures to levels protective of human health, while allowing the possibility of some future use. The selected remedy satisfies the long-term effectiveness criteria by limiting exposures to the waste and restricting groundwater use. The selected remedy does not present short-term risks and there are no implementability issues.

Preference for Treatment as a Principal Element. The selected remedy does not satisfy the statutory preference for remedies that employ treatment as a principal element. The wastes in the engineered waste cells cannot be practicably removed and treated. Therefore, limiting exposures by ICs and a SLUC is appropriate.

Five-Year Review Requirements. Because the remedy will result in maintaining the engineered waste cells in a manner to prevent migration and exposures, a statutory review of this site will be conducted as part of the ongoing CERCLA five-year reviews to ensure that the remedy remains protective of human health and the environment.

10.2 SITE 12 SOIL AND GROUNDWATER - ICs ALTERNATIVE

Protection of Human Health and the Environment. The selected remedy protects human health and the environment by limiting exposure to residual contamination by the method discussed in Section 9.0. Principal threats identified during the OU2 RI were addressed in the removal action. The controls on land and groundwater use will limit the threat of exposure via direct contact or ingestion. As an active component of the remedy, groundwater monitoring will be conducted to evaluate the migration and concentration of the contaminants in groundwater. Until land transfer, the AFRPA will continue to enforce procedures for protection of the site and perform any required ongoing maintenance. The Federal deed(s) will retain a right of access for the Air Force, EPA, and the State for monitoring, maintenance and inspection of the remedy, and any necessary environmental investigations.

Compliance with Applicable or Relevant and Appropriate Requirements. The selected remedy will comply with all ARARs (refer to Appendix C).

Cost Effectiveness. In the judgment of the Air Force, the selected remedy is cost-effective and represents a reasonable value for the money to be spent. The method for this determination was as discussed in Section 10.1 above. The annual cost of ICs shows the ICs Alternative is a cost-effective method of controlling exposures at Site 12.

Utilization of Permanent Solutions and Alternative Treatment Technologies (for Resource Recovery Technologies) to the Maximum Extent Practicable. The selected remedy does not utilize permanent solutions or alternative treatment technologies, but appropriately balances those considerations with relative costs and other relevant criteria.

The selected remedy achieves the objective of limiting exposures to levels protective of human health while allowing commercial use of the site. The selected remedy satisfies the long-term effectiveness criteria by limiting exposures to contaminated soil and restricting groundwater use. The selected remedy does not present short-term risks and there are no implementability issues.

Preference for Treatment as a Principal Element. The selected remedy does not satisfy the statutory preference for remedies that employ treatment as a principal element. The residual contamination remaining after the removal action cannot be practicably removed and treated. Therefore, limiting exposures by ICs and SLUC is appropriate.

Five-Year Review Requirements. Because the remedy will result in soil and groundwater contamination remaining on the site above levels that allow for unlimited use and unrestricted exposure, a statutory review of this site will be conducted as part of the ongoing CERCLA five-year reviews to ensure that the remedy remains protective of human health and the environment.

10.3 SITE 17 SUBSURFACE SOILS - ICs ALTERNATIVE

Protection of Human Health and the Environment. The selected remedy protects human health and the environment by limiting exposure to residual contamination by the method discussed in Section 9.0. Principal threats identified during the OU2 RI were addressed in the removal action. The controls on land use will limit the threat of exposure via direct contact or ingestion. Until land transfer, the AFRPA will continue to enforce procedures for protection of the site. The Federal deed(s) will retain a right of access for the Air Force, EPA, and the State for monitoring, maintenance and inspection of the remedy, and any necessary environmental investigations.

Compliance with Applicable or Relevant and Appropriate Requirements. The selected remedy will comply with all ARARs (refer to Appendix C).

Cost Effectiveness. In the judgment of the Air Force, the selected remedy is cost-effective and represents a reasonable value for the money to be spent. The method for this determination was as discussed in Section 10.1 above. The annual cost of ICs and SLUC shows the ICs Alternative is a cost-effective method of controlling exposures at Site 17.

Utilization of Permanent Solutions and Alternative Treatment Technologies (for Resource Recovery Technologies) to the Maximum Extent Practicable. The selected remedy does not utilize permanent solutions or alternative treatment technologies, but appropriately balances those considerations with relative costs and other relevant criteria.

The selected remedy achieves the objective of limiting exposures to levels protective of human health while allowing some use of the site. The selected remedy satisfies the long-term effectiveness criteria by limiting exposures to contaminated soils. The selected remedy does not present short-term risks and there are no implementability issues.

Preference for Treatment as a Principal Element. The selected remedy does not satisfy the statutory preference for remedies that employ treatment as a principal element. The residual contamination remaining after the removal action cannot be practicably removed and treated. Therefore, limiting exposures by ICs and SLUC is appropriate.

Five-Year Review Requirements. Because the remedy will result in soil contamination remaining on the site above levels that allow for unlimited use and unrestricted exposure, a statutory review of this site will be conducted as part of the ongoing CERCLA five-year reviews to ensure that the remedy remains protective of human health and the environment.

10.4 SITE 19 SURFACE AND NEAR-SURFACE SOILS - ICs ALTERNATIVE

Protection of Human Health and the Environment. The selected remedy protects human health and the environment by limiting exposure to soil contamination by the method discussed in Section 9.0. The controls on land use and site access will limit the threat of exposure via direct contact or ingestion. Until land transfer, the AFRPA will continue to enforce procedures for protection of the site. The Federal deed(s) will retain a right of access for the Air Force, EPA, and the State for monitoring, maintenance and inspection of the remedy, and any necessary environmental investigations.

Compliance with Applicable or Relevant and Appropriate Requirements. The selected remedy will comply with all ARARs (refer to Appendix C).

Cost Effectiveness. In the judgment of the Air Force, the selected remedy is cost-effective and represents a reasonable value for the money to be spent. The annual cost of ICs and LUC shows the ICs Alternative is a cost-effective method of controlling exposures at Site 19. The Excavation and Off-Base Disposal and Excavation and Off-Base Incineration Alternatives, which are significantly more expensive (each over three million dollars) than the ICs and SLUC, would allow unrestricted use of the site. However, with the expected future use as a public wastewater treatment facility, the additional expense would not return a reasonable value for the money spent. The method for this determination was as discussed in Section 10.1 above.

Utilization of Permanent Solutions and Alternative Treatment Technologies (for Resource Recovery Technologies) to the Maximum Extent Practicable. The selected remedy does not utilize permanent solutions or alternative treatment technologies, but appropriately balances those considerations with relative costs and other relevant criteria.

The selected remedy achieves the objective of limiting exposures to levels protective of human health while allowing use of the site as a public wastewater treatment facility. The selected remedy satisfies the long-term effectiveness criteria by limiting exposures to contaminated soils. The selected remedy does not present short-term risks and there are no implementability issues. The Excavation and Off-Base Disposal and Excavation and Off-Base Incineration Alternatives would provide a permanent solution, but costs are significant.

Preference for Treatment as a Principal Element. The selected remedy does not satisfy the statutory preference for remedies that employ treatment as a principal element. Removal of soil and treatment or disposal off-Base cannot be performed in a cost-effective manner. Therefore, limiting exposures by ICs and SLUC is appropriate.

Five-Year Review Requirements. Because the remedy will result in soil contamination remaining on the site above levels that allow for unlimited use and unrestricted exposure, a statutory review of this site will be conducted as part of the ongoing CERCLA five-year reviews to ensure that the remedy remains protective of human health and the environment.

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**DECISION SUMMARY:
REFERENCES**

REFERENCES

AFRPA/DD-March

- 2000 Letter from Mary Bridgewater, Regional BRAC Environmental Coordinator, to Melissa Pennington, US EPA Region 9, August 23, 2000.

The Earth Technology Corporation

- 2000 *Draft Final Site 42 Treatability Study Report*. Prepared by Earth Tech, Inc. for USAF Air Mobility Command, Scott AFB, Illinois.

IT Corporation

- 1996 *Removal of Wastes at Site 26, OU2, March Air Force Base Closure Report*. Prepared by IT Corporation for the U.S. Army Corps of Engineers, Omaha, Nebraska.
- 1997a *Removal of Wastes at Site 6c and 6d, OU2a, March Air Force Base Closure Report*. Prepared by IT Corporation for the U.S. Army Corps of Engineers, Omaha, Nebraska.
- 1997b *Removal of Wastes at Site 3, OU2, March Air Force Base Closure Report*. Prepared by IT Corporation for the U.S. Army Corps of Engineers, Omaha, Nebraska.
- 1997c *As-Built Construction Report, OU2, Site 6a, March Air Force Base*. Prepared by IT Corporation for the U.S. Army Corps of Engineers, Omaha, Nebraska.
- 1997d *Removal of Wastes at Site 6b' and 6b (Quarry), OU2, March Air Force Base Closure Report*. Prepared by IT Corporation for the U.S. Army Corps of Engineers, Omaha, Nebraska.
- 1997e *Removal of Wastes at Site 12, OU2, March Air Force Base Closure Report*. Prepared by IT Corporation for the U.S. Army Corps of Engineers, Omaha, Nebraska.
- 1997f *Removal of Wastes at Site 20/26B, OU2, March Air Force Base Closure Report*. Prepared by IT Corporation for the U.S. Army Corps of Engineers, Omaha, Nebraska.
- 1997g *Removal of Wastes at Site 24, OU2, March Air Force Base Closure Report*. Prepared by IT Corporation for the U.S. Army Corps of Engineers, Omaha, Nebraska.
- 1997h *Site 25 Closure Report, OU2, March Air Force Base Closure Report*. Prepared by IT Corporation for the U.S. Army Corps of Engineers, Omaha, Nebraska.
- 1997i *Removal of Wastes at Site 26A, OU2, March Air Force Base Closure Report*. Prepared by IT Corporation for the U.S. Army Corps of Engineers, Omaha, Nebraska.

OHM Remediation Services Corporation

- 1995 *Final Report Time Critical Removal Action-Site 40 at March Air Force Base California*. Prepared for U.S. Army Corps of Engineers, Omaha, Nebraska.
- 1996 *Draft Field Summary Report-Remedial Action at Installation Restoration Program Site 30, March Air Force Base, Riverside, California*. Prepared for Air Force Center for Environmental Excellence, Brooks AFB, Texas.

Parsons Engineering Science

- 1997 *Draft Site Closure Report, IRP Site 35c Former Diesel UST Site.* Prepared for Air Force Center for Environmental Excellence Technology Transfer Division, Brooks Air Force Base, Texas. Prepared for U.S. Army Corps of Engineers, Sacramento, California.

Tetra Tech, Inc.

- 1994 *Summary of Subsurface Investigation and Removal Action for March Air Force Base Operable Unit 2 Site 17.* Prepared for U.S. Army Corps of Engineers, Sacramento, California.
- 1997a *Operable Unit 2, Remedial Investigation/Feasibility Study.* Prepared for Air Force Center for Environmental Excellence, Brooks Air Force Base, Texas.
- 1997b *Trend Analysis.* Prepared for Headquarters Strategic Air Command, Environmental Compliance Division, Offutt Air Force Base, Nebraska.

U.S. EPA

- 1991 *Risk Assessment Guidance for Superfund Volume 1, Part B: Development of Risk-Based Preliminary Remediation Goals.*
- 1997 *Ecological Risk Assessment Guidance*
- 1999 *Region 9 Preliminary Remediation Goals.*

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APPENDIX A - RESPONSIVENESS SUMMARY

APPENDIX A - RESPONSIVENESS SUMMARY

Operable Unit 2 (OU2) Air Force Base Conversion Agency Sites March Air Force Base, California

RESPONSIVENESS SUMMARY

RESPONSIVENESS SUMMARY 1997 PROPOSED PLAN

OVERVIEW

Air Force Base Conversion Agency Site at Operable Unit 2 (OU2) is a group of 15 sites on March Air Force Base, California. Initial investigation identified these 15 sites as possibly contaminated and requiring soil and/or groundwater cleanup. Further investigation revealed that four of the sites did not require cleanup. Of the sites found to require remediation, seven were cleaned up with removal actions during the Remedial Investigation/Feasibility Study (RI/FS) phase. The four remaining sites included one that required action for both soil and groundwater, one that requires protection of waste cells constructed during removal actions, and two that required action for only soil. Institutional controls will be implemented at these sites requiring action.

Judging from the comments made at the public hearing for the Proposed Plan, and at various Restoration Advisory Board (RAB) and other public meetings held throughout the course of the RI/FS, the community supports the chosen cleanup alternatives. The earlier removal actions, including the consolidation of several landfill sites into two new, sealed and capped waste cells (Site 6), have also been supported.

This Responsiveness Summary includes the following sections:

- I. Background on Community Involvement and Concerns
- II. Summary of Comments Received During the Public Comment Period and the Air Force Responses
Comments from the California Environmental Protection Agency Department of Toxic Substances Control (DTSC) and Air Force Responses
Comments from the Public and Air Force Responses
- III. Community Relations Activities at OU2

BACKGROUND ON COMMUNITY INVOLVEMENT AND CONCERNS

The investigations and various removal actions at OU2 sites have not generated any negative reaction from the community. Open houses, workshops, and public meetings were sparsely attended. Public comment periods for the Draft RI and FS, and for various Engineering Evaluations/Cost Analyses (EE/CAs) for removal actions, did not receive responses from the public. The RAB, which at one point met every month, was kept apprised of and discussed the ongoing investigations and planned cleanup activities. In addition, RAB subcommittees reviewed and reported on some of the cleanup documents, such as the EE/CAs. Although the discussion and questions demonstrated a keen interest in the cleanup, no objections were raised to the chosen remedial measures. The primary concern was March's ability to get funding for the cleanup--for the entire base, not just at OU2.

The only removal action that brought significant community response was the Site 6 landfill consolidation, which is adjacent to Air Force Village West (AFVW), a private residential community. This site was designated for reuse by the community as a recreational area. Some concerns were voiced about the height of the new cells and their visibility from the housing area. The Air Force response was that the area had been the site of three previously existing, open dumps, and the removal action restored it to a clean and usable condition. At a public meeting to discuss adding wastes from other IRP sites to one of the cells, the Executive Director of the Joint Powers Authority asked for additional fill material on top of the liner to allow the installation of light poles and parking lots. He also requested that the AFVW access road used by the construction vehicles be cleaned up to its original condition after the work was finished. The Air Force agreed to both requests.

RESPONSE TO COMMENT FOR 2000 AFBCA OU2 PROPOSED PLAN

Comments from the public and Air Force Responses

Comment: I'm completely satisfied that this plan addresses all the issues of the community, specifically when you look at the statistics and the risk assessment. Being a cancer survivor (hope to be), I can tell you that I've seen statistics much higher than this. These are not only acceptable risks, but to me, they're insignificant. Therefore, I'm in complete agreement with this particular plan.

Air Force Response: Thank you.

Comment: Regarding Site 6, Landfill 4, I would suggest another restriction on this site. That would be "use of the site for passive or active recreation is not recommended." In my experience there have been problems with redeveloping landfills as ballparks and picnic areas, with methane gas generation and collapsing soils, and there is also the possibility of some damage to the (landfill) cap. Since there is so much space available on the base, this landfill should have some restriction on it.

Air Force Response: There are restrictions on the landfill to control the recreational activities so as not to damage Site 6's engineered cap. For example, dirt bikes will not be allowed, but ball fields will. An additional three feet of soil were added to the landfill cap to allow for the ballfield use. The slope of the cap was also at a 3% slope to ensure cap drainage but yet allow the ball field usage. Methane is not a problem on Site 6, since the waste is so old. Computer modeling was done knowing the age of the waste; the results show that the methane generation is at a minimum. That is why a methane destruction system, a flare, was not built.

Comment: It (the Proposed Plan) has stated that access to the Site 6 landfill would be controlled. Is that permanent or only until some reuse of the site is considered?

Air Force Response: This is permanent control. This control is placed to restrict the recreational usage to allow only activities that do not damage the cap.

Comment: Was any landfill gas monitoring or venting deemed necessary for the Site 6 landfill? Is that or should it be an issue?

Air Force Response: Methane is not a problem on Site 6, since the waste is old. Computer modeling was done knowing the age of the waste; the results show that the methane generation is at a minimum. That is why a methane destruction system, a flare, was not built.

Comment: Is the Site 6 landfill in an area of rising groundwater? If so, is there a possibility of groundwater coming into contact with the base of the landfill in such a way as to break the (landfill) liner?

Air Force Response: The ground water level at Site 6 changes seasonally. Groundwater levels rise in wet seasons and fall when it is dry. A subdrain system was engineered beneath the Site 6 cells. The subdrain system piping is made of perforated piping underneath the bottom liner, which directs the ground water away from the liner and into the Van Buren ditch.

Comment: Concerning long-term monitoring at the Site 6 landfill by the Air Force, is there going to be a separate analysis of groundwater levels?

Air Force Response: There are a total of six ground water monitoring wells in the vicinity of Site 6. These wells are used to monitor the ground water levels in addition to monitoring for known non-hazardous contaminants in the land fill to ensure the integrity of the liner is still intact.

Comment: If there is any significant change in conditions at the Site 6 landfill, such as gas or groundwater, will the Air Force be responsible for additional actions or the new owner?

Air Force Response: The Air Force will be responsible unless the damage is due to the fault of the new owner.

Comment: Regarding Site 12, the Civil Engineering Yard, Site 17, swimming pool, and Site 19, sludge drying beds; is there any recommendation that these sites be paved, newly paved or repaved for future use as commercial or industrial sites?

Air Force Response: There is no environmental need for any of these sites to be paved.

Comment: If this is some kind of remediation, would the Air Force consider doing this or leave it to the new owner or operator of the sites to pave it over?

Air Force Response: There is no environmental need for any of these sites to be paved. The new owner can choose to pave over them.

Comment: Would the Air Force at least provide the minimal acreage at each site recommended to be paved and cost estimates for paving to give to a new user or owner of the site?

Air Force Response: Acreage has been provided in the Record of Decision.

Comment: The work so far shows that the risks are acceptable for the uses proposed for these sites, but what if the risks are not acceptable to an adjacent potential operator or owner of a site?

Air Force Response: The use of adjacent sites was considered in the development of the restrictions.

Comment: Would the Air Force consider the development and use of buffer zones around some of these sites where there is still some contamination, cost to be negotiated between the Air Force and the new owners.

Air Force Response: The use of adjacent sites was considered in the development of the restrictions, therefore, buffer zones are not necessary. Only the sites themselves need to be restricted.

Comment: This whole report implies a new zoning scheme. There are some definitions proposed here, such as "unrestricted use." How is that defined? Does it mean residential, commercial/industrial?

Air Force Response: Unrestricted means the site could be used for any purpose including residential. There are no restrictions.

Comment: Does this land-use scheme jive with what the Joint Powers Authority in its Base Reuse Plan and Environmental Impact Report in 1997? How is this new information going to be coordinated with the overall land-use plan of the base?

Air Force Response: The land uses have been coordinated with the Joint Powers Authority. They understand the limitations on the restricted areas.

Comment: When are they planning on dealing with zoning issues?

Air Force Response: When they get ready to develop the property.

Comment: How does the taxpaying public make sure that the proper zoning is applied to these properties to assure public safety and how do we have a say in who the property ends up with?

Air Force Response: The Air Force has entered into Land Use Covenant with the State of California to ensure these restrictions are enforced. The use restrictions will be clearly stated in our deed(s), and will remain as a "cloud" in any future deed transfers.

Comment: We're discussing is the Proposed Plan; which contaminants were here, if and when they were removed; how will remaining hazards addressed and are they appropriately addressed by this particular plan. In my opinion, they are. Most zoning questions will be

addressed with those who will utilize the land later on when it's transferred with those restrictions assigned by the appropriate agencies. I'm sure that those agencies are not going to let anything go unless the public is safeguarded.

Air Force Response: You are correct. That is why we have the Institutional Controls and the Land Use Covenants. Zoning is actually the responsibility of your local community's zoning committee. However, the local zoning authority will be restricted by the covenants and restrictions carried in the deed.

Comment: I strongly recommend that some fashion of this same RAB committee exist as long as the property is being disposed of publicly, so we will make sure that it doesn't go in the wrong direction or anything harmful will happen to the community as a result of an oversight.

Air Force Response: We expect to support the continuation of a RAB until all property has been remediated to the transferable phase and properly deeded.

COMMUNITY RELATIONS ACTIVITIES AT OU2

- I. Letter to Orangecrest and Arnold Heights residential areas advising them of potentially hazardous materials in the newly discovered Site 40 landfill (January 1992)
- II. Press release announcing the discovery at Site 40 (January 1992)
- III. Press release announcing testing to be conducted at Site 40 (August 1992)
- IV. Environmental Visitor's Day including tours of two Superfund Innovative Technology Evaluation (SITE) programs, one of them in OU2 (June 1993)
- V. Public comment period for Sites 2, 17, and 36 EE/CAs (April-May 1994)
- VI. Open house for Sites 2, 17, and 36 (May 1994)
- VII. Workshop for Green Acres housing residents on proposed Site 17 action (May 1994)
- VIII. Open house for Site 40 proposed cleanup action (October 1994)
- IX. Public meeting on the planned removal action at Site 6 (January 1995)
- X. Public comment period for Draft OU2 Remedial Investigation (June-July 1995)
- XI. Public comment period for Draft OU2 Feasibility Study (July-August 1995)
- XII. Public comment period and public meeting for the draft site specific removal action memorandum for Site 6 (August-September 1995)
- XIII. Public comment period and public meeting for the modification to the site specific removal action memorandum for Site 6 (February-April 1996)
- XIV. Public comment period and public hearing for the Proposed Plan (September-October 1997)
- XV. Public comment period and public meeting for the Proposed Plan 2000 Fact Sheet (August - September 2000)

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APPENDIX B - ADMINISTRATIVE RECORD INDEX

APPENDIX B – ADMINISTRATIVE RECORD INDEX

Document Date	AR Number	Title	Author
Apr-84	2	Phase I, Records Search Report	CH2M Hill
Sep-85	319	Phase II Stage 1, Technical Operations Plan	Engineering-Science, Inc.
Mar-87	8	Phase II Stage 1, Confirmation/Quantification Report, Vol I of III	Engineering-Science, Inc.
Mar-87	9	Phase II Stage 1, Confirmation/Quantification Report, Vol II of III	Engineering-Science, Inc.
Mar-87	10	Phase II Stage 1, Confirmation/Quantification Report, Vol III of III	Engineering-Science, Inc.
Apr-87	318	Phase II Stage 2, Technical Operations Plan	Engineering-Science, Inc.
Jun-88	15	Phase II Stage 2, Confirmation/Quantification Report, Vol I of V	Engineering-Science, Inc.
Jun-88	16	Phase II Stage 2, Confirmation/Quantification Report, Vol II of V	Engineering-Science, Inc.
Jun-88	17	Phase II Stage 2, Confirmation/Quantification Report, Vol III of V	Engineering-Science, Inc.
Jun-88	18	Phase II Stage 2, Confirmation/Quantification Report, Vol IV of V	Engineering-Science, Inc.
Jun-88	19	Phase II Stage 2, Confirmation/Quantification Report, Vol V of V	Engineering-Science, Inc.
Jun-88	371	Report of Survey Findings, UST Survey	Hazwrap Support Contractor Office
27-Sep-90	53	Federal Facility Agreement	EPA Region IX, California Department of Health Services, California Regional Water Quality Control Board
24-Dec-91	136	PA/SI, Stage 5, Draft Site Characterization Summary, 15th Air Force Sites, Vol I of IV	Tetra Tech, Inc.
24-Dec-91	137	PA/SI, Stage 5, Draft Site Characterization Summary, 15th Air Force Sites, Vol II of IV	Tetra Tech, Inc.
24-Dec-91	138	PA/SI, Stage 5, Draft Site Characterization Summary, 15th Air Force Sites, Vol III of IV	Tetra Tech, Inc.
24-Dec-91	139	PA/SI, Stage 5, Draft Site Characterization Summary, 15th Air Force Sites, Vol IV of IV	Tetra Tech, Inc.
Jan-92	428	Stage 5, ITIR, Soil Gas Surveys, HQ 15AF and DRMO Sites	Tetra Tech, Inc.
Jan-92	446	Stage 5, ITIR, Geophysical Surveys, HQ 15AF and DRMO Sites	Tetra Tech, Inc.
31-Jan-92	156	Stage 5, Draft Site Characterization Summary, ITIR, Vol I of II, HQ 15AF Area Sites	Tetra Tech, Inc.
31-Jan-92	157	Stage 5, Draft Site Characterization Summary, ITIR, Vol II of Vol II, Appendices A-D, HQ 15AF Area Sites	Tetra Tech, Inc.
Apr-92	169	Aerial Photographic Analysis of Study Area	EPA Region IX
16-Apr-92	439	Stage 5, Final Draft ITIR, Soil Gas Survey, HQ 15AF and DRMO Area Sites	Tetra Tech, Inc.
16-Apr-92	450	Final Draft ITIR, Analytical Data, DRMO Sites, LF-40	Tetra Tech, Inc.
22-Apr-92	431	Stage 5, Final Draft ITIR, Expanded Source Investigation, HQ 15AF Central Area Sites and LF-40	Tetra Tech, Inc.
24-Apr-92	449	Final Draft ITIR, Analytical Data, HQ 15AF Central Area Sites, LF-40	Tetra Tech, Inc.
27-Aug-92	195	Stage 5, SAP Addendum, OU-2	Tetra Tech, Inc.
27-Aug-92	196	Stage 5, Work Plan Addendum, OU-2	Tetra Tech, Inc.
Dec-92	425	QAPP, Supplement to SAP Addendum, OU-2	Tetra Tech, Inc.
Feb-93	6	Soil Gas Survey, ITIR, OU-2	Tetra Tech, Inc.
Jun-94	255	EE/CA, Final Report, Subsurface Investigation and Removal Action, WP-17	Tetra Tech, Inc.
Jul-94	130	Stage 5, Supplement to Work Plan Addendum and SAP Addendum, OU-2	Tetra Tech, Inc.

Oct-94	350	Summary of Subsurface Investigation and Removal Action, Analytical Results, WP-17	Tetra Tech, Inc.
Nov-94	372	Draft Channel Construction Plan, Rapid Response, LF-40	OHM Remediation Services Corp.
Jan-95	433	Groundwater Flow and Transport Model Preliminary Model Calibration, Draft Report, Appendix, Vol I of II	Tetra Tech, Inc.
Jan-95	434	Groundwater Flow and Transport Model Preliminary Model Calibration, Draft Report, Appendix, Vol II of II	Tetra Tech, Inc.
Feb-95	358	Site Specific Removal Action Memorandum, LF-06	IT Corp.
Feb-95	376	Stage 5, Analytical Data, ITIR, Vol I of XIII, OU-2	Tetra Tech, Inc.
Feb-95	377	Stage 5, Analytical Data, ITIR, Vol II of XIII, OU-2	Tetra Tech, Inc.
Feb-95	378	Stage 5, Analytical Data, ITIR, Vol III of XIII, OU-2	Tetra Tech, Inc.
Feb-95	379	Stage 5, Analytical Data, ITIR, Vol IV of XIII, OU-2	Tetra Tech, Inc.
Feb-95	380	Stage 5, Analytical Data, ITIR, Vol V of XIII, OU-2	Tetra Tech, Inc.
Feb-95	381	Stage 5, Analytical Data, ITIR, Vol VI of XIII, OU-2	Tetra Tech, Inc.
Feb-95	382	Stage 5, Analytical Data, ITIR, Vol VII of XIII, OU-2	Tetra Tech, Inc.
Feb-95	383	Stage 5, Analytical Data, ITIR, Vol VIII of XIII, OU-2	Tetra Tech, Inc.
Feb-95	384	Stage 5, Analytical Data, ITIR, Vol IX of XIII, OU-2	Tetra Tech, Inc.
Feb-95	385	Stage 5, Analytical Data, ITIR, Vol X of XIII, OU-2	Tetra Tech, Inc.
Feb-95	386	Stage 5, Analytical Data, ITIR, Vol XI of XIII, OU-2	Tetra Tech, Inc.
Feb-95	387	Stage 5, Analytical Data, ITIR, Vol XII of XIII, OU-2	Tetra Tech, Inc.
Feb-95	388	Stage 5, Analytical Data, ITIR, Vol XIII of XIII, OU-2	Tetra Tech, Inc.
Jun-95	469	Final Rapid Response Time Critical Removal Action Report, Vol I of II, LF-40	OHM Remediation Services Corp.
Jun-95	470	Final Rapid Response Time Critical Removal Action Report, Vol II of II, LF-40	OHM Remediation Services Corp.
Oct-95	476	Final Site Specific Removal Action Memorandum	IT Corp.
Jan-96	571	Excavation of Diesel Contaminated Soil, Technical Information Report, LF-06	IT Corp.
9-Jan-96	251	USFWS Letter to March ARB Concerning Biological Opinion Concerning a Proposed Land Use Strategy and Management of Stephens' Kangaroo Rats	US Fish and Wildlife Service
Feb-96	581	Modification to the Site-Specific Removal Action Memorandum, SS-01, SD-09, WP-25, and 12 UST Locations, and Consolidation of LF-06	IT Corp.
4-Apr-96	556	Final Project Report, Rapid Response Removal Actions, Vol I of III, LF-20, WP-26	OHM Remediation Services Corp.
4-Apr-96	557	Final Project Report, Rapid Response Removal Actions, Vol II of III, LF-20, WP-26	OHM Remediation Services Corp.
4-Apr-96	558	Final Project Report, Rapid Response Removal Actions, Vol III of III, LF-20, WP-26	OHM Remediation Services Corp.
Jun-96	658	Draft Examination of Anomalies Located by Multi-Spectral Survey	IT Corp.
Jan-97	730	Closure Report, Removal of Wastes, Vol I of II, LF-20, WP-26B	IT Corp.
Jan-97	731	Closure Report, Removal of Wastes, Vol II of II, LF-20, WP-26B	IT Corp.
Jan-97	732	Closure Report, Removal of Wastes, WP-26A	IT Corp.
Feb-97	737	Closure Report, Vol I of II, WP-25	IT Corp.
Feb-97	738	Closure Report, Vol II of II, WP-25	IT Corp.
Feb-97	739	Closure Report, Removal of Wastes, Vol I of II, SS-12	IT Corp.
Feb-97	740	Closure Report, Removal of Wastes, Vol II of II, SS-12	IT Corp.
Feb-97	741	Removal of Wastes Report, Vol I of II, LF-24	IT Corp.
Feb-97	742	Removal of Wastes Report, Vol II of II, LF-24	IT Corp.
Feb-97	743	Removal of Wastes Report, Vol I of II, LF-03	IT Corp.
Feb-97	744	Removal of Wastes Report, Vol II of II, LF-03	IT Corp.
Feb-97	892	Final Total Dissolved Solids Evaluation, Vol I of III	Tetra Tech, Inc.

Feb-97	893	Final Total Dissolved Solids Evaluation, Vol II of III, Appendices	Tetra Tech, Inc.
Feb-97	894	Final Total Dissolved Solids Evaluation, Vol III of III, Appendices	Tetra Tech, Inc.
Feb-97	895	Final Trend Analysis	Tetra Tech, Inc.
Apr-97	787	Closure Report, Removal of Wastes, Vol I of II, LF-06	IT Corp.
Apr-97	788	Closure Report, Removal of Wastes, Vol II of II, LF-06	IT Corp.
Jul-97	678	RI/FS, Draft Final Report, Vol I of XVII, OU-2	Tetra Tech, Inc.
Jul-97	679	RI/FS, Draft Final Report, Vol II of XVII, OU-2	Tetra Tech, Inc.
Jul-97	680	RI/FS, Draft Final Report, Vol III of XVII, OU-2	Tetra Tech, Inc.
Jul-97	681	RI/FS, Draft Final Report, Vol IV of XVII, OU-2	Tetra Tech, Inc.
Jul-97	682	RI/FS, Draft Final Report, Vol V of XVII, OU-2	Tetra Tech, Inc.
Jul-97	766	Final Site Characterization Report, ST-39	Black & Veatch Waste Science, Inc.
Aug-97	794	Groundwater Assessment, LF-06	IT Corp.
Aug-97	855	Draft Final Site Closure Report, Former Diesel UST Site, ST-35	Parsons Engineering Science, Inc.
Sep-97	789	As-Built Construction Report, Vol I of V, LF-06	IT Corp.
Sep-97	790	As-Built Construction Report, Vol II of V, LF-06	IT Corp.
Sep-97	791	As-Built Construction Report, Vol III of V, LF-06	IT Corp.
Sep-97	792	As-Built Construction Report, Vol IV of V, LF-06	IT Corp.
Sep-97	793	As-Built Construction Report, Vol V of V, LF-06	IT Corp.
Sep-97	795	Post Closure Monitoring and Maintenance Plan, LF-06	IT Corp.
Sep-97	802	96 Annual Groundwater Report, Vol I of II	Tetra Tech, Inc.
Sep-97	803	96 Annual Groundwater Report, Vol II of II, Appendices	Tetra Tech, Inc.
Sep-97	804	Management Action Plan	Montgomery Watson
Sep-97	819	Basewide Groundwater Monitoring Program, Groundwater Flow and Transport Model, 96 Model Calibration and Predictions	Tetra Tech, Inc.
Sep-97	843	Closure Report, Removal of Waste, Vol I of II, LF-06	IT Corp.
Sep-97	844	Closure Report, Removal of Waste, Vol II of II, LF-06	IT Corp.
Oct-97	814	Characterization of Wastes, Vol I of IV, LF-24	IT Corp.
Oct-97	815	Characterization of Wastes, Vol II of IV, LF-24	IT Corp.
Oct-97	816	Characterization of Wastes, Vol III of IV, LF-24	IT Corp.
Oct-97	817	Characterization of Wastes, Vol IV of IV, LF-24	IT Corp.
27-Oct-97	931	RA, Final Field Summary Report, DP-30	OHM Remediation Services Corp.
Apr-98	840	Final Proposed Monitoring Strategy for Landfill Sites	Tetra Tech, Inc.
Jul-99	1030	Final O&M Work Plan, OU-2, LF-06	Tetra Tech, Inc., Black & Veatch Waste Science, Inc.
Nov-99	1028	Completion of Construction Report, Erosion Protection of Drainage Channel, LF-06	IT Corp.
1-May	1096	Final Annual Monitoring Report, 99-00	Montgomery Watson

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APPENDIX C - ARARs

APPENDIX C - ARARs

Documentation of Applicable or Relevant and Appropriate Requirements (ARARs) for Selected Remedies

TABLE C-1: Sites 6, 12, 17, and 19, Relevant and Appropriate State Requirements

Requirement	ARAR Status	Source	Description
Action Specific			
Land Use Covenant	Relevant and Appropriate	CCR, title 22, section 67391.1(a)	Requires imposition of appropriate limitations on land use by recorded land use covenant when hazardous substances remain on the property at levels that are not suitable for unrestricted use of the land.
Land Use Covenant	Relevant and Appropriate	CCR, title 22, section 67391.1(b)	Requires that the cleanup decision document contain an implementation and enforcement plan for land use limitations.
Land Use Covenant	Relevant and Appropriate	CCR, title 22, section 67391.1(d)	Requires that the land use covenant be recorded in the county where the land is located.
Land Use Covenant	Relevant and Appropriate	CCR, title 22, section 67391.1(i)	Definitions
Land Use Covenant	Relevant and Appropriate	CA Civil Code Section 1471(a) & (b)	Specifies requirements for land use covenants to apply to successors in title to the land.

Table C-2

State Requirements Applicable or Relevant and Appropriate to the Site 6 Removal Action and O&M Work Plan

Requirement	ARAR Status	Source	Description
Chemical Specific			
National Primary Drinking Water Standards	Relevant and Appropriate	40 CFR Part 141.61	Maximum contaminant levels and monitoring and analytical requirements for organic chemicals
California Maximum Contaminant Levels – Organic Chemicals	Relevant and Appropriate (if more stringent than the 40 CFR 141.61 standard)	CCR, title 22, section 64444 – Primary Standards	Provides numerical contaminant limits for certain organic chemicals in drinking water.

Action Specific			
Monitoring Requirements	Applicable	CCR, title 27, section 20385	Release monitoring requirements for solid waste management units
General Closure and Post-Closure Maintenance	Applicable	CCR, title 27, section 20950(a), (e)	General closure and post-closure maintenance standards for solid waste management units
General Post-Closure Maintenance	Applicable	CCR, title 27, section 21090(b)(1), (c), (e)(2)	Closure and post-closure maintenance requirements for solid waste landfills.
Gas Monitoring and Control During Closure and Post-closure	Applicable	CCR, title 27, section 20921	Methane must not exceed 5% at the property boundary or other approved monitoring point
Gas Monitoring	Applicable	CCR, title 27, section 20923	Gas monitoring program required
Perimeter Monitoring Network	Applicable	CCR, title 27, section 20925	Perimeter subsurface monitoring wells required
Structure Monitoring	Applicable	CCR, title 27, section 20931	If there are structures, gas monitoring required
Monitored Parameters	Applicable	CCR, title 27, section 20932	Methane and any specified trace gases must be sampled
Monitoring Frequency	Applicable	CCR, title 27, section 20933	Quarterly monitoring required, at a minimum.
Reporting	Applicable	CCR, title 27, section 20934	Results of monitoring to be submitted
Control	Applicable	CCR, title 27, section 20937	Requires gas control system if methane concentrations exceed compliance levels
Post-closure Maintenance	Applicable	CCR, title 27, section 21180	The landfill's final cover and operating systems must be maintained and monitored for no less than 30 years following closure.
Post-closure Land Use	Applicable	CCR, title 27, section 21190	Specifies restrictions and considerations in future land use

Table C-3

State Requirements Applicable or Relevant and Appropriate to the March ARB Quality Program Plan, as to Site 12

Requirement	ARAR Status	Source	Description
Chemical Specific			
National Primary Drinking Water Standards	Relevant and Appropriate	40 CFR Part 141.61	Maximum contaminant levels and monitoring and analytical requirements for organic chemicals
California Maximum Contaminant Levels – Organic Chemicals	Relevant and Appropriate (if more stringent than the 40 CFR 141.61 standard)	CCR, title 22, section 64444 – Primary Standards	Provides numerical contaminant limits for certain organic chemicals in drinking water.
Action Specific			
Water Quality Monitoring	Relevant and Appropriate	CCR, title 22, section 66264.97	Identifies requirements for water quality monitoring and monitoring systems for owners and operators of hazardous waste facilities

FINAL PAGE

ADMINISTRATIVE RECORD

FINAL PAGE

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Appendix F

Environmental Database Search & Physical Settings Reports

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Lewis-Meridian Park LLC, Upper Plateau
Former March Air Force Base - Ordinance Strge Area
Riverside, CA 92508

Inquiry Number: 6607282.2s
August 04, 2021

The EDR Radius Map™ Report with GeoCheck®



6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

FORMER MARCH AIR FORCE BASE - ORDINANCE STRGE AREA
RIVERSIDE, CA 92508

COORDINATES

Latitude (North): 33.9069140 - 33° 54' 24.89"
Longitude (West): 117.3088360 - 117° 18' 31.80"
Universal Transverse Mercator: Zone 11
UTM X (Meters): 471447.9
UTM Y (Meters): 3751683.8
Elevation: 1735 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map: 5641312 RIVERSIDE EAST, CA
Version Date: 2012

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from: 20140527, 20140603
Source: USDA

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MAPPED SITES SUMMARY

Target Property Address:
FORMER MARCH AIR FORCE BASE - ORDINANCE STRGE AREA
RIVERSIDE, CA 92508

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
Reg	MARCH AIR FORCE BASE		DOD	Same	1 ft.
Reg	MARCH AIR FORCE BASE	22 CSG/CC	NPL, SEMS, RCRA-LQG, US ENG CONTROLS, US INST...	Same	1 ft.
1	MILLS TANK *D	14255 VISTA GRANDE	RCRA NonGen / NLR	Lower	361, 0.068, North
2	9TH STREET ITALIAN	19638 WEBSTER RD	EDR Hist Auto	Lower	600, 0.114, West
3	PAUL SMALL	14150 BARTON ST	RCRA NonGen / NLR	Lower	741, 0.140, NNW
4	BENJAMIN FRANKLIN EL	19661 ORANGE TERRACE	ENVIROSTOR, SCH, CERS	Higher	2304, 0.436, SSW
5	MARCH USAR	3,545 ACRES; E. OF R	ENVIROSTOR	Lower	4147, 0.785, East
6	RIVERSIDE ELEMENTARY	WOOD ROAD/BERT ROAD	ENVIROSTOR, SCH	Lower	4433, 0.840, WSW

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

Proposed NPL..... Proposed National Priority List Sites
NPL LIENS..... Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL..... National Priority List Deletions

Federal CERCLIS list

FEDERAL FACILITY..... Federal Facility Site Information listing

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE..... Superfund Enterprise Management System Archive

Federal RCRA CORRACTS facilities list

CORRACTS..... Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF..... RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-SQG..... RCRA - Small Quantity Generators
RCRA-VSQG..... RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

Federal institutional controls / engineering controls registries

LUCIS..... Land Use Control Information System

Federal ERNS list

ERNS..... Emergency Response Notification System

EXECUTIVE SUMMARY

State- and tribal - equivalent NPL

RESPONSE..... State Response Sites

State and tribal landfill and/or solid waste disposal site lists

SWF/LF..... Solid Waste Information System

State and tribal leaking storage tank lists

LUST..... Geotracker's Leaking Underground Fuel Tank Report
INDIAN LUST..... Leaking Underground Storage Tanks on Indian Land
CPS-SLIC..... Statewide SLIC Cases

State and tribal registered storage tank lists

FEMA UST..... Underground Storage Tank Listing
UST..... Active UST Facilities
AST..... Aboveground Petroleum Storage Tank Facilities
INDIAN UST..... Underground Storage Tanks on Indian Land

State and tribal voluntary cleanup sites

VCP..... Voluntary Cleanup Program Properties
INDIAN VCP..... Voluntary Cleanup Priority Listing

State and tribal Brownfields sites

BROWNFIELDS..... Considered Brownfields Sites Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS..... A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT..... Waste Management Unit Database
SWRCY..... Recycler Database
HAULERS..... Registered Waste Tire Haulers Listing
INDIAN ODI..... Report on the Status of Open Dumps on Indian Lands
ODI..... Open Dump Inventory
DEBRIS REGION 9..... Torres Martinez Reservation Illegal Dump Site Locations
IHS OPEN DUMPS..... Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL..... Delisted National Clandestine Laboratory Register
HIST Cal-Sites..... Historical Calsites Database
SCH..... School Property Evaluation Program
CDL..... Clandestine Drug Labs
CERS HAZ WASTE..... CERS HAZ WASTE

EXECUTIVE SUMMARY

Toxic Pits..... Toxic Pits Cleanup Act Sites
US CDL..... National Clandestine Laboratory Register
PFAS..... PFAS Contamination Site Location Listing

Local Lists of Registered Storage Tanks

SWEEPS UST..... SWEEPS UST Listing
HIST UST..... Hazardous Substance Storage Container Database
CA FID UST..... Facility Inventory Database
CERS TANKS..... California Environmental Reporting System (CERS) Tanks

Local Land Records

LIENS..... Environmental Liens Listing
LIENS 2..... CERCLA Lien Information
DEED..... Deed Restriction Listing

Records of Emergency Release Reports

HMIRS..... Hazardous Materials Information Reporting System
CHMIRS..... California Hazardous Material Incident Report System
LDS..... Land Disposal Sites Listing
MCS..... Military Cleanup Sites Listing
SPILLS 90..... SPILLS 90 data from FirstSearch

Other Ascertainable Records

FUDS..... Formerly Used Defense Sites
SCRD DRYCLEANERS..... State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR..... Financial Assurance Information
EPA WATCH LIST..... EPA WATCH LIST
2020 COR ACTION..... 2020 Corrective Action Program List
TSCA..... Toxic Substances Control Act
TRIS..... Toxic Chemical Release Inventory System
SSTS..... Section 7 Tracking Systems
RMP..... Risk Management Plans
RAATS..... RCRA Administrative Action Tracking System
PADS..... PCB Activity Database System
ICIS..... Integrated Compliance Information System
FTTS..... FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS..... Material Licensing Tracking System
COAL ASH DOE..... Steam-Electric Plant Operation Data
COAL ASH EPA..... Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER..... PCB Transformer Registration Database
RADINFO..... Radiation Information Database
HIST FTTS..... FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS..... Incident and Accident Data
CONSENT..... Superfund (CERCLA) Consent Decrees
INDIAN RESERV..... Indian Reservations
FUSRAP..... Formerly Utilized Sites Remedial Action Program
UMTRA..... Uranium Mill Tailings Sites
LEAD SMELTERS..... Lead Smelter Sites
US AIRS..... Aerometric Information Retrieval System Facility Subsystem
US MINES..... Mines Master Index File

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EXECUTIVE SUMMARY

ABANDONED MINES.....	Abandoned Mines
FINDS.....	Facility Index System/Facility Registry System
DOCKET HWC.....	Hazardous Waste Compliance Docket Listing
ECHO.....	Enforcement & Compliance History Information
UXO.....	Unexploded Ordnance Sites
FUELS PROGRAM.....	EPA Fuels Program Registered Listing
CA BOND EXP. PLAN.....	Bond Expenditure Plan
Cortese.....	"Cortese" Hazardous Waste & Substances Sites List
CUPA Listings.....	CUPA Resources List
DRYCLEANERS.....	Cleaner Facilities
EMI.....	Emissions Inventory Data
ENF.....	Enforcement Action Listing
Financial Assurance.....	Financial Assurance Information Listing
HAZNET.....	Facility and Manifest Data
ICE.....	ICE
HIST CORTESE.....	Hazardous Waste & Substance Site List
HWP.....	EnviroStor Permitted Facilities Listing
HWT.....	Registered Hazardous Waste Transporter Database
MINES.....	Mines Site Location Listing
MWMP.....	Medical Waste Management Program Listing
NPDES.....	NPDES Permits Listing
PEST LIC.....	Pesticide Regulation Licenses Listing
PROC.....	Certified Processors Database
Notify 65.....	Proposition 65 Records
UIC.....	UIC Listing
UIC GEO.....	UIC GEO (GEOTRACKER)
WASTEWATER PITS.....	Oil Wastewater Pits Listing
WDS.....	Waste Discharge System
WIP.....	Well Investigation Program Case List
MILITARY PRIV SITES.....	MILITARY PRIV SITES (GEOTRACKER)
PROJECT.....	PROJECT (GEOTRACKER)
WDR.....	Waste Discharge Requirements Listing
CIWQS.....	California Integrated Water Quality System
CERS.....	CERS
NON-CASE INFO.....	NON-CASE INFO (GEOTRACKER)
OTHER OIL GAS.....	OTHER OIL & GAS (GEOTRACKER)
PROD WATER PONDS.....	PROD WATER PONDS (GEOTRACKER)
SAMPLING POINT.....	SAMPLING POINT (GEOTRACKER)
WELL STIM PROJ.....	Well Stimulation Project (GEOTRACKER)
HWTS.....	Hazardous Waste Tracking System
MINES MRDS.....	Mineral Resources Data System

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP.....	EDR Proprietary Manufactured Gas Plants
EDR Hist Cleaner.....	EDR Exclusive Historical Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF.....	Recovered Government Archive Solid Waste Facilities List
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EXECUTIVE SUMMARY

RGA LUST..... Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.

Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: Also known as Superfund, the National Priority List database is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund program. The source of this database is the U.S. EPA.

A review of the NPL list, as provided by EDR, and dated 04/27/2021 has revealed that there is 1 NPL site within approximately 1 mile of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<i>MARCH AIR FORCE BASE</i> Cerclis ID:: 902761 EPA Id: CA4570024527	<i>22 CSG/CC</i>	<i>0 - 1/8 (0.000 mi.)</i>	<i>0</i>	<i>9</i>

Federal CERCLIS list

SEMS: SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

A review of the SEMS list, as provided by EDR, and dated 04/27/2021 has revealed that there is 1 SEMS site within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<i>MARCH AIR FORCE BASE</i> Site ID: 0902761 EPA Id: CA4570024527	<i>22 CSG/CC</i>	<i>0 - 1/8 (0.000 mi.)</i>	<i>0</i>	<i>9</i>

EXECUTIVE SUMMARY

Federal RCRA generators list

RCRA-LQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

A review of the RCRA-LQG list, as provided by EDR, and dated 03/22/2021 has revealed that there is 1 RCRA-LQG site within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
MARCH AIR FORCE BASE EPA ID:: CA4570024527	22 CSG/CC	0 - 1/8 (0.000 mi.)	0	9

Federal institutional controls / engineering controls registries

US ENG CONTROLS: A listing of sites with engineering controls in place.

A review of the US ENG CONTROLS list, as provided by EDR, and dated 02/22/2021 has revealed that there is 1 US ENG CONTROLS site within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
MARCH AIR FORCE BASE EPA ID:: CA4570024527 EPA ID:: CA4570024527	22 CSG/CC	0 - 1/8 (0.000 mi.)	0	9

US INST CONTROLS: A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

A review of the US INST CONTROLS list, as provided by EDR, and dated 02/22/2021 has revealed that there is 1 US INST CONTROLS site within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
MARCH AIR FORCE BASE EPA ID:: CA4570024527	22 CSG/CC	0 - 1/8 (0.000 mi.)	0	9

State- and tribal - equivalent CERCLIS

ENVIROSTOR: The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifies sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State

EXECUTIVE SUMMARY

Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

A review of the ENVIROSTOR list, as provided by EDR, and dated 04/23/2021 has revealed that there are 3 ENVIROSTOR sites within approximately 1 mile of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
BENJAMIN FRANKLIN EL Facility Id: 33820017 Status: Inactive - Withdrawn	19661 ORANGE TERRACE	SSW 1/4 - 1/2 (0.436 mi.)	4	52
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
MARCH USAR Facility Id: 71000040 Status: No Further Action	3,545 ACRES; E. OF R	E 1/2 - 1 (0.785 mi.)	5	55
RIVERSIDE ELEMENTARY Facility Id: 33010028 Status: No Further Action	WOOD ROAD/BERT ROAD	WSW 1/2 - 1 (0.840 mi.)	6	56

ADDITIONAL ENVIRONMENTAL RECORDS

Other Ascertainable Records

RCRA NonGen / NLR: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 03/22/2021 has revealed that there are 2 RCRA NonGen / NLR sites within approximately 0.25 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
MILLS TANK *D EPA ID:: CAP000182428	14255 VISTA GRANDE	N 0 - 1/8 (0.068 mi.)	1	46
PAUL SMALL	14150 BARTON ST	NNW 1/8 - 1/4 (0.140 mi.)	3	50

DOD: Consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

A review of the DOD list, as provided by EDR, and dated 12/31/2005 has revealed that there is 1 DOD site within approximately 1 mile of the target property.

EXECUTIVE SUMMARY

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
MARCH AIR FORCE BASE		0 - 1/8 (0.000 mi.)	0	9

ROD: Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid the cleanup.

A review of the ROD list, as provided by EDR, and dated 04/27/2021 has revealed that there is 1 ROD site within approximately 1 mile of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
MARCH AIR FORCE BASE EPA ID:: CA4570024527	22 CSG/CC	0 - 1/8 (0.000 mi.)	0	9

PRP: A listing of verified Potentially Responsible Parties

A review of the PRP list, as provided by EDR, and dated 12/30/2020 has revealed that there is 1 PRP site within approximately 0.001 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
MARCH AIR FORCE BASE	22 CSG/CC	0 - 1/8 (0.000 mi.)	0	9

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR Hist Auto: EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR Hist Auto list, as provided by EDR, has revealed that there is 1 EDR Hist Auto site within approximately 0.125 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
9TH STREET ITALIAN	19638 WEBSTER RD	W 0 - 1/8 (0.114 mi.)	2	50

DRAFT

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 4 records.

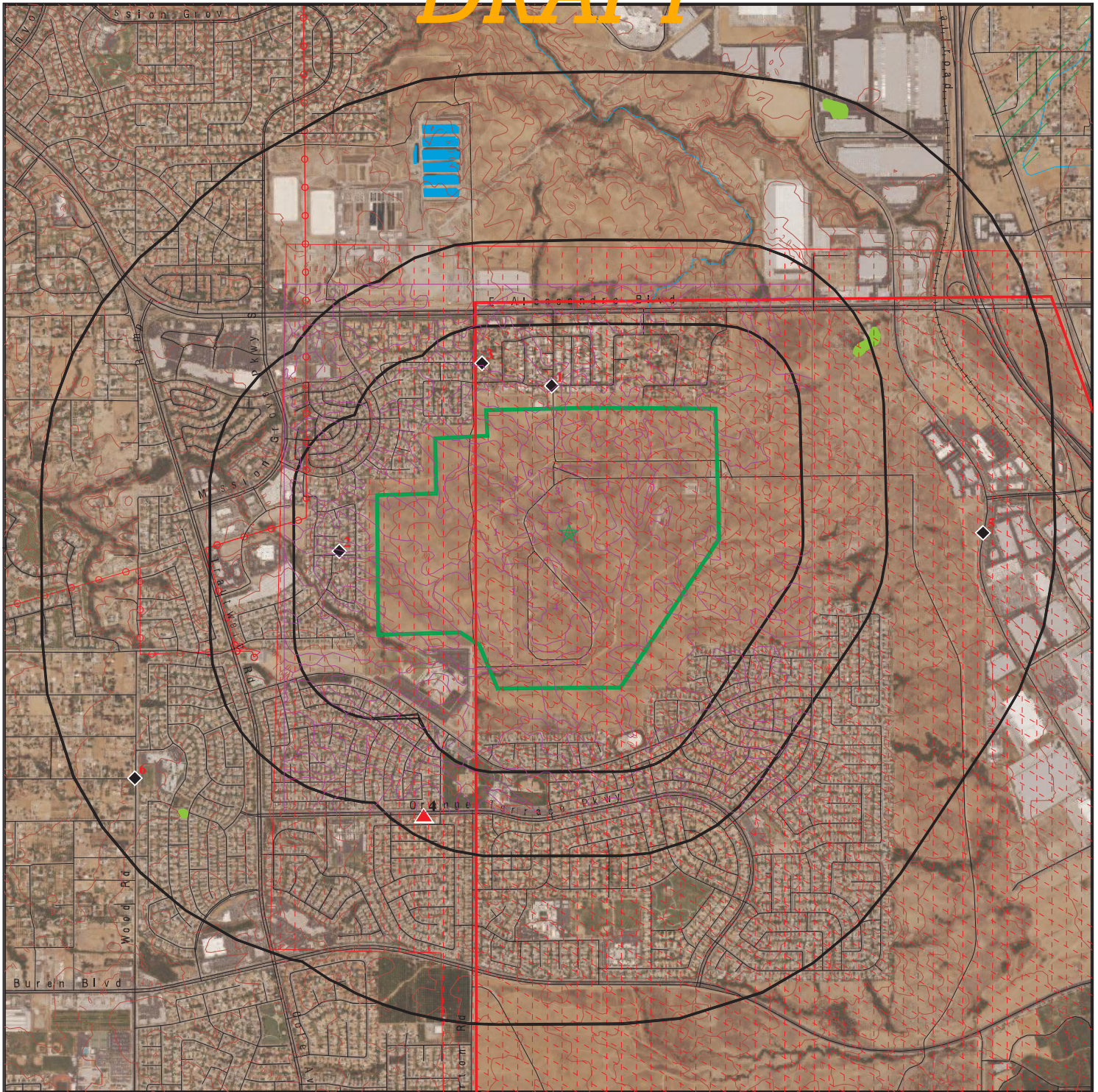
Site Name

Database(s)

ALESSANDRO PROPERTIES

CDL
CDL
CDL
ENVIROSTOR, VCP

OVERVIEW MAP - 6607282.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites



Indian Reservations BIA

Power transmission lines

Special Flood Hazard Area (1%)

0.2% Annual Chance Flood Hazard

National Wetland Inventory

State Wetlands

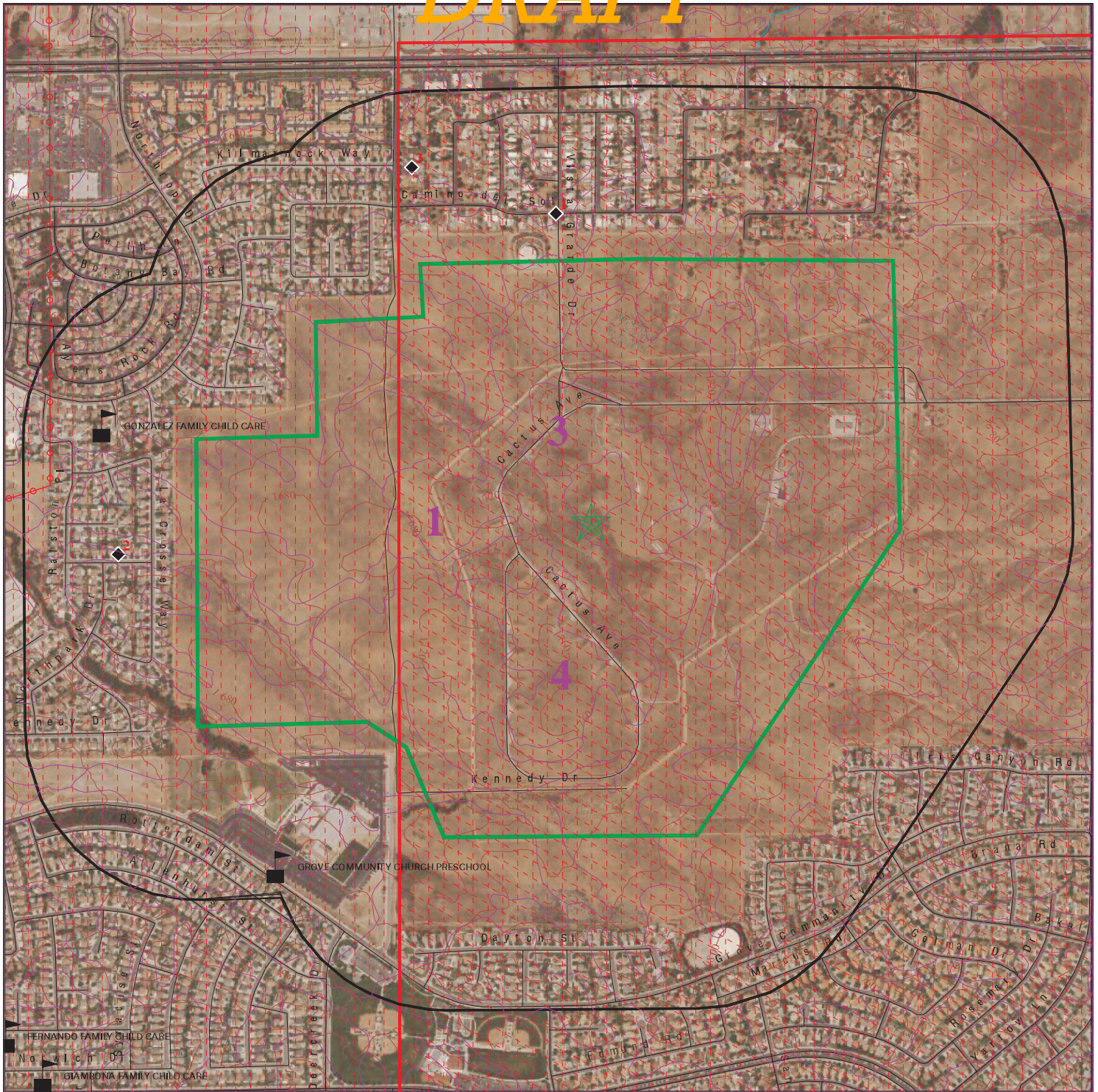
Areas of Concern















This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Lewis-Meridian Park LLC, Upper Plateau
 ADDRESS: Former March Air Force Base - Ordinance Strge Area
 Riverside CA 92508
 LAT/LONG: 33.906914 / 117.308836

CLIENT: Leighton Consulting
 CONTACT: Robert Blaine Hansen
 INQUIRY #: 6607282.2s
 DATE: August 04, 2021 8:05 pm



-  Target Property
-  Sites at elevations higher than or equal to the target property
-  Sites at elevations lower than the target property
-  Manufactured Gas Plants
-  Sensitive Receptors
-  National Priority List Sites
-  Dept. Defense Sites

-  Indian Reservations BIA
-  Power transmission lines
-  Special Flood Hazard Area (1%)
-  0.2% Annual Chance Flood Hazard
-  Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Lewis-Meridian Park LLC, Upper Plateau
ADDRESS: Former March Air Force Base - Ordinance Strge Area
 Riverside CA 92508
LAT/LONG: 33.906914 / 117.308836

CLIENT: Leighton Consulting
CONTACT: Robert Blaine Hansen
INQUIRY #: 6607282.2s
DATE: August 04, 2021 8:05 pm

DRAFT

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
<i>Federal NPL site list</i>								
NPL	1.000		1	0	0	0	NR	1
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
<i>Federal Delisted NPL site list</i>								
Delisted NPL	1.000		0	0	0	0	NR	0
<i>Federal CERCLIS list</i>								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		1	0	0	NR	NR	1
<i>Federal CERCLIS NFRAP site list</i>								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
<i>Federal RCRA CORRACTS facilities list</i>								
CORRACTS	1.000		0	0	0	0	NR	0
<i>Federal RCRA non-CORRACTS TSD facilities list</i>								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
<i>Federal RCRA generators list</i>								
RCRA-LQG	0.250		1	0	NR	NR	NR	1
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-VSQG	0.250		0	0	NR	NR	NR	0
<i>Federal institutional controls / engineering controls registries</i>								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		1	0	0	NR	NR	1
US INST CONTROLS	0.500		1	0	0	NR	NR	1
<i>Federal ERNS list</i>								
ERNS	0.001		0	NR	NR	NR	NR	0
<i>State- and tribal - equivalent NPL</i>								
RESPONSE	1.000		0	0	0	0	NR	0
<i>State- and tribal - equivalent CERCLIS</i>								
ENVIROSTOR	1.000		0	0	1	2	NR	3
<i>State and tribal landfill and/or solid waste disposal site lists</i>								
SWF/LF	0.500		0	0	0	NR	NR	0
<i>State and tribal leaking storage tank lists</i>								
LUST	0.500		0	0	0	NR	NR	0

DRAFT

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN LUST	0.500		0	0	0	NR	NR	0
CPS-SLIC	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		0	0	NR	NR	NR	0
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
VCP	0.500		0	0	0	NR	NR	0
INDIAN VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
WMUDS/SWAT	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	0	NR	NR	0
HAULERS	0.001		0	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	0.001		0	NR	NR	NR	NR	0
HIST Cal-Sites	1.000		0	0	0	0	NR	0
SCH	0.250		0	0	NR	NR	NR	0
CDL	0.001		0	NR	NR	NR	NR	0
CERS HAZ WASTE	0.250		0	0	NR	NR	NR	0
Toxic Pits	1.000		0	0	0	0	NR	0
US CDL	0.001		0	NR	NR	NR	NR	0
PFAS	0.500		0	0	0	NR	NR	0
Local Lists of Registered Storage Tanks								
SWEEPS UST	0.250		0	0	NR	NR	NR	0
HIST UST	0.250		0	0	NR	NR	NR	0
CA FID UST	0.250		0	0	NR	NR	NR	0
CERS TANKS	0.250		0	0	NR	NR	NR	0
Local Land Records								
LIENS	0.001		0	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
LIENS 2	0.001		0	NR	NR	NR	NR	0
DEED	0.500		0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS	0.001		0	NR	NR	NR	NR	0
CHMIRS	0.001		0	NR	NR	NR	NR	0
LDS	0.001		0	NR	NR	NR	NR	0
MCS	0.001		0	NR	NR	NR	NR	0
SPILLS 90	0.001		0	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		1	1	NR	NR	NR	2
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		1	0	0	0	NR	1
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	0.001		0	NR	NR	NR	NR	0
EPA WATCH LIST	0.001		0	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	0.001		0	NR	NR	NR	NR	0
TRIS	0.001		0	NR	NR	NR	NR	0
SSTS	0.001		0	NR	NR	NR	NR	0
ROD	1.000		1	0	0	0	NR	1
RMP	0.001		0	NR	NR	NR	NR	0
RAATS	0.001		0	NR	NR	NR	NR	0
PRP	0.001		1	NR	NR	NR	NR	1
PADS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001		0	NR	NR	NR	NR	0
FTTS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
DOT OPS	0.001		0	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	0.001		0	NR	NR	NR	NR	0
US AIRS	0.001		0	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
FINDS	0.001		0	NR	NR	NR	NR	0
DOCKET HWC	0.001		0	NR	NR	NR	NR	0
ECHO	0.001		0	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
Cortese	0.500		0	0	0	NR	NR	0
CUPA Listings	0.250		0	0	NR	NR	NR	0

DRAFT

MAP FINDINGS SUMMARY

<u>Database</u>	<u>Search Distance (Miles)</u>	<u>Target Property</u>	<u>< 1/8</u>	<u>1/8 - 1/4</u>	<u>1/4 - 1/2</u>	<u>1/2 - 1</u>	<u>> 1</u>	<u>Total Plotted</u>
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NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

DRAFT

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

DOD
Region

MARCH AIR FORCE BASE (CLOSED)
MARCH AIR FORCE BASE (CLO (County), CA)

DOD **CUSA143538**
N/A

< 1/8
1 ft.

DOD:

Feature 1: Air Force DOD
Feature 2: Not reported
Feature 3: Not reported
URL: Not reported
Name 1: March Air Force Base (Closed)
Name 2: Not reported
Name 3: Not reported
State: CA
DOD Site: Yes
Tile name: CARIVERSIDE

NPL
Region

MARCH AIR FORCE BASE
22 CSG/CC
RIVERSIDE, CA 92518

NPL **1000169261**
SEMS **CA4570024527**
RCRA-LQG
US ENG CONTROLS
US INST CONTROLS
ROD
PRP

< 1/8
1 ft.

NPL:

EPA Region: 9
EPA ID: CA4570024527
Site ID: 902761
Name: MARCH AIR FORCE BASE
Address: 22 CSG/CC
City,State,Zip: RIVERSIDE, CA 92518
Federal: Y
Final Date: 1989-11-21 00:00:00
Latitude: 33.906389
Longitude: -117.2557
Site Score: 31.940000000000001

NPL:

NPL Status: Currently on the Final NPL
Substance ID: Not reported
CAS Number: Not reported
Substance: Not reported
Pathway: Not reported
Scoring: Not reported

NPL Status: Currently on the Final NPL
Substance ID: A046
CAS Number: 1336-36-3
Substance: POLYCHLORINATED BIPHENYLS
Pathway: GROUND WATER PATHWAY
Scoring: 3

NPL Status: Currently on the Final NPL
Substance ID: U210
CAS Number: 127-18-4
Substance: TETRACHLOROETHENE
Pathway: GROUND WATER PATHWAY
Scoring: 2

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

MARCH AIR FORCE BASE (Continued)

1000169261

NPL Status: Currently on the Final NPL
Substance ID: U228
CAS Number: 79-01-6
Substance: TRICHLOROETHYLENE (TCE)
Pathway: GROUND WATER PATHWAY
Scoring: 2

Summary Details:

Conditions at proposal July 14, 1989): March Air Force Base (MAFB) covers approximately 7,000 acres near Riverside in the Moreno Valley in Riverside County, California. MAFB is adjacent to light industrial, agricultural, and residential areas. Established in 1918 as the Alessandro Aviation Field, MAFB has served as a training base and refueling operations base. Industrial operations including aircraft maintenance and repair) involved use of solvents and disposal of solvent wastes. MAFB is participating in the Installation Restoration Program (IRP), established in 1978. Under this program, the Department of Defense seeks to identify, investigate, and clean up contamination from hazardous materials. As part of IRP, the Air Force investigated 28 potentially contaminated disposal areas. MAFB Well No. 1 on-base was found to be contaminated with trichloroethylene, tetrachloroethylene, and cis-1,2-dichloroethylene at levels that exceed State drinking water standards. It was taken out of service. Soils on the base are contaminated with toluene and benzene. An estimated 11,600 people obtain drinking water from municipal wells within 3 miles of hazardous substances on MAFB. The Air Force is conducting a remedial investigation/ feasibility study (RI/FS) to determine the type and extent of contamination at the base and identify alternatives for remedial action. Status November 21, 1989): Field work continues on the RI/FS.

NPL:

NPL Status: Currently on the Final NPL
Category Description: Depth To Aquifer-> 50 And <= 100 Feet
Category Value: 65

NPL Status: Currently on the Final NPL
Category Description: Distance To Nearest Population-> 0 And <= 1/4 Mile
Category Value: 10

NPL:

NPL Name: MARCH AIR FORCE BASE

NPL:

EPA Region: 09
Site ID: 0902761
Site Status: F
Federal Site: Y
Date Deleted: Not reported
Date Finalized: 11/21/89
Date Proposed: 07/14/89

NPL:

Proposed Date: 07/14/1989
Final Date: 11/21/1989
Deleted Date: Not reported
NPL Status: Final

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

MARCH AIR FORCE BASE (Continued)

1000169261

SEMS:

Site ID: 0902761
EPA ID: CA4570024527
Name: MARCH AIR FORCE BASE
Address: 22 CSG/CC
Address 2: Not reported
City,State,Zip: RIVERSIDE, CA 92518
Cong District: 41,43
FIPS Code: 06065
Latitude: 33.906389
Longitude: -117.255700
FF: Y
NPL: Currently on the Final NPL
Non NPL Status: Not reported

SEMS Detail:

Region: 09
Site ID: 0902761
EPA ID: CA4570024527
Site Name: MARCH AIR FORCE BASE
NPL: F
FF: Y
OU: 00
Action Code: NF
Action Name: NPL FINL
SEQ: 1
Start Date: 1989-11-21 05:00:00
Finish Date: 11/21/1989 5:00:00 AM
Qual: Not reported
Current Action Lead: EPA Perf

Region: 09
Site ID: 0902761
EPA ID: CA4570024527
Site Name: MARCH AIR FORCE BASE
NPL: F
FF: Y
OU: 00
Action Code: NP
Action Name: PROPOSED
SEQ: 1
Start Date: 1989-07-14 04:00:00
Finish Date: 7/14/1989 4:00:00 AM
Qual: Not reported
Current Action Lead: EPA Perf

Region: 09
Site ID: 0902761
EPA ID: CA4570024527
Site Name: MARCH AIR FORCE BASE
NPL: F
FF: Y
OU: 00
Action Code: HR
Action Name: HAZRANK
SEQ: 1
Start Date: 1987-06-01 04:00:00

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

MARCH AIR FORCE BASE (Continued)

1000169261

Finish Date: 6/1/1987 4:00:00 AM
Qual: Not reported
Current Action Lead: EPA Perf

Region: 09
Site ID: 0902761
EPA ID: CA4570024527
Site Name: MARCH AIR FORCE BASE
NPL: F
FF: Y
OU: 00
Action Code: AR
Action Name: ADMIN REC
SEQ: 1
Start Date: 2000-10-24 04:00:00
Finish Date: Not reported
Qual: Not reported
Current Action Lead: EPA Perf

Region: 09
Site ID: 0902761
EPA ID: CA4570024527
Site Name: MARCH AIR FORCE BASE
NPL: F
FF: Y
OU: 02
Action Code: RO
Action Name: ROD
SEQ: 4
Start Date: 2004-05-11 04:00:00
Finish Date: 5/11/2004 4:00:00 AM
Qual: Not reported
Current Action Lead: Fed Fac

Region: 09
Site ID: 0902761
EPA ID: CA4570024527
Site Name: MARCH AIR FORCE BASE
NPL: F
FF: Y
OU: 02
Action Code: RO
Action Name: ROD
SEQ: 5
Start Date: 2005-09-30 04:00:00
Finish Date: 9/30/2005 4:00:00 AM
Qual: Not reported
Current Action Lead: Fed Fac

Region: 09
Site ID: 0902761
EPA ID: CA4570024527
Site Name: MARCH AIR FORCE BASE
NPL: F
FF: Y
OU: 00
Action Code: SI

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

MARCH AIR FORCE BASE (Continued)

1000169261

Action Name:	SI
SEQ:	1
Start Date:	1987-06-01 04:00:00
Finish Date:	6/1/1987 4:00:00 AM
Qual:	L
Current Action Lead:	Fed Fac
Region:	09
Site ID:	0902761
EPA ID:	CA4570024527
Site Name:	MARCH AIR FORCE BASE
NPL:	F
FF:	Y
OU:	01
Action Code:	LX
Action Name:	FF RD
SEQ:	1
Start Date:	1996-04-07 05:00:00
Finish Date:	4/18/1996 4:00:00 AM
Qual:	Not reported
Current Action Lead:	Fed Fac
Region:	09
Site ID:	0902761
EPA ID:	CA4570024527
Site Name:	MARCH AIR FORCE BASE
NPL:	F
FF:	Y
OU:	04
Action Code:	LW
Action Name:	FF RI/FS
SEQ:	2
Start Date:	1990-09-27 04:00:00
Finish Date:	9/29/2005 4:00:00 AM
Qual:	Not reported
Current Action Lead:	Fed Fac
Region:	09
Site ID:	0902761
EPA ID:	CA4570024527
Site Name:	MARCH AIR FORCE BASE
NPL:	F
FF:	Y
OU:	04
Action Code:	RO
Action Name:	ROD
SEQ:	3
Start Date:	2005-09-29 04:00:00
Finish Date:	9/29/2005 4:00:00 AM
Qual:	Not reported
Current Action Lead:	Fed Fac
Region:	09
Site ID:	0902761
EPA ID:	CA4570024527
Site Name:	MARCH AIR FORCE BASE
NPL:	F

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

MARCH AIR FORCE BASE (Continued)

1000169261

FF:	Y
OU:	00
Action Code:	DS
Action Name:	DISCVRY
SEQ:	1
Start Date:	1985-02-01 06:00:00
Finish Date:	2/1/1985 6:00:00 AM
Qual:	Not reported
Current Action Lead:	Fed Fac
Region:	09
Site ID:	0902761
EPA ID:	CA4570024527
Site Name:	MARCH AIR FORCE BASE
NPL:	F
FF:	Y
OU:	02
Action Code:	LW
Action Name:	FF RI/FS
SEQ:	6
Start Date:	1995-07-01 04:00:00
Finish Date:	7/1/1997 4:00:00 AM
Qual:	Not reported
Current Action Lead:	Fed Fac
Region:	09
Site ID:	0902761
EPA ID:	CA4570024527
Site Name:	MARCH AIR FORCE BASE
NPL:	F
FF:	Y
OU:	02
Action Code:	RO
Action Name:	ROD
SEQ:	7
Start Date:	2004-04-01 05:00:00
Finish Date:	4/1/2004 5:00:00 AM
Qual:	Not reported
Current Action Lead:	Fed Fac
Region:	09
Site ID:	0902761
EPA ID:	CA4570024527
Site Name:	MARCH AIR FORCE BASE
NPL:	F
FF:	Y
OU:	01
Action Code:	LW
Action Name:	FF RI/FS
SEQ:	1
Start Date:	1990-09-27 04:00:00
Finish Date:	6/20/1996 4:00:00 AM
Qual:	Not reported
Current Action Lead:	Fed Fac
Region:	09
Site ID:	0902761

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

MARCH AIR FORCE BASE (Continued)

1000169261

EPA ID: CA4570024527
Site Name: MARCH AIR FORCE BASE
NPL: F
FF: Y
OU: 01
Action Code: RO
Action Name: ROD
SEQ: 1
Start Date: 1996-06-20 04:00:00
Finish Date: 6/20/1996 4:00:00 AM
Qual: Not reported
Current Action Lead: Fed Fac

Region: 09
Site ID: 0902761
EPA ID: CA4570024527
Site Name: MARCH AIR FORCE BASE
NPL: F
FF: Y
OU: 00
Action Code: PA
Action Name: PA
SEQ: 1
Start Date: 1987-02-01 05:00:00
Finish Date: 2/1/1987 5:00:00 AM
Qual: L
Current Action Lead: Fed Fac

Region: 09
Site ID: 0902761
EPA ID: CA4570024527
Site Name: MARCH AIR FORCE BASE
NPL: F
FF: Y
OU: 02
Action Code: LW
Action Name: FF RI/FS
SEQ: 4
Start Date: 1992-01-24 05:00:00
Finish Date: 4/30/1995 4:00:00 AM
Qual: Not reported
Current Action Lead: Fed Fac

Region: 09
Site ID: 0902761
EPA ID: CA4570024527
Site Name: MARCH AIR FORCE BASE
NPL: F
FF: Y
OU: 01
Action Code: EE
Action Name: EE/CA
SEQ: 1
Start Date: 2018-11-12 06:00:00
Finish Date: 11/12/2018 6:00:00 AM
Qual: Not reported
Current Action Lead: Fed Fac

Map ID
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MARCH AIR FORCE BASE (Continued)

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Region: 09
Site ID: 0902761
EPA ID: CA4570024527
Site Name: MARCH AIR FORCE BASE
NPL: F
FF: Y
OU: 01
Action Code: LY
Action Name: FF RA
SEQ: 1
Start Date: 1996-03-05 05:00:00
Finish Date: Not reported
Qual: Not reported
Current Action Lead: Fed Fac

Region: 09
Site ID: 0902761
EPA ID: CA4570024527
Site Name: MARCH AIR FORCE BASE
NPL: F
FF: Y
OU: 05
Action Code: LW
Action Name: FF RI/FS
SEQ: 5
Start Date: 2005-10-30 04:00:00
Finish Date: 5/21/2015 5:00:00 AM
Qual: Not reported
Current Action Lead: Fed Fac

Region: 09
Site ID: 0902761
EPA ID: CA4570024527
Site Name: MARCH AIR FORCE BASE
NPL: F
FF: Y
OU: 05
Action Code: RO
Action Name: ROD
SEQ: 6
Start Date: 2019-04-22 05:00:00
Finish Date: 4/22/2019 5:00:00 AM
Qual: R
Current Action Lead: Fed Fac

RCRA-LQG:

Date Form Received by Agency: 2020-07-08 00:00:00.0
Handler Name: MARCH AIR RESERVE BASE
Handler Address: 610 MEYER DR
Handler City,State,Zip: MARCH ARB, CA 92518
EPA ID: CA4570024527
Contact Name: SEAN LEE
Contact Address: MEYER DR
Contact City,State,Zip: MARCH ARB, CA 92518
Contact Telephone: 951-655-5082
Contact Fax: Not reported

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MARCH AIR FORCE BASE (Continued)

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Groundwater Controls Indicator:	N/A
Operating TSD Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	2020-09-28 14:20:58.0
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Biennial: List of Years

Year: 2019

[Click Here for Biennial Reporting System Data:](#)

Year: 2015

[Click Here for Biennial Reporting System Data:](#)

Year: 2013

[Click Here for Biennial Reporting System Data:](#)

Year: 2011

[Click Here for Biennial Reporting System Data:](#)

Year: 2009

[Click Here for Biennial Reporting System Data:](#)

Year: 2007

[Click Here for Biennial Reporting System Data:](#)

Year: 2005

[Click Here for Biennial Reporting System Data:](#)

Year: 2003

[Click Here for Biennial Reporting System Data:](#)

Year: 2001

[Click Here for Biennial Reporting System Data:](#)

Hazardous Waste Summary:

Waste Code: D001
Waste Description: IGNITABLE WASTE

Waste Code: D002
Waste Description: CORROSIVE WASTE

Waste Code: D003
Waste Description: REACTIVE WASTE

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MARCH AIR FORCE BASE (Continued)

1000169261

Waste Code:	D004
Waste Description:	ARSENIC
Waste Code:	D005
Waste Description:	BARIUM
Waste Code:	D006
Waste Description:	CADMIUM
Waste Code:	D007
Waste Description:	CHROMIUM
Waste Code:	D008
Waste Description:	LEAD
Waste Code:	D009
Waste Description:	MERCURY
Waste Code:	D011
Waste Description:	SILVER
Waste Code:	D018
Waste Description:	BENZENE
Waste Code:	D021
Waste Description:	CHLOROBENZENE
Waste Code:	D035
Waste Description:	METHYL ETHYL KETONE
Waste Code:	D039
Waste Description:	TETRACHLOROETHYLENE
Waste Code:	D040
Waste Description:	TRICHLOROETHYLENE
Waste Code:	F001
Waste Description:	THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLOROETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Waste Code:	F002
Waste Description:	THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2, TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

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MARCH AIR FORCE BASE (Continued)

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Waste Code:	F003
Waste Description:	THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Waste Code:	F005
Waste Description:	THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.
Waste Code:	P098
Waste Description:	POTASSIUM CYANIDE (OR) POTASSIUM CYANIDE K(CN)
Waste Code:	U188
Waste Description:	PHENOL
Waste Code:	U227
Waste Description:	1,1,2-TRICHLOROETHANE (OR) ETHANE, 1,1,2-TRICHLORO-

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	USAF RESERVE COMMAND
Legal Status:	Federal
Date Became Current:	2006-07-23 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	2145 GRAEBER STREET, ST 117
Owner/Operator City,State,Zip:	MARCH AIR RESERVE BASE, CA 92518
Owner/Operator Telephone:	951-655-4520
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	GEN. RUSSELL A. MUNCY
Legal Status:	Federal
Date Became Current:	2013-11-01 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name:	MULTIPLE OPS - ALL USAF COMMANDS

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EPA ID Number

MARCH AIR FORCE BASE (Continued)

1000169261

Legal Status:	Federal
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	22 CSG/CC
Owner/Operator City,State,Zip:	CITY NOT REPORTED, CA 99999
Owner/Operator Telephone:	714-655-4735
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name:	UNITED STATES AIR FORCE
Legal Status:	Private
Date Became Current:	1918-01-01 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	2145 GRAEBER STREET, ST 117
Owner/Operator City,State,Zip:	MARCH AIR RESERVE BASE, CA 92518
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name:	UNITED STATES AIR FORCE
Legal Status:	Federal
Date Became Current:	1918-01-01 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	2145 GRAEBER STREET, SUITE 117
Owner/Operator City,State,Zip:	MARCH AIR RESERVE BASE, CA 92518
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	GENERAL JAMES L. MELIN
Legal Status:	Private
Date Became Current:	2006-07-23 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	COL. RUSSELL A MUNCY
Legal Status:	Federal
Date Became Current:	2013-11-01 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

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MARCH AIR FORCE BASE (Continued)

1000169261

Owner/Operator Indicator:	Operator
Owner/Operator Name:	BRIG. GEN MELISSA COBURN
Legal Status:	Federal
Date Became Current:	2019-01-01 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	2145 GRAEBER ST., STE 117
Owner/Operator City,State,Zip:	MARCH AIR RESERVE BASE, CA 92518
Owner/Operator Telephone:	951-655-4520
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	MELISSA.COUBURN@US.AF.MIL
Owner/Operator Indicator:	Owner
Owner/Operator Name:	US AIR FORCE
Legal Status:	Federal
Date Became Current:	1918-01-01 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	2145 GRAEBER ST., SUITE 117
Owner/Operator City,State,Zip:	MARCH AIR RESERVE BASE, CA 92518-1667
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name:	USAF RESERVE COMMAND
Legal Status:	Federal
Date Became Current:	1918-01-01 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	2145 GRABER STREET SUITE 117
Owner/Operator City,State,Zip:	MARCH ARB, CA 92518-2166
Owner/Operator Telephone:	951-655-4520
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name:	US AIR FORCE
Legal Status:	Federal
Date Became Current:	1945-01-01 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	2145 GRAEBER
Owner/Operator City,State,Zip:	MARCH ARB, CA 92518
Owner/Operator Telephone:	951-655-4665
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	GENERAL JAMES T. RUBEOR
Legal Status:	Federal
Date Became Current:	2003-07-19 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported

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MARCH AIR FORCE BASE (Continued)

1000169261

Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	GENERAL JAMES L. MELIN
Legal Status:	Federal
Date Became Current:	2006-07-23 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	CA 92518
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name:	US AIR FORCE
Legal Status:	Federal
Date Became Current:	1945-01-01 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	2145 GRAEBER
Owner/Operator City,State,Zip:	MARCH ARB, CA 92518
Owner/Operator Telephone:	951-655-4665
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	COL MARY ARB
Legal Status:	Federal
Date Became Current:	2010-01-01 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	2145 GRABER STREET SUITE 117
Owner/Operator City,State,Zip:	MARCH ARB, CA 92518-2166
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name:	US AIR FORCE
Legal Status:	Federal
Date Became Current:	1947-01-01 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	2145 GRAEBER ST, BLDG 470
Owner/Operator City,State,Zip:	MARCH ARB, CA 92518
Owner/Operator Telephone:	951-655-4665
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name:	COLONEL JAMES T. RUBEOR
Legal Status:	Federal
Date Became Current:	2003-07-19 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported

Map ID
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MARCH AIR FORCE BASE (Continued)

1000169261

Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name:	USAF
Legal Status:	Federal
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	452 SPTG CEV
Owner/Operator City,State,Zip:	MARCH ARB, CA 92518-2166
Owner/Operator Telephone:	909-655-5069
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	2010-07-15 00:00:00.0
Handler Name:	MARCH AIR RESERVE BASE
Federal Waste Generator Description:	Large Quantity Generator
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	No
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

Receive Date:	2013-03-20 00:00:00.0
Handler Name:	MARCH AIR RESERVE BASE
Federal Waste Generator Description:	Large Quantity Generator
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	No
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

Receive Date:	2014-10-22 00:00:00.0
Handler Name:	MARCH AIR RESERVE BASE
Federal Waste Generator Description:	Large Quantity Generator
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	Yes
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	No
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

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MARCH AIR FORCE BASE (Continued)

1000169261

Receive Date: 2016-02-29 00:00:00.0
Handler Name: MARCH AIR RESERVE BASE
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: Yes
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 2020-07-08 00:00:00.0
Handler Name: MARCH AIR RESERVE BASE
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: Yes
Non Storage Recycler Activity: No
Electronic Manifest Broker: No

Receive Date: 1996-09-01 00:00:00.0
Handler Name: MARCH AIR RESERVE BASE
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 2000-07-14 00:00:00.0
Handler Name: MARCH AIR RESERVE BASE
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 1992-03-30 00:00:00.0
Handler Name: MARCH AIR FORCE BASE
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No

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MARCH AIR FORCE BASE (Continued)

1000169261

Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 1994-03-31 00:00:00.0
Handler Name: MARCH AIR FORCE BASE, CA
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 1996-03-26 00:00:00.0
Handler Name: MARCH AFB, CA
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 1999-03-04 00:00:00.0
Handler Name: MARCH ARB, CA
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No
Non Storage Recycler Activity: Not reported
Electronic Manifest Broker: Not reported

Receive Date: 2000-10-12 00:00:00.0
Handler Name: MARCH ARB CA
Federal Waste Generator Description: Large Quantity Generator
State District Owner: Not reported
Large Quantity Handler of Universal Waste: No
Recognized Trader Importer: No
Recognized Trader Exporter: No
Spent Lead Acid Battery Importer: No
Spent Lead Acid Battery Exporter: No
Current Record: No

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MARCH AIR FORCE BASE (Continued)

1000169261

Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported
Receive Date:	2002-04-10 00:00:00.0
Handler Name:	MARCH AIR RESERVE BASE
Federal Waste Generator Description:	Large Quantity Generator
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	Yes
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	No
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported
Receive Date:	2004-02-25 00:00:00.0
Handler Name:	MARCH AIR RESERVE BASE
Federal Waste Generator Description:	Large Quantity Generator
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	Yes
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	No
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported
Receive Date:	2006-02-08 00:00:00.0
Handler Name:	MARCH AIR RESERVE BASE
Federal Waste Generator Description:	Large Quantity Generator
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	No
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported
Receive Date:	2008-03-26 00:00:00.0
Handler Name:	MARCH AIR RESERVE BASE
Federal Waste Generator Description:	Large Quantity Generator
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	No
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

List of NAICS Codes and Descriptions:

NAICS Code: 92811

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MARCH AIR FORCE BASE (Continued)

1000169261

NAICS Description: NATIONAL SECURITY
NAICS Code: 92812
NAICS Description: INTERNATIONAL AFFAIRS

Facility Has Received Notices of Violation:

Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	EPA
Violation Short Description:	Generators - General
Date Violation was Determined:	1995-04-27 00:00:00.0
Actual Return to Compliance Date:	2000-04-27 00:00:00.0
Return to Compliance Qualifier:	Not Resolved
Violation Responsible Agency:	EPA
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	002
Date of Enforcement Action:	1995-04-28 00:00:00.0
Enforcement Responsible Agency:	EPA
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

MARCH AIR FORCE BASE (Continued)

1000169261

Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	R9STA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported
Found Violation:	Yes
Agency Which Determined Violation:	EPA
Violation Short Description:	Generators - General
Date Violation was Determined:	1984-03-05 00:00:00.0
Actual Return to Compliance Date:	1995-04-04 00:00:00.0
Return to Compliance Qualifier:	Unverifiable
Violation Responsible Agency:	EPA
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	001
Date of Enforcement Action:	1984-05-18 00:00:00.0
Enforcement Responsible Agency:	EPA
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	No
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	WRITTEN INFORMAL
Enforcement Responsible Person:	R9EPA
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

MARCH AIR FORCE BASE (Continued)

1000169261

Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported

Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported

Evaluation Action Summary:	
Evaluation Date:	2006-11-02 00:00:00.0
Evaluation Responsible Agency:	State
Found Violation:	No
Evaluation Type Description:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier:	Not reported
Evaluation Responsible Sub-Organization:	Not reported
Actual Return to Compliance Date:	Not reported
Scheduled Compliance Date:	Not reported
Date of Request:	Not reported
Date Response Received:	Not reported
Request Agency:	Not reported
Former Citation:	Not reported

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

MARCH AIR FORCE BASE (Continued)

1000169261

Evaluation Date: 1995-04-04 00:00:00.0
Evaluation Responsible Agency: EPA
Found Violation: Yes
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: R9EPA
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: 2000-04-27 00:00:00.0
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 1984-03-05 00:00:00.0
Evaluation Responsible Agency: EPA
Found Violation: Yes
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION ON-SITE
Evaluation Responsible Person Identifier: R9EPA
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: 1995-04-04 00:00:00.0
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 1996-05-06 00:00:00.0
Evaluation Responsible Agency: State
Found Violation: No
Evaluation Type Description: FOLLOW-UP INSPECTION
Evaluation Responsible Person Identifier: R9STA
Evaluation Responsible Sub-Organization: Not reported
Actual Return to Compliance Date: Not reported
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Site:

Name: MARCH AIR FORCE BASE
Address: 22 CSG/CC
Address 2: Not reported
City,State,Zip: RIVERSIDE, CA 92518
Event Code: Not reported
Action Taken Date: 08/01/2017
EPA ID: CA4570024527

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

MARCH AIR FORCE BASE (Continued)

1000169261

Action Name:	ROD Amendment
Action ID:	1
Operable Unit:	01
Contaminated Media:	Soil
Contact Name:	Not reported
Contact Telephone:	Not reported
Event:	Not reported
Federal Facility:	Y
Fiscal Year:	2017
NPL Status:	Currently on the Final NPL
Superfund Alternative Agreement:	N
Latitude:	33.906389
Longitude:	-117.255700
Media:	
EPA ID:	CA4570024527
Contaminated Media:	Soil
Action ID:	1
Operable Unit:	01
Action Name:	Explanation of Significant Differences
Action Taken Date:	08/24/2000
Event Code:	Not reported
Contact Name:	Not reported
Contact Telephone:	Not reported
Event:	Not reported
Federal Facility:	Y
Fiscal Year:	2000
NPL Status:	Currently on the Final NPL
Superfund Alternative Agreement:	N
Latitude:	33.906389
Longitude:	-117.255700
EPA ID:	CA4570024527
Contaminated Media:	Soil
Action ID:	1
Operable Unit:	01
Action Name:	ROD Amendment
Action Taken Date:	08/01/2017
Event Code:	Not reported
Contact Name:	Not reported
Contact Telephone:	Not reported
Event:	Not reported
Federal Facility:	Y
Fiscal Year:	2017
NPL Status:	Currently on the Final NPL
Superfund Alternative Agreement:	N
Latitude:	33.906389
Longitude:	-117.255700
EPA ID:	CA4570024527
Contaminated Media:	Soil
Action ID:	1
Operable Unit:	01
Action Name:	ROD Amendment
Action Taken Date:	08/01/2017
Event Code:	Not reported
Contact Name:	Not reported
Contact Telephone:	Not reported

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

MARCH AIR FORCE BASE (Continued)

1000169261

Event: Not reported
Federal Facility: Y
Fiscal Year: 2017
NPL Status: Currently on the Final NPL
Superfund Alternative Agreement: N
Latitude: 33.906389
Longitude: -117.255700

EPA ID: CA4570024527
Contaminated Media: Soil
Action ID: 1
Operable Unit: 01
Action Name: ROD Amendment
Action Taken Date: 08/01/2017
Event Code: Not reported
Contact Name: Not reported
Contact Telephone: Not reported
Event: Not reported
Federal Facility: Y
Fiscal Year: 2017
NPL Status: Currently on the Final NPL
Superfund Alternative Agreement: N
Latitude: 33.906389
Longitude: -117.255700

EPA ID: CA4570024527
Contaminated Media: Soil
Action ID: 1
Operable Unit: 01
Action Name: ROD Amendment
Action Taken Date: 08/01/2017
Event Code: Not reported
Contact Name: Not reported
Contact Telephone: Not reported
Event: Not reported
Federal Facility: Y
Fiscal Year: 2017
NPL Status: Currently on the Final NPL
Superfund Alternative Agreement: N
Latitude: 33.906389
Longitude: -117.255700

EPA ID: CA4570024527
Contaminated Media: Soil
Action ID: 1
Operable Unit: 01
Action Name: ROD Amendment
Action Taken Date: 08/01/2017
Event Code: Not reported
Contact Name: Not reported
Contact Telephone: Not reported
Event: Not reported
Federal Facility: Y
Fiscal Year: 2017
NPL Status: Currently on the Final NPL
Superfund Alternative Agreement: N
Latitude: 33.906389

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

MARCH AIR FORCE BASE (Continued)

1000169261

Longitude:	-117.255700
EPA ID:	CA4570024527
Contaminated Media:	Soil
Action ID:	1
Operable Unit:	01
Action Name:	ROD Amendment
Action Taken Date:	08/01/2017
Event Code:	Not reported
Contact Name:	Not reported
Contact Telephone:	Not reported
Event:	Not reported
Federal Facility:	Y
Fiscal Year:	2017
NPL Status:	Currently on the Final NPL
Superfund Alternative Agreement:	N
Latitude:	33.906389
Longitude:	-117.255700
EPA ID:	CA4570024527
Contaminated Media:	Soil Gas
Action ID:	1
Operable Unit:	01
Action Name:	ROD Amendment
Action Taken Date:	08/01/2017
Event Code:	Not reported
Contact Name:	Not reported
Contact Telephone:	Not reported
Event:	Not reported
Federal Facility:	Y
Fiscal Year:	2017
NPL Status:	Currently on the Final NPL
Superfund Alternative Agreement:	N
Latitude:	33.906389
Longitude:	-117.255700
EPA ID:	CA4570024527
Contaminated Media:	Soil
Action ID:	3
Operable Unit:	02
Action Name:	ROD Amendment
Action Taken Date:	12/12/2016
Event Code:	Not reported
Contact Name:	Not reported
Contact Telephone:	Not reported
Event:	Not reported
Federal Facility:	Y
Fiscal Year:	2017
NPL Status:	Currently on the Final NPL
Superfund Alternative Agreement:	N
Latitude:	33.906389
Longitude:	-117.255700
EPA ID:	CA4570024527
Contaminated Media:	Groundwater
Action ID:	1
Operable Unit:	01

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

MARCH AIR FORCE BASE (Continued)

1000169261

Action Name: Record of Decision
Action Taken Date: 06/20/1996
Event Code: Not reported
Contact Name: Not reported
Contact Telephone: Not reported
Event: Not reported
Federal Facility: Y
Fiscal Year: 1996
NPL Status: Currently on the Final NPL
Superfund Alternative Agreement: N
Latitude: 33.906389
Longitude: -117.255700

EPA ID: CA4570024527
Contaminated Media: Soil
Action ID: 1
Operable Unit: 01
Action Name: Record of Decision
Action Taken Date: 06/20/1996
Event Code: Not reported
Contact Name: Not reported
Contact Telephone: Not reported
Event: Not reported
Federal Facility: Y
Fiscal Year: 1996
NPL Status: Currently on the Final NPL
Superfund Alternative Agreement: N
Latitude: 33.906389
Longitude: -117.255700

EPA ID: CA4570024527
Contaminated Media: Groundwater
Action ID: 1
Operable Unit: 01
Action Name: Record of Decision
Action Taken Date: 06/20/1996
Event Code: Not reported
Contact Name: Not reported
Contact Telephone: Not reported
Event: Not reported
Federal Facility: Y
Fiscal Year: 1996
NPL Status: Currently on the Final NPL
Superfund Alternative Agreement: N
Latitude: 33.906389
Longitude: -117.255700

EPA ID: CA4570024527
Contaminated Media: Soil
Action ID: 1
Operable Unit: 01
Action Name: Record of Decision
Action Taken Date: 06/20/1996
Event Code: Not reported
Contact Name: Not reported
Contact Telephone: Not reported
Event: Not reported

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

MARCH AIR FORCE BASE (Continued)

1000169261

Federal Facility: Y
Fiscal Year: 1996
NPL Status: Currently on the Final NPL
Superfund Alternative Agreement: N
Latitude: 33.906389
Longitude: -117.255700

EPA ID: CA4570024527
Contaminated Media: Groundwater
Action ID: 1
Operable Unit: 01
Action Name: Record of Decision
Action Taken Date: 06/20/1996
Event Code: Not reported
Contact Name: Not reported
Contact Telephone: Not reported
Event: Not reported
Federal Facility: Y
Fiscal Year: 1996
NPL Status: Currently on the Final NPL
Superfund Alternative Agreement: N
Latitude: 33.906389
Longitude: -117.255700

EPA ID: CA4570024527
Contaminated Media: Soil
Action ID: 1
Operable Unit: 01
Action Name: Record of Decision
Action Taken Date: 06/20/1996
Event Code: Not reported
Contact Name: Not reported
Contact Telephone: Not reported
Event: Not reported
Federal Facility: Y
Fiscal Year: 1996
NPL Status: Currently on the Final NPL
Superfund Alternative Agreement: N
Latitude: 33.906389
Longitude: -117.255700

EPA ID: CA4570024527
Contaminated Media: Free-phase NAPL
Action ID: 1
Operable Unit: 01
Action Name: Record of Decision
Action Taken Date: 06/20/1996
Event Code: Not reported
Contact Name: Not reported
Contact Telephone: Not reported
Event: Not reported
Federal Facility: Y
Fiscal Year: 1996
NPL Status: Currently on the Final NPL
Superfund Alternative Agreement: N
Latitude: 33.906389
Longitude: -117.255700

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

MARCH AIR FORCE BASE (Continued)

1000169261

EPA ID: CA4570024527
Contaminated Media: Groundwater
Action ID: 1
Operable Unit: 01
Action Name: Record of Decision
Action Taken Date: 06/20/1996
Event Code: Not reported
Contact Name: Not reported
Contact Telephone: Not reported
Event: Not reported
Federal Facility: Y
Fiscal Year: 1996
NPL Status: Currently on the Final NPL
Superfund Alternative Agreement: N
Latitude: 33.906389
Longitude: -117.255700

EPA ID: CA4570024527
Contaminated Media: Soil
Action ID: 1
Operable Unit: 01
Action Name: Record of Decision
Action Taken Date: 06/20/1996
Event Code: Not reported
Contact Name: Not reported
Contact Telephone: Not reported
Event: Not reported
Federal Facility: Y
Fiscal Year: 1996
NPL Status: Currently on the Final NPL
Superfund Alternative Agreement: N
Latitude: 33.906389
Longitude: -117.255700

EPA ID: CA4570024527
Contaminated Media: Soil
Action ID: 1
Operable Unit: 01
Action Name: Record of Decision
Action Taken Date: 06/20/1996
Event Code: Not reported
Contact Name: Not reported
Contact Telephone: Not reported
Event: Not reported
Federal Facility: Y
Fiscal Year: 1996
NPL Status: Currently on the Final NPL
Superfund Alternative Agreement: N
Latitude: 33.906389
Longitude: -117.255700

EPA ID: CA4570024527
Contaminated Media: Soil
Action ID: 1
Operable Unit: 01
Action Name: Record of Decision
Action Taken Date: 06/20/1996

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

MARCH AIR FORCE BASE (Continued)

1000169261

Event Code: Not reported
Contact Name: Not reported
Contact Telephone: Not reported
Event: Not reported
Federal Facility: Y
Fiscal Year: 1996
NPL Status: Currently on the Final NPL
Superfund Alternative Agreement: N
Latitude: 33.906389
Longitude: -117.255700

EPA ID: CA4570024527
Contaminated Media: Groundwater
Action ID: 1
Operable Unit: 01
Action Name: Record of Decision
Action Taken Date: 06/20/1996
Event Code: Not reported
Contact Name: Not reported
Contact Telephone: Not reported
Event: Not reported
Federal Facility: Y
Fiscal Year: 1996
NPL Status: Currently on the Final NPL
Superfund Alternative Agreement: N
Latitude: 33.906389
Longitude: -117.255700

EPA ID: CA4570024527
Contaminated Media: Groundwater
Action ID: 1
Operable Unit: 01
Action Name: Record of Decision
Action Taken Date: 06/20/1996
Event Code: Not reported
Contact Name: Not reported
Contact Telephone: Not reported
Event: Not reported
Federal Facility: Y
Fiscal Year: 1996
NPL Status: Currently on the Final NPL
Superfund Alternative Agreement: N
Latitude: 33.906389
Longitude: -117.255700

EPA ID: CA4570024527
Contaminated Media: Free-phase NAPL
Action ID: 1
Operable Unit: 01
Action Name: Record of Decision
Action Taken Date: 06/20/1996
Event Code: Not reported
Contact Name: Not reported
Contact Telephone: Not reported
Event: Not reported
Federal Facility: Y
Fiscal Year: 1996

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

MARCH AIR FORCE BASE (Continued)

1000169261

NPL Status: Currently on the Final NPL
Superfund Alternative Agreement: N
Latitude: 33.906389
Longitude: -117.255700

EPA ID: CA4570024527
Contaminated Media: Groundwater
Action ID: 1
Operable Unit: 01
Action Name: Record of Decision
Action Taken Date: 06/20/1996
Event Code: Not reported
Contact Name: Not reported
Contact Telephone: Not reported
Event: Not reported
Federal Facility: Y
Fiscal Year: 1996
NPL Status: Currently on the Final NPL
Superfund Alternative Agreement: N
Latitude: 33.906389
Longitude: -117.255700

EPA ID: CA4570024527
Contaminated Media: Free-phase NAPL
Action ID: 1
Operable Unit: 01
Action Name: Record of Decision
Action Taken Date: 06/20/1996
Event Code: Not reported
Contact Name: Not reported
Contact Telephone: Not reported
Event: Not reported
Federal Facility: Y
Fiscal Year: 1996
NPL Status: Currently on the Final NPL
Superfund Alternative Agreement: N
Latitude: 33.906389
Longitude: -117.255700

EPA ID: CA4570024527
Contaminated Media: Soil
Action ID: 1
Operable Unit: 01
Action Name: Record of Decision
Action Taken Date: 06/20/1996
Event Code: Not reported
Contact Name: Not reported
Contact Telephone: Not reported
Event: Not reported
Federal Facility: Y
Fiscal Year: 1996
NPL Status: Currently on the Final NPL
Superfund Alternative Agreement: N
Latitude: 33.906389
Longitude: -117.255700

EPA ID: CA4570024527

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

MARCH AIR FORCE BASE (Continued)

1000169261

Contaminated Media: Soil
Action ID: 1
Operable Unit: 01
Action Name: Record of Decision
Action Taken Date: 06/20/1996
Event Code: Not reported
Contact Name: Not reported
Contact Telephone: Not reported
Event: Not reported
Federal Facility: Y
Fiscal Year: 1996
NPL Status: Currently on the Final NPL
Superfund Alternative Agreement: N
Latitude: 33.906389
Longitude: -117.255700

EPA ID: CA4570024527
Contaminated Media: Soil
Action ID: 3
Operable Unit: 04
Action Name: Record of Decision
Action Taken Date: 09/29/2005
Event Code: Not reported
Contact Name: Not reported
Contact Telephone: Not reported
Event: Not reported
Federal Facility: Y
Fiscal Year: 2005
NPL Status: Currently on the Final NPL
Superfund Alternative Agreement: N
Latitude: 33.906389
Longitude: -117.255700

EPA ID: CA4570024527
Contaminated Media: Groundwater
Action ID: 3
Operable Unit: 04
Action Name: Record of Decision
Action Taken Date: 09/29/2005
Event Code: Not reported
Contact Name: Not reported
Contact Telephone: Not reported
Event: Not reported
Federal Facility: Y
Fiscal Year: 2005
NPL Status: Currently on the Final NPL
Superfund Alternative Agreement: N
Latitude: 33.906389
Longitude: -117.255700

EPA ID: CA4570024527
Contaminated Media: Soil
Action ID: 3
Operable Unit: 04
Action Name: Record of Decision
Action Taken Date: 09/29/2005
Event Code: Not reported

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

MARCH AIR FORCE BASE (Continued)

1000169261

Contact Name: Not reported
Contact Telephone: Not reported
Event: Not reported
Federal Facility: Y
Fiscal Year: 2005
NPL Status: Currently on the Final NPL
Superfund Alternative Agreement: N
Latitude: 33.906389
Longitude: -117.255700

EPA ID: CA4570024527
Contaminated Media: Groundwater
Action ID: 5
Operable Unit: 02
Action Name: Record of Decision
Action Taken Date: 09/30/2005
Event Code: Not reported
Contact Name: Not reported
Contact Telephone: Not reported
Event: Not reported
Federal Facility: Y
Fiscal Year: 2005
NPL Status: Currently on the Final NPL
Superfund Alternative Agreement: N
Latitude: 33.906389
Longitude: -117.255700

EPA ID: CA4570024527
Contaminated Media: Soil
Action ID: 5
Operable Unit: 02
Action Name: Record of Decision
Action Taken Date: 09/30/2005
Event Code: Not reported
Contact Name: Not reported
Contact Telephone: Not reported
Event: Not reported
Federal Facility: Y
Fiscal Year: 2005
NPL Status: Currently on the Final NPL
Superfund Alternative Agreement: N
Latitude: 33.906389
Longitude: -117.255700

EPA ID: CA4570024527
Contaminated Media: Not reported
Action ID: 7
Operable Unit: 02
Action Name: Record of Decision
Action Taken Date: 04/01/2004
Event Code: Not reported
Contact Name: Not reported
Contact Telephone: Not reported
Event: Not reported
Federal Facility: Y
Fiscal Year: 2004
NPL Status: Currently on the Final NPL

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

MARCH AIR FORCE BASE (Continued)

1000169261

Superfund Alternative Agreement: N
Latitude: 33.906389
Longitude: -117.255700

US INST CONTROLS:

Name: MARCH AIR FORCE BASE
Address: 22 CSG/CC
Address 2: Not reported
City,State,Zip: RIVERSIDE, CA 92518
EPA ID: CA4570024527
Action Name: ROD Amendment
Action ID: 1
Operable Unit: 01
Actual Date: 08/01/2017
Contaminated Media: Soil Gas
Event Code: Not reported
Contact Name: Not reported
Contact Telephone: Not reported
Event: Not reported
Federal Facility: Y
Fiscal Year: 2017
NPL Status: Currently on the Final NPL
Superfund Alternative Agreement: N
Latitude: 33.906389
Longitude: -117.255700

Name: MARCH AIR FORCE BASE
Address: 22 CSG/CC
Address 2: Not reported
City,State,Zip: RIVERSIDE, CA 92518
EPA ID: CA4570024527
Action Name: Record of Decision
Action ID: 3
Operable Unit: 04
Actual Date: 09/29/2005
Contaminated Media: Soil
Event Code: Not reported
Contact Name: Not reported
Contact Telephone: Not reported
Event: Not reported
Federal Facility: Y
Fiscal Year: 2005
NPL Status: Currently on the Final NPL
Superfund Alternative Agreement: N
Latitude: 33.906389
Longitude: -117.255700

Name: MARCH AIR FORCE BASE
Address: 22 CSG/CC
Address 2: Not reported
City,State,Zip: RIVERSIDE, CA 92518
EPA ID: CA4570024527
Action Name: Record of Decision
Action ID: 4
Operable Unit: 02
Actual Date: 05/11/2004

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

MARCH AIR FORCE BASE (Continued)

1000169261

Contaminated Media: Groundwater
Event Code: Not reported
Contact Name: Not reported
Contact Telephone: Not reported
Event: Not reported
Federal Facility: Y
Fiscal Year: 2004
NPL Status: Currently on the Final NPL
Superfund Alternative Agreement: N
Latitude: 33.906389
Longitude: -117.255700

Name: MARCH AIR FORCE BASE
Address: 22 CSG/CC
Address 2: Not reported
City,State,Zip: RIVERSIDE, CA 92518
EPA ID: CA4570024527
Action Name: Record of Decision
Action ID: 4
Operable Unit: 02
Actual Date: 05/11/2004
Contaminated Media: Soil
Event Code: Not reported
Contact Name: Not reported
Contact Telephone: Not reported
Event: Not reported
Federal Facility: Y
Fiscal Year: 2004
NPL Status: Currently on the Final NPL
Superfund Alternative Agreement: N
Latitude: 33.906389
Longitude: -117.255700

Name: MARCH AIR FORCE BASE
Address: 22 CSG/CC
Address 2: Not reported
City,State,Zip: RIVERSIDE, CA 92518
EPA ID: CA4570024527
Action Name: Record of Decision
Action ID: 5
Operable Unit: 02
Actual Date: 09/30/2005
Contaminated Media: Soil
Event Code: Not reported
Contact Name: Not reported
Contact Telephone: Not reported
Event: Not reported
Federal Facility: Y
Fiscal Year: 2005
NPL Status: Currently on the Final NPL
Superfund Alternative Agreement: N
Latitude: 33.906389
Longitude: -117.255700

ROD:

Name: MARCH AIR FORCE BASE
Address: 22 CSG/CC

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

MARCH AIR FORCE BASE (Continued)

1000169261

City,State,Zip: RIVERSIDE, CA 92518
EPA ID: CA4570024527
RG: 9
Site ID: 902761
Action: FF ESD
Operable Unit Number: EAST MARCH - SOILS/GW
SEQ ID: 1
Action Completion: 2000-08-24 00:00:00
NPL Status: Final
Non NPL Status: Not reported

Name: MARCH AIR FORCE BASE
Address: 22 CSG/CC
City,State,Zip: RIVERSIDE, CA 92518
EPA ID: CA4570024527
RG: 9
Site ID: 902761
Action: FF ROD (RCRA Statement of Basis/RTC)
Operable Unit Number: EAST MARCH - SOILS/GW
SEQ ID: 1
Action Completion: 1996-06-20 00:00:00
NPL Status: Final
Non NPL Status: Not reported

Name: MARCH AIR FORCE BASE
Address: 22 CSG/CC
City,State,Zip: RIVERSIDE, CA 92518
EPA ID: CA4570024527
RG: 9
Site ID: 902761
Action: FF ROD (RCRA Statement of Basis/RTC)
Operable Unit Number: BASEWIDE
SEQ ID: 3
Action Completion: 2005-09-29 00:00:00
NPL Status: Final
Non NPL Status: Not reported

Name: MARCH AIR FORCE BASE
Address: 22 CSG/CC
City,State,Zip: RIVERSIDE, CA 92518
EPA ID: CA4570024527
RG: 9
Site ID: 902761
Action: FF ROD (RCRA Statement of Basis/RTC)
Operable Unit Number: WEST MARCH - SOILS/GW
SEQ ID: 4
Action Completion: 2004-05-11 00:00:00
NPL Status: Final
Non NPL Status: Not reported

Name: MARCH AIR FORCE BASE
Address: 22 CSG/CC
City,State,Zip: RIVERSIDE, CA 92518
EPA ID: CA4570024527
RG: 9
Site ID: 902761
Action: FF ROD (RCRA Statement of Basis/RTC)

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

MARCH AIR FORCE BASE (Continued)

1000169261

Operable Unit Number:	WEST MARCH - SOILS/GW
SEQ ID:	5
Action Completion:	2005-09-30 00:00:00
NPL Status:	Final
Non NPL Status:	Not reported
Name:	MARCH AIR FORCE BASE
Address:	22 CSG/CC
City,State,Zip:	RIVERSIDE, CA 92518
EPA ID:	CA4570024527
RG:	9
Site ID:	902761
Action:	FF ROD (RCRA Statement of Basis/RTC)
Operable Unit Number:	SITEWIDE GW
SEQ ID:	6
Action Completion:	2019-04-22 00:00:00
NPL Status:	Final
Non NPL Status:	Not reported
Name:	MARCH AIR FORCE BASE
Address:	22 CSG/CC
City,State,Zip:	RIVERSIDE, CA 92518
EPA ID:	CA4570024527
RG:	9
Site ID:	902761
Action:	FF ROD (RCRA Statement of Basis/RTC)
Operable Unit Number:	WEST MARCH - SOILS/GW
SEQ ID:	7
Action Completion:	2004-04-01 00:00:00
NPL Status:	Final
Non NPL Status:	Not reported
Name:	MARCH AIR FORCE BASE
Address:	22 CSG/CC
City,State,Zip:	RIVERSIDE, CA 92518
EPA ID:	CA4570024527
RG:	9
Site ID:	902761
Action:	FF ROD Amendment
Operable Unit Number:	EAST MARCH - SOILS/GW
SEQ ID:	1
Action Completion:	2017-08-01 00:00:00
NPL Status:	Final
Non NPL Status:	Not reported
Name:	MARCH AIR FORCE BASE
Address:	22 CSG/CC
City,State,Zip:	RIVERSIDE, CA 92518
EPA ID:	CA4570024527
RG:	9
Site ID:	902761
Action:	FF ROD Amendment
Operable Unit Number:	EAST MARCH - SOILS/GW
SEQ ID:	2
Action Completion:	2019-02-25 00:00:00
NPL Status:	Final
Non NPL Status:	Not reported

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

MARCH AIR FORCE BASE (Continued)

1000169261

Name: MARCH AIR FORCE BASE
 Address: 22 CSG/CC
 City,State,Zip: RIVERSIDE, CA 92518
 EPA ID: CA4570024527
 RG: 9
 Site ID: 902761
 Action: FF ROD Amendment
 Operable Unit Number: WEST MARCH - SOILS/GW
 SEQ ID: 3
 Action Completion: 2016-12-12 00:00:00
 NPL Status: Final
 Non NPL Status: Not reported

PRP:

PRP Name: STATE OF CALIFORNIA/DEPT. OF HEALTH SERVICES
 STATE OF CALIFORNIA/DEPT. OF WATER QUALITY
 U.S. AIR FORCE
 U.S. AIR FORCE

1
North
< 1/8
0.068 mi.
361 ft.

MILLS TANK *D
14255 VISTA GRANDE
RIVERSIDE, CA 92578

RCRA NonGen / NLR

1025880484
CAP000182428

Relative:
Lower
Actual:
1651 ft.

RCRA NonGen / NLR:
 Date Form Received by Agency: 2007-06-28 00:00:00.0
 Handler Name: MILLS TANK *D
 Handler Address: 14255 VISTA GRANDE
 Handler City,State,Zip: RIVERSIDE, CA 92578
 EPA ID: CAP000182428
 Contact Name: JUDY J ADAMS
 Contact Address: PO BOX 8300
 Contact City,State,Zip: PERRIS, CA 92573
 Contact Telephone: 951-928-3777 x6252
 Contact Fax: Not reported
 Contact Email: ADAMSJ@EMWD.ORG
 Contact Title: Not reported
 EPA Region: 09
 Land Type: Municipal
 Federal Waste Generator Description: Not a generator, verified
 Non-Notifier: Not reported
 Biennial Report Cycle: Not reported
 Accessibility: Not reported
 Active Site Indicator: Not reported
 State District Owner: Not reported
 State District: Not reported
 Mailing Address: PO BOX 8300
 Mailing City,State,Zip: PERRIS, CA 92573
 Owner Name: EASTERN MUNICIPAL WATER DISTRICT
 Owner Type: Municipal
 Operator Name: EASTERN MUNICIPAL WATER DISTRICT
 Operator Type: Municipal
 Short-Term Generator Activity: No
 Importer Activity: No
 Mixed Waste Generator: No
 Transporter Activity: No
 Transfer Facility Activity: No

Map ID
 Direction
 Distance
 Elevation

Site

Database(s)

EDR ID Number
 EPA ID Number

MILLS TANK *D (Continued)

1025880484

Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site Fed-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	2007-07-02 19:08:39.0
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Hazardous Waste Summary:

Waste Code:	D001
Waste Description:	IGNITABLE WASTE
Waste Code:	F003

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

MILLS TANK *D (Continued)

1025880484

Waste Description:

THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste Code:

F005

Waste Description:

THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Handler - Owner Operator:

Owner/Operator Indicator:

Owner

Owner/Operator Name:

EASTERN MUNICIPAL WATER DISTRICT

Legal Status:

Municipal

Date Became Current:

1950-10-16 00:00:00.

Date Ended Current:

Not reported

Owner/Operator Address:

PO BOX 8300

Owner/Operator City,State,Zip:

PERRIS, CA 92572

Owner/Operator Telephone:

Not reported

Owner/Operator Telephone Ext:

Not reported

Owner/Operator Fax:

Not reported

Owner/Operator Email:

Not reported

Owner/Operator Indicator:

Operator

Owner/Operator Name:

EASTERN MUNICIPAL WATER DISTRICT

Legal Status:

Municipal

Date Became Current:

1950-10-16 00:00:00.

Date Ended Current:

Not reported

Owner/Operator Address:

Not reported

Owner/Operator City,State,Zip:

Not reported

Owner/Operator Telephone:

Not reported

Owner/Operator Telephone Ext:

Not reported

Owner/Operator Fax:

Not reported

Owner/Operator Email:

Not reported

Owner/Operator Indicator:

Owner

Owner/Operator Name:

EASTERN MUNICIPAL WATER DISTRICT

Legal Status:

Municipal

Date Became Current:

1950-10-16 00:00:00.

Date Ended Current:

Not reported

Owner/Operator Address:

PO BOX 8300

Owner/Operator City,State,Zip:

PERRIS, CA 92572

Owner/Operator Telephone:

Not reported

Owner/Operator Telephone Ext:

Not reported

Owner/Operator Fax:

Not reported

Owner/Operator Email:

Not reported

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

MILLS TANK *D (Continued)

1025880484

Owner/Operator Indicator:	Operator
Owner/Operator Name:	EASTERN MUNICIPAL WATER DISTRICT
Legal Status:	Municipal
Date Became Current:	1950-10-16 00:00:00.
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	2007-06-28 00:00:00.0
Handler Name:	MILLS TANK *D
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

Receive Date:	2007-03-16 00:00:00.0
Handler Name:	MILLS TANK
Federal Waste Generator Description:	Large Quantity Generator
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	No
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

List of NAICS Codes and Descriptions:

NAICS Code:	22131
NAICS Description:	WATER SUPPLY AND IRRIGATION SYSTEMS

Facility Has Received Notices of Violations:

Violations:	No Violations Found
-------------	---------------------

Evaluation Action Summary:

Evaluations:	No Evaluations Found
--------------	----------------------

DRAFT

MAP FINDINGS

Map ID Direction Distance Elevation Site Database(s) EDR ID Number EPA ID Number

2 **9TH STREET ITALIAN** **EDR Hist Auto** **1020221487**
West **19638 WEBSTER RD** **N/A**
< 1/8 **RIVERSIDE, CA 92508**
0.114 mi.
600 ft.

Relative: EDR Hist Auto
Lower

Actual: Year: Name: Type:
1623 ft. 2013 9TH STREET ITALIAN Gasoline Service Stations
2014 9TH STREET ITALIAN Gasoline Service Stations

3 **PAUL SMALL** **RCRA NonGen / NLR** **1026487234**
NNW **14150 BARTON ST** **CAC003093415**
1/8-1/4 **RIVERSIDE, CA 92508**
0.140 mi.
741 ft.

Relative: RCRA NonGen / NLR:
Lower

Actual: Date Form Received by Agency: 2020-11-17 00:00:00.0
1649 ft. Handler Name: PAUL SMALL
Handler Address: 14150 BARTON ST
Handler City,State,Zip: RIVERSIDE, CA 92508
EPA ID: CAC003093415
Contact Name: PAUL SMALL
Contact Address: 14150 BARTON ST
Contact City,State,Zip: RIVERSIDE, CA 92508
Contact Telephone: 951-653-0086
Contact Fax: Not reported
Contact Email: SCHEDULING@PWSEI.COM
Contact Title: Not reported
EPA Region: 09
Land Type: Not reported
Federal Waste Generator Description: Not a generator, verified
Non-Notifier: Not reported
Biennial Report Cycle: Not reported
Accessibility: Not reported
Active Site Indicator: Not reported
State District Owner: Not reported
State District: Not reported
Mailing Address: 14150 BARTON ST
Mailing City,State,Zip: RIVERSIDE, CA 92508
Owner Name: PAUL SMALL
Owner Type: Other
Operator Name: PAUL SMALL
Operator Type: Other
Short-Term Generator Activity: No
Importer Activity: No
Mixed Waste Generator: No
Transporter Activity: No
Transfer Facility Activity: No
Recycler Activity with Storage: No
Small Quantity On-Site Burner Exemption: No
Smelting Melting and Refining Furnace Exemption: No
Underground Injection Control: No
Off-Site Waste Receipt: No
Universal Waste Indicator: No
Universal Waste Destination Facility: No
Federal Universal Waste: No
Active Site Fed-Reg Treatment Storage and Disposal Facility: Not reported

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

PAUL SMALL (Continued)

1026487234

Active Site Converter Treatment storage and Disposal Facility:	Not reported
Active Site State-Reg Treatment Storage and Disposal Facility:	Not reported
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
Commercial TSD Indicator:	No
Treatment Storage and Disposal Type:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
Permit Renewals Workload Universe:	Not reported
Permit Workload Universe:	Not reported
Permit Progress Universe:	Not reported
Post-Closure Workload Universe:	Not reported
Closure Workload Universe:	Not reported
202 GPRA Corrective Action Baseline:	No
Corrective Action Workload Universe:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
TSDFs Potentially Subject to CA Under 3004 (u)/(v) Universe:	No
TSDFs Only Subject to CA under Discretionary Auth Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No
Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Operating TSDF Universe:	Not reported
Full Enforcement Universe:	Not reported
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	2020-11-30 19:32:25.0
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name:	PAUL SMALL
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	14150 BARTON ST
Owner/Operator City,State,Zip:	RIVERSIDE, CA 92508
Owner/Operator Telephone:	951-653-0086
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator: Operator

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

PAUL SMALL (Continued)

1026487234

Owner/Operator Name:	PAUL SMALL
Legal Status:	Other
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	14150 BARTON ST
Owner/Operator City,State,Zip:	RIVERSIDE, CA 92508
Owner/Operator Telephone:	951-653-0086
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	2020-11-17 00:00:00.0
Handler Name:	PAUL SMALL
Federal Waste Generator Description:	Not a generator, verified
State District Owner:	Not reported
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported

List of NAICS Codes and Descriptions:

NAICS Code:	56299
NAICS Description:	ALL OTHER WASTE MANAGEMENT SERVICES

Facility Has Received Notices of Violations:

Violations:	No Violations Found
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Evaluation Action Summary:

Evaluations:	No Evaluations Found
--------------	----------------------

4
SSW
1/4-1/2
0.436 mi.
2304 ft.

BENJAMIN FRANKLIN ELEMENTARY SCHOOL
19661 ORANGE TERRACE PARKWAY
RIVERSIDE, CA 92508

ENVIROSTOR **S107027265**
SCH **N/A**
CERS

Relative:
Higher
Actual:
1760 ft.

ENVIROSTOR:	
Name:	BENJAMIN FRANKLIN ELEMENTARY SCHOOL
Address:	19661 ORANGE TERRACE PARKWAY
City,State,Zip:	RIVERSIDE, CA 92508-3256
Facility ID:	33820017
Status:	Inactive - Withdrawn
Status Date:	02/19/2002
Site Code:	404301
Site Type:	School Investigation
Site Type Detailed:	School
Acres:	11
NPL:	NO
Regulatory Agencies:	DTSC
Lead Agency:	DTSC

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

BENJAMIN FRANKLIN ELEMENTARY SCHOOL (Continued)

S107027265

Program Manager: Not reported
Supervisor: Javier Hinojosa
Division Branch: Southern California Schools & Brownfields Outreach
Assembly: 61
Senate: 31
Special Program: Not reported
Restricted Use: NO
Site Mgmt Req: NONE SPECIFIED
Funding: School District
Latitude: 33.89440
Longitude: -117.3209
APN: NONE SPECIFIED
Past Use: * EDUCATIONAL SERVICES
Potential COC: NONE SPECIFIED
Confirmed COC: NONE SPECIFIED
Potential Description: NONE SPECIFIED
Alias Name: RIVERSIDE USD-BENJAMIN FRANKLIN ELEM
Alias Type: Alternate Name
Alias Name: 404301
Alias Type: Project Code (Site Code)
Alias Name: 33820017
Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 02/19/2002
Comments: The school project was dropped in December 2001.

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

SCH:

Name: BENJAMIN FRANKLIN ELEMENTARY SCHOOL
Address: 19661 ORANGE TERRACE PARKWAY
City,State,Zip: RIVERSIDE, CA 92508-3256
Facility ID: 33820017
Site Type: School Investigation
Site Type Detail: School
Site Mgmt. Req.: NONE SPECIFIED
Acres: 11
National Priorities List: NO
Cleanup Oversight Agencies: DTSC
Lead Agency: DTSC
Lead Agency Description: * DTSC
Project Manager: Not reported
Supervisor: Javier Hinojosa
Division Branch: Southern California Schools & Brownfields Outreach

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

BENJAMIN FRANKLIN ELEMENTARY SCHOOL (Continued)

S107027265

Site Code: 404301
Assembly: 61
Senate: 31
Special Program Status: Not reported
Status: Inactive - Withdrawn
Status Date: 02/19/2002
Restricted Use: NO
Funding: School District
Latitude: 33.89440
Longitude: -117.3209
APN: NONE SPECIFIED
Past Use: * EDUCATIONAL SERVICES
Potential COC: NONE SPECIFIED
Confirmed COC: NONE SPECIFIED
Potential Description: NONE SPECIFIED
Alias Name: RIVERSIDE USD-BENJAMIN FRANKLIN ELEM
Alias Type: Alternate Name
Alias Name: 404301
Alias Type: Project Code (Site Code)
Alias Name: 33820017
Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 02/19/2002
Comments: The school project was dropped in December 2001.

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

CERS:

Name: BENJAMIN FRANKLIN EL
Address: 19661 ORANGE TERRACE PARKWAY
City,State,Zip: RIVERSIDE, CA 92508-3256
Site ID: 335073
CERS ID: 33820017
CERS Description: School Investigation

Affiliation:

Affiliation Type Desc: Supervisor
Entity Name: JAVIER HINOJOSA
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

5
East
1/2-1
0.785 mi.
4147 ft.

MARCH USAR
3,545 ACRES; E. OF RIVERSIDE
RIVERSIDE, CA 92518

ENVIROSTOR **S107736677**
N/A

Relative:
Lower

ENVIROSTOR:

Actual:
1567 ft.

Name: MARCH USAR
 Address: 3,545 ACRES; E. OF RIVERSIDE
 City,State,Zip: RIVERSIDE, CA 92518
 Facility ID: 71000040
 Status: No Further Action
 Status Date: 04/05/2005
 Site Code: 400685
 Site Type: Military Evaluation
 Site Type Detailed: Open Base
 Acres: 3545
 NPL: NO
 Regulatory Agencies: RWQCB 8 - Santa Ana
 Lead Agency: RWQCB 8 - Santa Ana
 Program Manager: Not reported
 Supervisor: Not reported
 Division Branch: Cleanup Cypress
 Assembly: 64
 Senate: Not reported
 Special Program: Not reported
 Restricted Use: NO
 Site Mgmt Req: NONE SPECIFIED
 Funding: DERA
 Latitude: Not reported
 Longitude: Not reported
 APN: NONE SPECIFIED
 Past Use: NONE SPECIFIED
 Potential COC: NONE SPECIFIED
 Confirmed COC: NONE SPECIFIED
 Potential Description: NONE SPECIFIED
 Alias Name: 400685
 Alias Type: Project Code (Site Code)
 Alias Name: 71000040
 Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: Not reported
 Completed Sub Area Name: Not reported
 Completed Document Type: Not reported
 Completed Date: Not reported
 Comments: Not reported

Future Area Name: Not reported
 Future Sub Area Name: Not reported
 Future Document Type: Not reported
 Future Due Date: Not reported
 Schedule Area Name: Not reported
 Schedule Sub Area Name: Not reported
 Schedule Document Type: Not reported
 Schedule Due Date: Not reported
 Schedule Revised Date: Not reported

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

6
WSW
1/2-1
0.840 mi.
4433 ft.

RIVERSIDE ELEMENTARY SCHOOL NO. 29
WOOD ROAD/BERT ROAD
RIVERSIDE, CA 92504

ENVIROSTOR S107737159
SCH N/A

Relative:
Lower

ENVIROSTOR:

Actual:
1602 ft.

Name: RIVERSIDE ELEMENTARY SCHOOL NO. 29
 Address: WOOD ROAD/BERT ROAD
 City,State,Zip: RIVERSIDE, CA 92504
 Facility ID: 33010028
 Status: No Further Action
 Status Date: 10/04/2001
 Site Code: 404063
 Site Type: School Investigation
 Site Type Detailed: School
 Acres: 10
 NPL: NO
 Regulatory Agencies: DTSC
 Lead Agency: DTSC
 Program Manager: Not reported
 Supervisor: Javier Hinojosa
 Division Branch: Southern California Schools & Brownfields Outreach
 Assembly: 61
 Senate: 31
 Special Program: Not reported
 Restricted Use: NO
 Site Mgmt Req: NONE SPECIFIED
 Funding: School District
 Latitude: 33.9119
 Longitude: -117.4008
 APN: NONE SPECIFIED
 Past Use: AGRICULTURAL - ROW CROPS
 Potential COC: Chromium VI DDT DDE Nickel (soluble salts)
 Confirmed COC: NONE SPECIFIED
 Potential Description: SOIL
 Alias Name: RIVERSIDE ELEMENTARY SCH. #29 (PROPOSED)
 Alias Type: Alternate Name
 Alias Name: RIVERSIDE ELEMENTARY SCHOOL #29
 Alias Type: Alternate Name
 Alias Name: RIVERSIDE UNIFIED SCHOOL DISTRICT
 Alias Type: Alternate Name
 Alias Name: RIVERSIDE USD-ELEM #29/CDE
 Alias Type: Alternate Name
 Alias Name: RIVERSIDE USD-PROP. ELEM SCHOOL #29/VCA
 Alias Type: Alternate Name
 Alias Name: 404024
 Alias Type: Project Code (Site Code)
 Alias Name: 404063
 Alias Type: Project Code (Site Code)
 Alias Name: 33010028
 Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: PROJECT WIDE
 Completed Sub Area Name: Not reported
 Completed Document Type: Environmental Oversight Agreement
 Completed Date: 11/21/2000
 Comments: Not reported

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

RIVERSIDE ELEMENTARY SCHOOL NO. 29 (Continued)

S107737159

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 10/05/2001
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 01/12/2015
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 10/04/2001
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Phase 1
Completed Date: 02/03/2000
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Workplan
Completed Date: 04/01/2001
Comments: wp approved

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

SCH:

Name: RIVERSIDE ELEMENTARY SCHOOL NO. 29
Address: WOOD ROAD/BERT ROAD
City,State,Zip: RIVERSIDE, CA 92504
Facility ID: 33010028
Site Type: School Investigation
Site Type Detail: School
Site Mgmt. Req.: NONE SPECIFIED
Acres: 10
National Priorities List: NO
Cleanup Oversight Agencies: DTSC
Lead Agency: DTSC
Lead Agency Description: * DTSC
Project Manager: Not reported
Supervisor: Javier Hinojosa
Division Branch: Southern California Schools & Brownfields Outreach

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

RIVERSIDE ELEMENTARY SCHOOL NO. 29 (Continued)

S107737159

Site Code: 404063
Assembly: 61
Senate: 31
Special Program Status: Not reported
Status: No Further Action
Status Date: 10/04/2001
Restricted Use: NO
Funding: School District
Latitude: 33.9119
Longitude: -117.4008
APN: NONE SPECIFIED
Past Use: AGRICULTURAL - ROW CROPS
Potential COC: Chromium VI, Chromium VI, DDT, DDE, Nickel (soluble salts)
Confirmed COC: NONE SPECIFIED
Potential Description: SOIL
Alias Name: RIVERSIDE ELEMENTARY SCH. #29 (PROPOSED)
Alias Type: Alternate Name
Alias Name: RIVERSIDE ELEMENTARY SCHOOL #29
Alias Type: Alternate Name
Alias Name: RIVERSIDE UNIFIED SCHOOL DISTRICT
Alias Type: Alternate Name
Alias Name: RIVERSIDE USD-ELEM #29/CDE
Alias Type: Alternate Name
Alias Name: RIVERSIDE USD-PROP. ELEM SCHOOL #29/VCA
Alias Type: Alternate Name
Alias Name: 404024
Alias Type: Project Code (Site Code)
Alias Name: 404063
Alias Type: Project Code (Site Code)
Alias Name: 33010028
Alias Type: Envirostor ID Number

Completed Info:

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Environmental Oversight Agreement
Completed Date: 11/21/2000
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 10/05/2001
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Cost Recovery Closeout Memo
Completed Date: 01/12/2015
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 10/04/2001
Comments: Not reported

Completed Area Name: PROJECT WIDE

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

RIVERSIDE ELEMENTARY SCHOOL NO. 29 (Continued)

S107737159

Completed Sub Area Name: Not reported
Completed Document Type: Phase 1
Completed Date: 02/03/2000
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Workplan
Completed Date: 04/01/2001
Comments: wp approved

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

DRAFT

ORPHAN SUMMARY

Count: 4 records.

City	EDR ID	Site Name	Site Address	Zip	Database(s)
MORENO VALLEY	S107539751		ON CACTUS	92518	CDL
MORENO VALLEY	S125431918	ALESSANDRO PROPERTIES	14044 OLD 215 FRONTAGE ROAD AN	92553	ENVIROSTOR, VCP
RIVERSIDE	S107540987		VACANT LOT ON JOHN F KENNEDY D		CDL
RIVERSIDE	S107526644		1/4 ML W OF KRAMEA ST & BART	92507	CDL

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 04/27/2021	Source: EPA
Date Data Arrived at EDR: 05/03/2021	Telephone: N/A
Date Made Active in Reports: 05/19/2021	Last EDR Contact: 06/29/2021
Number of Days to Update: 16	Next Scheduled EDR Contact: 10/11/2021
	Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 04/27/2021	Source: EPA
Date Data Arrived at EDR: 05/03/2021	Telephone: N/A
Date Made Active in Reports: 05/19/2021	Last EDR Contact: 06/29/2021
Number of Days to Update: 16	Next Scheduled EDR Contact: 10/11/2021
	Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 04/27/2021
Date Data Arrived at EDR: 05/03/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 16

Source: EPA
Telephone: N/A
Last EDR Contact: 06/29/2021
Next Scheduled EDR Contact: 10/11/2021
Data Release Frequency: Quarterly

Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 02/22/2021
Date Data Arrived at EDR: 03/30/2021
Date Made Active in Reports: 06/17/2021
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 06/23/2021
Next Scheduled EDR Contact: 10/11/2021
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly known as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 04/27/2021
Date Data Arrived at EDR: 05/03/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 16

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 06/29/2021
Next Scheduled EDR Contact: 10/25/2021
Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 04/27/2021	Source: EPA
Date Data Arrived at EDR: 05/03/2021	Telephone: 800-424-9346
Date Made Active in Reports: 05/19/2021	Last EDR Contact: 06/29/2021
Number of Days to Update: 16	Next Scheduled EDR Contact: 10/25/2021
	Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 03/22/2021	Source: EPA
Date Data Arrived at EDR: 03/23/2021	Telephone: 800-424-9346
Date Made Active in Reports: 05/19/2021	Last EDR Contact: 06/21/2021
Number of Days to Update: 57	Next Scheduled EDR Contact: 10/04/2021
	Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 03/22/2021	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/23/2021	Telephone: (415) 495-8895
Date Made Active in Reports: 05/19/2021	Last EDR Contact: 06/21/2021
Number of Days to Update: 57	Next Scheduled EDR Contact: 10/04/2021
	Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/22/2021	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/23/2021	Telephone: (415) 495-8895
Date Made Active in Reports: 05/19/2021	Last EDR Contact: 06/21/2021
Number of Days to Update: 57	Next Scheduled EDR Contact: 10/04/2021
	Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 03/22/2021	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/23/2021	Telephone: (415) 495-8895
Date Made Active in Reports: 05/19/2021	Last EDR Contact: 06/21/2021
Number of Days to Update: 57	Next Scheduled EDR Contact: 10/04/2021
	Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/22/2021	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/23/2021	Telephone: (415) 495-8895
Date Made Active in Reports: 05/19/2021	Last EDR Contact: 06/21/2021
Number of Days to Update: 57	Next Scheduled EDR Contact: 10/04/2021
	Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 05/10/2021	Source: Department of the Navy
Date Data Arrived at EDR: 05/13/2021	Telephone: 843-820-7326
Date Made Active in Reports: 08/03/2021	Last EDR Contact: 05/05/2021
Number of Days to Update: 82	Next Scheduled EDR Contact: 08/23/2021
	Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 02/22/2021	Source: Environmental Protection Agency
Date Data Arrived at EDR: 02/23/2021	Telephone: 703-603-0695
Date Made Active in Reports: 05/19/2021	Last EDR Contact: 05/21/2021
Number of Days to Update: 85	Next Scheduled EDR Contact: 09/06/2021
	Data Release Frequency: Varies

US INST CONTROLS: Institutional Controls Sites List

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 02/22/2021	Source: Environmental Protection Agency
Date Data Arrived at EDR: 02/23/2021	Telephone: 703-603-0695
Date Made Active in Reports: 05/19/2021	Last EDR Contact: 05/21/2021
Number of Days to Update: 85	Next Scheduled EDR Contact: 09/06/2021
	Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 03/22/2021
Date Data Arrived at EDR: 03/24/2021
Date Made Active in Reports: 06/17/2021
Number of Days to Update: 85

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 06/17/2021
Next Scheduled EDR Contact: 10/04/2021
Data Release Frequency: Quarterly

State- and tribal - equivalent NPL

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 04/23/2021
Date Data Arrived at EDR: 04/23/2021
Date Made Active in Reports: 07/12/2021
Number of Days to Update: 80

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 07/22/2021
Next Scheduled EDR Contact: 11/08/2021
Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifies sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 04/23/2021
Date Data Arrived at EDR: 04/23/2021
Date Made Active in Reports: 07/12/2021
Number of Days to Update: 80

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 07/22/2021
Next Scheduled EDR Contact: 11/08/2021
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inventory of solid waste disposal facilities or landfills. These may be active or inactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 05/10/2021
Date Data Arrived at EDR: 05/11/2021
Date Made Active in Reports: 07/27/2021
Number of Days to Update: 77

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 05/11/2021
Next Scheduled EDR Contact: 08/23/2021
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

LUST REG 5: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008	Source: California Regional Water Quality Control Board Central Valley Region (5)
Date Data Arrived at EDR: 07/22/2008	Telephone: 916-464-4834
Date Made Active in Reports: 07/31/2008	Last EDR Contact: 07/01/2011
Number of Days to Update: 9	Next Scheduled EDR Contact: 10/17/2011
	Data Release Frequency: No Update Planned

LUST REG 4: Underground Storage Tank Leak List

Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004	Source: California Regional Water Quality Control Board Los Angeles Region (4)
Date Data Arrived at EDR: 09/07/2004	Telephone: 213-576-6710
Date Made Active in Reports: 10/12/2004	Last EDR Contact: 09/06/2011
Number of Days to Update: 35	Next Scheduled EDR Contact: 12/19/2011
	Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List

Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004	Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Date Data Arrived at EDR: 10/20/2004	Telephone: 510-622-2433
Date Made Active in Reports: 11/19/2004	Last EDR Contact: 09/19/2011
Number of Days to Update: 30	Next Scheduled EDR Contact: 01/02/2012
	Data Release Frequency: No Update Planned

LUST REG 1: Active Toxic Site Investigation

Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001	Source: California Regional Water Quality Control Board North Coast (1)
Date Data Arrived at EDR: 02/28/2001	Telephone: 707-570-3769
Date Made Active in Reports: 03/29/2001	Last EDR Contact: 08/01/2011
Number of Days to Update: 29	Next Scheduled EDR Contact: 11/14/2011
	Data Release Frequency: No Update Planned

LUST REG 6V: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005	Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Date Data Arrived at EDR: 06/07/2005	Telephone: 760-241-7365
Date Made Active in Reports: 06/29/2005	Last EDR Contact: 09/12/2011
Number of Days to Update: 22	Next Scheduled EDR Contact: 12/26/2011
	Data Release Frequency: No Update Planned

LUST REG 6L: Leaking Underground Storage Tank Case Listing

For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003	Source: California Regional Water Quality Control Board Lahontan Region (6)
Date Data Arrived at EDR: 09/10/2003	Telephone: 530-542-5572
Date Made Active in Reports: 10/07/2003	Last EDR Contact: 09/12/2011
Number of Days to Update: 27	Next Scheduled EDR Contact: 12/26/2011
	Data Release Frequency: No Update Planned

LUST REG 3: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003	Source: California Regional Water Quality Control Board Central Coast Region (3)
Date Data Arrived at EDR: 05/19/2003	Telephone: 805-542-4786
Date Made Active in Reports: 06/02/2003	Last EDR Contact: 07/18/2011
Number of Days to Update: 14	Next Scheduled EDR Contact: 10/31/2011
	Data Release Frequency: No Update Planned

LUST: Leaking Underground Fuel Tank Report (GEOTRACKER)

Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 03/08/2021	Source: State Water Resources Control Board
Date Data Arrived at EDR: 03/09/2021	Telephone: see region list
Date Made Active in Reports: 03/30/2021	Last EDR Contact: 06/03/2021
Number of Days to Update: 21	Next Scheduled EDR Contact: 09/20/2021
	Data Release Frequency: Quarterly

LUST REG 7: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004	Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Date Data Arrived at EDR: 02/26/2004	Telephone: 760-776-8943
Date Made Active in Reports: 03/24/2004	Last EDR Contact: 08/01/2011
Number of Days to Update: 27	Next Scheduled EDR Contact: 11/14/2011
	Data Release Frequency: No Update Planned

LUST REG 8: Leaking Underground Storage Tanks

California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005	Source: California Regional Water Quality Control Board Santa Ana Region (8)
Date Data Arrived at EDR: 02/15/2005	Telephone: 909-782-4496
Date Made Active in Reports: 03/28/2005	Last EDR Contact: 08/15/2011
Number of Days to Update: 41	Next Scheduled EDR Contact: 11/28/2011
	Data Release Frequency: No Update Planned

LUST REG 9: Leaking Underground Storage Tank Report

Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001	Source: California Regional Water Quality Control Board San Diego Region (9)
Date Data Arrived at EDR: 04/23/2001	Telephone: 858-637-5595
Date Made Active in Reports: 05/21/2001	Last EDR Contact: 09/26/2011
Number of Days to Update: 28	Next Scheduled EDR Contact: 01/09/2012
	Data Release Frequency: No Update Planned

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 04/08/2020	Source: EPA Region 6
Date Data Arrived at EDR: 05/20/2020	Telephone: 214-665-6597
Date Made Active in Reports: 08/12/2020	Last EDR Contact: 06/11/2021
Number of Days to Update: 84	Next Scheduled EDR Contact: 11/01/2021
	Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land

A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 10/01/2020
Date Data Arrived at EDR: 12/16/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 86

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 09/30/2020
Date Data Arrived at EDR: 12/22/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 80

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 10/02/2020
Date Data Arrived at EDR: 12/18/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 84

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 06/17/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 11/12/2020
Date Data Arrived at EDR: 12/16/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 86

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 10/07/2020
Date Data Arrived at EDR: 12/16/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 86

Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 10/09/2020
Date Data Arrived at EDR: 12/16/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 86

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 10/01/2020
Date Data Arrived at EDR: 12/16/2020
Date Made Active in Reports: 03/12/2021
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

CPS-SLIC: Statewide SLIC Cases (GEOTRACKER)

Cleanup Program Sites (CPS; also known as Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 03/08/2021	Source: State Water Resources Control Board
Date Data Arrived at EDR: 03/09/2021	Telephone: 866-480-1028
Date Made Active in Reports: 03/30/2021	Last EDR Contact: 06/03/2021
Number of Days to Update: 21	Next Scheduled EDR Contact: 09/20/2021
	Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003	Source: California Regional Water Quality Control Board, North Coast Region (1)
Date Data Arrived at EDR: 04/07/2003	Telephone: 707-576-2220
Date Made Active in Reports: 04/25/2003	Last EDR Contact: 08/01/2011
Number of Days to Update: 18	Next Scheduled EDR Contact: 11/14/2011
	Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004	Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Date Data Arrived at EDR: 10/20/2004	Telephone: 510-286-0457
Date Made Active in Reports: 11/19/2004	Last EDR Contact: 09/19/2011
Number of Days to Update: 30	Next Scheduled EDR Contact: 01/02/2012
	Data Release Frequency: No Update Planned

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006	Source: California Regional Water Quality Control Board Central Coast Region (3)
Date Data Arrived at EDR: 05/18/2006	Telephone: 805-549-3147
Date Made Active in Reports: 06/15/2006	Last EDR Contact: 07/18/2011
Number of Days to Update: 28	Next Scheduled EDR Contact: 10/31/2011
	Data Release Frequency: No Update Planned

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004	Source: Region Water Quality Control Board Los Angeles Region (4)
Date Data Arrived at EDR: 11/18/2004	Telephone: 213-576-6600
Date Made Active in Reports: 01/04/2005	Last EDR Contact: 07/01/2011
Number of Days to Update: 47	Next Scheduled EDR Contact: 10/17/2011
	Data Release Frequency: No Update Planned

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005	Source: Regional Water Quality Control Board Central Valley Region (5)
Date Data Arrived at EDR: 04/05/2005	Telephone: 916-464-3291
Date Made Active in Reports: 04/21/2005	Last EDR Contact: 09/12/2011
Number of Days to Update: 16	Next Scheduled EDR Contact: 12/26/2011
	Data Release Frequency: No Update Planned

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 6L: SLIC Sites

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11

Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: No Update Planned

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing

A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/29/2021
Date Data Arrived at EDR: 02/17/2021
Date Made Active in Reports: 03/22/2021
Number of Days to Update: 33

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 06/29/2021
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: Varies

UST CLOSURE: Proposed Closure of Underground Storage Tank (UST) Cases

UST cases that are being considered for closure by either the State Water Resources Control Board or the Executive Director have been posted for a 60-day public comment period. UST Case Closures being proposed for consideration by the State Water Resources Control Board. These are primarily UST cases that meet closure criteria under the decisional framework in State Water Board Resolution No. 92-49 and other Board orders. UST Case Closures proposed for consideration by the Executive Director pursuant to State Water Board Resolution No. 2012-0061. These are cases that meet the criteria of the Low-Threat UST Case Closure Policy. UST Case Closure Review Denials and Approved Orders.

Date of Government Version: 03/05/2021	Source: State Water Resources Control Board
Date Data Arrived at EDR: 03/09/2021	Telephone: 916-327-7844
Date Made Active in Reports: 04/01/2021	Last EDR Contact: 06/04/2021
Number of Days to Update: 23	Next Scheduled EDR Contact: 09/20/2021
	Data Release Frequency: Varies

UST: Active UST Facilities

Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 03/08/2021	Source: SWRCB
Date Data Arrived at EDR: 03/09/2021	Telephone: 916-341-5851
Date Made Active in Reports: 03/31/2021	Last EDR Contact: 06/03/2021
Number of Days to Update: 22	Next Scheduled EDR Contact: 09/20/2021
	Data Release Frequency: Semi-Annually

MILITARY UST SITES: Military UST Sites (GEOTRACKER)

Military ust sites

Date of Government Version: 03/08/2021	Source: State Water Resources Control Board
Date Data Arrived at EDR: 03/09/2021	Telephone: 866-480-1028
Date Made Active in Reports: 03/30/2021	Last EDR Contact: 06/03/2021
Number of Days to Update: 21	Next Scheduled EDR Contact: 09/20/2021
	Data Release Frequency: Varies

AST: Aboveground Petroleum Storage Tank Facilities

A listing of aboveground storage tank petroleum storage tank locations.

Date of Government Version: 07/06/2016	Source: California Environmental Protection Agency
Date Data Arrived at EDR: 07/12/2016	Telephone: 916-327-5092
Date Made Active in Reports: 09/19/2016	Last EDR Contact: 06/08/2021
Number of Days to Update: 69	Next Scheduled EDR Contact: 09/27/2021
	Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 10/02/2020	Source: EPA Region 4
Date Data Arrived at EDR: 12/18/2020	Telephone: 404-562-9424
Date Made Active in Reports: 03/12/2021	Last EDR Contact: 06/17/2021
Number of Days to Update: 84	Next Scheduled EDR Contact: 11/01/2021
	Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 11/12/2020	Source: EPA Region 10
Date Data Arrived at EDR: 12/16/2020	Telephone: 206-553-2857
Date Made Active in Reports: 03/12/2021	Last EDR Contact: 06/11/2021
Number of Days to Update: 86	Next Scheduled EDR Contact: 11/01/2021
	Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 10/01/2020	Source: EPA, Region 1
Date Data Arrived at EDR: 12/16/2020	Telephone: 617-918-1313
Date Made Active in Reports: 03/12/2021	Last EDR Contact: 06/11/2021
Number of Days to Update: 86	Next Scheduled EDR Contact: 11/01/2021
	Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 10/01/2020	Source: EPA Region 9
Date Data Arrived at EDR: 12/16/2020	Telephone: 415-972-3368
Date Made Active in Reports: 03/12/2021	Last EDR Contact: 06/11/2021
Number of Days to Update: 86	Next Scheduled EDR Contact: 11/01/2021
	Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 09/30/2020	Source: EPA Region 7
Date Data Arrived at EDR: 12/22/2020	Telephone: 913-551-7003
Date Made Active in Reports: 03/12/2021	Last EDR Contact: 06/11/2021
Number of Days to Update: 80	Next Scheduled EDR Contact: 11/01/2021
	Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 10/07/2020	Source: EPA Region 5
Date Data Arrived at EDR: 12/16/2020	Telephone: 312-886-6136
Date Made Active in Reports: 03/12/2021	Last EDR Contact: 06/11/2021
Number of Days to Update: 86	Next Scheduled EDR Contact: 11/01/2021
	Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 04/08/2020	Source: EPA Region 6
Date Data Arrived at EDR: 05/20/2020	Telephone: 214-665-7591
Date Made Active in Reports: 08/12/2020	Last EDR Contact: 06/11/2021
Number of Days to Update: 84	Next Scheduled EDR Contact: 11/01/2021
	Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 10/09/2020	Source: EPA Region 8
Date Data Arrived at EDR: 12/16/2020	Telephone: 303-312-6137
Date Made Active in Reports: 03/12/2021	Last EDR Contact: 06/11/2021
Number of Days to Update: 86	Next Scheduled EDR Contact: 11/01/2021
	Data Release Frequency: Varies

State and tribal voluntary cleanup sites

VCP: Voluntary Cleanup Program Properties

Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 04/23/2021	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 04/23/2021	Telephone: 916-323-3400
Date Made Active in Reports: 07/12/2021	Last EDR Contact: 07/22/2021
Number of Days to Update: 80	Next Scheduled EDR Contact: 11/08/2021
	Data Release Frequency: Quarterly

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015	Source: EPA, Region 1
Date Data Arrived at EDR: 09/29/2015	Telephone: 617-918-1102
Date Made Active in Reports: 02/18/2016	Last EDR Contact: 06/15/2021
Number of Days to Update: 142	Next Scheduled EDR Contact: 10/04/2021
	Data Release Frequency: No Update Planned

INDIAN VCP R7: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008	Source: EPA, Region 7
Date Data Arrived at EDR: 04/22/2008	Telephone: 913-551-7365
Date Made Active in Reports: 05/19/2008	Last EDR Contact: 07/08/2021
Number of Days to Update: 27	Next Scheduled EDR Contact: 07/20/2009
	Data Release Frequency: No Update Planned

State and tribal Brownfields sites

BROWNFIELDS: Considered Brownfields Sites Listing

A listing of sites the SWRCB considers to be Brownfields since these are sites have come to them through the MOA Process.

Date of Government Version: 03/22/2021	Source: State Water Resources Control Board
Date Data Arrived at EDR: 03/23/2021	Telephone: 916-323-7905
Date Made Active in Reports: 06/10/2021	Last EDR Contact: 06/17/2021
Number of Days to Update: 79	Next Scheduled EDR Contact: 10/04/2021
	Data Release Frequency: Quarterly

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 03/15/2021	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/16/2021	Telephone: 202-566-2777
Date Made Active in Reports: 06/10/2021	Last EDR Contact: 06/10/2021
Number of Days to Update: 86	Next Scheduled EDR Contact: 09/27/2021
	Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT: Waste Management Unit Database

Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000	Source: State Water Resources Control Board
Date Data Arrived at EDR: 04/10/2000	Telephone: 916-227-4448
Date Made Active in Reports: 05/10/2000	Last EDR Contact: 07/20/2021
Number of Days to Update: 30	Next Scheduled EDR Contact: 11/08/2021
	Data Release Frequency: No Update Planned

SWRCY: Recycler Database

A listing of recycling facilities in California.

Date of Government Version: 03/09/2021	Source: Department of Conservation
Date Data Arrived at EDR: 03/09/2021	Telephone: 916-323-3836
Date Made Active in Reports: 03/31/2021	Last EDR Contact: 06/04/2021
Number of Days to Update: 22	Next Scheduled EDR Contact: 09/20/2021
	Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing

A listing of registered waste tire haulers.

Date of Government Version: 11/23/2020	Source: Integrated Waste Management Board
Date Data Arrived at EDR: 11/23/2020	Telephone: 916-341-6422
Date Made Active in Reports: 02/08/2021	Last EDR Contact: 06/15/2021
Number of Days to Update: 77	Next Scheduled EDR Contact: 08/23/2021
	Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998	Source: Environmental Protection Agency
Date Data Arrived at EDR: 12/03/2007	Telephone: 703-308-8245
Date Made Active in Reports: 01/24/2008	Last EDR Contact: 07/20/2021
Number of Days to Update: 52	Next Scheduled EDR Contact: 11/08/2021
	Data Release Frequency: No Update Planned

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985	Source: Environmental Protection Agency
Date Data Arrived at EDR: 08/09/2004	Telephone: 800-424-9346
Date Made Active in Reports: 09/17/2004	Last EDR Contact: 06/09/2004
Number of Days to Update: 39	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009	Source: EPA, Region 9
Date Data Arrived at EDR: 05/07/2009	Telephone: 415-947-4219
Date Made Active in Reports: 09/21/2009	Last EDR Contact: 07/13/2021
Number of Days to Update: 137	Next Scheduled EDR Contact: 11/01/2021
	Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land

A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014	Source: Department of Health & Human Services, Indian Health Service
Date Data Arrived at EDR: 08/06/2014	Telephone: 301-443-1452
Date Made Active in Reports: 01/29/2015	Last EDR Contact: 07/20/2021
Number of Days to Update: 176	Next Scheduled EDR Contact: 11/08/2021
	Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 05/18/2021	Source: Drug Enforcement Administration
Date Data Arrived at EDR: 05/18/2021	Telephone: 202-307-1000
Date Made Active in Reports: 08/03/2021	Last EDR Contact: 05/22/2021
Number of Days to Update: 77	Next Scheduled EDR Contact: 09/06/2021
	Data Release Frequency: No Update Planned

HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005	Source: Department of Toxic Substance Control
Date Data Arrived at EDR: 08/03/2006	Telephone: 916-323-3400
Date Made Active in Reports: 08/24/2006	Last EDR Contact: 02/23/2009
Number of Days to Update: 21	Next Scheduled EDR Contact: 05/25/2009
	Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 04/23/2021	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 04/23/2021	Telephone: 916-323-3400
Date Made Active in Reports: 07/12/2021	Last EDR Contact: 07/22/2021
Number of Days to Update: 80	Next Scheduled EDR Contact: 11/08/2021
	Data Release Frequency: Quarterly

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 12/31/2019	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 01/20/2021	Telephone: 916-255-6504
Date Made Active in Reports: 04/08/2021	Last EDR Contact: 07/13/2021
Number of Days to Update: 78	Next Scheduled EDR Contact: 10/18/2021
	Data Release Frequency: Varies

CERS HAZ WASTE: CERS HAZ WASTE

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs.

Date of Government Version: 04/19/2021
Date Data Arrived at EDR: 04/20/2021
Date Made Active in Reports: 07/07/2021
Number of Days to Update: 78

Source: CalEPA
Telephone: 916-323-2514
Last EDR Contact: 07/15/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Quarterly

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 05/18/2021
Date Data Arrived at EDR: 05/18/2021
Date Made Active in Reports: 08/03/2021
Number of Days to Update: 77

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 05/18/2021
Next Scheduled EDR Contact: 09/06/2021
Data Release Frequency: Quarterly

PFAS: PFAS Contamination Site Location Listing

A listing of PFAS contaminated sites included in the GeoTracker database.

Date of Government Version: 02/24/2021
Date Data Arrived at EDR: 02/24/2021
Date Made Active in Reports: 05/14/2021
Number of Days to Update: 79

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/04/2021
Next Scheduled EDR Contact: 09/20/2021
Data Release Frequency: Varies

Local Lists of Registered Storage Tanks

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SAN FRANCISCO AST: Aboveground Storage Tank Site Listing

Aboveground storage tank sites

Date of Government Version: 05/06/2021
Date Data Arrived at EDR: 05/07/2021
Date Made Active in Reports: 07/23/2021
Number of Days to Update: 77

Source: San Francisco County Department of Public Health
Telephone: 415-252-3896
Last EDR Contact: 07/27/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: Varies

CERS TANKS: California Environmental Reporting System (CERS) Tanks

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.

Date of Government Version: 04/19/2021
Date Data Arrived at EDR: 04/20/2021
Date Made Active in Reports: 07/07/2021
Number of Days to Update: 78

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 07/15/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Quarterly

CA FID UST: Facility Inventory Database

The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Local Land Records

LIENS: Environmental Liens Listing

A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 03/01/2021
Date Data Arrived at EDR: 03/03/2021
Date Made Active in Reports: 05/20/2021
Number of Days to Update: 78

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/25/2021
Next Scheduled EDR Contact: 09/13/2021
Data Release Frequency: Varies

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 04/27/2021
Date Data Arrived at EDR: 05/03/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 16

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 06/29/2021
Next Scheduled EDR Contact: 10/11/2021
Data Release Frequency: Semi-Annually

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 03/02/2021	Source: DTSC and SWRCB
Date Data Arrived at EDR: 03/03/2021	Telephone: 916-323-3400
Date Made Active in Reports: 05/19/2021	Last EDR Contact: 05/28/2021
Number of Days to Update: 77	Next Scheduled EDR Contact: 09/13/2021
	Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 03/22/2021	Source: U.S. Department of Transportation
Date Data Arrived at EDR: 03/24/2021	Telephone: 202-366-4555
Date Made Active in Reports: 06/17/2021	Last EDR Contact: 06/17/2021
Number of Days to Update: 85	Next Scheduled EDR Contact: 10/04/2021
	Data Release Frequency: Quarterly

CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 04/04/2021	Source: Office of Emergency Services
Date Data Arrived at EDR: 04/20/2021	Telephone: 916-845-8400
Date Made Active in Reports: 07/07/2021	Last EDR Contact: 07/15/2021
Number of Days to Update: 78	Next Scheduled EDR Contact: 11/01/2021
	Data Release Frequency: Semi-Annually

LDS: Land Disposal Sites Listing (GEOTRACKER)

Land Disposal sites (Landfills) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 03/08/2021	Source: State Water Quality Control Board
Date Data Arrived at EDR: 03/09/2021	Telephone: 866-480-1028
Date Made Active in Reports: 03/31/2021	Last EDR Contact: 06/03/2021
Number of Days to Update: 22	Next Scheduled EDR Contact: 09/20/2021
	Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing (GEOTRACKER)

Military sites (consisting of: Military UST sites; Military Privatized sites; and Military Cleanup sites [formerly known as DoD non UST]) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 03/08/2021	Source: State Water Resources Control Board
Date Data Arrived at EDR: 03/09/2021	Telephone: 866-480-1028
Date Made Active in Reports: 03/31/2021	Last EDR Contact: 06/03/2021
Number of Days to Update: 22	Next Scheduled EDR Contact: 09/20/2021
	Data Release Frequency: Quarterly

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 06/06/2012	Source: FirstSearch
Date Data Arrived at EDR: 01/03/2013	Telephone: N/A
Date Made Active in Reports: 02/22/2013	Last EDR Contact: 01/03/2013
Number of Days to Update: 50	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 03/22/2021	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/23/2021	Telephone: (415) 495-8895
Date Made Active in Reports: 05/19/2021	Last EDR Contact: 06/21/2021
Number of Days to Update: 57	Next Scheduled EDR Contact: 10/04/2021
	Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 02/11/2021	Source: U.S. Army Corps of Engineers
Date Data Arrived at EDR: 02/17/2021	Telephone: 202-528-4285
Date Made Active in Reports: 04/05/2021	Last EDR Contact: 05/18/2021
Number of Days to Update: 47	Next Scheduled EDR Contact: 08/30/2021
	Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005	Source: USGS
Date Data Arrived at EDR: 11/10/2006	Telephone: 888-275-8747
Date Made Active in Reports: 01/11/2007	Last EDR Contact: 07/13/2021
Number of Days to Update: 62	Next Scheduled EDR Contact: 10/25/2021
	Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018	Source: U.S. Geological Survey
Date Data Arrived at EDR: 04/11/2018	Telephone: 888-275-8747
Date Made Active in Reports: 11/06/2019	Last EDR Contact: 07/09/2021
Number of Days to Update: 574	Next Scheduled EDR Contact: 10/18/2021
	Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017	Source: Environmental Protection Agency
Date Data Arrived at EDR: 02/03/2017	Telephone: 615-532-8599
Date Made Active in Reports: 04/07/2017	Last EDR Contact: 05/18/2021
Number of Days to Update: 63	Next Scheduled EDR Contact: 08/23/2021
	Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 03/22/2021	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/23/2021	Telephone: 202-566-1917
Date Made Active in Reports: 06/17/2021	Last EDR Contact: 06/21/2021
Number of Days to Update: 86	Next Scheduled EDR Contact: 10/04/2021
	Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/21/2014	Telephone: 617-520-3000
Date Made Active in Reports: 06/17/2014	Last EDR Contact: 07/26/2021
Number of Days to Update: 88	Next Scheduled EDR Contact: 11/15/2021
	Data Release Frequency: No Update Planned

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017	Source: Environmental Protection Agency
Date Data Arrived at EDR: 05/08/2018	Telephone: 703-308-4044
Date Made Active in Reports: 07/20/2018	Last EDR Contact: 05/07/2021
Number of Days to Update: 73	Next Scheduled EDR Contact: 08/16/2021
	Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016	Source: EPA
Date Data Arrived at EDR: 06/17/2020	Telephone: 202-260-5521
Date Made Active in Reports: 09/10/2020	Last EDR Contact: 06/17/2021
Number of Days to Update: 85	Next Scheduled EDR Contact: 09/27/2021
	Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 08/14/2020
Date Made Active in Reports: 11/04/2020
Number of Days to Update: 82

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 05/17/2021
Next Scheduled EDR Contact: 08/30/2021
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 04/19/2021
Date Data Arrived at EDR: 04/20/2021
Date Made Active in Reports: 07/16/2021
Number of Days to Update: 87

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 07/19/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 04/27/2021
Date Data Arrived at EDR: 05/03/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 16

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 06/29/2021
Next Scheduled EDR Contact: 09/13/2021
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 05/07/2021
Date Data Arrived at EDR: 05/13/2021
Date Made Active in Reports: 08/03/2021
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 07/14/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 12/30/2020	Source: EPA
Date Data Arrived at EDR: 01/14/2021	Telephone: 202-564-6023
Date Made Active in Reports: 03/05/2021	Last EDR Contact: 06/29/2021
Number of Days to Update: 50	Next Scheduled EDR Contact: 08/16/2021
	Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 11/19/2020	Source: EPA
Date Data Arrived at EDR: 01/08/2021	Telephone: 202-566-0500
Date Made Active in Reports: 03/22/2021	Last EDR Contact: 07/09/2021
Number of Days to Update: 73	Next Scheduled EDR Contact: 10/18/2021
	Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016	Source: Environmental Protection Agency
Date Data Arrived at EDR: 11/23/2016	Telephone: 202-564-2501
Date Made Active in Reports: 02/10/2017	Last EDR Contact: 06/29/2021
Number of Days to Update: 79	Next Scheduled EDR Contact: 10/18/2021
	Data Release Frequency: No Update Planned

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009	Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Date Data Arrived at EDR: 04/16/2009	Telephone: 202-566-1667
Date Made Active in Reports: 05/11/2009	Last EDR Contact: 08/18/2017
Number of Days to Update: 25	Next Scheduled EDR Contact: 12/04/2017
	Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009	Source: EPA
Date Data Arrived at EDR: 04/16/2009	Telephone: 202-566-1667
Date Made Active in Reports: 05/11/2009	Last EDR Contact: 08/18/2017
Number of Days to Update: 25	Next Scheduled EDR Contact: 12/04/2017
	Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 03/08/2021	Source: Nuclear Regulatory Commission
Date Data Arrived at EDR: 03/11/2021	Telephone: 301-415-7169
Date Made Active in Reports: 05/11/2021	Last EDR Contact: 07/14/2021
Number of Days to Update: 61	Next Scheduled EDR Contact: 11/01/2021
	Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2019	Source: Department of Energy
Date Data Arrived at EDR: 12/01/2020	Telephone: 202-586-8719
Date Made Active in Reports: 02/09/2021	Last EDR Contact: 05/27/2021
Number of Days to Update: 70	Next Scheduled EDR Contact: 09/13/2021
	Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/05/2019	Telephone: N/A
Date Made Active in Reports: 11/11/2019	Last EDR Contact: 05/27/2021
Number of Days to Update: 251	Next Scheduled EDR Contact: 09/13/2021
	Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database

The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 09/13/2019	Source: Environmental Protection Agency
Date Data Arrived at EDR: 11/06/2019	Telephone: 202-566-0517
Date Made Active in Reports: 02/10/2020	Last EDR Contact: 05/07/2021
Number of Days to Update: 96	Next Scheduled EDR Contact: 08/16/2021
	Data Release Frequency: Varies

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/01/2019	Source: Environmental Protection Agency
Date Data Arrived at EDR: 07/01/2019	Telephone: 202-343-9775
Date Made Active in Reports: 09/23/2019	Last EDR Contact: 06/22/2021
Number of Days to Update: 84	Next Scheduled EDR Contact: 10/11/2021
	Data Release Frequency: No Update Planned

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/01/2007	Telephone: 202-564-2501
Date Made Active in Reports: 04/10/2007	Last EDR Contact: 12/17/2007
Number of Days to Update: 40	Next Scheduled EDR Contact: 03/17/2008
	Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transportation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 01/02/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/17/2020
Number of Days to Update: 80

Source: Department of Transportation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 07/23/2021
Next Scheduled EDR Contact: 11/08/2021
Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 06/30/2021
Date Data Arrived at EDR: 07/14/2021
Date Made Active in Reports: 07/16/2021
Number of Days to Update: 2

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 07/02/2021
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 06/22/2020
Date Made Active in Reports: 11/20/2020
Number of Days to Update: 151

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 06/21/2021
Next Scheduled EDR Contact: 10/04/2021
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 07/02/2021
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: Varies

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 08/08/2017
Date Data Arrived at EDR: 09/11/2018
Date Made Active in Reports: 09/14/2018
Number of Days to Update: 3

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 07/23/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 08/30/2019
Date Data Arrived at EDR: 11/15/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 74

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 05/21/2021
Next Scheduled EDR Contact: 08/30/2021
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 04/27/2021
Date Data Arrived at EDR: 05/03/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 16

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 06/29/2021
Next Scheduled EDR Contact: 10/11/2021
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931 and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: No Update Planned

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: No Update Planned

MINES VIOLATIONS: MSHA Violation Assessment Data

Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 05/27/2021
Date Data Arrived at EDR: 05/27/2021
Date Made Active in Reports: 06/10/2021
Number of Days to Update: 14

Source: DOL, Mine Safety & Health Administration
Telephone: 202-693-9424
Last EDR Contact: 07/01/2021
Next Scheduled EDR Contact: 09/13/2021
Data Release Frequency: Quarterly

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 02/01/2021
Date Data Arrived at EDR: 02/24/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 84

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 05/25/2021
Next Scheduled EDR Contact: 09/06/2021
Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 05/06/2020
Date Data Arrived at EDR: 05/27/2020
Date Made Active in Reports: 08/13/2020
Number of Days to Update: 78

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 05/27/2021
Next Scheduled EDR Contact: 09/06/2021
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 05/27/2021
Next Scheduled EDR Contact: 09/06/2021
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 03/23/2021
Date Data Arrived at EDR: 03/25/2021
Date Made Active in Reports: 06/17/2021
Number of Days to Update: 84

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 06/14/2021
Next Scheduled EDR Contact: 09/20/2021
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 02/03/2021
Date Data Arrived at EDR: 03/03/2021
Date Made Active in Reports: 04/05/2021
Number of Days to Update: 33

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 05/18/2021
Next Scheduled EDR Contact: 09/13/2021
Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 11/03/2020
Date Data Arrived at EDR: 11/17/2020
Date Made Active in Reports: 02/09/2021
Number of Days to Update: 84

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 05/21/2021
Next Scheduled EDR Contact: 09/06/2021
Data Release Frequency: Varies

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 12/31/2018	Source: Department of Defense
Date Data Arrived at EDR: 07/02/2020	Telephone: 703-704-1564
Date Made Active in Reports: 09/17/2020	Last EDR Contact: 07/07/2021
Number of Days to Update: 77	Next Scheduled EDR Contact: 10/25/2021
	Data Release Frequency: Varies

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 04/04/2021	Source: Environmental Protection Agency
Date Data Arrived at EDR: 04/06/2021	Telephone: 202-564-2280
Date Made Active in Reports: 06/25/2021	Last EDR Contact: 07/01/2021
Number of Days to Update: 80	Next Scheduled EDR Contact: 10/18/2021
	Data Release Frequency: Quarterly

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 05/14/2021	Source: EPA
Date Data Arrived at EDR: 05/14/2021	Telephone: 800-385-6164
Date Made Active in Reports: 08/03/2021	Last EDR Contact: 05/14/2021
Number of Days to Update: 81	Next Scheduled EDR Contact: 08/30/2021
	Data Release Frequency: Quarterly

CA BOND EXP. PLAN: Bond Expenditure Plan

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989	Source: Department of Health Services
Date Data Arrived at EDR: 07/27/1994	Telephone: 916-255-2118
Date Made Active in Reports: 08/02/1994	Last EDR Contact: 05/31/1994
Number of Days to Update: 6	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

CORTESE: "Cortese" Hazardous Waste & Substances Sites List

The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 03/22/2021	Source: CAL EPA/Office of Emergency Information
Date Data Arrived at EDR: 03/23/2021	Telephone: 916-323-3400
Date Made Active in Reports: 06/10/2021	Last EDR Contact: 06/17/2021
Number of Days to Update: 79	Next Scheduled EDR Contact: 10/04/2021
	Data Release Frequency: Quarterly

CUPA LIVERMORE-PLEASANTON: CUPA Facility Listing

list of facilities associated with the various CUPA programs in Livermore-Pleasanton

Date of Government Version: 05/01/2019	Source: Livermore-Pleasanton Fire Department
Date Data Arrived at EDR: 05/14/2019	Telephone: 925-454-2361
Date Made Active in Reports: 07/17/2019	Last EDR Contact: 05/14/2021
Number of Days to Update: 64	Next Scheduled EDR Contact: 08/23/2021
	Data Release Frequency: Varies

DRYCLEAN AVAQMD: Antelope Valley Air Quality Management District Drycleaner Listing

A listing of dry cleaners in the Antelope Valley Air Quality Management District.

Date of Government Version: 02/26/2021
Date Data Arrived at EDR: 03/02/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 78

Source: Antelope Valley Air Quality Management District
Telephone: 661-723-8070
Last EDR Contact: 05/25/2021
Next Scheduled EDR Contact: 09/13/2021
Data Release Frequency: Varies

DRYCLEANERS: Cleaner Facilities

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 03/01/2021
Date Data Arrived at EDR: 03/04/2021
Date Made Active in Reports: 05/20/2021
Number of Days to Update: 77

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 05/25/2021
Next Scheduled EDR Contact: 09/13/2021
Data Release Frequency: Annually

DRYCLEAN SOUTH COAST: South Coast Air Quality Management District Drycleaner Listing

A listing of dry cleaners in the South Coast Air Quality Management District

Date of Government Version: 02/23/2021
Date Data Arrived at EDR: 02/25/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 83

Source: South Coast Air Quality Management District
Telephone: 909-396-3211
Last EDR Contact: 05/18/2021
Next Scheduled EDR Contact: 09/06/2021
Data Release Frequency: Varies

EMI: Emissions Inventory Data

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 06/16/2020
Date Made Active in Reports: 08/28/2020
Number of Days to Update: 73

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 06/10/2021
Next Scheduled EDR Contact: 09/27/2021
Data Release Frequency: Varies

ENF: Enforcement Action Listing

A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

Date of Government Version: 04/16/2021
Date Data Arrived at EDR: 04/20/2021
Date Made Active in Reports: 07/07/2021
Number of Days to Update: 78

Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 07/15/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing

Financial Assurance information

Date of Government Version: 04/14/2021
Date Data Arrived at EDR: 04/15/2021
Date Made Active in Reports: 07/06/2021
Number of Days to Update: 82

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 07/13/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing

A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 05/13/2021
Date Data Arrived at EDR: 05/13/2021
Date Made Active in Reports: 07/26/2021
Number of Days to Update: 74

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 05/05/2021
Next Scheduled EDR Contact: 08/23/2021
Data Release Frequency: Varies

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method. This database begins with calendar year 1993.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 04/15/2020
Date Made Active in Reports: 07/02/2020
Number of Days to Update: 78

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 07/09/2021
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: Annually

ICE: ICE

Contains data pertaining to the Permitted Facilities with Inspections / Enforcements sites tracked in Envirostor.

Date of Government Version: 05/14/2021
Date Data Arrived at EDR: 05/14/2021
Date Made Active in Reports: 07/27/2021
Number of Days to Update: 74

Source: Department of Toxic Substances Control
Telephone: 877-786-9427
Last EDR Contact: 05/14/2021
Next Scheduled EDR Contact: 08/30/2021
Data Release Frequency: Quarterly

HIST CORTESE: Hazardous Waste & Substance Site List

The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 01/22/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/22/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

HWP: EnviroStor Permitted Facilities Listing

Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 05/14/2021
Date Data Arrived at EDR: 05/14/2021
Date Made Active in Reports: 07/27/2021
Number of Days to Update: 74

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/14/2021
Next Scheduled EDR Contact: 08/30/2021
Data Release Frequency: Quarterly

HWT: Registered Hazardous Waste Transporter Database

A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 04/05/2021
Date Data Arrived at EDR: 04/06/2021
Date Made Active in Reports: 06/23/2021
Number of Days to Update: 78

Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 07/01/2021
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: Quarterly

MINES: Mines Site Location Listing

A listing of mine site locations from the Office of Mine Reclamation.

Date of Government Version: 03/08/2021	Source: Department of Conservation
Date Data Arrived at EDR: 03/09/2021	Telephone: 916-322-1080
Date Made Active in Reports: 03/30/2021	Last EDR Contact: 06/03/2021
Number of Days to Update: 21	Next Scheduled EDR Contact: 09/20/2021
	Data Release Frequency: Quarterly

MWMP: Medical Waste Management Program Listing

The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 01/29/2021	Source: Department of Public Health
Date Data Arrived at EDR: 03/03/2021	Telephone: 916-558-1784
Date Made Active in Reports: 05/20/2021	Last EDR Contact: 05/28/2021
Number of Days to Update: 78	Next Scheduled EDR Contact: 09/13/2021
	Data Release Frequency: Varies

NPDES: NPDES Permits Listing

A listing of NPDES permits, including stormwater.

Date of Government Version: 05/10/2021	Source: State Water Resources Control Board
Date Data Arrived at EDR: 05/11/2021	Telephone: 916-445-9379
Date Made Active in Reports: 07/27/2021	Last EDR Contact: 05/11/2021
Number of Days to Update: 77	Next Scheduled EDR Contact: 08/23/2021
	Data Release Frequency: Quarterly

PEST LIC: Pesticide Regulation Licenses Listing

A listing of licenses and certificates issued by the Department of Pesticide Regulation. The DPR issues licenses and/or certificates to: Persons and businesses that apply or sell pesticides; Pest control dealers and brokers; Persons who advise on agricultural pesticide applications.

Date of Government Version: 03/02/2021	Source: Department of Pesticide Regulation
Date Data Arrived at EDR: 03/03/2021	Telephone: 916-445-4038
Date Made Active in Reports: 05/20/2021	Last EDR Contact: 05/28/2021
Number of Days to Update: 78	Next Scheduled EDR Contact: 09/13/2021
	Data Release Frequency: Quarterly

PROC: Certified Processors Database

A listing of certified processors.

Date of Government Version: 03/09/2021	Source: Department of Conservation
Date Data Arrived at EDR: 03/09/2021	Telephone: 916-323-3836
Date Made Active in Reports: 03/31/2021	Last EDR Contact: 06/04/2021
Number of Days to Update: 22	Next Scheduled EDR Contact: 09/20/2021
	Data Release Frequency: Quarterly

NOTIFY 65: Proposition 65 Records

Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 03/12/2021	Source: State Water Resources Control Board
Date Data Arrived at EDR: 03/16/2021	Telephone: 916-445-3846
Date Made Active in Reports: 06/01/2021	Last EDR Contact: 06/08/2021
Number of Days to Update: 77	Next Scheduled EDR Contact: 09/27/2021
	Data Release Frequency: No Update Planned

UIC: UIC Listing

A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 03/08/2021	Source: Department of Conservation
Date Data Arrived at EDR: 03/09/2021	Telephone: 916-445-2408
Date Made Active in Reports: 03/31/2021	Last EDR Contact: 06/03/2021
Number of Days to Update: 22	Next Scheduled EDR Contact: 09/20/2021
	Data Release Frequency: Varies

UIC GEO: Underground Injection Control Sites (GEOTRACKER)

Underground control injection sites

Date of Government Version: 03/08/2021	Source: State Water Resource Control Board
Date Data Arrived at EDR: 03/09/2021	Telephone: 866-480-1028
Date Made Active in Reports: 03/30/2021	Last EDR Contact: 06/03/2021
Number of Days to Update: 21	Next Scheduled EDR Contact: 09/20/2021
	Data Release Frequency: Varies

WASTEWATER PITS: Oil Wastewater Pits Listing

Water officials discovered that oil producers have been dumping chemical-laden wastewater into hundreds of unlined pits that are operating without proper permits. Inspections completed by the Central Valley Regional Water Quality Control Board revealed the existence of previously unidentified waste sites. The water boards review found that more than one-third of the region's active disposal pits are operating without permission.

Date of Government Version: 11/19/2019	Source: RWQCB, Central Valley Region
Date Data Arrived at EDR: 01/07/2020	Telephone: 559-445-5577
Date Made Active in Reports: 03/09/2020	Last EDR Contact: 07/01/2021
Number of Days to Update: 62	Next Scheduled EDR Contact: 10/18/2021
	Data Release Frequency: Varies

WDS: Waste Discharge System

Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007	Source: State Water Resources Control Board
Date Data Arrived at EDR: 06/20/2007	Telephone: 916-341-5227
Date Made Active in Reports: 06/29/2007	Last EDR Contact: 05/14/2021
Number of Days to Update: 9	Next Scheduled EDR Contact: 08/30/2021
	Data Release Frequency: No Update Planned

WIP: Well Investigation Program Case List

Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009	Source: Los Angeles Water Quality Control Board
Date Data Arrived at EDR: 07/21/2009	Telephone: 213-576-6726
Date Made Active in Reports: 08/03/2009	Last EDR Contact: 06/15/2021
Number of Days to Update: 13	Next Scheduled EDR Contact: 10/04/2021
	Data Release Frequency: No Update Planned

MILITARY PRIV SITES: Military Privatized Sites (GEOTRACKER)

Military privatized sites

Date of Government Version: 03/08/2021	Source: State Water Resources Control Board
Date Data Arrived at EDR: 03/09/2021	Telephone: 866-480-1028
Date Made Active in Reports: 03/30/2021	Last EDR Contact: 06/03/2021
Number of Days to Update: 21	Next Scheduled EDR Contact: 09/20/2021
	Data Release Frequency: Varies

PROJECT: Project Sites (GEOTRACKER)

Projects sites

Date of Government Version: 03/08/2021
Date Data Arrived at EDR: 03/09/2021
Date Made Active in Reports: 03/30/2021
Number of Days to Update: 21

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/03/2021
Next Scheduled EDR Contact: 09/20/2021
Data Release Frequency: Varies

WDR: Waste Discharge Requirements Listing

In general, the Waste Discharge Requirements (WDRs) Program (sometimes also referred to as the "Non Chapter 15 (Non 15) Program") regulates point discharges that are exempt pursuant to Subsection 20090 of Title 27 and not subject to the Federal Water Pollution Control Act. Exemptions from Title 27 may be granted for nine categories of discharges (e.g., sewage, wastewater, etc.) that meet, and continue to meet, the preconditions listed for each specific exemption. The scope of the WDRs Program also includes the discharge of wastes classified as inert, pursuant to section 20230 of Title 27.

Date of Government Version: 03/09/2021
Date Data Arrived at EDR: 03/09/2021
Date Made Active in Reports: 03/31/2021
Number of Days to Update: 22

Source: State Water Resources Control Board
Telephone: 916-341-5810
Last EDR Contact: 06/07/2021
Next Scheduled EDR Contact: 09/20/2021
Data Release Frequency: Quarterly

CIWQS: California Integrated Water Quality System

The California Integrated Water Quality System (CIWQS) is a computer system used by the State and Regional Water Quality Control Boards to track information about places of environmental interest, manage permits and other orders, track inspections, and manage violations and enforcement activities.

Date of Government Version: 11/30/2020
Date Data Arrived at EDR: 12/01/2020
Date Made Active in Reports: 02/12/2021
Number of Days to Update: 73

Source: State Water Resources Control Board
Telephone: 866-794-4977
Last EDR Contact: 05/19/2021
Next Scheduled EDR Contact: 09/13/2021
Data Release Frequency: Varies

CERS: CalEPA Regulated Site Portal Data

The CalEPA Regulated Site Portal database combines data about environmentally regulated sites and facilities in California into a single database. It combines data from a variety of state and federal databases, and provides an overview of regulated activities across the spectrum of environmental programs for any given location in California. These activities include hazardous materials and waste, state and federal cleanups, impacted ground and surface waters, and toxic materials

Date of Government Version: 04/19/2021
Date Data Arrived at EDR: 04/20/2021
Date Made Active in Reports: 07/07/2021
Number of Days to Update: 78

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 07/15/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

NON-CASE INFO: Non-Case Information Sites (GEOTRACKER)

Non-Case Information sites

Date of Government Version: 03/08/2021
Date Data Arrived at EDR: 03/09/2021
Date Made Active in Reports: 03/30/2021
Number of Days to Update: 21

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/03/2021
Next Scheduled EDR Contact: 09/20/2021
Data Release Frequency: Varies

OTHER OIL GAS: Other Oil & Gas Projects Sites (GEOTRACKER)

Other Oil & Gas Projects sites

Date of Government Version: 03/08/2021
Date Data Arrived at EDR: 03/09/2021
Date Made Active in Reports: 03/30/2021
Number of Days to Update: 21

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/03/2021
Next Scheduled EDR Contact: 09/20/2021
Data Release Frequency: Varies

PROD WATER PONDS: Produced Water Ponds Sites (GEOTRACKER)

Produced water ponds sites

Date of Government Version: 03/08/2021
Date Data Arrived at EDR: 03/09/2021
Date Made Active in Reports: 03/30/2021
Number of Days to Update: 21

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/03/2021
Next Scheduled EDR Contact: 09/20/2021
Data Release Frequency: Varies

SAMPLING POINT: Sampling Point ? Public Sites (GEOTRACKER)

Sampling point - public sites

Date of Government Version: 03/08/2021
Date Data Arrived at EDR: 03/09/2021
Date Made Active in Reports: 03/30/2021
Number of Days to Update: 21

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/03/2021
Next Scheduled EDR Contact: 09/20/2021
Data Release Frequency: Varies

WELL STIM PROJ: Well Stimulation Project (GEOTRACKER)

Includes areas of groundwater monitoring plans, a depiction of the monitoring network, and the facilities, boundaries, and subsurface characteristics of the oilfield and the features (oil and gas wells, produced water ponds, UIC wells, water supply wells, etc?) being monitored

Date of Government Version: 03/08/2021
Date Data Arrived at EDR: 03/09/2021
Date Made Active in Reports: 03/30/2021
Number of Days to Update: 21

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/03/2021
Next Scheduled EDR Contact: 09/20/2021
Data Release Frequency: Varies

PCS ENF: Enforcement data

No description is available for this data

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 02/05/2015
Date Made Active in Reports: 03/06/2015
Number of Days to Update: 29

Source: EPA
Telephone: 202-564-2497
Last EDR Contact: 06/30/2021
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: No Update Planned

PCS INACTIVE: Listing of Inactive PCS Permits

An inactive permit is a facility that has shut down or is no longer discharging.

Date of Government Version: 11/05/2014
Date Data Arrived at EDR: 01/06/2015
Date Made Active in Reports: 05/06/2015
Number of Days to Update: 120

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 06/30/2021
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: No Update Planned

PCS: Permit Compliance System

PCS is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

Date of Government Version: 07/14/2011
Date Data Arrived at EDR: 08/05/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 55

Source: EPA, Office of Water
Telephone: 202-564-2496
Last EDR Contact: 06/30/2021
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: No Update Planned

MINES MRDS: Mineral Resources Data System

Mineral Resources Data System

Date of Government Version: 04/06/2018
 Date Data Arrived at EDR: 10/21/2019
 Date Made Active in Reports: 10/24/2019
 Number of Days to Update: 3

Source: USGS
 Telephone: 703-648-6533
 Last EDR Contact: 05/27/2021
 Next Scheduled EDR Contact: 09/06/2021
 Data Release Frequency: Varies

HWTS: Hazardous Waste Tracking System

DTSC maintains the Hazardous Waste Tracking System that stores ID number information since the early 1980s and manifest data since 1993. The system collects both manifest copies from the generator and destination facility.

Date of Government Version: 04/08/2021
 Date Data Arrived at EDR: 04/09/2021
 Date Made Active in Reports: 04/20/2021
 Number of Days to Update: 11

Source: Department of Toxic Substances Control
 Telephone: 916-324-2444
 Last EDR Contact: 06/29/2021
 Next Scheduled EDR Contact: 10/18/2021
 Data Release Frequency: Varies

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
 Date Data Arrived at EDR: N/A
 Date Made Active in Reports: N/A
 Number of Days to Update: N/A

Source: EDR, Inc.
 Telephone: N/A
 Last EDR Contact: N/A
 Next Scheduled EDR Contact: N/A
 Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
 Date Data Arrived at EDR: N/A
 Date Made Active in Reports: N/A
 Number of Days to Update: N/A

Source: EDR, Inc.
 Telephone: N/A
 Last EDR Contact: N/A
 Next Scheduled EDR Contact: N/A
 Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Resources Recycling and Recovery in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/13/2014
Number of Days to Update: 196

Source: Department of Resources Recycling and Recovery
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the State Water Resources Control Board in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/30/2013
Number of Days to Update: 182

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

COUNTY RECORDS

ALAMEDA COUNTY:

CS ALAMEDA: Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 01/09/2019
Date Data Arrived at EDR: 01/11/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 53

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 06/29/2021
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: Semi-Annually

UST ALAMEDA: Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 03/17/2021
Date Data Arrived at EDR: 03/18/2021
Date Made Active in Reports: 03/25/2021
Number of Days to Update: 7

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 06/29/2021
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA AMADOR: CUPA Facility List
Cupa Facility List

Date of Government Version: 02/02/2021
Date Data Arrived at EDR: 02/04/2021
Date Made Active in Reports: 04/23/2021
Number of Days to Update: 78

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 07/26/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: Varies

BUTTE COUNTY:

CUPA BUTTE: CUPA Facility Listing
Cupa facility list.

Date of Government Version: 04/21/2017
Date Data Arrived at EDR: 04/25/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 106

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 06/29/2021
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA CALVERAS: CUPA Facility Listing
Cupa Facility Listing

Date of Government Version: 06/15/2021
Date Data Arrived at EDR: 06/16/2021
Date Made Active in Reports: 07/02/2021
Number of Days to Update: 16

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 06/15/2021
Next Scheduled EDR Contact: 10/04/2021
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA COLUSA: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/06/2020
Date Data Arrived at EDR: 04/23/2020
Date Made Active in Reports: 07/10/2020
Number of Days to Update: 78

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 07/26/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: Semi-Annually

CONTRA COSTA COUNTY:

SL CONTRA COSTA: Site List

List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 04/21/2021
Date Data Arrived at EDR: 04/22/2021
Date Made Active in Reports: 07/12/2021
Number of Days to Update: 81

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 07/20/2021
Next Scheduled EDR Contact: 11/08/2021
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA DEL NORTE: CUPA Facility List
Cupa Facility list

Date of Government Version: 12/17/2020
Date Data Arrived at EDR: 01/28/2021
Date Made Active in Reports: 04/16/2021
Number of Days to Update: 78

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 07/20/2021
Next Scheduled EDR Contact: 11/08/2021
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA EL DORADO: CUPA Facility List
CUPA facility list.

Date of Government Version: 05/10/2021
Date Data Arrived at EDR: 05/12/2021
Date Made Active in Reports: 07/26/2021
Number of Days to Update: 75

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 07/20/2021
Next Scheduled EDR Contact: 11/08/2021
Data Release Frequency: Varies

FRESNO COUNTY:

CUPA FRESNO: CUPA Resources List

Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 01/14/2021
Date Data Arrived at EDR: 01/15/2021
Date Made Active in Reports: 04/05/2021
Number of Days to Update: 80

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 06/23/2021
Next Scheduled EDR Contact: 10/11/2021
Data Release Frequency: Semi-Annually

GLENN COUNTY:

CUPA GLENN: CUPA Facility List
Cupa facility list

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 49

Source: Glenn County Air Pollution Control District
Telephone: 830-934-6500
Last EDR Contact: 07/13/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: No Update Planned

HUMBOLDT COUNTY:

CUPA HUMBOLDT: CUPA Facility List
CUPA facility list.

Date of Government Version: 05/17/2021
Date Data Arrived at EDR: 05/18/2021
Date Made Active in Reports: 05/20/2021
Number of Days to Update: 2

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 05/10/2021
Next Scheduled EDR Contact: 08/30/2021
Data Release Frequency: Semi-Annually

IMPERIAL COUNTY:

CUPA IMPERIAL: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/14/2021
Date Data Arrived at EDR: 04/15/2021
Date Made Active in Reports: 07/06/2021
Number of Days to Update: 82

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 07/13/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

INYO COUNTY:

CUPA INYO: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/03/2018
Date Made Active in Reports: 06/14/2018
Number of Days to Update: 72

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 05/11/2021
Next Scheduled EDR Contact: 08/30/2021
Data Release Frequency: Varies

KERN COUNTY:

CUPA KERN: CUPA Facility List

A listing of sites included in the Kern County Hazardous Material Business Plan.

Date of Government Version: 04/22/2021
Date Data Arrived at EDR: 04/30/2021
Date Made Active in Reports: 07/19/2021
Number of Days to Update: 80

Source: Kern County Public Health
Telephone: 661-321-3000
Last EDR Contact: 07/26/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: Varies

UST KERN: Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 01/19/2021
Date Data Arrived at EDR: 01/21/2021
Date Made Active in Reports: 01/28/2021
Number of Days to Update: 7

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 07/26/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: Quarterly

KINGS COUNTY:

CUPA KINGS: CUPA Facility List

A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 12/03/2020
Date Data Arrived at EDR: 01/26/2021
Date Made Active in Reports: 04/14/2021
Number of Days to Update: 78

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 05/25/2021
Next Scheduled EDR Contact: 08/30/2021
Data Release Frequency: Varies

LAKE COUNTY:

CUPA LAKE: CUPA Facility List
Cupa facility list

Date of Government Version: 05/10/2021
Date Data Arrived at EDR: 05/12/2021
Date Made Active in Reports: 07/26/2021
Number of Days to Update: 75

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 07/06/2021
Next Scheduled EDR Contact: 10/25/2021
Data Release Frequency: Varies

LASSEN COUNTY:

CUPA LASSEN: CUPA Facility List
Cupa facility list

Date of Government Version: 07/31/2020
Date Data Arrived at EDR: 08/21/2020
Date Made Active in Reports: 11/09/2020
Number of Days to Update: 80

Source: Lassen County Environmental Health
Telephone: 530-251-8528
Last EDR Contact: 07/13/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

LOS ANGELES COUNTY:

AOCONCERN: Key Areas of Concerns in Los Angeles County

San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office. Date of Government Version: 3/30/2009 Exide Site area is a cleanup plan of lead-impacted soil surrounding the former Exide Facility as designated by the DTSC. Date of Government Version: 7/17/2017

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206

Source: N/A
Telephone: N/A
Last EDR Contact: 06/08/2021
Next Scheduled EDR Contact: 09/27/2021
Data Release Frequency: No Update Planned

HMS LOS ANGELES: HMS: Street Number List

Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 04/08/2021
Date Data Arrived at EDR: 04/13/2021
Date Made Active in Reports: 06/28/2021
Number of Days to Update: 76

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 06/29/2021
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: Semi-Annually

LF LOS ANGELES: List of Solid Waste Facilities

Solid Waste Facilities in Los Angeles County.

Date of Government Version: 04/12/2021
Date Data Arrived at EDR: 04/13/2021
Date Made Active in Reports: 06/28/2021
Number of Days to Update: 76

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 07/09/2021
Next Scheduled EDR Contact: 10/25/2021
Data Release Frequency: Varies

LF LOS ANGELES CITY: City of Los Angeles Landfills

Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 01/01/2021
Date Data Arrived at EDR: 02/18/2021
Date Made Active in Reports: 05/10/2021
Number of Days to Update: 81

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 07/06/2021
Next Scheduled EDR Contact: 10/25/2021
Data Release Frequency: Varies

LOS ANGELES AST: Active & Inactive AST Inventory

A listing of active & inactive above ground petroleum storage tank site locations, located in the City of Los Angeles.

Date of Government Version: 06/01/2019	Source: Los Angeles Fire Department
Date Data Arrived at EDR: 06/25/2019	Telephone: 213-978-3800
Date Made Active in Reports: 08/22/2019	Last EDR Contact: 06/17/2021
Number of Days to Update: 58	Next Scheduled EDR Contact: 10/04/2021
	Data Release Frequency: Varies

LOS ANGELES CO LF METHANE: Methane Producing Landfills

This data was created on April 30, 2012 to represent known disposal sites in Los Angeles County that may produce and emanate methane gas. The shapefile contains disposal sites within Los Angeles County that once accepted degradable refuse material. Information used to create this data was extracted from a landfill survey performed by County Engineers (Major Waste System Map, 1973) as well as historical records from CalRecycle, Regional Water Quality Control Board, and Los Angeles County Department of Public Health

Date of Government Version: 02/04/2021	Source: Los Angeles County Department of Public Works
Date Data Arrived at EDR: 04/16/2021	Telephone: 626-458-6973
Date Made Active in Reports: 04/21/2021	Last EDR Contact: 07/12/2021
Number of Days to Update: 5	Next Scheduled EDR Contact: 10/25/2021
	Data Release Frequency: No Update Planned

LOS ANGELES HM: Active & Inactive Hazardous Materials Inventory

A listing of active & inactive hazardous materials facility locations, located in the City of Los Angeles.

Date of Government Version: 04/19/2021	Source: Los Angeles Fire Department
Date Data Arrived at EDR: 06/17/2021	Telephone: 213-978-3800
Date Made Active in Reports: 06/28/2021	Last EDR Contact: 06/17/2021
Number of Days to Update: 11	Next Scheduled EDR Contact: 10/04/2021
	Data Release Frequency: Varies

LOS ANGELES UST: Active & Inactive UST Inventory

A listing of active & inactive underground storage tank site locations and underground storage tank historical sites, located in the City of Los Angeles.

Date of Government Version: 06/01/2019	Source: Los Angeles Fire Department
Date Data Arrived at EDR: 06/25/2019	Telephone: 213-978-3800
Date Made Active in Reports: 08/22/2019	Last EDR Contact: 06/17/2021
Number of Days to Update: 58	Next Scheduled EDR Contact: 10/04/2021
	Data Release Frequency: Varies

SITE MIT LOS ANGELES: Site Mitigation List

Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 03/02/2021	Source: Community Health Services
Date Data Arrived at EDR: 04/16/2021	Telephone: 323-890-7806
Date Made Active in Reports: 07/06/2021	Last EDR Contact: 07/09/2021
Number of Days to Update: 81	Next Scheduled EDR Contact: 10/25/2021
	Data Release Frequency: Annually

UST EL SEGUNDO: City of El Segundo Underground Storage Tank

Underground storage tank sites located in El Segundo city.

Date of Government Version: 01/21/2017	Source: City of El Segundo Fire Department
Date Data Arrived at EDR: 04/19/2017	Telephone: 310-524-2236
Date Made Active in Reports: 05/10/2017	Last EDR Contact: 07/06/2021
Number of Days to Update: 21	Next Scheduled EDR Contact: 10/25/2021
	Data Release Frequency: No Update Planned

UST LONG BEACH: City of Long Beach Underground Storage Tank
Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 04/22/2019	Source: City of Long Beach Fire Department
Date Data Arrived at EDR: 04/23/2019	Telephone: 562-570-2563
Date Made Active in Reports: 06/27/2019	Last EDR Contact: 07/13/2021
Number of Days to Update: 65	Next Scheduled EDR Contact: 11/01/2021
	Data Release Frequency: Varies

UST TORRANCE: City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 02/02/2021	Source: City of Torrance Fire Department
Date Data Arrived at EDR: 04/28/2021	Telephone: 310-618-2973
Date Made Active in Reports: 07/13/2021	Last EDR Contact: 07/13/2021
Number of Days to Update: 76	Next Scheduled EDR Contact: 11/01/2021
	Data Release Frequency: Semi-Annually

MADERA COUNTY:

CUPA MADERA: CUPA Facility List

A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 08/10/2020	Source: Madera County Environmental Health
Date Data Arrived at EDR: 08/12/2020	Telephone: 559-675-7823
Date Made Active in Reports: 10/23/2020	Last EDR Contact: 05/12/2021
Number of Days to Update: 72	Next Scheduled EDR Contact: 08/30/2021
	Data Release Frequency: Varies

MARIN COUNTY:

UST MARIN: Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 09/26/2018	Source: Public Works Department Waste Management
Date Data Arrived at EDR: 10/04/2018	Telephone: 415-473-6647
Date Made Active in Reports: 11/02/2018	Last EDR Contact: 06/22/2021
Number of Days to Update: 29	Next Scheduled EDR Contact: 10/11/2021
	Data Release Frequency: No Update Planned

MENDOCINO COUNTY:

UST MENDOCINO: Mendocino County UST Database
A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 03/24/2021	Source: Department of Public Health
Date Data Arrived at EDR: 04/07/2021	Telephone: 707-463-4466
Date Made Active in Reports: 06/24/2021	Last EDR Contact: 05/18/2021
Number of Days to Update: 78	Next Scheduled EDR Contact: 09/06/2021
	Data Release Frequency: Annually

MERCED COUNTY:

CUPA MERCED: CUPA Facility List
CUPA facility list.

Date of Government Version: 05/13/2021
Date Data Arrived at EDR: 05/14/2021
Date Made Active in Reports: 07/26/2021
Number of Days to Update: 73

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 05/12/2021
Next Scheduled EDR Contact: 08/30/2021
Data Release Frequency: Varies

MONO COUNTY:

CUPA MONO: CUPA Facility List
CUPA Facility List

Date of Government Version: 02/22/2021
Date Data Arrived at EDR: 03/02/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 78

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 06/02/2021
Next Scheduled EDR Contact: 09/06/3021
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA MONTEREY: CUPA Facility Listing

CUPA Program listing from the Environmental Health Division.

Date of Government Version: 06/23/2021
Date Data Arrived at EDR: 06/23/2021
Date Made Active in Reports: 06/24/2021
Number of Days to Update: 1

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 06/22/2021
Next Scheduled EDR Contact: 10/11/2021
Data Release Frequency: Varies

NAPA COUNTY:

LUST NAPA: Sites With Reported Contamination

A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 01/09/2017
Date Data Arrived at EDR: 01/11/2017
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 50

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 05/18/2021
Next Scheduled EDR Contact: 09/06/2021
Data Release Frequency: No Update Planned

UST NAPA: Closed and Operating Underground Storage Tank Sites

Underground storage tank sites located in Napa county.

Date of Government Version: 09/05/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 10/31/2019
Number of Days to Update: 52

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 05/18/2021
Next Scheduled EDR Contact: 09/06/2021
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA NEVADA: CUPA Facility List
CUPA facility list.

Date of Government Version: 04/28/2021
Date Data Arrived at EDR: 04/29/2021
Date Made Active in Reports: 07/15/2021
Number of Days to Update: 77

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 07/20/2021
Next Scheduled EDR Contact: 11/08/2021
Data Release Frequency: Varies

ORANGE COUNTY:

IND_SITE ORANGE: List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 03/01/2021
Date Data Arrived at EDR: 04/30/2021
Date Made Active in Reports: 07/19/2021
Number of Days to Update: 80

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 07/29/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: Annually

LUST ORANGE: List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 03/01/2021
Date Data Arrived at EDR: 05/03/2021
Date Made Active in Reports: 05/12/2021
Number of Days to Update: 9

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 04/29/2021
Next Scheduled EDR Contact: 08/16/2021
Data Release Frequency: Quarterly

UST ORANGE: List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 04/29/2021
Date Data Arrived at EDR: 04/30/2021
Date Made Active in Reports: 07/19/2021
Number of Days to Update: 80

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 07/29/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: Quarterly

PLACER COUNTY:

MS PLACER: Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 05/25/2021
Date Data Arrived at EDR: 05/26/2021
Date Made Active in Reports: 06/01/2021
Number of Days to Update: 6

Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 05/25/2021
Next Scheduled EDR Contact: 09/13/2021
Data Release Frequency: Semi-Annually

PLUMAS COUNTY:

CUPA PLUMAS: CUPA Facility List
Plumas County CUPA Program facilities.

Date of Government Version: 03/31/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/26/2019
Number of Days to Update: 64

Source: Plumas County Environmental Health
Telephone: 530-283-6355
Last EDR Contact: 07/13/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

RIVERSIDE COUNTY:

LUST RIVERSIDE: Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 06/29/2021	Source: Department of Environmental Health
Date Data Arrived at EDR: 06/30/2021	Telephone: 951-358-5055
Date Made Active in Reports: 07/14/2021	Last EDR Contact: 06/08/2021
Number of Days to Update: 14	Next Scheduled EDR Contact: 09/27/2021
	Data Release Frequency: Quarterly

UST RIVERSIDE: Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 06/29/2021	Source: Department of Environmental Health
Date Data Arrived at EDR: 06/30/2021	Telephone: 951-358-5055
Date Made Active in Reports: 07/14/2021	Last EDR Contact: 06/07/2021
Number of Days to Update: 14	Next Scheduled EDR Contact: 09/27/2021
	Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

CS SACRAMENTO: Toxic Site Clean-Up List
List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 03/30/2021	Source: Sacramento County Environmental Management
Date Data Arrived at EDR: 04/01/2021	Telephone: 916-875-8406
Date Made Active in Reports: 06/23/2021	Last EDR Contact: 07/01/2021
Number of Days to Update: 83	Next Scheduled EDR Contact: 10/11/2021
	Data Release Frequency: Quarterly

ML SACRAMENTO: Master Hazardous Materials Facility List
Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 03/30/2021	Source: Sacramento County Environmental Management
Date Data Arrived at EDR: 04/01/2021	Telephone: 916-875-8406
Date Made Active in Reports: 06/25/2021	Last EDR Contact: 06/23/2021
Number of Days to Update: 85	Next Scheduled EDR Contact: 10/11/2021
	Data Release Frequency: Quarterly

SAN BENITO COUNTY:

CUPA SAN BENITO: CUPA Facility List
Cupa facility list

Date of Government Version: 04/28/2021	Source: San Benito County Environmental Health
Date Data Arrived at EDR: 04/29/2021	Telephone: N/A
Date Made Active in Reports: 05/03/2021	Last EDR Contact: 07/26/2021
Number of Days to Update: 4	Next Scheduled EDR Contact: 11/15/2021
	Data Release Frequency: Varies

SAN BERNARDINO COUNTY:

PERMITS SAN BERNARDINO: Hazardous Material Permits
This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 05/19/2021
Date Data Arrived at EDR: 05/19/2021
Date Made Active in Reports: 06/07/2021
Number of Days to Update: 19

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 07/27/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

HMMD SAN DIEGO: Hazardous Materials Management Division Database

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 03/02/2021
Date Data Arrived at EDR: 03/03/2021
Date Made Active in Reports: 05/21/2021
Number of Days to Update: 79

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 05/28/2021
Next Scheduled EDR Contact: 09/13/2021
Data Release Frequency: Quarterly

LF SAN DIEGO: Solid Waste Facilities

San Diego County Solid Waste Facilities.

Date of Government Version: 10/01/2020
Date Data Arrived at EDR: 11/23/2020
Date Made Active in Reports: 02/08/2021
Number of Days to Update: 77

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 07/27/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

SAN DIEGO CO LOP: Local Oversight Program Listing

A listing of all LOP release sites that are or were under the County of San Diego's jurisdiction. Included are closed or transferred cases, open cases, and cases that did not have a case type indicated. The cases without a case type are mostly complaints; however, some of them could be LOP cases.

Date of Government Version: 07/14/2020
Date Data Arrived at EDR: 07/16/2020
Date Made Active in Reports: 09/29/2020
Number of Days to Update: 75

Source: Department of Environmental Health
Telephone: 858-505-6874
Last EDR Contact: 07/13/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

SAN DIEGO CO SAM: Environmental Case Listing

The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010
Date Data Arrived at EDR: 06/15/2010
Date Made Active in Reports: 07/09/2010
Number of Days to Update: 24

Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 05/25/2021
Next Scheduled EDR Contact: 09/13/2021
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

CUPA SAN FRANCISCO CO: CUPA Facility Listing

Cupa facilities

Date of Government Version: 05/06/2021
Date Data Arrived at EDR: 05/07/2021
Date Made Active in Reports: 07/23/2021
Number of Days to Update: 77

Source: San Francisco County Department of Environmental Health
Telephone: 415-252-3896
Last EDR Contact: 07/27/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: Varies

LUST SAN FRANCISCO: Local Oversight Facilities

A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10

Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 07/27/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: No Update Planned

UST SAN FRANCISCO: Underground Storage Tank Information

Underground storage tank sites located in San Francisco county.

Date of Government Version: 05/06/2021
Date Data Arrived at EDR: 05/07/2021
Date Made Active in Reports: 07/23/2021
Number of Days to Update: 77

Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 07/27/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

UST SAN JOAQUIN: San Joaquin Co. UST

A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 06/22/2018
Date Data Arrived at EDR: 06/26/2018
Date Made Active in Reports: 07/11/2018
Number of Days to Update: 15

Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 06/08/2021
Next Scheduled EDR Contact: 09/27/2021
Data Release Frequency: No Update Planned

SAN LUIS OBISPO COUNTY:

CUPA SAN LUIS OBISPO: CUPA Facility List

Cupa Facility List.

Date of Government Version: 05/07/2021
Date Data Arrived at EDR: 05/11/2021
Date Made Active in Reports: 05/14/2021
Number of Days to Update: 3

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 05/06/2021
Next Scheduled EDR Contact: 08/30/2021
Data Release Frequency: Varies

SAN MATEO COUNTY:

BI SAN MATEO: Business Inventory

List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 02/20/2020
Date Data Arrived at EDR: 02/20/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 64

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 06/10/2021
Next Scheduled EDR Contact: 09/20/2021
Data Release Frequency: Annually

LUST SAN MATEO: Fuel Leak List

A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 03/29/2019
Date Data Arrived at EDR: 03/29/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 61

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 06/02/2021
Next Scheduled EDR Contact: 09/20/2021
Data Release Frequency: No Update Planned

SANTA BARBARA COUNTY:

CUPA SANTA BARBARA: CUPA Facility Listing

CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011
Date Data Arrived at EDR: 09/09/2011
Date Made Active in Reports: 10/07/2011
Number of Days to Update: 28

Source: Santa Barbara County Public Health Department
Telephone: 805-686-8167
Last EDR Contact: 05/12/2021
Next Scheduled EDR Contact: 08/30/2021
Data Release Frequency: No Update Planned

SANTA CLARA COUNTY:

CUPA SANTA CLARA: Cupa Facility List

Cupa facility list

Date of Government Version: 02/24/2021
Date Data Arrived at EDR: 02/26/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 82

Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 05/12/2021
Next Scheduled EDR Contact: 08/30/2021
Data Release Frequency: Varies

HIST LUST SANTA CLARA: HIST LUST - Fuel Leak Site Activity Report

A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LUST SANTA CLARA: LOP Listing

A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 03/03/2014
Date Data Arrived at EDR: 03/05/2014
Date Made Active in Reports: 03/18/2014
Number of Days to Update: 13

Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 05/18/2021
Next Scheduled EDR Contact: 09/06/2021
Data Release Frequency: No Update Planned

SAN JOSE HAZMAT: Hazardous Material Facilities

Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 11/03/2020
Date Data Arrived at EDR: 11/05/2020
Date Made Active in Reports: 01/26/2021
Number of Days to Update: 82

Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 07/27/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: Annually

SANTA CRUZ COUNTY:

CUPA SANTA CRUZ: CUPA Facility List
CUPA facility listing.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 05/23/2017
Number of Days to Update: 90

Source: Santa Cruz County Environmental Health
Telephone: 831-464-2761
Last EDR Contact: 05/12/2021
Next Scheduled EDR Contact: 08/30/2021
Data Release Frequency: Varies

SHASTA COUNTY:

CUPA SHASTA: CUPA Facility List
Cupa Facility List.

Date of Government Version: 06/15/2017
Date Data Arrived at EDR: 06/19/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 51

Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 05/12/2021
Next Scheduled EDR Contact: 08/30/2021
Data Release Frequency: Varies

SOLANO COUNTY:

LUST SOLANO: Leaking Underground Storage Tanks

A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 06/04/2019
Date Data Arrived at EDR: 06/06/2019
Date Made Active in Reports: 08/13/2019
Number of Days to Update: 68

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 05/25/2021
Next Scheduled EDR Contact: 09/13/2021
Data Release Frequency: No Update Planned

UST SOLANO: Underground Storage Tanks

Underground storage tank sites located in Solano county.

Date of Government Version: 03/23/2021
Date Data Arrived at EDR: 03/25/2021
Date Made Active in Reports: 06/10/2021
Number of Days to Update: 77

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 06/22/2021
Next Scheduled EDR Contact: 09/12/2021
Data Release Frequency: Quarterly

SONOMA COUNTY:

CUPA SONOMA: Cupa Facility List
Cupa Facility list

Date of Government Version: 07/02/2021
Date Data Arrived at EDR: 07/06/2021
Date Made Active in Reports: 07/14/2021
Number of Days to Update: 8

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 06/28/2021
Next Scheduled EDR Contact: 10/04/2021
Data Release Frequency: Varies

LUST SONOMA: Leaking Underground Storage Tank Sites

A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 04/01/2021
Date Data Arrived at EDR: 04/01/2021
Date Made Active in Reports: 06/23/2021
Number of Days to Update: 83

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 06/15/2021
Next Scheduled EDR Contact: 10/04/2021
Data Release Frequency: Quarterly

STANISLAUS COUNTY:

CUPA STANISLAUS: CUPA Facility List
Cupa facility list

Date of Government Version: 05/14/2021
Date Data Arrived at EDR: 05/17/2021
Date Made Active in Reports: 08/03/2021
Number of Days to Update: 78

Source: Stanislaus County Department of Environmental Protection
Telephone: 209-525-6751
Last EDR Contact: 07/06/2021
Next Scheduled EDR Contact: 10/25/2021
Data Release Frequency: Varies

SUTTER COUNTY:

UST SUTTER: Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 03/01/2021
Date Data Arrived at EDR: 03/02/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 78

Source: Sutter County Environmental Health Services
Telephone: 530-822-7500
Last EDR Contact: 05/25/2021
Next Scheduled EDR Contact: 09/13/2021
Data Release Frequency: Semi-Annually

TEHAMA COUNTY:

CUPA TEHAMA: CUPA Facility List
Cupa facilities

Date of Government Version: 01/13/2021
Date Data Arrived at EDR: 01/14/2021
Date Made Active in Reports: 04/06/2021
Number of Days to Update: 82

Source: Tehama County Department of Environmental Health
Telephone: 530-527-8020
Last EDR Contact: 07/27/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: Varies

TRINITY COUNTY:

CUPA TRINITY: CUPA Facility List
Cupa facility list

Date of Government Version: 04/14/2021
Date Data Arrived at EDR: 04/15/2021
Date Made Active in Reports: 07/06/2021
Number of Days to Update: 82

Source: Department of Toxic Substances Control
Telephone: 760-352-0381
Last EDR Contact: 07/13/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

TULARE COUNTY:

CUPA TULARE: CUPA Facility List
Cupa program facilities

Date of Government Version: 04/26/2021
Date Data Arrived at EDR: 04/28/2021
Date Made Active in Reports: 07/13/2021
Number of Days to Update: 76

Source: Tulare County Environmental Health Services Division
Telephone: 559-624-7400
Last EDR Contact: 07/27/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: Varies

TUOLUMNE COUNTY:

CUPA TUOLUMNE: CUPA Facility List
Cupa facility list

Date of Government Version: 04/23/2018	Source: Divison of Environmental Health
Date Data Arrived at EDR: 04/25/2018	Telephone: 209-533-5633
Date Made Active in Reports: 06/25/2018	Last EDR Contact: 07/13/2021
Number of Days to Update: 61	Next Scheduled EDR Contact: 11/01/2021
	Data Release Frequency: Varies

VENTURA COUNTY:

BWT VENTURA: Business Plan, Hazardous Waste Producers, and Operating Underground Tanks

The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 03/29/2021	Source: Ventura County Environmental Health Division
Date Data Arrived at EDR: 04/22/2021	Telephone: 805-654-2813
Date Made Active in Reports: 07/12/2021	Last EDR Contact: 07/15/2021
Number of Days to Update: 81	Next Scheduled EDR Contact: 11/01/2021
	Data Release Frequency: Quarterly

LF VENTURA: Inventory of Illegal Abandoned and Inactive Sites

Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011	Source: Environmental Health Division
Date Data Arrived at EDR: 12/01/2011	Telephone: 805-654-2813
Date Made Active in Reports: 01/19/2012	Last EDR Contact: 06/22/2021
Number of Days to Update: 49	Next Scheduled EDR Contact: 10/11/2021
	Data Release Frequency: No Update Planned

LUST VENTURA: Listing of Underground Tank Cleanup Sites

Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008	Source: Environmental Health Division
Date Data Arrived at EDR: 06/24/2008	Telephone: 805-654-2813
Date Made Active in Reports: 07/31/2008	Last EDR Contact: 05/05/2021
Number of Days to Update: 37	Next Scheduled EDR Contact: 08/23/2021
	Data Release Frequency: No Update Planned

MED WASTE VENTURA: Medical Waste Program List

To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 03/29/2021	Source: Ventura County Resource Management Agency
Date Data Arrived at EDR: 04/21/2021	Telephone: 805-654-2813
Date Made Active in Reports: 04/23/2021	Last EDR Contact: 07/15/2021
Number of Days to Update: 2	Next Scheduled EDR Contact: 11/01/2021
	Data Release Frequency: Quarterly

UST VENTURA: Underground Tank Closed Sites List

Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 03/01/2021	Source: Environmental Health Division
Date Data Arrived at EDR: 03/09/2021	Telephone: 805-654-2813
Date Made Active in Reports: 03/31/2021	Last EDR Contact: 06/04/2021
Number of Days to Update: 22	Next Scheduled EDR Contact: 09/20/2021
	Data Release Frequency: Quarterly

YOLO COUNTY:

UST YOLO: Underground Storage Tank Comprehensive Facility Report
Underground storage tank sites located in Yolo county.

Date of Government Version: 03/26/2021	Source: Yolo County Department of Health
Date Data Arrived at EDR: 04/01/2021	Telephone: 530-666-8646
Date Made Active in Reports: 06/23/2021	Last EDR Contact: 06/22/2021
Number of Days to Update: 83	Next Scheduled EDR Contact: 10/11/2021
	Data Release Frequency: Annually

YUBA COUNTY:

CUPA YUBA: CUPA Facility List
CUPA facility listing for Yuba County.

Date of Government Version: 04/21/2021	Source: Yuba County Environmental Health Department
Date Data Arrived at EDR: 04/22/2021	Telephone: 530-749-7523
Date Made Active in Reports: 05/12/2021	Last EDR Contact: 07/20/2021
Number of Days to Update: 20	Next Scheduled EDR Contact: 11/08/2021
	Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 03/24/2021	Source: Department of Energy & Environmental Protection
Date Data Arrived at EDR: 05/11/2021	Telephone: 860-424-3375
Date Made Active in Reports: 07/28/2021	Last EDR Contact: 05/11/2021
Number of Days to Update: 78	Next Scheduled EDR Contact: 08/23/2021
	Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2018	Source: Department of Environmental Protection
Date Data Arrived at EDR: 04/10/2019	Telephone: N/A
Date Made Active in Reports: 05/16/2019	Last EDR Contact: 07/09/2021
Number of Days to Update: 36	Next Scheduled EDR Contact: 10/18/2021
	Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 01/01/2019	Source: Department of Environmental Conservation
Date Data Arrived at EDR: 04/29/2020	Telephone: 518-402-8651
Date Made Active in Reports: 07/10/2020	Last EDR Contact: 07/29/2021
Number of Days to Update: 72	Next Scheduled EDR Contact: 11/08/2021
	Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 06/30/2018
Date Data Arrived at EDR: 07/19/2019
Date Made Active in Reports: 09/10/2019
Number of Days to Update: 53

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 07/07/2021
Next Scheduled EDR Contact: 10/25/2021
Data Release Frequency: Annually

RI MANIFEST: Manifest information

Hazardous waste manifest information

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 02/11/2021
Date Made Active in Reports: 02/24/2021
Number of Days to Update: 13

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 05/13/2021
Next Scheduled EDR Contact: 08/30/2021
Data Release Frequency: Annually

WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 06/19/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 76

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 06/03/2021
Next Scheduled EDR Contact: 09/20/2021
Data Release Frequency: Annually

Oil/Gas Pipelines

Source: Endeavor Business Media

Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data

Source: Endeavor Business Media

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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:

Source: American Hospital Association, Inc.
Telephone: 312-280-5991

The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing

Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000

A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes

Source: National Institutes of Health
Telephone: 301-594-6248

Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools

Source: National Center for Education Statistics
Telephone: 202-502-7300

The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities

Source: Department of Social Services

Telephone: 916-657-4041

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.

Source: FEMA

Telephone: 877-336-2627

Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory

Source: Department of Fish and Wildlife

Telephone: 916-445-0411

Current USGS 7.5 Minute Topographic Map

Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

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GEOCHECK[®] - PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

LEWIS-MERIDIAN PARK LLC, UPPER PLATEAU
FORMER MARCH AIR FORCE BASE - ORDINANCE STRGE AREA
RIVERSIDE, CA 92508

TARGET PROPERTY COORDINATES

Latitude (North):	33.906914 - 33° 54' 24.89"
Longitude (West):	117.308836 - 117° 18' 31.81"
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	471447.9
UTM Y (Meters):	3751683.8
Elevation:	1735 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	5641312 RIVERSIDE EAST, CA
Version Date:	2012

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

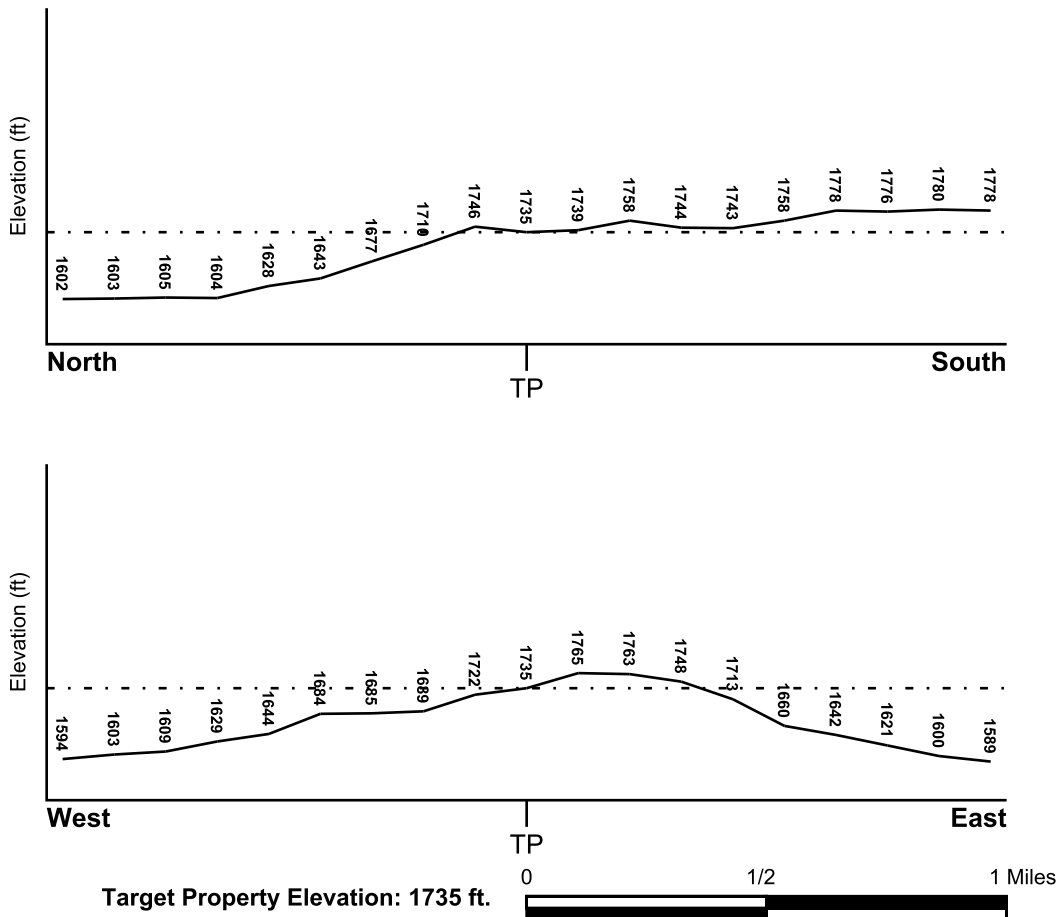
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General NW

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

<u>Flood Plain Panel at Target Property</u>	<u>FEMA Source Type</u>
06065C0745G	FEMA FIRM Flood data
<u>Additional Panels in search area:</u>	<u>FEMA Source Type</u>
06065C0740G	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

<u>NWI Quad at Target Property</u>	<u>NWI Electronic Data Coverage</u>
NOT AVAILABLE	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

<u>MAP ID</u>	<u>LOCATION FROM TP</u>	<u>GENERAL DIRECTION GROUNDWATER FLOW</u>
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

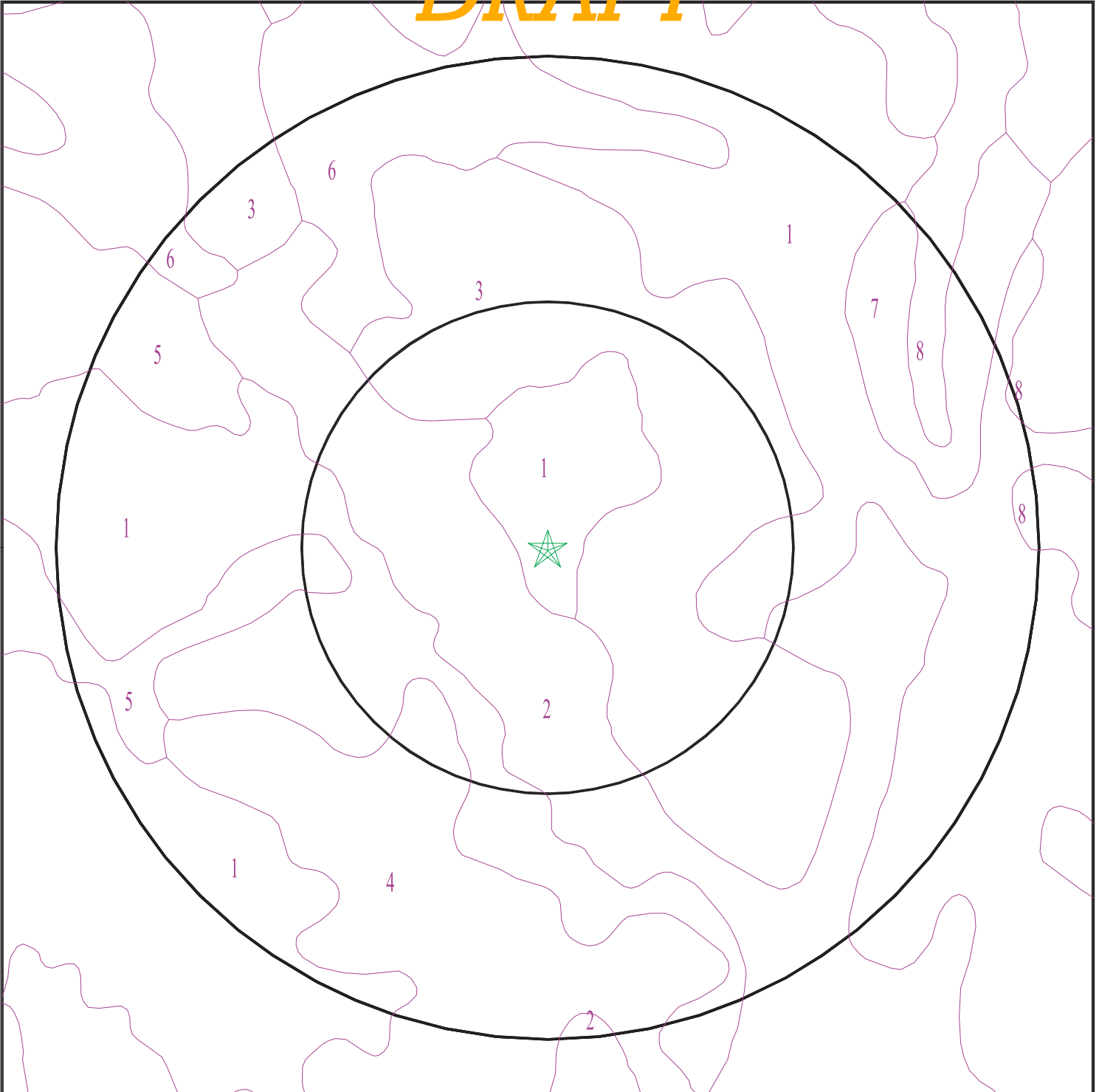
Era: Mesozoic
System: Cretaceous
Series: Cretaceous granitic rocks
Code: Kg (*decoded above as Era, System & Series*)

GEOLOGIC AGE IDENTIFICATION

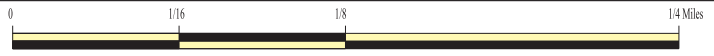
Category: Plutonic and Intrusive Rocks

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

DRAFT



- ★ Target Property
- ∩ SSURGO Soil
- ∩ Water



SITE NAME: Lewis-Meridian Park LLC, Upper Plateau
ADDRESS: Former March Air Force Base - Ordinance Strge Area
Riverside CA 92508
LAT/LONG: 33.906914 / 117.308836

CLIENT: Leighton Consulting
CONTACT: Robert Blaine Hansen
INQUIRY #: 6607282.2s
DATE: August 04, 2021 8:06 pm

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: FALLBROOK

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	5 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 0.42 Min: 0	Max: Min:
2	5 inches	18 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 0.42 Min: 0	Max: Min:
3	18 inches	22 inches	weathered bedrock	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 0.42 Min: 0	Max: Min:

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Map ID: 2

Soil Component Name: FALLBROOK

Soil Surface Texture: sandy loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	14 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 0.42 Min: 0	Max: Min:
2	14 inches	24 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 0.42 Min: 0	Max: Min:
3	24 inches	27 inches	weathered bedrock	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 0.42 Min: 0	Max: Min:

Soil Map ID: 3

Soil Component Name: FALLBROOK

Soil Surface Texture: sandy loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	7 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 0.42 Min: 0	Max: Min:
2	7 inches	18 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 0.42 Min: 0	Max: Min:
3	18 inches	22 inches	weathered bedrock	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 0.42 Min: 0	Max: Min:

Soil Map ID: 4

Soil Component Name: FALLBROOK

Soil Surface Texture: sandy loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	7 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 0.42 Min: 0	Max: Min:
2	7 inches	18 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 0.42 Min: 0	Max: Min:
3	18 inches	22 inches	weathered bedrock	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 0.42 Min: 0	Max: Min:

Soil Map ID: 5

Soil Component Name: FALLBROOK

Soil Surface Texture: sandy loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	7 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 0.42 Min: 0	Max: Min:
2	7 inches	18 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 0.42 Min: 0	Max: Min:
3	18 inches	22 inches	weathered bedrock	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 0.42 Min: 0	Max: Min:

Soil Map ID: 6

Soil Component Name: FALLBROOK

Soil Surface Texture: sandy loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	7 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 0.42 Min: 0	Max: Min:
2	7 inches	18 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 0.42 Min: 0	Max: Min:
3	18 inches	22 inches	weathered bedrock	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: 0.42 Min: 0	Max: Min:

Soil Map ID: 7

Soil Component Name: VISTA

Soil Surface Texture: coarse sandy loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	14 inches	coarse sandy loam	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	Not reported	Max: 0.42 Min: 0	Max: Min:
2	14 inches	24 inches	coarse sandy loam	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	Not reported	Max: 0.42 Min: 0	Max: Min:
3	24 inches	27 inches	weathered bedrock	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	Not reported	Max: 0.42 Min: 0	Max: Min:

Soil Map ID: 8

Soil Component Name: Cieneba

Soil Surface Texture: sandy loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Somewhat excessively drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	14 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: 0.42 Min: 0	Max: Min:
2	14 inches	22 inches	weathered bedrock	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	Not reported	Max: 0.42 Min: 0	Max: Min:

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

<u>DATABASE</u>	<u>SEARCH DISTANCE (miles)</u>
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
No Wells Found		

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
No PWS System Found		

Note: PWS System location is not always the same as well location.

DRAFT

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

STATE DATABASE WELL INFORMATION

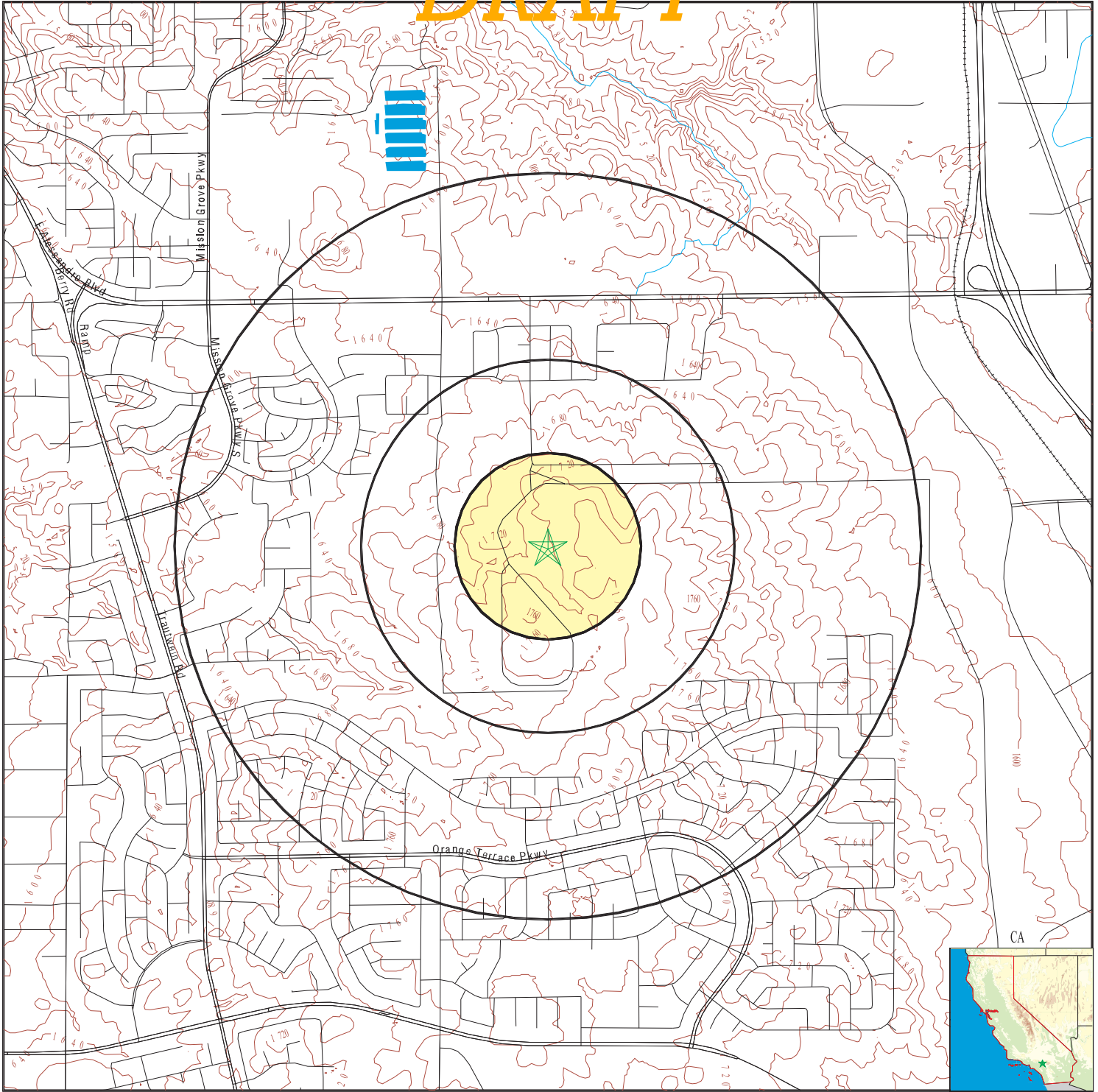
MAP ID

No Wells Found

WELL ID

LOCATION
FROM TP

DRAFT



- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons

- Groundwater Flow Direction
- Indeterminate Groundwater Flow at Location
- Groundwater Flow Varies at Location
- Closest Hydrogeological Data
- Oil, gas or related wells



SITE NAME: Lewis-Meridian Park LLC, Upper Plateau
 ADDRESS: Former March Air Force Base - Ordinance Strge Area
 Riverside CA 92508
 LAT/LONG: 33.906914 / 117.308836

CLIENT: Leighton Consulting
 CONTACT: Robert Blaine Hansen
 INQUIRY #: 6607282.2s
 DATE: August 04, 2021 8:06 pm

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
92508	8	0

Federal EPA Radon Zone for RIVERSIDE County: 2

- Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for RIVERSIDE COUNTY, CA

Number of sites tested: 12

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.117 pCi/L	100%	0%	0%
Living Area - 2nd Floor	0.450 pCi/L	100%	0%	0%
Basement	1.700 pCi/L	100%	0%	0%

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)

Source: United States Geologic Survey

EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map

Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.

Source: FEMA

Telephone: 877-336-2627

Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory

Source: Department of Fish and Wildlife

Telephone: 916-445-0411

HYDROGEOLOGIC INFORMATION

AQUIFLOW^R Information System

Source: EDR proprietary database of groundwater flow information

EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit

Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)

The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)

Telephone: 800-672-5559

SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)

This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

OTHER STATE DATABASE INFORMATION

Groundwater Ambient Monitoring & Assessment Program

State Water Resources Control Board

Telephone: 916-341-5577

The GAMA Program is California's comprehensive groundwater quality monitoring program. GAMA collects data by testing the untreated, raw water in different types of wells for naturally-occurring and man-made chemicals. The GAMA data includes Domestic, Monitoring and Municipal well types from the following sources, Department of Water Resources, Department of Health Services, EDF, Agricultural Lands, Lawrence Livermore National Laboratory, Department of Pesticide Regulation, United States Geological Survey, Groundwater Ambient Monitoring and Assessment Program and Local Groundwater Projects.

Water Well Database

Source: Department of Water Resources

Telephone: 916-651-9648

California Drinking Water Quality Database

Source: Department of Public Health

Telephone: 916-324-2319

The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

California Oil and Gas Well Locations

Source: Dept of Conservation, Geologic Energy Management Division

Telephone: 916-323-1779

Oil and Gas well locations in the state.

California Earthquake Fault Lines

Source: California Division of Mines and Geology

The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

RADON

State Database: CA Radon

Source: Department of Public Health

Telephone: 916-210-8558

Radon Database for California

Area Radon Information

Source: USGS

Telephone: 703-356-4020

The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones

Source: EPA

Telephone: 703-356-4020

Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities

Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater

Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

STREET AND ADDRESS INFORMATION

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DRAFT

Appendix G

Local and Regional Regulatory Agency Records

DRAFT



Jared Blumenfeld
Secretary for
Environmental Protection

Department of Toxic Substances Control

Meredith Williams, Ph.D.
Director
5796 Corporate Avenue
Cypress, California 90630



Gavin Newsom
Governor

September 8, 2021

Robert Hansen
LEIGHTON
rhansen@leightongroup.com

PR4-090721-19
276-170-007, 176-120-001, 294-020-001, 297-090-009, -001, 197-080-003, -002, 004,
005, 197-090-003, -002, 008, 007, 006, 005, RIVERSIDE, CA

Dear Requestor:

We have received your Public Records Act Request from the Department of Toxic Substances Control (DTSC). After a thorough review of our files, no site records were found pertaining to the sites/facilities referenced above.

A large number of our records are available on EnviroStor, an online database that provides non-confidential, public access to DTSC's Data Management System. It tracks our cleanup, permitting, enforcement and investigation efforts at hazardous waste facilities and sites with known or suspected contamination issues. EnviroStor is available 24/7, 365 days a year. The data reflects the latest updates as they are entered in the system. Access it from your computer or smartphone, the local library – anywhere Internet access is available. Just go to www.envirostor.dtsc.ca.gov. You'll find a step-by-step tour of EnviroStor under the "How to Use EnviroStor" menu on the website.

If you have any questions or would like further information regarding your request, please contact me at 714-4845337 or via email at CypressFileRoom@dtsc.ca.gov.

Sincerely,

Julie Johnson

Julie Johnson
Regional Records Coordinator

DRAFT

Robert Hansen

From: ChatsworthFileRoom@DTSC <ChatsworthFileRoom@dtsc.ca.gov>
Sent: Tuesday, September 7, 2021 3:39 PM
To: Robert Hansen
Subject: RE: Records Reqeust - Riverside Properties

Hello Robert,

I've forwarded this request to our Cypress regional records office for processing. They have jurisdiction over sites in Riverside, Orange and San Bernardino Counties. If they discover in their research of our statewide databases that Chatsworth may have documents for those sites, they will notify us. That way, one regional office won't duplicate the efforts of another.

Robert Hardison
Records Mgt. Asst. Coordinator
Chatsworth DTSC

From: Robert Hansen <rhansen@leightongroup.com>
Sent: Tuesday, September 7, 2021 2:48 PM
To: ChatsworthFileRoom@DTSC <ChatsworthFileRoom@dtsc.ca.gov>
Subject: Records Reqeust - Riverside Properties

EXTERNAL:

Dear Chatsworth Records:

Please conduct a search for any records related to the following Riverside County, California APNs:

<u>APN</u>	<u>Approx. Acreage</u>
276-170-007	98.6
276-120-001	16.24
294-020-001	80
297-090-009	80
297-090-001	79.81
297-080-003	29.91
297-080-002	54.82
297-080-004	26,94
297-080-005	15
297-090-003	25
297-090-002	40
297-090-008	10
297-090-007	10
297-090-006	20
297-090-005	<u>40</u>
Total = 626	



DRAFT

ROBERT B. HANSEN

Associate Environmental Geologist

10532 Acacia Street, Ste B-6

Rancho Cucamonga, CA 91730

o. 909.527-8782

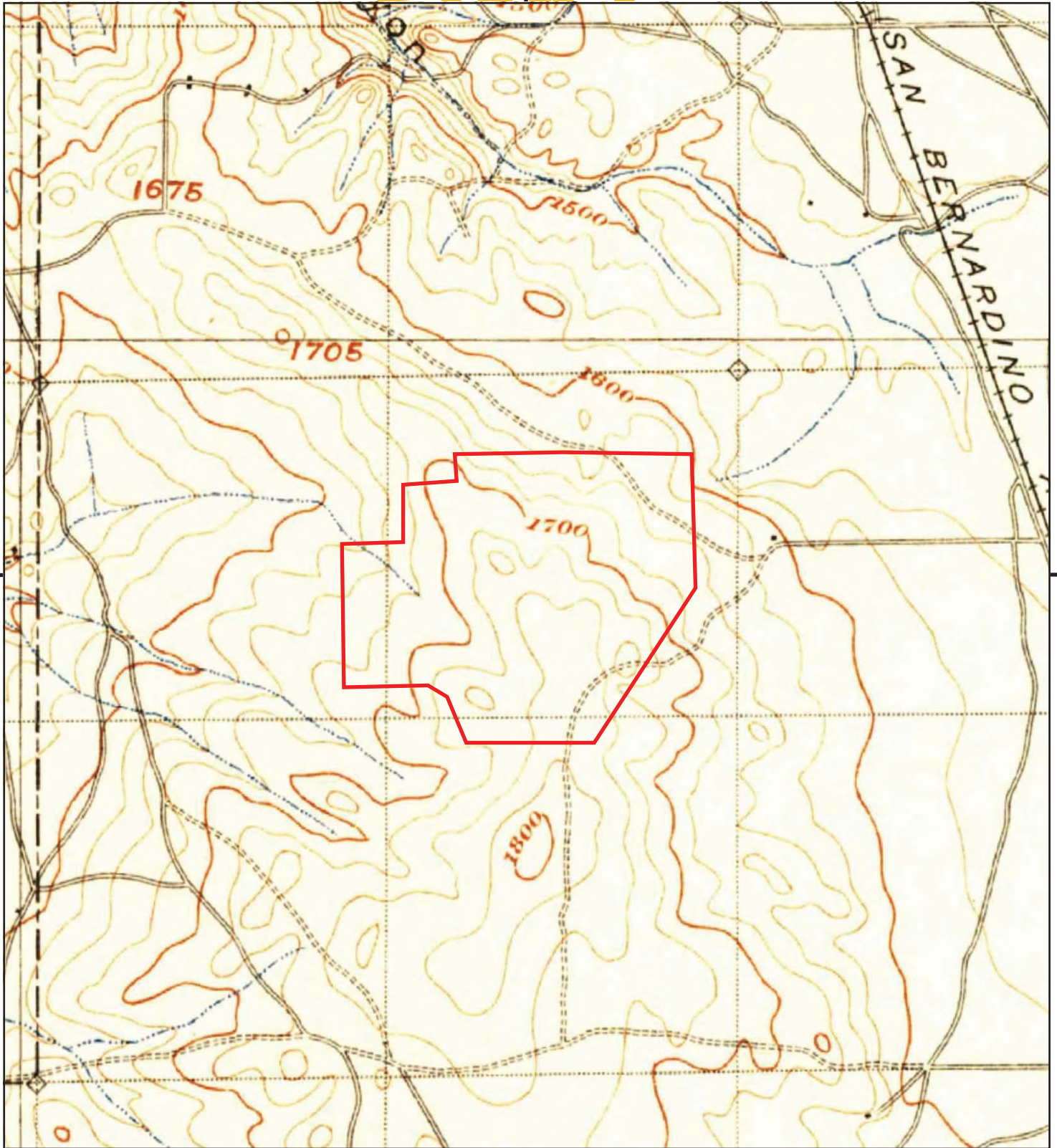
c. 909.202-1662

Celebrate our **60 Years** with us by visiting our new website at www.leightongroup.com

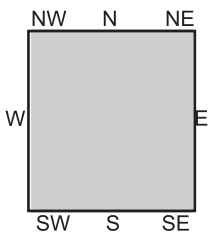
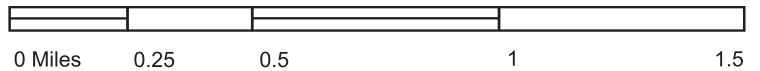
DRAFT

Appendix H

Historical Site Usage Sources



This report includes information from the following map sheet(s).

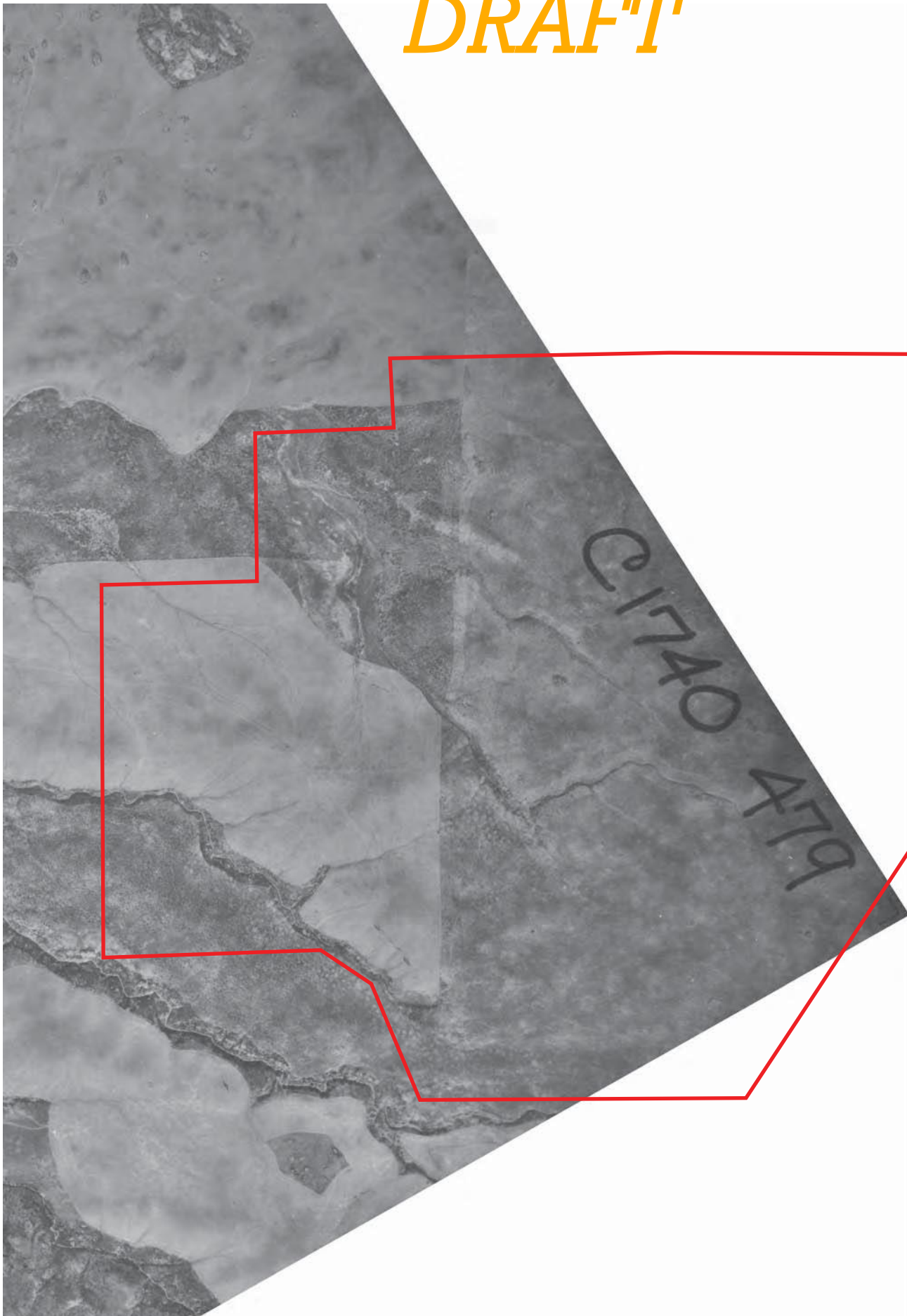


TP, Riverside, 1901, 15-minute

SITE NAME: Lewis-Meridian Park LLC, Upper Plateau
 ADDRESS: Former March Air Force Base - Ordinance
 Riverside, CA 92508
 CLIENT: Leighton Consulting



DRAFT



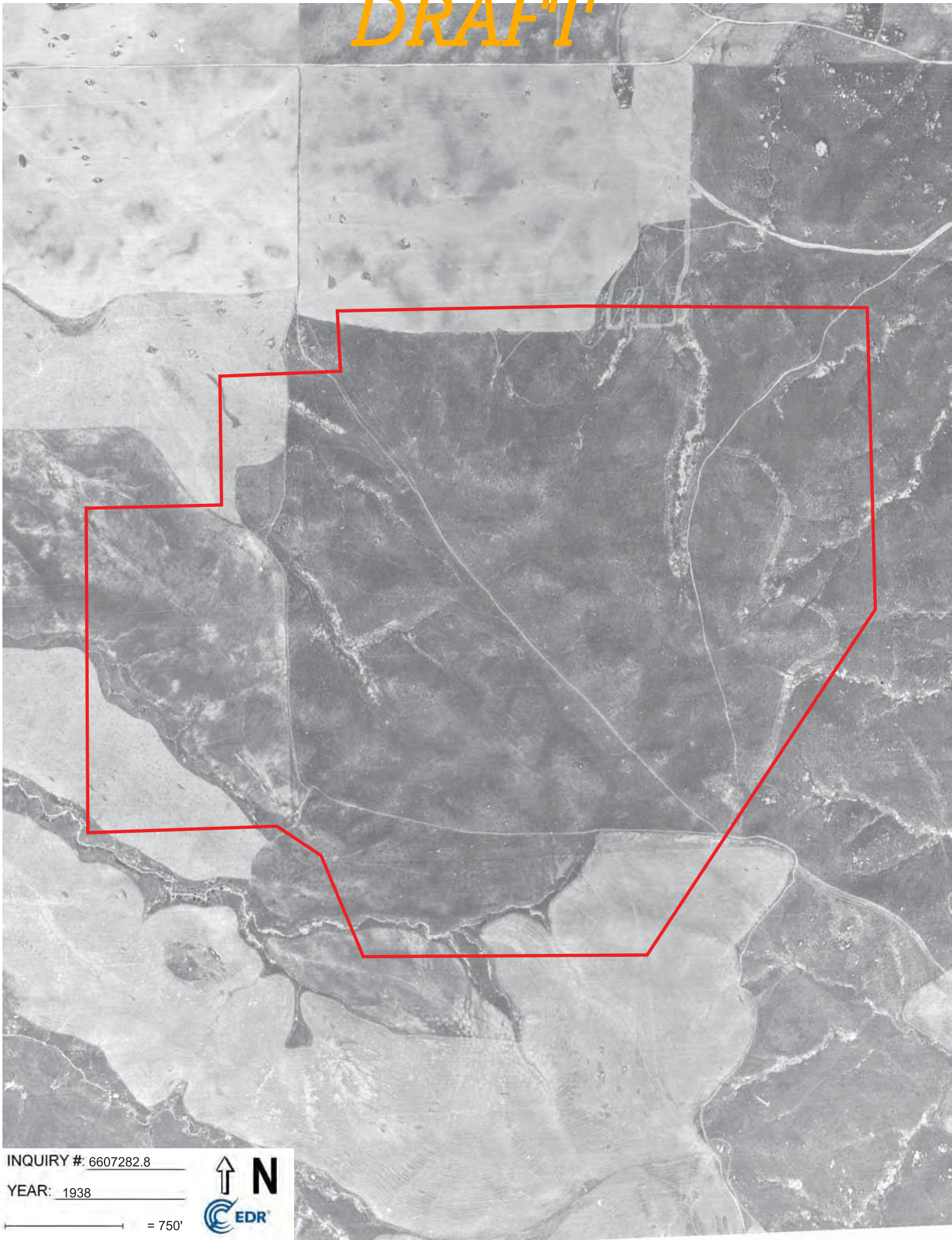
INQUIRY #: 6607282.8

YEAR: 1931

— = 750'



DRAFT

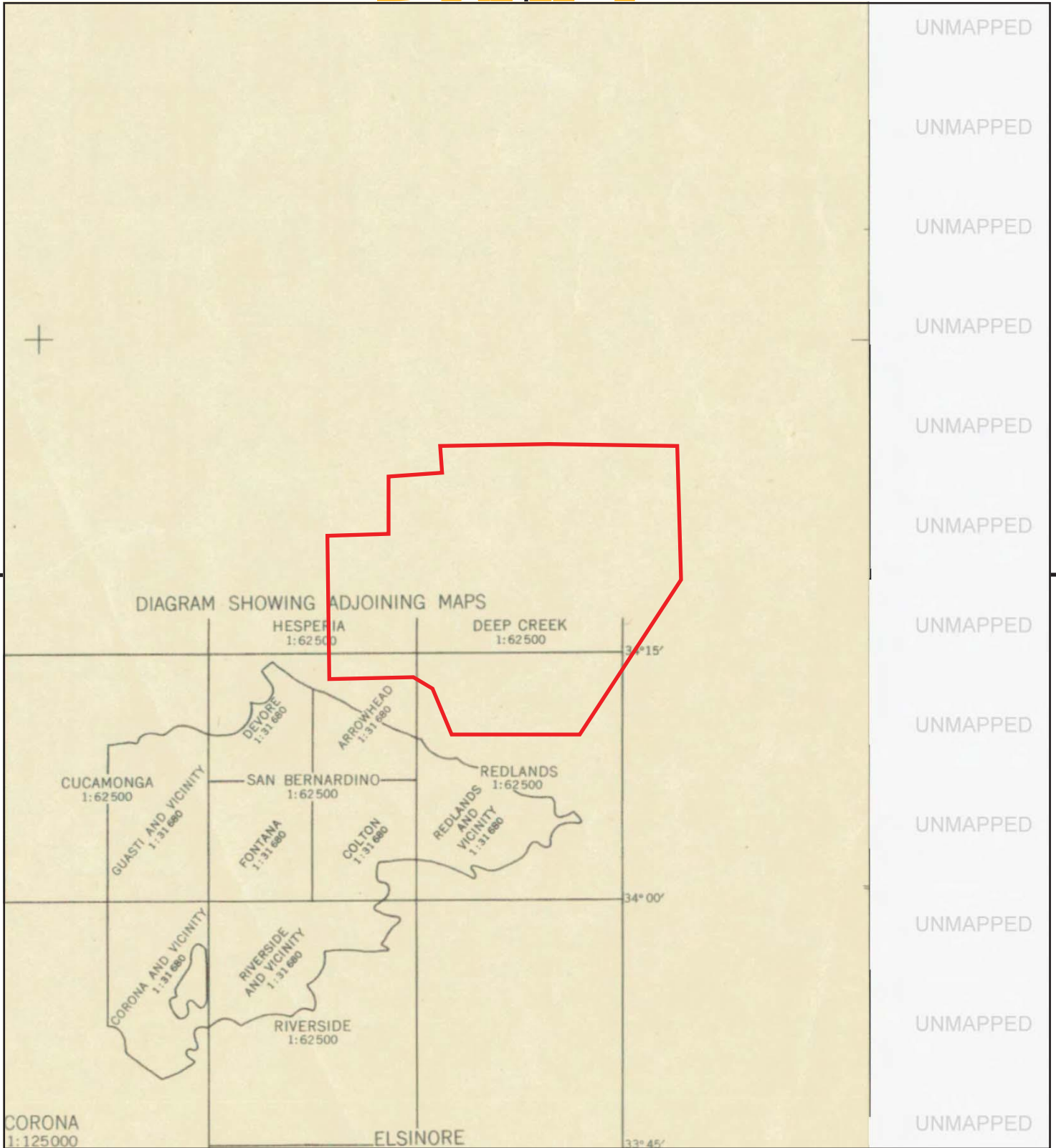


INQUIRY #: 6607282.8

YEAR: 1938

— = 750'





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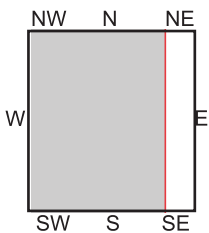
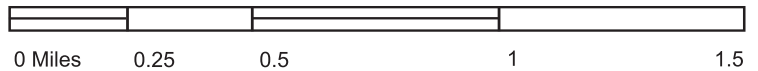
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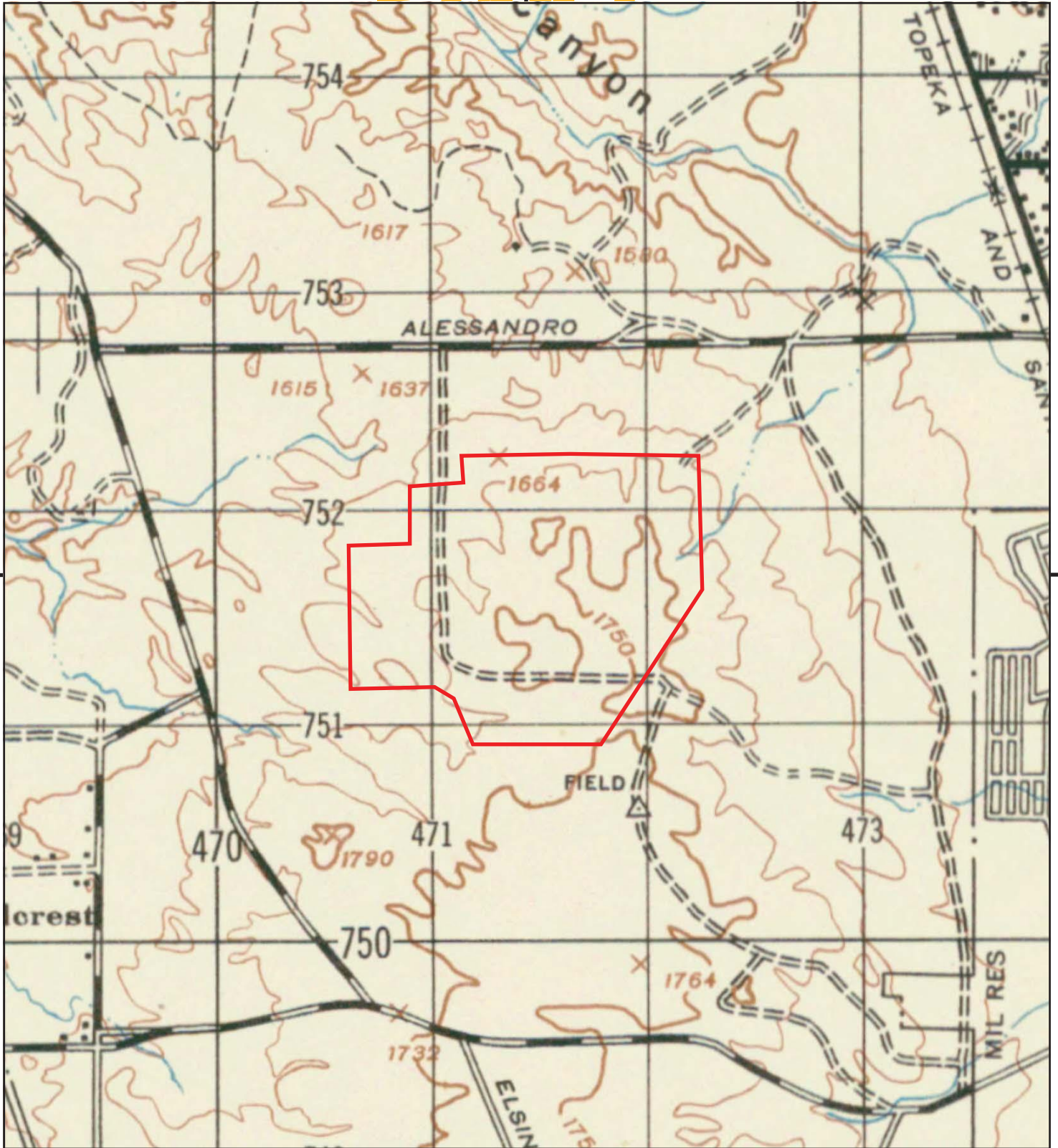
This report includes information from the following map sheet(s).



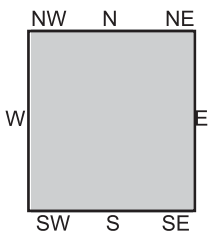
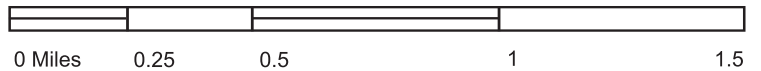
TP, RIVERSIDE VICINITY, 1942, 7.5-minute

SITE NAME: Lewis-Meridian Park LLC, Upper Plateau
 ADDRESS: Former March Air Force Base - Ordinance
 Riverside, CA 92508
 CLIENT: Leighton Consulting





This report includes information from the following map sheet(s).



TP, RIVERSIDE, 1947, 15-minute

SITE NAME: Lewis-Meridian Park LLC, Upper Plateau
 ADDRESS: Former March Air Force Base - Ordinance
 Riverside, CA 92508
 CLIENT: Leighton Consulting



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INQUIRY #: 6607282.8

YEAR: 1949

— = 750'



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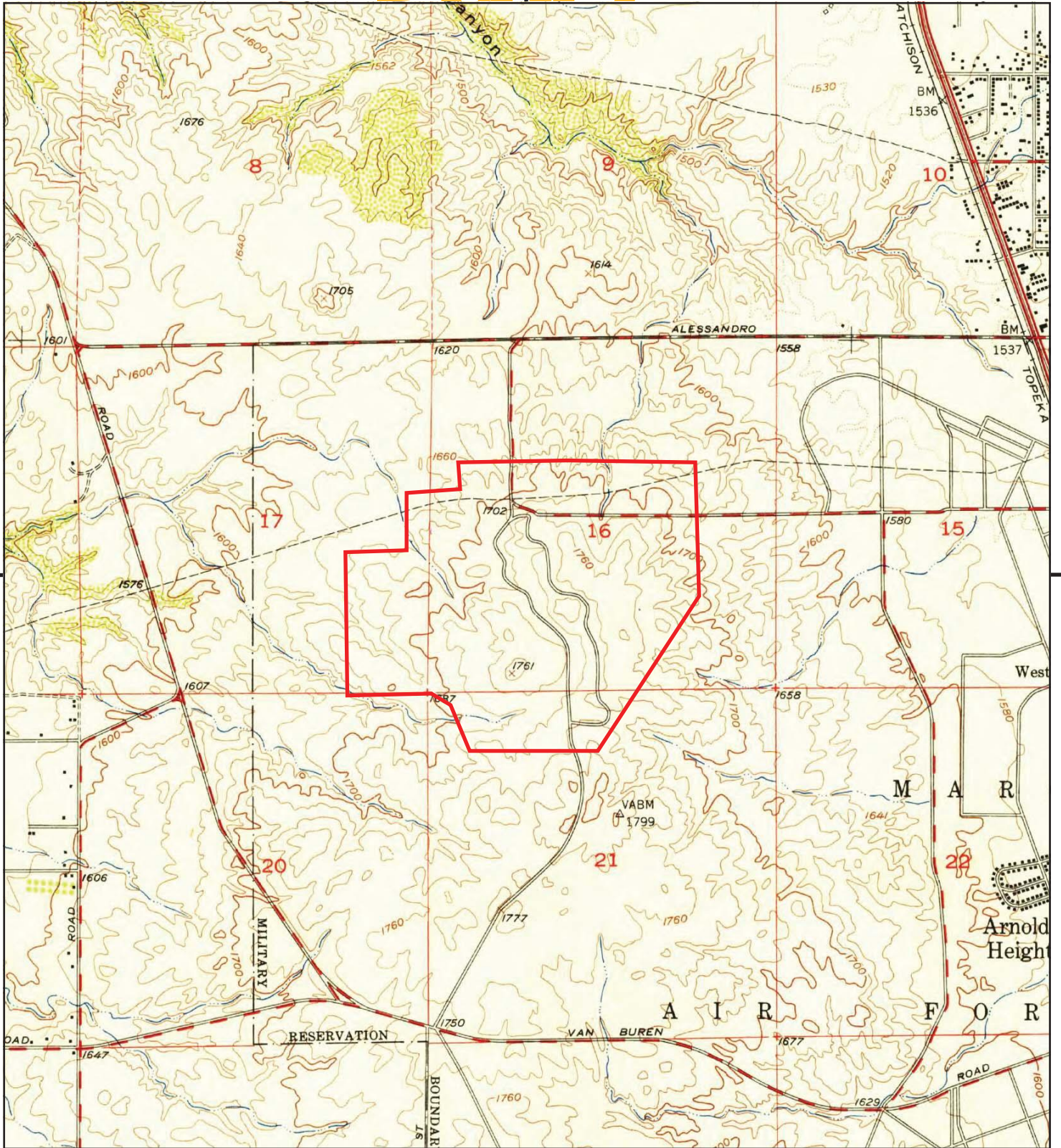


INQUIRY #: 6607282.8

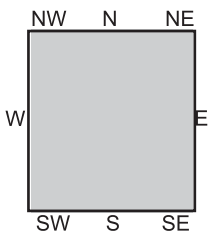
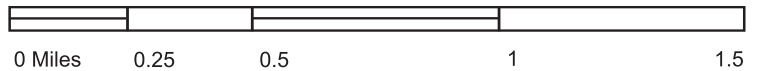
YEAR: 1953

— = 750'





This report includes information from the following map sheet(s).



TP, Riverside East, 1953, 7.5-minute

SITE NAME: Lewis-Meridian Park LLC, Upper Plateau
 ADDRESS: Former March Air Force Base - Ordinance
 Riverside, CA 92508
 CLIENT: Leighton Consulting



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1962: C_24244, 1-142



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A

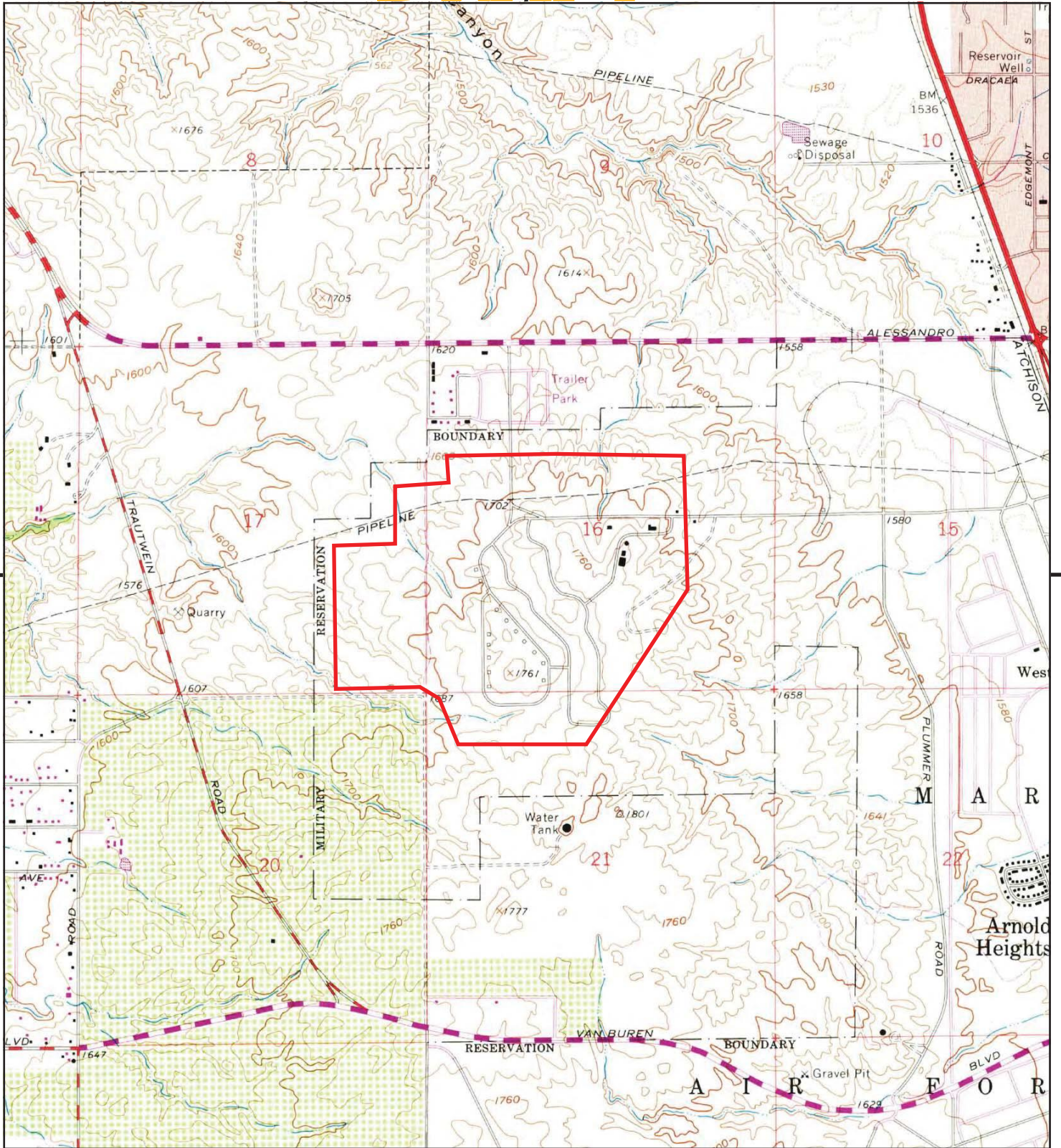


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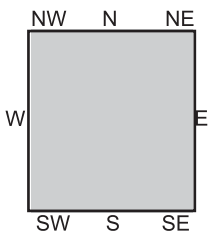
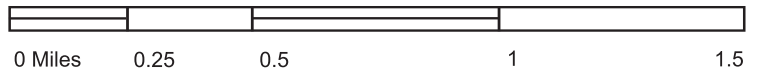
YEAR: 1967

— = 750'





This report includes information from the following map sheet(s).



TP, Riverside East, 1967, 7.5-minute

SITE NAME: Lewis-Meridian Park LLC, Upper Plateau
 ADDRESS: Former March Air Force Base - Ordinance
 Riverside, CA 92508
 CLIENT: Leighton Consulting



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1976: AMI-RIV-76, 8089



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USDA

16

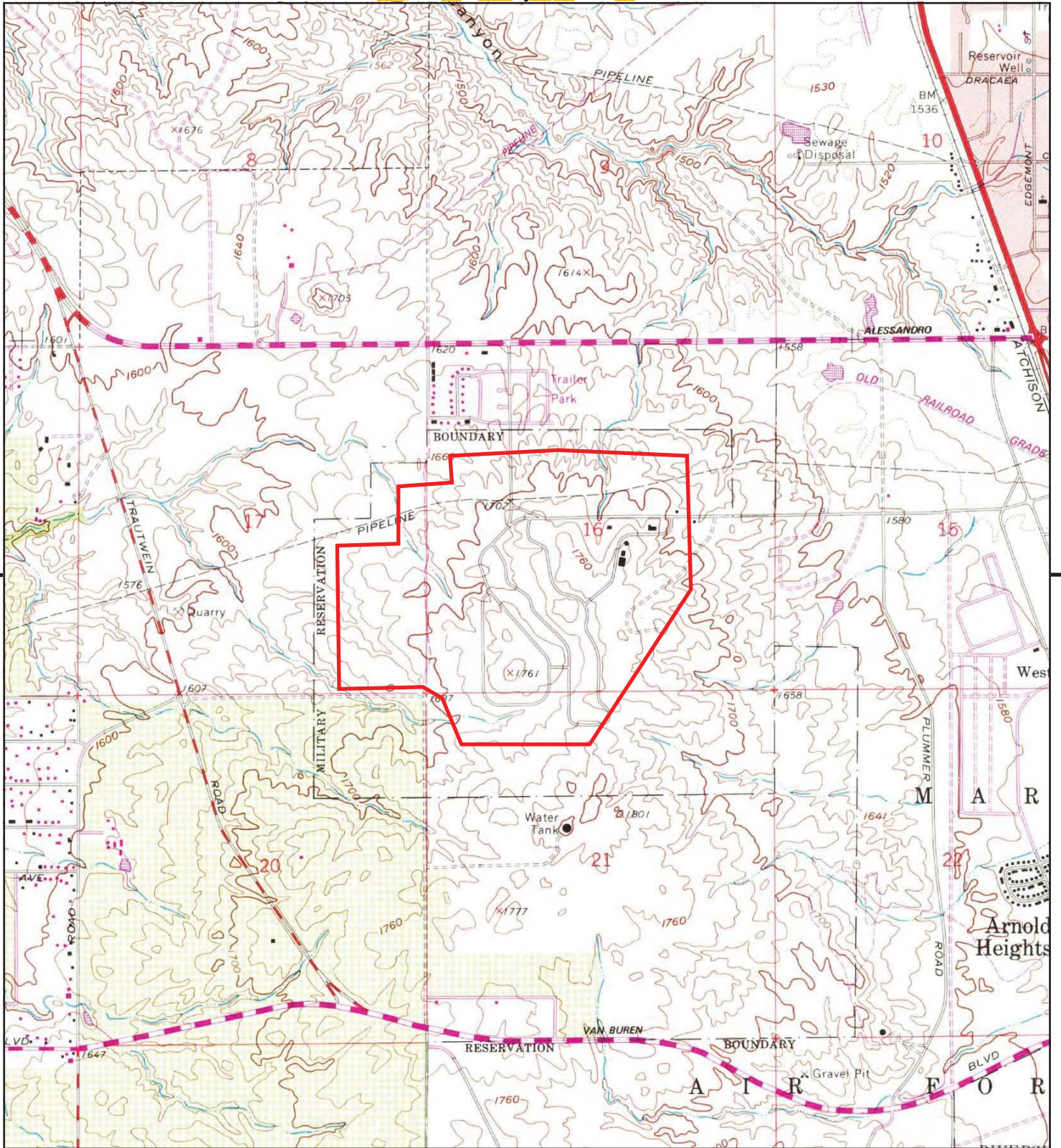


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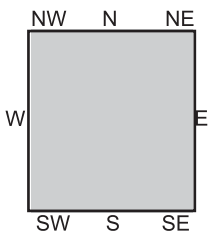
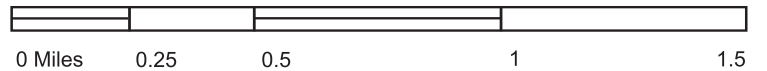
YEAR: 1978

— = 750'





This report includes information from the following map sheet(s).



TP, Riverside East, 1980, 7.5-minute

SITE NAME: Lewis-Meridian Park LLC, Upper Plateau
 ADDRESS: Former March Air Force Base - Ordinance
 Riverside, CA 92508
 CLIENT: Leighton Consulting



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INQUIRY #: 6607282.8

YEAR: 1985

— = 750'



DRAFT



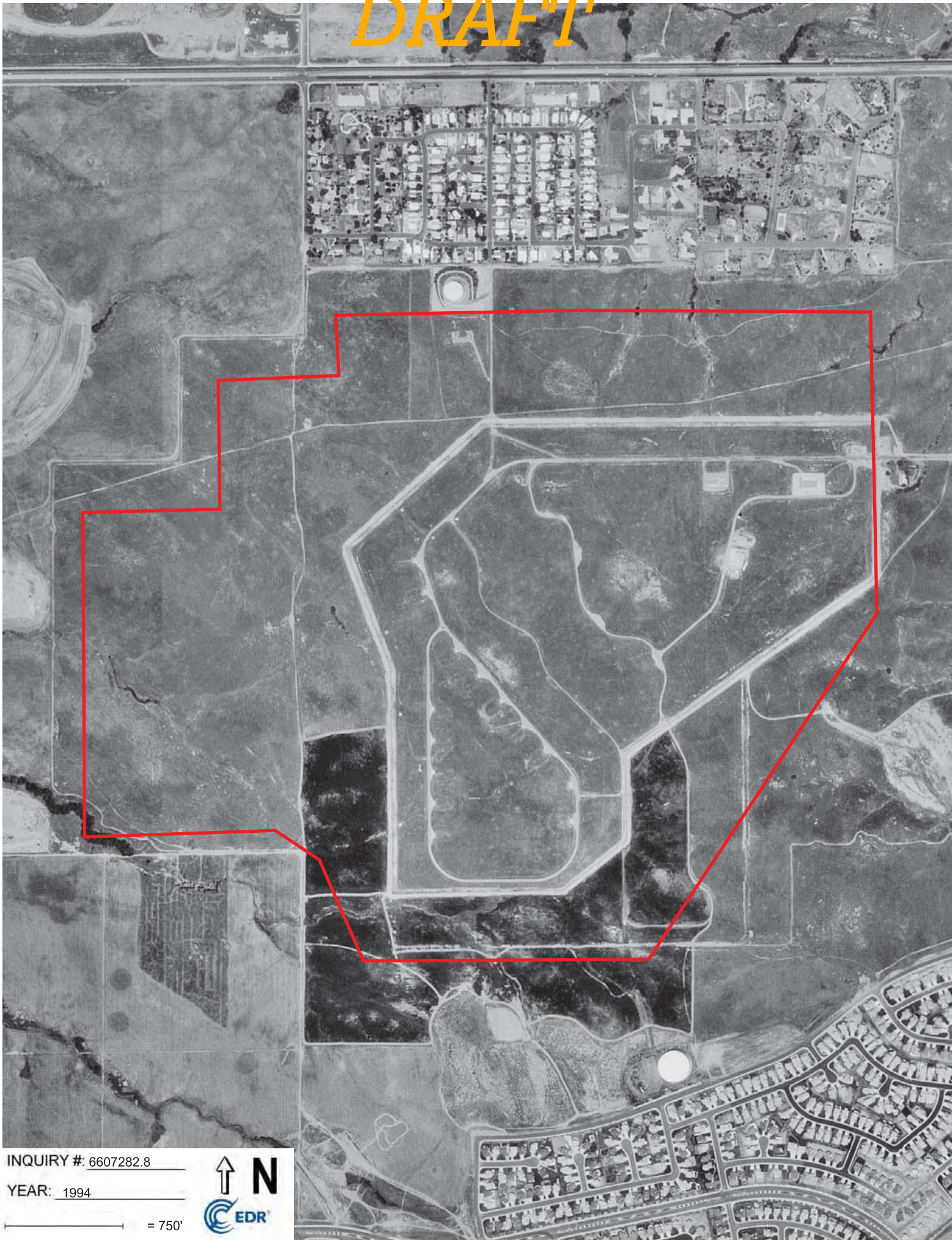
INQUIRY #: 6607282.8

YEAR: 1989

— = 750'



DRAFT



INQUIRY #: 6607282.8

YEAR: 1994

— = 750'



DRAFT



INQUIRY #: 6607282.8

YEAR: 2002

— = 750'



DRAFT



INQUIRY #: 6607282.8

YEAR: 2006

— = 750'



DRAFT



INQUIRY #: 6607282.8

YEAR: 2009

— = 750'



DRAFT

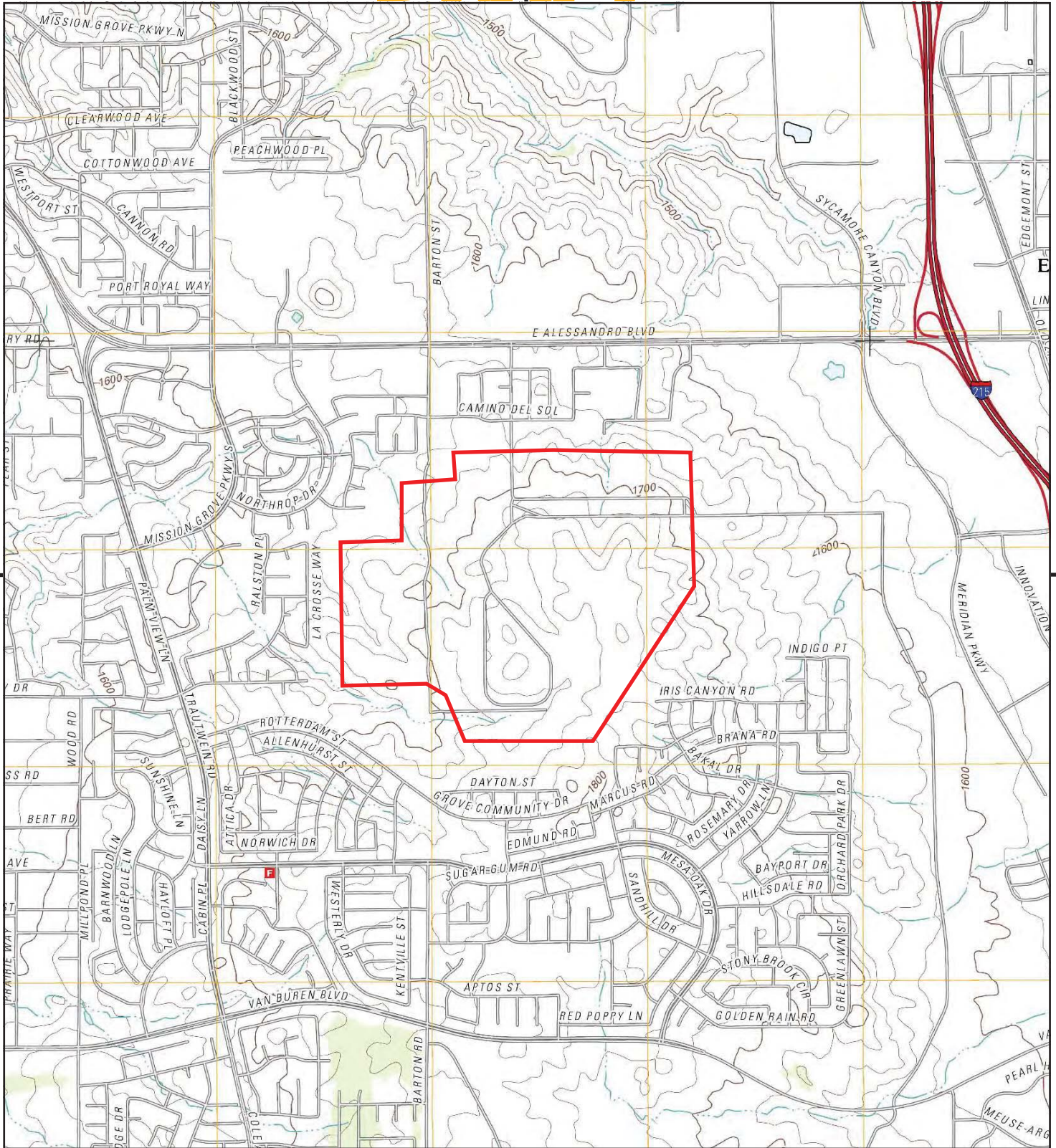


INQUIRY #: 6607282.8

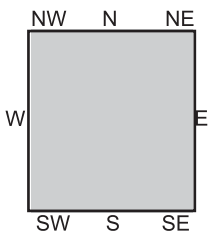
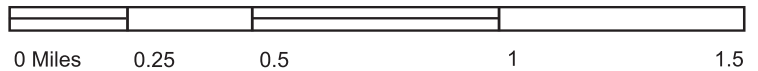
YEAR: 2012

— = 750'





This report includes information from the following map sheet(s).



TP, Riverside East, 2012, 7.5-minute

SITE NAME: Lewis-Meridian Park LLC, Upper Plateau
ADDRESS: Former March Air Force Base - Ordinance
 Riverside, CA 92508
CLIENT: Leighton Consulting



DRAFT



INQUIRY #: 6607282.8

YEAR: 2016

— = 750'



Certified Sanborn® Map Report

08/04/21

Site Name:

Lewis-Meridian Park LLC, Upper
Former March Air Force Base -
Riverside, CA 92508
EDR Inquiry # 6607282.3

Client Name:

Leighton Consulting
17781 Cowan
Irvine, CA 92614
Contact: Robert Blaine Hansen



The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Leighton Consulting were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # 5977-489C-A4A4
PO # NA
Project 13226.002



Sanborn® Library search results

Certification #: 5977-489C-A4A4

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- Library of Congress
- University Publications of America
- EDR Private Collection

The Sanborn Library LLC Since 1866™

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Lewis-Meridian Park LLC, Upper Plateau

Former March Air Force Base - Ordinance Strge Area
Riverside, CA 92508

Inquiry Number: 6607282.5

August 06, 2021

The EDR-City Directory Abstract

EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Abstract is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Abstract includes a search and abstract of available city directory data. For each address, the directory lists the name of the corresponding occupant at five year intervals.

Business directories including city, cross reference and telephone directories were reviewed, if available, at approximately five year intervals for the years spanning 1921 through 2017. This report compiles information gathered in this review by geocoding the latitude and longitude of properties identified and gathering information about properties within 1320 feet of the target property.

A summary of the information obtained is provided in the text of this report.

RECORD SOURCES

EDR's Digital Archive combines historical directory listings from sources such as Cole Information and Dun & Bradstreet. These standard sources of property information complement and enhance each other to provide a more comprehensive report.

EDR is licensed to reproduce certain City Directory works by the copyright holders of those works. The purchaser of this EDR City Directory Report may include it in report(s) delivered to a customer. Reproduction of City Directories without permission of the publisher or licensed vendor may be a violation of copyright.



RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. An "X" indicates where information was identified in the source and provided in this report.

<u>Year</u>	<u>Source</u>	<u>TP</u>	<u>Adjoining</u>	<u>Text Abstract</u>	<u>Source Image</u>
2017	Cole Information Services	-	-	-	-
2014	Cole Information Services	-	-	-	-
2009	Cole Information Services	-	-	-	-
2004	Cole Information Services	-	-	-	-
2002	SBC PACIFIC BELL	-	-	-	-
2001	Haines Company, Inc.	-	-	-	-
1999	Cole Information Services	-	-	-	-
1996	Pacific Bell	-	-	-	-
1994	Cole Information Services	-	-	-	-
1993	Pacific Bell	-	-	-	-

DRAFT

EXECUTIVE SUMMARY

<u>Year</u>	<u>Source</u>	<u>TP</u>	<u>Adjoining</u>	<u>Text Abstract</u>	<u>Source Image</u>
1990	Pacific Bell	-	-	-	-
1986	Pacific Bell Yellow Pages	-	-	-	-
1981	Pacific Telephone	-	-	-	-
1977	Pacific Telephone	-	-	-	-
1970	Pacific Telephone	-	-	-	-
1967	Luskey Brothers & Co.	-	-	-	-
1966	Luskey Brothers & Company Inc.	-	-	-	-
1961	Luskey Brothers & Co.	-	-	-	-
1960	Luskeys Brothers & Co., Publishers	-	-	-	-
1956	Luskey Brothers & Co.	-	-	-	-
1955	Luskeys Brothers Co., Publishers	-	-	-	-
1951	Los Angeles Directory Co.	-	-	-	-
1946	Southern California Telephone Company	-	-	-	-
1945	Los Angeles Directory Co.	-	-	-	-
1941	Pacific Directory Co.	-	-	-	-
1939	Los Angeles Directory Co.	-	-	-	-
1936	Los Angeles Directory Co.	-	-	-	-
1931	Southern California Telephone Co.	-	-	-	-
1930	Los Angeles Directory Co.	-	-	-	-
1927	Los Angeles Directory Co.	-	-	-	-
1925	Los Angeles Directory Co.	-	-	-	-
1924	Kaasen Directory Co.	-	-	-	-
1921	Riverside Directory Co.	-	-	-	-

FINDINGS

TARGET PROPERTY INFORMATION

ADDRESS

Former March Air Force Base - Ordinance Strge Area
Riverside, CA 92508

FINDINGS DETAIL

Target Property research detail.

FINDINGS

ADJOINING PROPERTY DETAIL

The following Adjoining Property addresses were researched for this report. Detailed findings are provided for each address.

No Addresses Found

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FINDINGS

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TARGET PROPERTY: ADDRESS NOT IDENTIFIED IN RESEARCH SOURCE

The following Target Property addresses were researched for this report, and the addresses were not identified in the research source.

Address Researched

Former March Air Force Base -
Ordinance Strge Area

Address Not Identified in Research Source

2017, 2014, 2009, 2004, 2002, 2001, 1999, 1996, 1994, 1993, 1990, 1986, 1981,
1977, 1970, 1967, 1966, 1961, 1960, 1956, 1955, 1951, 1946, 1945, 1941, 1939,
1936, 1931, 1930, 1927, 1925, 1924, 1921

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Appendix I

GBA Geoenvironmental Report

Important Information about This

Geoenvironmental Report

Geoenvironmental studies are commissioned to gain information about environmental conditions on and beneath the surface of a site. The more comprehensive the study, the more reliable the assessment is likely to be. But remember: Any such assessment is to a greater or lesser extent based on professional opinions about conditions that cannot be seen or tested. Accordingly, no matter how many data are developed, risks created by unanticipated conditions will always remain. *Have realistic expectations.* Work with your geoenvironmental consultant to manage known and unknown risks. Part of that process should already have been accomplished, through the risk allocation provisions you and your geoenvironmental professional discussed and included in your contract's general terms and conditions. This document is intended to explain some of the concepts that may be included in your agreement, and to pass along information and suggestions to help you manage your risk.

Beware of Change; Keep Your Geoenvironmental Professional Advised

The design of a geoenvironmental study considers a variety of factors that are subject to change. Changes can undermine the applicability of a report's findings, conclusions, and recommendations. *Advise your geoenvironmental professional about any changes you become aware of.* Geoenvironmental professionals cannot accept responsibility or liability for problems that occur because a report fails to consider conditions that did not exist when the study was designed. Ask your geoenvironmental professional about the types of changes you should be particularly alert to. Some of the most common include:

- modification of the proposed development or ownership group,
- sale or other property transfer,
- replacement of or additions to the financing entity,

- amendment of existing regulations or introduction of new ones, or
- changes in the use or condition of adjacent property.

Should you become aware of any change, *do not rely on a geoenvironmental report.* Advise your geoenvironmental professional immediately; follow the professional's advice.

Recognize the Impact of Time

A geoenvironmental professional's findings, recommendations, and conclusions cannot remain valid indefinitely. The more time that passes, the more likely it is that important latent changes will occur. *Do not rely on a geoenvironmental report if too much time has elapsed since it was completed.* Ask your environmental professional to define "too much time." In the case of Phase I Environmental Site Assessments (ESAs), for example, more than 180 days after submission is generally considered "too much."

Prepare To Deal with Unanticipated Conditions

The findings, recommendations, and conclusions of a Phase I ESA report typically are based on a review of historical information, interviews, a site "walkover," and other forms of noninvasive research. When site subsurface conditions are not sampled in any way, the risk of unanticipated conditions is higher than it would otherwise be.

While borings, installation of monitoring wells, and similar invasive test methods can help reduce the risk of unanticipated conditions, *do not overvalue the effectiveness of testing.* Testing provides information about actual conditions only at the precise locations where samples are taken, and only when they are taken. Your geoenvironmental

professional has applied that specific information to develop a general opinion about environmental conditions. *Actual conditions in areas not sampled may differ (sometimes sharply) from those predicted in a report.* For example, a site may contain an unregistered underground storage tank that shows no surface trace of its existence. *Even conditions in areas that were tested can change, sometimes suddenly, due to any number of events, not the least of which include occurrences at adjacent sites.* Recognize, too, that *even some conditions in tested areas may go undiscovered*, because the tests or analytical methods used were designed to detect only those conditions assumed to exist.

Manage your risks by retaining your geoenvironmental professional to work with you as the project proceeds. Establish a contingency fund or other means to enable your geoenvironmental professional to respond rapidly, in order to limit the impact of unforeseen conditions. And to help prevent any misunderstanding, identify those empowered to authorize changes and the administrative procedures that should be followed.

Do Not Permit Any Other Party To Rely on the Report

Geoenvironmental professionals design their studies and prepare their reports to meet the specific needs of the clients who retain them, in light of the risk management methods that the client and geoenvironmental professional agree to, and the statutory, regulatory, or other requirements that apply. The study designed for a developer may differ sharply from one designed for a lender, insurer, public agency...or even another developer. *Unless the report specifically states otherwise, it was developed for you and only you.* Do not unilaterally permit any other party to rely on it. The report and the study underlying it may not be adequate for another party's needs, and you could be held liable for shortcomings your geoenvironmental professional was powerless to prevent or anticipate. Inform your geoenvironmental professional when you know or expect that someone else—a third-party—will want to use or rely on the report. *Do not permit third-party use or reliance until you first confer with the geoenvironmental professional who prepared the report.* Additional testing, analysis, or study may be required and, in any event, appropriate terms and conditions should be agreed to so both you and your geoenvironmental professional are protected from third-party risks. *Any party who relies on a geoenvironmental report without the express written permission of the professional who prepared it and the client for whom it was prepared may be solely liable for any problems that arise.*

Avoid Misinterpretation of the Report

Design professionals and other parties may want to rely on the report in developing plans and specifications. They need to be advised, in writing, that their needs may not have been considered when the study's scope was developed, and, even if their needs were considered, they might misinterpret geoenvironmental findings, conclusions, and recommendations. *Commission your geoenvironmental professional to explain pertinent elements of the report to others who are permitted to rely on it, and to review any plans, specifications or other instruments of professional service that incorporate any of the report's findings, conclusions, or recommendations.* Your geoenvironmental professional has the best understanding of the issues involved, including the fundamental assumptions that underpinned the study's scope.

Give Contractors Access to the Report

Reduce the risk of delays, claims, and disputes by giving contractors access to the full report, *providing that it is accompanied by a letter of transmittal that can protect you* by making it unquestionably clear that: 1) the study was not conducted and the report was not prepared for purposes of bid development, and 2) the findings, conclusions, and recommendations included in the report are based on a variety of opinions, inferences, and assumptions and are subject to interpretation. Use the letter to also advise contractors to consult with your geoenvironmental professional to obtain clarifications, interpretations, and guidance (a fee may be required for this service), and that—in any event—they should conduct additional studies to obtain the specific type and extent of information each prefers for preparing a bid or cost estimate. Providing access to the full report, with the appropriate caveats, helps prevent formation of adversarial attitudes and claims of concealed or differing conditions. If a contractor elects to ignore the warnings and advice in the letter of transmittal, it would do so at its own risk. Your geoenvironmental professional should be able to help you prepare an effective letter.

Do Not Separate Documentation from the Report

Geoenvironmental reports often include supplemental documentation, such as maps and copies of regulatory files, permits, registrations, citations, and correspondence with regulatory agencies. If subsurface explorations were performed, the report may contain final boring logs and copies of laboratory data. If remediation activities occurred on site, the report may include: copies of daily field reports; waste manifests; and information about the disturbance of subsurface materials, the type and thickness of any fill placed on site, and fill placement practices, among other types of documentation. *Do not separate supplemental documentation from the report. Do not, and do not permit any other party to redraw or modify any of the supplemental documentation for incorporation into other professionals' instruments of service.*

Understand the Role of Standards

Unless they are incorporated into statutes or regulations, standard practices and standard guides developed by the American Society for Testing and Materials (ASTM) and other recognized standards-developing organizations (SDOs) are little more than aspirational methods agreed to by a consensus of a committee. The committees that develop standards may not comprise those best-qualified to establish methods and, no matter what, no standard method can possibly consider the infinite client- and project-specific variables that fly in the face of the theoretical "standard conditions" to which standard practices and standard guides apply. In fact, these variables can be so pronounced that geoenvironmental professionals who comply with every directive of an ASTM or other standard procedure could run afoul of local custom and practice, thus violating the standard of care. Accordingly, when geoenvironmental professionals indicate in their reports that they have performed a service "in general compliance" with one standard or another, it means they have applied professional judgement in creating and implementing a scope of service designed for the specific client and project involved, and which follows some of the general precepts laid out in the referenced standard. To the extent that a report indicates "general compliance" with a standard, you may wish to speak with your geoenvironmental professional to learn more about what was and was not done. *Do not assume a given standard was followed to the letter.* Research indicates that that seldom is the case.

Realize That Recommendations May Not Be Final

The technical recommendations included in a geoenvironmental report are based on assumptions about actual conditions, and so are preliminary or tentative. Final recommendations can be prepared only by observing actual conditions as they are exposed. For that reason, you should retain the geoenvironmental professional of record to observe construction and/or remediation activities on site, to permit rapid response to unanticipated conditions. *The geoenvironmental professional who prepared the report cannot assume responsibility or liability for the report's recommendations if that professional is not retained to observe relevant site operations.*

Understand That Geotechnical Issues Have Not Been Addressed

Unless geotechnical engineering was specifically included in the scope of professional service, a report is not likely to relate any findings, conclusions, or recommendations about the suitability of subsurface materials for construction purposes, especially when site remediation has been accomplished through the removal, replacement, encapsulation, or chemical treatment of on-site soils. The equipment, techniques, and testing used by geotechnical engineers differ markedly from those used by geoenvironmental professionals; their education, training, and experience are also significantly different. If you plan to build on the subject site, but have not yet had a geotechnical engineering study conducted, your geoenvironmental professional should be able to provide guidance about the next steps you should take. The same firm may provide the services you need.

DRAFT

Read Responsibility Provisions Closely

Geoenvironmental studies cannot be exact; they are based on professional judgement and opinion. Nonetheless, some clients, contractors, and others assume geoenvironmental reports are or certainly should be unerringly precise. Such assumptions have created unrealistic expectations that have led to wholly unwarranted claims and disputes. To help prevent such problems, geoenvironmental professionals have developed a number of report provisions and contract terms that explain who is responsible for what, and how risks are to be allocated. Some people mistake these for “exculpatory clauses,” that is, provisions whose purpose is to transfer one party’s rightful responsibilities and liabilities to someone else. Read the responsibility provisions included in a report and in the contract you and your geoenvironmental professional agreed to. *Responsibility provisions are not “boilerplate.”* They are important.

Rely on Your Geoenvironmental Professional for Additional Assistance

Membership in the Geoprofessional Business Association exposes geoenvironmental professionals to a wide array of risk management techniques that can be of genuine benefit for everyone involved with a geoenvironmental project. Confer with your GBA-member geoenvironmental professional for more information.



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