



Superfund Proposed Plan

Former McClellan Air Force Base

Finding of Suitability for Early Transfer (FOSET) #2

No Further Action (NFA) Sites

United States Environmental Protection Agency, Region 9 ■ 75 Hawthorne Street ■ San Francisco, CA, 94105

August 2015

A. Introduction

The U.S. Environmental Protection Agency (EPA), in consultation with the California Department of Toxic Substances Control (DTSC) and the Central Valley Regional Water Quality Control Board (Central Valley Water Board), is issuing this **Proposed Plan**¹ for the 35 **No Further Action (NFA) Sites** within the **Finding of Suitability for Early Transfer (FOSET) #2** Property at the former McClellan Air Force Base (AFB) Superfund Site (now known as McClellan Park), located in McClellan, California. The EPA is requesting public comment on the proposed remedy for these 35 NFA sites. This plan summarizes the history, cleanup process, and rationale for the proposed remedial alternative for these 35 sites and fulfills the requirements of the **Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)** §117(a) and the **National Oil and Hazardous Substances Pollution Contingency Plan (NCP)** §300.430(f)(2).

The community is invited to learn more about the Proposed Plan and to ask questions at a public meeting on Wednesday, September 2, 2015 at 6:30 p.m. Information about the public comment period and the public meeting are shown below. The EPA invites you to review and comment on the Proposed Plan during this period, and also invites you to review material, ask questions, and participate in making final decisions about the preferred remedy presented in this Proposed Plan. The EPA will review and respond to all comments and formalize the decision in the FOSET #2 NFA Sites **Record of Decision (ROD)**.

How You Can Be Involved

30-Day Public Comment Period

□ August 24 to September 25, 2015

Comments must be received by September 25, 2015

Mail (or e-mail) your written comments to:

Bob Fitzgerald
Remedial Project Manager
U.S. Environmental Protection Agency
75 Hawthorne Street
Mailcode S82
San Francisco, CA 94105
(415) 947-4171
fitzgerald.bob@epa.gov

Public Meeting

□ Wednesday, September 2, 2015, at 6:30 p.m.

North Highlands Recreation Center
6040 Watt Avenue
North Highlands, CA 95660

During the public meeting, the EPA will present and explain the information contained in this Proposed Plan. You will be able to ask questions and tell EPA representatives what you think about the cleanup alternatives. The EPA will accept written and oral comments and respond to them in the final decision document. A final cleanup decision will not be made until all comments are considered.

For additional information, or to obtain another copy of this Proposed Plan, contact Viola Cooper, EPA Community Involvement Coordinator, at (415) 972-3243 or cooper.viola@epa.gov.

1. To assist the reader, as each key term is introduced, it appears in **bold type**. A glossary of key terms is provided on pages 13 to 15.

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The U.S. Air Force transferred 525 acres with 133 **Installation Restoration Program (IRP)** Sites under FOSET #2 to McClellan Business Park, LLC (MBP). The FOSET #2 Sites are located in the eastern and southeastern area of McClellan Park. Ten sites in FOSET #2 were included in other U.S. Air Force RODs, and EPA is addressing the remaining 123 IRP sites in three separate FOSET #2 RODs: the Action Sites ROD for 43 sites; an upcoming Group 2 Action Sites ROD for 45 sites; and the NFA ROD for 35 sites where NFA is the proposed remedy because risk levels are below or within the risk range, and there are no threats to groundwater or surface water quality.

The Proposed Plan for the Action Sites ROD went through public review in January 2014, and the ROD was issued in March 2015. A Proposed Plan presenting the 45 Group 2 Action Sites proposed remedy alternatives is under preparation. This FOSET #2 NFA Sites Proposed Plan summarizes the proposed NFA remedy for soil extending from the surface to 15 feet below ground surface (bgs). This Proposed Plan summarizes the site histories; describes past cleanup actions, investigations, and studies that the U.S. Air Force has performed at the FOSET #2 NFA Sites; and provides the basis for this proposed NFA remedy for these sites, which the EPA, DTSC, and the Central Valley Water Board believe is protective of human health and the environment.

The supporting information for the sites discussed in this Proposed Plan came from two different **Remedial Investigation and Feasibility Studies (RI/FS)**: the *Final Follow-on Strategic Sites Remedial Investigation Characterization Summary and Feasibility Study* (FOSS RICS/FS, U.S. **Air Force Real Property Agency [AFRPA]**, June 2012, McClellan **Administrative Record [AR]** #7572) and the *Final Small Volume Sites Remedial Investigation Characterization Summaries Addenda and Feasibility Study* (SVS RICS/FS, AFRPA, May 2011, McClellan AR #7326). The 35 proposed NFA sites summarized in Table 1 and shown on Figure 1 are grouped based on these two documents.

If EPA selects the proposed NFA remedies, then remedy implementation will be complete upon EPA's signature of the ROD. The U.S. Air Force is still responsible for cleanup of contamination in soil and soil gas below 15 feet bgs,

in **groundwater**, and for the remainder of the IRP sites within the FOSS RICS/FS and SVS RICS/FS that were not included in any **privatization** transfer.

Table 1 - 35 FOSET #2 Proposed No Further Action Sites
 Sites in green are from FOSS RICS/FS. Sites in blue are from SVS RICS/FS

FOSET #2 Sites from the FOSS RI/FS	FOSET #2 Sites from the SVS RI/FS		
• Area of Concern (AOC) 651	• Dudley Blvd.	• SA 054	• SA 099
• AOC H-4	• PRL 039	• SA 056	• SA 106
• AOC H-5	• PRL B-003	• SA 061	
• AOC H-6	• PRL S-016	• SA 065	
• AOC H-7	• PRL S-020	• SA 070	
• AOC H-9 (F2)	• PRL S-023	• SA 074	
• Potential Release Location (PRL) 025	• PRL T-010	• SA 075	
• PRL P-008	• PRL T-018	• SA 076	
• PRL S-003	• SA 034	• SA 084	
• PRL T-062	• SA 046	• SA 085	
• Study Area (SA) 103	• SA 052	• SA 087	

(F2) Indicates portion of the IRP site within FOSET #2.

B. History and Site Background

The former McClellan AFB, now McClellan Park, encompasses about 3,000 acres and is located 7 miles northeast of downtown Sacramento, California. McClellan Park is surrounded by the City of Sacramento to the west and southwest, unincorporated areas of Antelope to the north, Rio Linda to the northwest, and North Highlands to the east (Figure 2).

Between 1936 and 2001, McClellan AFB was an aircraft repair depot and supply base. Contamination exists within certain areas at McClellan Park as a result of the U.S. Air Force storing, using, and disposing of industrial solvents and cleaners, aviation fuels, and a variety of oils, lubricants, and other materials at the property. Due to past disposal practices, spills, releases, and leaking tanks and pipelines, groundwater contamination is present and was first detected in 1979. In July 1987, McClellan AFB was listed on the **National Priorities List (NPL)** as a Superfund site.

The U.S. Air Force initiated the process outlined in **CERCLA** for hazardous waste site cleanup (see Figure 3). Under CERCLA, the U.S. Air Force funds cleanup actions at McClellan Park. The U.S. Air Force completed several Interim RODs, final RODs, and ROD amendments to address cleanup of the groundwater, the shallow soil gas, and soil contamination. The U.S. Air Force also conducted a **non-time critical removal action (NTCRA)** to address contamination associated with **radionuclides** at the Dudley Blvd site, which is one of the sites included in this Proposed Plan. In addition, several of the NFA sites are within the influence of **soil vapor extraction (SVE) systems** that operated or are still operating at former McClellan AFB as part of the CERCLA groundwater remedy (see Table 2).

The EPA proposal for NFA for the 35 sites is based on years of technical investigation and analysis by the U.S. Air Force included in the two RI/FS Reports mentioned above, with EPA oversight and consultation with the DTSC and the Central Valley Water Board.

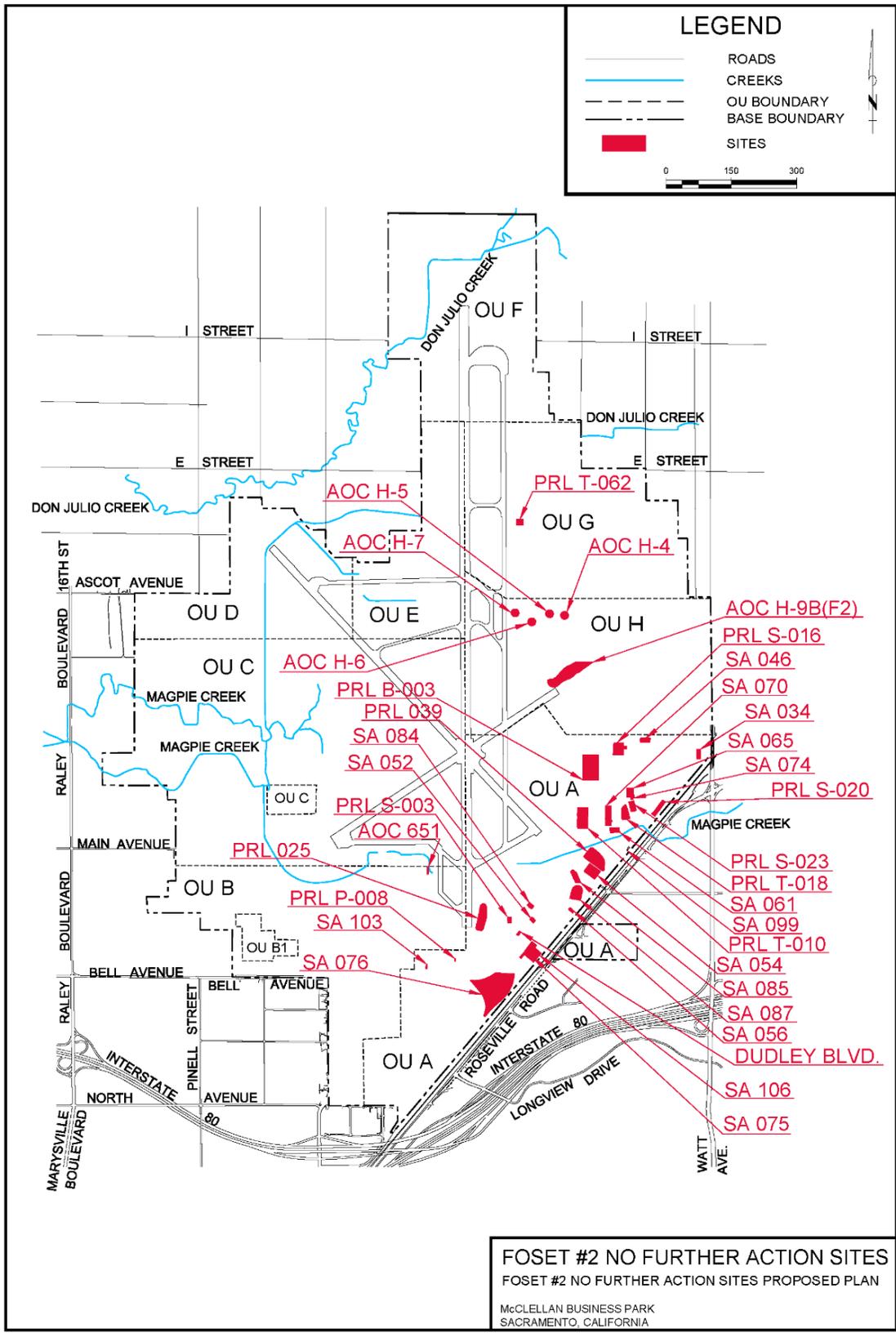


Figure 1 - FOSET #2 Proposed No Further Action Sites Location Map

C. Site Characteristics

McClellan AFB, originally called Sacramento Air Depot, was dedicated in 1937 as an active industrial facility. Since 1939, portions of the former McClellan AFB have been used for a variety of activities associated with maintenance and operation of aircraft and related communications systems. Past operations at the base include maintenance of bombers during World War II and the Korean War; maintenance of jet aircraft since the 1960s; and, until closure, the maintenance and repair of communications equipment and electronics (AFRPA, 2007, AR#6475). Activities at the former McClellan AFB have involved the use of a variety of hazardous substances. Materials used at the base in conjunction with maintenance activities include industrial solvents, caustic cleaners, electroplating chemicals, heavy metals, **polychlorinated biphenyls (PCBs)**, radioactive materials, and various fuels and oils (Mitretek, 2005, AR#5934). **Volatile organic compound (VOC)** and **non-VOC** contamination on the former base are widespread in groundwater, soil, and soil gas.

Currently, the predominant land uses at McClellan Park are office, industrial, and aviation. Surface features at the FOSET #2 Sites include open grassland, drainages, and vernal pools, as well as industrial buildings and runway areas.

D. Cleanup Process

The EPA, as lead oversight agency, has prepared this Proposed Plan which has received the concurrence of both the DTSC and the Central Valley Water Board. This plan fulfills the requirements of CERCLA §117 (a) and the NCP §300.430(f)(2). CERCLA is commonly referred to as Superfund.

As part of CERCLA, as illustrated in Figure 3, the Proposed Plan is followed by the ROD in which the final decision is documented and described in detail. The ROD will also include a **Responsiveness Summary** in response to comments received from the public during the Proposed Plan comment period. Since the proposed alternative for these sites is NFA, the CERCLA process for NFA Sites will be complete upon EPA's signature of the ROD.

E. Scope and Role of the Proposed Plan

This Proposed Plan supports the forthcoming FOSET #2 NFA Sites ROD. The Proposed Plan summarizes the basis for proposing NFA, as presented below.

This Proposed Plan addresses contamination in the upper 15 feet of soil. The U.S. Air Force is responsible for contamination in soil and soil gas below 15 feet and groundwater contamination. While several of the FOSET #2 NFA Sites are located within the influence of existing SVE systems, these SVE systems are not intended to remediate shallow soil gas but instead operate for the protection of groundwater. Radiological contamination has been addressed by the U.S. Air Force through a NTCRA.

F. Summary of Site Risks

The rationale for selecting a proposed remedial alternative can be supported by evaluating the risks to both human and ecological receptors (i.e., plants and wildlife) posed by identified contaminants. Evaluating risk is a scientific process, referred to as a **risk assessment**, which uses both facts and assumptions to evaluate potential adverse effects on human and ecological health from exposure to chemicals. The health risks and potential threats to water quality posed by the site help determine whether or not a cleanup action is needed.

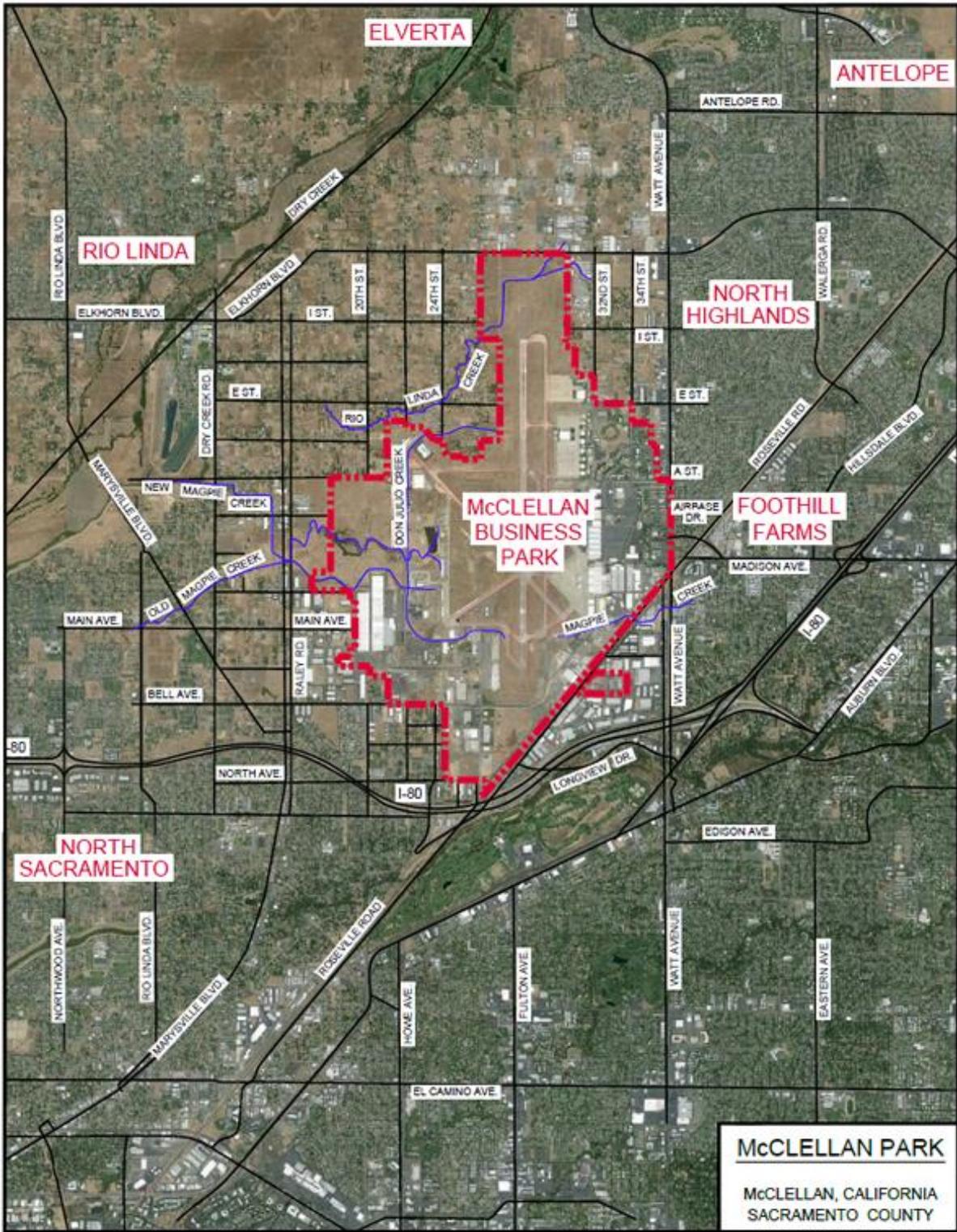


Figure 2 - Map of McClellan Park

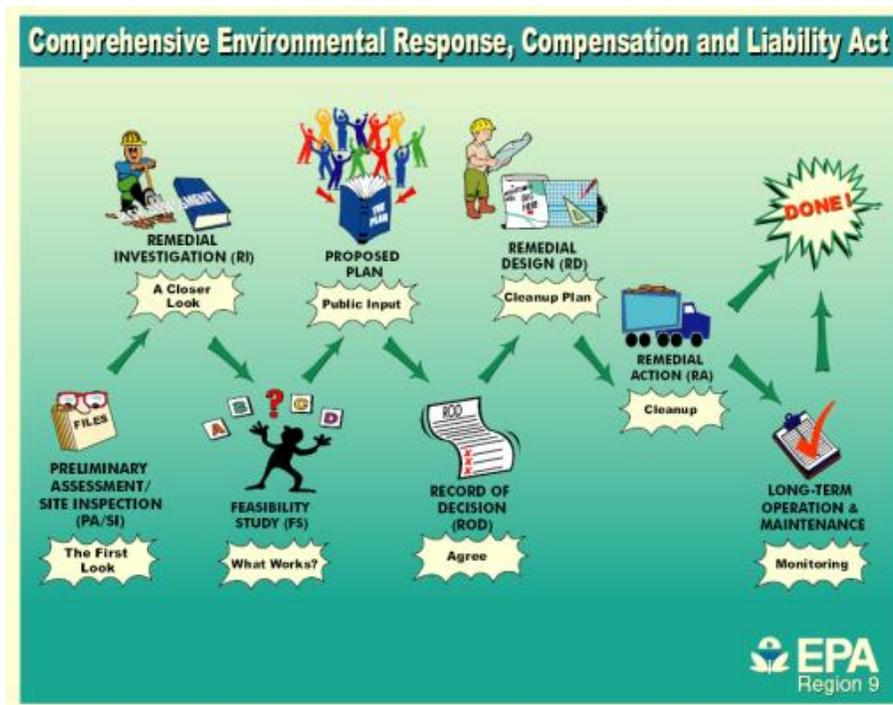


Figure 3 - CERCLA Process Flow Diagram

The **exposure routes** (i.e., different ways people might be exposed to contaminants) evaluated in the risk assessments for humans include incidental soil ingestion, inhalation of particulates which had previously settled (e.g., due to dust or wind-erosion), inhalation of indoor and outdoor air, and dermal contact with soil. For potential future residents, the ingestion of homegrown produce was also considered. Exposure routes evaluated for **shallow soil gas (SSG)** include the **vapor inhalation pathway** (i.e., contaminants in the soil volatilize into soil gas, migrate into buildings, and are inhaled by the occupants) and direct contact pathways (e.g., ingestion, dermal contact, and outdoor inhalation).

Contaminants in soil can migrate to surface water and/or groundwater, possibly resulting in unacceptable impacts to water quality. The potential for unacceptable impacts to water quality was evaluated for the FOSET #2 NFA Sites. This evaluation was completed by screening the soil data against the estimated soil concentrations that could result in contaminants in surface water or groundwater at unacceptable concentrations. Contamination in groundwater beneath these sites has been evaluated and addressed separately in the Basewide VOC Groundwater ROD (AFRPA, 2007, AR#6475) and Non-VOC Amendment to the Basewide VOC Groundwater ROD (AFRPA, 2009, AR#7055).

Risk assessments for each IRP site were performed by the U.S. Air Force and the results are presented in the FOSS RICS/FS and SVS RICS/FS. In these risk assessments, the U.S. Air Force used facts and assumptions consistent with current and likely future industrial reuse of the property, and the risk assessments remain valid for privatized cleanup. For humans, the likelihood of any kind of cancer resulting from exposure to a contaminated site is generally expressed as a probability, for example, "1-in-1,000,000 or one-in-one-million." In other words, for every one million people who are exposed over an assumed period of 30 years, one extra cancer case could occur as a result of exposure to a certain contaminant. The EPA target **cancer risk** range is between one-in-one-million and one-in-ten-thousand. Depending on site-specific factors, cleanup is considered when risks are greater than one-in-one-million, but is generally required when risks are greater than one-in-ten-thousand for the anticipated land use. For humans, risk analyses also consider **non-cancer health risks** through the use of the **hazard index (HI)**. If the HI

is greater than 1, people are exposed to levels of contaminants that may pose a non-cancer health risk. Specific non-cancer health risks depend on the type of contaminant. For humans, some non-cancer health risks can include kidney disease, nervous system damage, anemia, dizziness, and headaches. Depending on site-specific factors, cleanup is generally required when the HI is greater than 1. Land uses contribute to how people are potentially exposed to contamination. Table 2 summarizes the human health risk information for the 35 proposed NFA sites to demonstrate that the risk is below or within the risk range at the majority of the sites for the anticipated industrial land use (and also demonstrates that the risk is below or within the risk range for **unrestricted land use** for the majority of the sites), and provides the basis for selecting the proposed NFA remedy. Table 2 also summarizes the surface water and groundwater quality assessment for each site to demonstrate that the sites do not pose a threat to water quality. For the sites where risk values exceed the risk range, risk is driven by metals in soil that were either detected using a method that is unreliable, represent isolated detections, or that were detected at concentrations within the range of background concentrations. Please see Section G and Table 2 for site-specific information.

Impact from these FOSET #2 sites to onsite and offsite ecological habitat was evaluated as part of the RICS/FS. All of the FOSET #2 Sites in the FOSS and SVS RICS/FS were identified as providing no significant ecological habitat onsite and were recommended for no further ecological investigation. None of the proposed NFA sites present an ecological risk.

G. Proposed No Further Action Alternative

The NFA sites can be divided into four categories: 1) sites with both residential and industrial risk values below the risk management range and HIs less than 1 for both soil and SSG; 2) sites with risk values within the risk management range and HIs less than 1; 3) sites with residential HI values greater than 1 for soil due to metals with other risk values either within or below the risk management range; and 4) sites with risk values for soil above the risk range due to metals and risk values for SSG above the risk management range. A summary of the sites in each category is included below while Table 2 describes each of the 35 NFA sites and summarizes the data supporting the proposed NFA remedy for each site. Risks for SSG and soil are also presented in Table 2. As part of the risk data evaluation, the validity of the test method used to analyze the data was also considered. As an example, at the reported concentrations, arsenic and thallium results from Method SW6010 have been shown to be unreliable (e.g., detected arsenic results reported from Method 6010 were not reproducible when samples were analyzed by Method 7060). Only arsenic and thallium data analyzed using the SW-846 7000 series methods (e.g., arsenic by Method SW7060) are considered usable. While the Method 6010 arsenic and thallium data were initially used to consider whether the risk and hazard calculations are representative of site risk and hazard, they have likely biased risk values high. Since these results are not considered reliable and were biasing risk high, it was determined that arsenic and thallium results from Method 6010 would not be used to make decisions or select remedies.

Further information on the four categories of NFA sites is as follows:

- 1) **Below Risk Range/HI Less Than 1:** Risk values for both SSG and soil at AOC 651, AOC H-6, PRL 039, PRL B-003, PRL P-008, PRL S-023, and SA 046 are below the risk management range for both the residential and industrial scenarios, and the HIs for SSG and soil are less than 1 for both the residential and industrial scenarios. No **contaminants of concern (COCs)** were identified for soil or SSG. Therefore, no action is necessary for these sites.
- 2) **Within or Below Risk Range/HI Less Than 1:** Risk values for both SSG and soil at AOC H-4, AOC H-5, AOC H-7, AOC H-9 (F2), PRL S-003, PRL S-016, PRL T-010, PRL T-018, PRL T-062, SA 052, SA 056, SA 065, SA 070, SA 074, SA 075, SA 084, SA 103, and SA 106 are within or below the risk management range for both the residential and industrial scenarios, and the HIs for SSG and soil are less than 1 for both the residential

and industrial scenarios. No COCs were identified for soil or SSG. Therefore, no action is necessary for these sites.

- 3) **Within or Below Risk Range/HI Greater Than 1 Due to Metals:** HI values for soil are greater than 1 for the residential scenario due to metals concentrations at Dudley Blvd, PRL 025, PRL S-020, SA 034, SA 054, SA 085, and SA 099. Risk values for both SSG and soil are within or below the risk management range for both the residential and industrial scenarios. The HIs for SSG are less than 1 for both the residential and industrial scenarios, while the HIs for soil are less than 1 for the industrial scenario. For soil at Dudley Blvd, PRL S-020, SA 034, SA 054, and SA 099, the HIs for the residential scenario are greater than 1 due to metals that were either detected using a method that is unreliable or at concentrations within the range of background levels. For soil at PRL 025, the HI for the residential scenario is greater than 1 due to metals that are limited in extent and defined; these isolated concentrations are not believed to be a significant source of contamination. For soil at SA 085, the HI for the residential scenario is greater than 1 due to metals limited in extent (i.e., cadmium) as well as metals that were detected using a method that is unreliable (i.e., arsenic and thallium by Method 6010). Excluding the affected metals for each of these sites, HI values are less than 1 and risk values are below the risk management range. No COCs were identified for soil or SSG at PRL 025, PRL S-020, SA 034, SA 054, SA 085, and SA 099. Radium-226 was identified as a COC in soil for Dudley Blvd., but this contamination was removed during the NTCRA. Therefore, no action is necessary for these sites.
- 4) **Above Risk Range/HI Greater Than 1:** This category can be divided into two subcategories to classify risk exceedances.
 - a. The HIs for the residential scenario for both soil and SSG are greater than 1 at SA 087. Risk values for both soil and SSG are within or below the risk management range for the residential scenario. The risk values for the industrial scenario are within or below the risk management range and the HIs for the industrial scenario are less than 1 for both soil and SSG.
 - b. The risk value for the residential scenario is above the risk management range for soil and the soil HI for the residential scenario is greater than 1 at SA 061 and SA 076. All other risk values for soil and SSG are within or below the risk management range and other HIs are less than 1 (i.e., the industrial scenario for soil and both the residential and industrial scenarios for SSG).

The soil HIs for the residential scenario are greater than 1 at SA 061, SA 076, and SA 087 due to metals that were either detected using a method that is unreliable or that were detected at concentrations within the range of background concentrations. The residential risk values for soil are above the risk management range at SA 061 and SA 076 due to arsenic. However, excluding arsenic, the soil HIs are less than 1 and the residential risk is below the risk management range at both SA 061 and SA 076. The soil HI is greater than 1 at SA 087 due to arsenic and aluminum, but both metals are within the range of background. Excluding arsenic and aluminum, the soil HI is less than 1 for SA 087. The SSG HI for the residential scenario is greater than 1 at SA 087. However, the HI is only slightly above 1 and the extent of SSG exceedances are considered isolated. Therefore, no action is proposed for these sites.

The 35 proposed NFA Sites will provide unrestricted land use, and will require no further follow-up. There are no principal threat wastes present on these sites at levels outside the risk range deemed protective of human health and the environment.

Further information regarding these 35 sites is provided in the Final FOSS and SVS RICS/FS. These documents, along with other documents comprising the AR, are available in the **Information Repository** locations identified in the box on the following page.

The proposed NFA remedy can be changed in response to public comments or new information. The EPA invites community comments on the proposed remedy.

H. Community Participation

The EPA provides cleanup information through public meetings, the AR, announcements or articles published on the EPA website, and in newsletters, fact sheets, or community newspapers. The EPA, along with the DTSC and the Central Valley Water Board, encourages the public to gain a better understanding of the ongoing cleanup efforts at McClellan Park. Please see the “How You Can Be Involved” and “McClellan Information Repository Locations” boxes in Section A and Section H, respectively.

To facilitate communication between the EPA and the neighboring community, McClellan AFB has an active community relations and public participation program, which includes a **Restoration Advisory Board**. The Restoration Advisory Board consists of stakeholders from the community, regulatory agencies, and the U.S. Air Force. The EPA conducts public outreach meetings and speaking engagements with local organizations. The public is invited to attend the next Restoration Advisory Board meeting. For more information about the McClellan Community Relations Program or the Restoration Advisory Board, contact EPA Community Relations at (415) 972-3243 or e-mail cooper.viola@epa.gov.

The public is invited to review and comment on this Proposed Plan for the FOSET #2 NFA Sites. The EPA invites you to submit your comments on this Proposed Plan in writing to McClellan Community Relations between August 24 and September 25, 2015. A Comment Form with a mailing address is provided at the back of this Proposed Plan for your use. You may also attach additional pages if needed. A public meeting will be held on September 2, 2015, during which the EPA will be available to answer any questions. Verbal comments may be formally submitted and documented during the public meeting. The EPA will prepare written responses to all comments pertaining to this Proposed Plan. Responses to the public comments will be included in the Responsiveness Summary of the FOSET #2 NFA Sites ROD. The ROD will be available in the AR upon publication.

McClellan Information Repository Locations

U.S. Air Force Civil Engineer Center:

McClellan AFB Administrative Record
3411 Olson Street, Building 10
McClellan, CA 95652
(916) 643-1742 ext. 201
Appointments available from 8:00 a.m. to 3:00 p.m.,
Monday through Friday

Also available online at:

<http://afcec.publicadmin-record.us.af.mil>

North Highlands-Antelope Library:

4235 Antelope Road
Antelope, CA 95843
(916) 264-2700
<http://www.saclibrary.org>

Hours:

- Tuesday and Wednesday: 10:00 a.m. to 8:00 p.m.
- Thursday: 10:00 a.m. to 6:00 p.m.
- Friday: 1:00 p.m. to 6:00 p.m.
- Saturday: 10:00 a.m. to 5:00 p.m.
- Sunday and Monday: Closed

EPA Region 9 Regional Records Center:

75 Hawthorne Street, Room 3110
San Francisco, CA 94105
(415) 947-8717
Hours: Monday – Friday, 8:00 a.m. to 5:00 p.m.

For further information on the FOSET #2 NFA Sites, please contact:

U.S. Environmental Protection Agency

<http://www.epa.gov>

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California Regional Water Quality Control Board, Central Valley Region

<http://www.waterboards.ca.gov/centralvalley>

<http://www.geotracker.waterboards.ca.gov>

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Department of Toxic Substances Control

<http://www.dtsc.ca.gov>

<http://www.envirostor.dtsc.ca.gov/public>

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Glossary

Air Force Real Property Agency (AFRPA) – A former field-operating agency activated by the secretary of the Air Force. The mission was to execute the environmental programs and real and personal property disposal for major Air Force bases being closed in the U.S.

Administrative Record (AR) – Located at the former McClellan Air Force Base (McClellan Park), online (<http://afcec.publicadmin-record.us.af.mil>), and at the EPA Region 9 Records Center, a collection of all pertinent documents that support the final decisions for each site.

Bioventing – A process that involves delivering oxygen to contaminated soils through the extraction and/or injection of air. The increased oxygen within the subsurface helps naturally occurring microorganisms within the soil to biodegrade the contamination (typically fuel-related contamination).

Cancer risk – The probability of contracting cancer over the course of a lifetime (assumed to be 70 years).

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) – Legislation passed in 1980 and designed to respond to the past disposal of hazardous substances. The act was extensively amended in 1986 by the Superfund Amendments and Reauthorization Act, which added many provisions and clarified areas in the original law.

Contaminant of concern (COC) – A contaminant present at a concentration that presents a risk to human health and/or the environment.

Contaminant of potential concern (COPC) – A contaminant present at a concentration that may pose a possible risk to human health and/or the environment.

Exposure route – A way that people or ecological receptors can be exposed to contaminants. Common pathways include breathing, ingestion, or absorption through the skin.

Feasibility Study (FS) – A study of a hazardous waste site that must be completed before a cleanup remedy can be chosen and implemented. The FS identifies and evaluates alternatives for addressing contamination.

Finding of Suitability for Early Transfer (FOSET) – A document that records that a parcel of real property at a former military installation is suitable for transfer by deed, but that remedial action to address environmental contamination may still be required.

Finding of Suitability for Early Transfer (FOSET) #2 – FOSET #2 includes the privatized cleanup of parcels (133 sites) primarily in the eastern part of McClellan Park.

Groundwater – Underground water that fills pores between particles of soil, sand, and gravel or openings in rocks to the point of saturation. Where groundwater occurs in significant quantity, it can be used as a source of drinking water. Groundwater use at McClellan Park has been restricted because of contamination, which is being addressed in accordance with the VOC Groundwater ROD.

Hazard index (HI) – The ratio of contaminant concentration divided by the safe exposure level. If the hazard index exceeds 1, people are exposed to contaminants that may pose non-cancer health risks. Non-cancer health risks are contaminant-dependent but may include kidney disease, headaches, dizziness, and anemia. For more information, go to ToxFAQs at www.atsdr.cdc.gov.

Human Health Risk Assessment (HHRA) – The process to estimate the nature and probability of adverse health effects in humans who may be exposed to chemicals in contaminated environmental media, now or in the future. The risk is typically measured or estimated in numerical terms (e.g., one chance in a million).

Information Repository – The location(s) where documents related to the site can be viewed.

Installation Restoration Program (IRP) – A program designed to identify, investigate, and clean up contamination associated with past Air Force activities.

National Oil and Hazardous Substances Pollution Contingency Plan (NCP) – The federal regulation that guides determination of the sites to be cleaned up under the Superfund program. This plan also provides the organizational structure and procedures for preparing and responding to discharges of oil and releases of hazardous substances in accordance with CERCLA and the Clean Water Act.

National Priorities List (NPL) – U.S. Environmental Protection Agency’s published list of the highest priority hazardous waste sites in the U.S. for investigation and cleanup, which are subject to the Superfund program.

Non-cancer health risk – A health risk that does not result in cancer and may include kidney disease, headaches, dizziness, and anemia.

Non-Time Critical Removal Action (NTCRA) – Non-time critical removal actions are conducted at Superfund sites to address contamination when it is determined, based on the site evaluation, that a removal action is appropriate, and a planning period of at least six months is available before on-site activities must begin. Non-time critical removal actions can address priority risks and provide an important method of moving sites more quickly through the Superfund process.

Non-volatile organic compounds (Non-VOCs) – A group of compounds that do not readily evaporate at room temperature. These include metals, pesticides, semi-volatile organic compounds, petroleum hydrocarbons, dioxins/furans, and radionuclides.

Polychlorinated biphenyl (PCB) – One of a group of toxic, persistent chemicals formerly used in electrical transformers and capacitors for insulating purposes. PCBs are classified as possible carcinogens.

Polycyclic aromatic hydrocarbon (PAH) – One of a group of more than 100 different chemicals that are formed during the incomplete burning of coal, oil and gas, garbage, or other organic substances like tobacco or charbroiled meat.

Privatization – The process through which the Department of Defense provides cleanup funds to a new property owner with the goal of speeding up redevelopment.

Proposed Plan – A summary of cleanup alternatives for a contaminated site, including a preferred alternative and the reasons for its selection. This step is the community’s opportunity to review and comment on all cleanup alternatives under consideration. The responses to the comments are presented in the Record of Decision. All changes from the Proposed Plan are explained in the Record of Decision.

Proposed remedy – The proposed cleanup method(s) or decision for the contaminated site(s). Under Privatization at McClellan, the EPA selects the remedies in consultation with DTSC and the Central Valley Water Board. The preferred alternative must be protective of human health and the environment, comply with applicable or relevant and appropriate requirements, and be cost-effective.

Radionuclides – Chemical elements that emit energy as radiation that are present in the natural environment but can be changed for various purposes (such as being used to create paint that glows in the dark). Soil and groundwater can be contaminated if such chemicals are spilled on the ground or buried for disposal.

Record of Decision (ROD) – A document selecting and explaining the cleanup alternative(s) that will be used at a site. The Record of Decision is based on information and technical analyses generated during the Remedial Investigation and FS, and consideration of public comments and community concerns.

Remedial Investigation (RI) – A hazardous waste site study to examine the nature and extent of site contamination.

Responsiveness Summary – The section within the ROD that summarizes comments received from the public during the public comment period and provides lead agency responses to them.

Restoration Advisory Board – A board, consisting primarily of members of the public, which is a forum for the exchange of information between community members, regulatory agencies, and Air Force personnel. Board members have the opportunity to review cleanup reports and provide advice to decision makers on investigation and cleanup matters.

Revetment – A U-shaped barricade, formed by berms, that are designed to protect aircraft from ground or air attacks.

Risk assessment – A study based on the results of the RI to determine the extent to which chemical contaminants found at a Superfund site pose a risk to public health and the environment.

Semi-volatile organic compounds (SVOCs) – A group of chemical compounds that evaporate in air at a slower rate than volatile organic compounds. SVOC is a name for a class of compounds and includes PAHs, PCBs, pesticides, and dioxins/furans.

Shallow soil gas (SSG) – Soil gas in the upper 15 feet of soil.

Soil gas – Air between soil particles that may contain vaporized contaminants from the soil.

Soil vapor extraction (SVE) – A process that applies a vacuum to subsurface soil (via extraction wells) to extract contaminated vapors from the soil and flush fresh air through the contaminated soil. As necessary, the extracted vapors are treated to reduce emissions to acceptable levels.

Total petroleum hydrocarbons (TPH) – A wide range of liquid hydrocarbons, including gasoline and diesel fuel.

Unrestricted land use – Risk is reduced to such a low level as to allow anything to be built, including homes and schools.

Vapor inhalation pathway – Vapor intrusion is the migration of volatile chemicals from the subsurface into overlying buildings. The vapor inhalation pathway is used in risk analysis to evaluate the impact of vapor intrusion on building occupants. Basically, the vapor inhalation pathway includes contaminants in the soil that volatilize into soil gas, migrate into buildings, and are inhaled by the occupants.

Volatile organic compound (VOC) – An organic compound containing carbon that evaporates (volatilizes) readily at room temperature. VOCs are used in the manufacturing of paints, pharmaceuticals, and refrigerants. VOCs typically are industrial solvents, such as trichloroethylene. Some VOCs are known carcinogens. For more information, go to ToxFAQs at <http://www.atsdr.cdc.gov/toxfaqs/index.asp>.

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Table 2 - Rationale for FOSET #2 Proposed No Further Action Sites Remedy

Note: Green indicates sites included in the FOSS RICS/FS. Blue indicates sites included in the SVS RICS/FS.

Site(s)	Site Description	Summary of Data Supporting Proposed NFA Proposed Remedy
AOC 651 ¹	This site consists of an area northeast of former Building 651 (former storage, painting, paint stripping, and electrical repair facility) where trichloroethylene (TCE) was reportedly stored and disposed of onto the ground for at least three years in the early 1970s and possibly for as long as 10 years. Contaminants of potential concern (COPCs) include VOCs.	Data indicate releases have not impacted this site. No analytes were detected in SSG samples collected from the site; therefore, no risk assessment was conducted and no COCs were identified. No complete exposure routes exist at the site; thus there is no associated risk for unrestricted use. Soil data do not indicate potential impacts to groundwater or surface water.
AOC H-4 ²	This site consists of an area northeast of Building 877, north of a former large engine test revetment , and west of the Industrial Waste Line (IWL). Revetments are U-shaped barricades formed by berms that are designed to protect aircraft from ground or air attacks. This area served as part of an engine test revetment from 1946 to 1964. Possible impacts may have resulted from spills or leaks from aircraft parked within the revetment and surface water runoff from adjacent IRP sites (PRL P-001, PRL S-045, and PRL B-007). COPCs include VOCs, semi-volatile organic compounds (SVOCs) , total petroleum hydrocarbons (TPH) , polycyclic aromatic hydrocarbons (PAHs) , metals, and PCBs.	Data indicate this site has not been significantly impacted by surface releases from former revetment activities. Soil and SSG samples were collected and evaluated in a risk assessment. No COCs were identified. SSG risk for unrestricted use is 1×10^{-5} (from naphthalene and benzene), which is within the risk management range, and for industrial use is 7×10^{-7} , which is below the risk management range. The HI is less than 1 for both use scenarios. The presence of VOCs at AOC H-4 is most likely the result of releases from PRL P-001 and/or PRL S-045. Soil risk for unrestricted use is 6×10^{-5} (from arsenic) and for industrial use is 4×10^{-6} (from arsenic), both of which are within the risk management range. The HI is less than 1 for both use scenarios. However, excluding arsenic, soil risks are less than the risk management range for unrestricted and industrial use. Arsenic was detected using Method SW6010, considered unreliable for this metal at the reported concentrations, and was also within the range of natural background variation. Soil data do not indicate potential impacts to groundwater or surface water.
AOC H-5 ²	This site is located northeast of AOC H-6, northwest of Building 877, and overlaps the northeast corner of PRL S-045. This area served as part of the engine test revetment from 1946 to 1964. There are potential contaminants resulting from spills or leaks from parked aircraft or engine test activities associated with adjacent site PRL P-001. There is also a potential for impacts at this site as a result of activities associated with adjacent IRP sites (PRL P-001, PRL S-045, and PRL B-007). COPCs include VOCs, SVOCs, TPH, PAHs, metals, and PCBs.	Data indicate that this site has not been significantly impacted by releases from former revetment activities. Soil and SSG samples were collected and evaluated in a risk assessment. No COCs were identified. VOCs were detected in soil gas at concentrations less than associated screening levels. SSG risks (1×10^{-6} from chloroform and benzene and HI less than 1) and soil risks (9×10^{-6} from benzo(a)pyrene and HI less than 1) are on the low end of the risk management range for unrestricted use and below the risk management range for industrial use (7×10^{-8} and HI less than 1 for SSG; 1×10^{-6} and HI less than 1 for soil). Soil data do not indicate potential impacts to groundwater. PAHs were detected in one soil sample at concentrations greater than screening levels, indicating potential impacts to surface water, but step-out soil samples did not contain PAHs at concentrations exceeding associated screening levels. PAHs are addressed as part of PRL S-045.
AOC H-6 ¹	This site is located west of Building 877, AOC H-4, AOC H-5, and PRL P-001, and it is within the north-central portion of PRL S-045. This area served as part of the engine test revetment from 1946 to 1964. This site may have been impacted as a result of activities associated with adjacent sites (PRL P-001, PRL S-045, and PRL B-007). COPCs include VOCs, SVOCs, TPH, PAHs, metals, and PCBs.	Data indicate that this site has not been impacted by releases from former revetment activities. Soil and SSG samples were collected and evaluated in a risk assessment. No COCs were identified. SSG samples did not contain detectable concentrations of VOCs; therefore, there are no associated risks. Soil risk for unrestricted use is 5×10^{-11} and for industrial use is 2×10^{-11} , both of which are less than the risk management range. The HI is less than 1 for both use scenarios. Soil data do not indicate potential impacts to groundwater or surface water.
AOC H-7 ²	This site is located northwest of AOC H-6 and overlaps the northwest corner of PRL S-045. This area served as part of a revetment between 1946 and 1964. By 1964, the entire aircraft test facility had been dismantled and replaced by an aircraft apron which partially covered this site. Potential contaminants include fuels, oils, and hydraulic fluid from spills or leaks from parked aircraft. This site may have also been impacted as a result of activities associated with adjacent sites (PRL P-001, PRL S-045, and PRL B-007). COPCs include VOCs, SVOCs, TPH, PAHs, metals, and PCBs.	Data indicate that this site has not been significantly impacted by releases from the former revetment activities. Soil samples were collected and evaluated in a risk assessment. Based on soil sample results (no detectable concentrations of VOCs), no SSG samples were collected. No COCs were identified. Soil risk for unrestricted use is 6×10^{-5} (from arsenic) and for industrial use is 4×10^{-6} (from arsenic), both of which are within the risk management range. The HI is less than 1 for both use scenarios. However, arsenic was detected using Method SW6010, which is considered unreliable at the reported concentrations. In addition, arsenic is within the range of natural background variation. Soil risks are less than the risk management range for unrestricted use when arsenic is excluded. Soil data do not indicate potential impacts to groundwater or surface water.

Site(s)	Site Description	Summary of Data Supporting Proposed NFA Proposed Remedy
AOC H-9 (F2) ²	AOC H-9 (F2) comprises the southwestern half of AOC H-9 (AOC H-9B). This area includes one area where a stain was observed in aerial photographs from 1953. Buildings 248 and 258, a suspected battery disposal pit, and remnants of a taxiway are also located within AOC H-9 (F2). The staining observed in aerial photography is no longer visible due to construction in the area. A geophysical survey was conducted at the suspected location of a battery disposal pit. Several anomalies were identified along the eastern side of the grid area but were determined to be infrastructure; the survey did not find evidence of a disposal pit in the area. COPCs include metals, VOCs, SVOCs, TPH, and PCBs.	<p>Data indicates that this site has not been significantly impacted. Soil and SSG samples were collected and soil was evaluated in a risk assessment. No COCs were identified.</p> <p>No detectable concentrations of VOCs were present in SSG samples; therefore, a human health risk assessment (HHRA) for soil gas was not conducted.</p> <p>Soil risk for unrestricted use is 3×10^{-6} (from Aroclor-1260 and benzo(a)pyrene), which is on the low end of the risk management range, and for industrial use is 4×10^{-7} (from Aroclor-1260 and benzo(a)pyrene), which is below the risk management range. The HI is less than 1 for both use scenarios. The extent of PCB contamination is bounded by paved areas, and benzo(a)pyrene was detected at a trace concentration slightly greater than the unrestricted use screening level but much less than the protection of surface water screening level.</p> <p>Soil data do not indicate potential impacts to groundwater. There are potential impacts to surface water from PCBs, but the extent of PCB contamination is limited and bound by paved areas.</p>
Dudley Boulevard ³	This site is located southwest of Dudley Boulevard and Dudley Loop. Previous investigations at this location indicated the presence of radiological contamination in soil suspected to have been caused by radium dials, radium waste, or radium paint storage. Radium 226 is the only COC; no non-radiological COCs were identified. In 1997, the U.S. Air Force excavated 8 cubic yards of radium-impacted soil and disposed of it off-site. More recently, through a NTCRA in September 2011, the U.S. Air Force removed an additional 120 cubic yards of radium-impacted soil and asphalt. The conclusions in the Dudley Boulevard Final Status Survey Report (dated August 2012, McClellan AR#7634), state that the excavation of residual radioactivity allows release of the site for unrestricted use.	<p>Sufficient excavation of radiological contamination (radium 226) has been done to allow for unrestricted use. Soil and SSG samples were collected and analyzed for non-radiological analytes; no COCs were identified.</p> <p>SSG risk for unrestricted use is 8×10^{-6} (from TCE), which is at the low end of the risk management range, and for industrial use is 5×10^{-7}, which is below the risk management range. The HI is less than 1 for both use scenarios.</p> <p>Soil risk for unrestricted use is 5×10^{-9}, which is less than the risk management range. Soil risk for industrial use is 3×10^{-9}, which is below the risk management range. The HI is 2 (from cobalt) for unrestricted use and less than 1 for industrial use. Cobalt (18 mg/kg) was detected at a concentration exceeding the unrestricted use screening level in one sample; however, the concentration was within the range of concentrations in the background data set and does not represent a source of contamination.</p> <p>Soil data do not indicate potential impacts to groundwater. There was a potential impact to surface water from cadmium, but the extent was limited and the location with the exceedance was excavated during the NTCRA.</p>
PRL 025 ³	This site comprises the location of a potential burial pit. The site was reportedly used during the 1940s and early 1950s. No evidence of a burial pit was observed in aerial photographs from 1947, 1949, or 1953. Types of wastes that may have been received are not known. A portion of IWL (PRL L-003A) runs beneath southern and eastern portions of the site. The IC 35 SVE system operated approximately 500 feet east of the site from June 1999 to May 2008. COPCs include VOCs, SVOCs, TPH, PAHs, dioxins/furans, and metals.	<p>Burial activities did not occur at the site; a burial pit was mistakenly identified. Soil profiles from 16 soil borings did not indicate the presence of waste or disturbed soil. Soil and SSG samples were collected and evaluated in a risk assessment. No COCs were identified.</p> <p>SSG risk for unrestricted use is 1×10^{-6} (from carbon tetrachloride and naphthalene), which is at the low end of the risk management range. SSG risk for industrial use is 7×10^{-8}, which is below the risk management range. The HI is less than 1 for both use scenarios.</p> <p>Soil risk for unrestricted use is 8×10^{-7}, which is less than the risk management range. Soil risk for industrial use is 7×10^{-8}, which is below the risk management range. The HI is 3 for unrestricted use (from aluminum and cadmium) and is less than 1 for industrial use. Soil risks are less than the risk management range for unrestricted use, excluding aluminum and cadmium. Cadmium was detected by Method SW6010 at concentrations slightly above the screening level in three samples. Aluminum was detected at a concentration above the screening level in one sample and most likely represents natural variations in the background levels. These exceedances are isolated and defined in extent, so aluminum and cadmium are not considered to represent a source of contamination.</p> <p>There are potential impacts to groundwater and surface water from arsenic and cadmium, but the extent is limited. Other metal exceedances, including lead, were detected in a single soil sample where organic compounds were not detected at concentrations greater than screening levels, suggesting the presence of metals in the subsurface is not the result of releases. No COCs were identified.</p>
PRL 039 ¹	This site may have been the original general refuse disposal area for McClellan AFB prior to 1941. Listed as 625-foot by 160-foot-wide burn and disposal pit under the large parking lot south of Building 351. Ash was reportedly not removed from the site. No evidence of a disposal area is visible in aerial photos of the area. COPCs include VOCs, SVOCs, dioxins/furans, and metals.	Soil in profiles below 1.5 feet bgs was undisturbed; soil above 1.5 feet bgs has likely been disturbed due to construction activities. No evidence of waste or ash was observed in profile borings. Based on the results of the soil profiling, the site was determined not to be a burn or disposal pit; therefore, no samples were collected and no further action is necessary.
PRL B-003 ¹	This site is identified as a potential release site based on an undocumented report of a possible burial pit at the present location of Building 251. Before 1937, this area was undeveloped grassland and no structures existed at former McClellan AFB. COPCs include VOCs, SVOCs, and metals.	Several high-quality aerial photographs taken before, during, and after construction of Building 251 were reviewed for evidence of a burial pit. No photographs show any indication of a burial pit at this location. An investigation was not performed because no supporting evidence that a burial pit existed was found; therefore, no further action is necessary.

Site(s)	Site Description	Summary of Data Supporting Proposed NFA Proposed Remedy
PRL P-008 ¹	This is the site of a suspected acid-cyanide pit. The site consists of a 750-square-foot grassland area at the southern end of Runway 1634. The only source of historical information available is a 1954 civil engineering drawing showing a 50-foot-by-15-foot pit. The existence of a pit at this location was questionable because two other pits shown on the drawing were reportedly planned nearby but were never constructed. During a 1992 site walk, two mounds were discovered; one in the northern portion and one in the southern portion of the site. Approximately 50 feet to the west, a depression was noted that was about same size as the suspected pit. The site remains undeveloped grassland.	<p>No pits were visible in any aerial photographs reviewed for this site. Former McClellan AFB employees were questioned about the existence of a disposal pit at this location; none of the interviewees recalled a disposal pit at this location. Soil samples were collected (no contaminants were detected in the soil), and the pH of soil was within the normal range; it is unlikely that the site was ever used as an acid-cyanide pit. Therefore, an updated HHRA was not conducted at PRL P-008, and there is no associated risk.</p> <p>Soil data do not indicate potential impacts to groundwater or surface water.</p>
PRL S-003 ²	This site is the location of former Building 401 (acid storage warehouse), which was constructed between 1941 and 1943 and demolished between 1972 and 1974. No information is available on the types or quantities of acids stored in this building. Concrete foundations of the building are still present. COPCs include acids and VOCs.	<p>Data does not indicate that this site was significantly impacted. Soil and SSG samples were collected, and SSG was evaluated in a risk assessment. No COCs were identified.</p> <p>SSG risk for unrestricted use is 5×10^{-6} (from naphthalene), which is at the lower end of the risk management range. SSG risk for industrial use is 3×10^{-7}, which is below the risk management range. The HI is less than 1 for both use scenarios. Naphthalene was the only VOC detected at concentrations greater than the unrestricted use screening level but less than the industrial use screening levels. These exceedances occurred in soil gas samples from one boring located east of PRL S-003 and are most likely representative of releases from PRL S-002.</p> <p>A risk assessment was not conducted for soil analytes; however, all results were below screening levels with the exception of benzo(a)pyrene in one sample, which was detected above the unrestricted use screening level (but below the industrial use screening level). The presence of benzo(a)pyrene is considered a result of a release from an adjacent IRP site (PRL S-002) and is therefore addressed with PRL S-002.</p> <p>Soil data do not indicate potential impacts to groundwater or surface water.</p>
PRL S-016 ²	This site consists of Buildings 250M and 250N, which served as the base warehouse and supply shop until 1966. The buildings were converted into aircraft instrument repair shops from 1966 to 1972. Three solvent spray booths, two paint booths, two sealing rooms, and a paint removal room with sinks connected to the IWL were installed in these buildings. Each solvent spray booth was supplied by a 220-gallon above ground storage tank (AST) between Buildings 250N and 250A. The former AST was covered and located on a concrete pad approximately 4 to 6 feet above grade. Used solvents were piped to a solvent still from 1966 to 1989. The still was moved to Building 237 in 1989. COPCs include VOCs and metals.	<p>Data indicates that no significant impacts resulted from past activities at PRL S-016. Soil and SSG samples were collected, and SSG results were evaluated in a risk assessment. No COCs have been identified.</p> <p>SSG risk for unrestricted use is 3×10^{-6} (from benzene), which is at the low end of the risk management range. SSG risk for industrial use is 2×10^{-7}, which is below the risk management range. The HI is less than 1 for both use scenarios. Benzene was only detected at a concentration greater than unrestricted use screening levels in one of seven samples collected from biased locations. Data do not indicate an ongoing source of VOC contamination in the area. Therefore, no COCs were identified for shallow soil gas at PRL S-016.</p> <p>Several metals were detected at concentrations greater than the combined background concentrations, but all metal concentrations were less than screening levels. No soil COPCs were identified, and no risk values or HIs for soil exposures were calculated.</p> <p>Soil data do not indicate potential impacts to groundwater or surface water.</p>
PRL S-020 ³	This site is the location of Building 336, which served as a photographic processing laboratory and audiovisual center beginning in 1972. This was the central collection location for on-base silver waste since an electrolytic silver recovery system was installed in 1974. Prior to 1974, silver wastes were disposed directly into laboratory drains without treatment or recovery. All drains in Building 336 connect to the sanitary sewer system not to the IWL. COPCs include VOCs, SVOCs, and metals.	<p>Data indicates that no significant impacts resulted from past activities at PRL S-020. Soil and SSG samples were collected, and results were evaluated in a risk assessment. No COCs have been identified.</p> <p>SSG risk for unrestricted use is 6×10^{-7} and for industrial use is 4×10^{-8}, both of which are less than the risk management range. The HI is less than 1 for both use scenarios.</p> <p>Soil risk for unrestricted use is 5×10^{-11} and for industrial use is 2×10^{-11}, both of which are less than the risk management range. The HI is 5 (from thallium) for unrestricted use and less than 1 for industrial use. Arsenic and thallium were the only metals detected at concentrations exceeding screening levels; however, Method SW6010 is considered unreliable at the reported concentrations for these metals. Without thallium, the HI is less than 1.</p> <p>Soil data do not indicate potential impacts to groundwater. There are potential impacts to surface water from arsenic, but data were obtained with Method SW6010 and are considered unreliable at the reported concentrations.</p>

Site(s)	Site Description	Summary of Data Supporting Proposed NFA Proposed Remedy
PRL S-023 ¹	This site consists of Building 358, which was the former Army Air Force warehouse and was built in 1942. It contained a paint spray booth and two small tanks (approximately 10 gallons each). Beginning in 1971, the southern half of the building was used to store paper goods, and the northern half was used by the Screen Printing Unit where solvents were used to clean used printing screens. Liquid waste from the paint spray booth and screen printing was stored in the small tanks. Twice a year, liquid waste was transported to an approved off-site disposal facility. This site was initially identified as an IRP site because Building 358 was incorrectly identified as a plating shop. No COPCs were identified.	There is no evidence that Building 358 was used as a plating shop and no evidence of releases from the paint spray booth or the area where silk screens were cleaned. Building 358 does not have floor drains and is not connected to the IWL. Previous assessments indicate that no further action is necessary.
PRL T-010* ²	This site consists of Building 362, which is divided into Bays A through C. Building 362A was previously used for van and aircraft maintenance and as a paint, oil, and dope shop. This building was also used as a tubing and cable shop. Building 362B was used as a fabric and clothing shop, a sheet metal shop, and a general storage area. After 1980, the area was used as a tubing and cable shop. Building 362C was used as an aircraft maintenance shop. Potential contamination sources include paint spray booths, lubricants, tetrachloroethylene (PCE) degreasing operations, and solvents. An underground storage tank (UST) reportedly existed in the southwest corner of the building; however, location, dates of operation, removal, and contents are unknown. A ground-penetrating radar survey was conducted in 1989 along the north and south sides of the building. Three anomalies were noted along the northern edge of the building; however, none of the anomalies were conclusive of a UST. COPCs include VOCs, TPH, SVOCs, and metals.	<p>Data indicates that minor releases of fuels and solvents may have occurred at this site. Soil and SSG samples were collected, and results were evaluated in a risk assessment.</p> <p>SSG risk for unrestricted use is 7×10^{-6} (from benzene and chloroform), which is at the low end of the risk management range. SSG risk for industrial use is 4×10^{-7}, which is less than the risk management range. The HI is less than 1 for both scenarios. There were limited detections of benzene, chloroform, naphthalene, and TCE in SSG above the unrestricted use screening levels, which are considered COCs; however, the impacted area is well characterized and does not represent significant contamination.</p> <p>Soil risk for unrestricted use is 4×10^{-5} (from arsenic) and for industrial use is 3×10^{-6}, both of which are within the risk management range. However, excluding arsenic, soil risks are less than the risk management range for unrestricted and industrial use. The HI is less than 1 for both use scenarios. Arsenic was detected using Method SW6010 and is not considered to be representative of site conditions at the reported concentrations. Arsenic was detected within the range of naturally occurring background concentrations in one sample analyzed by Method SW7060.</p> <p>There are potential impacts to groundwater from arsenic, but data were primarily obtained with Method SW6010 and are considered unreliable at the reported concentrations. Soil data do not indicate potential impacts to surface water.</p>
PRL T-018 ²	This site is the location of former Tank Farm #4, which was in operation from 1940 through the late 1980s. It consisted of four 25,000-gallon USTs, a former fuel pump (Building 390), and a truck receiving area. USTs contained leaded and unleaded gasoline. All components of Tank Farm #4 were removed in 1992, and the site was paved and turned into a parking lot. An additional 500-gallon diesel UST was discovered during trenching in the area and was removed in 2010. Closure was granted by the Central Valley Water Board for the gasoline USTs in 1997 and for the diesel UST in 2010. COPCs include TPH, metals, SVOCs, and VOCs.	<p>Data indicates that the site has not been significantly impacted. Soil and SSG samples were collected, and results were evaluated in a risk assessment. No COCs have been identified.</p> <p>SSG risk for unrestricted use is 3×10^{-5} (from PCE) and for industrial use is 2×10^{-6}, both of which are within the risk management range. The HI is less than 1 for both use scenarios. These samples were collected from biased locations and the site is considered sufficiently characterized. Data do not indicate a significant source of VOC contamination in the area. Therefore, no COCs were identified for SSG at PRL T-018.</p> <p>Soil risk for unrestricted use is 2×10^{-7} and for industrial use is 8×10^{-8}, both of which are less than the risk management range. The HI is less than 1 for both use scenarios.</p> <p>The TPH-gasoline (TPH-G) and TPH-diesel (TPH-D) detections from 1992 indicating potential impacts to groundwater have likely been decreased by a bioventing system and the IC 29 SVE system.</p> <p>There are potential impacts to groundwater and surface water from arsenic, but data were obtained with Method SW6010 and are considered unreliable at the reported concentrations. Concentrations of arsenic were below the detection limit when samples were analyzed by Method SW7060.</p> <p>There is a potential impact to surface water from PCBs, but impacts are not expected because components of the former tank farm were excavated and removed. In addition, the site was paved and turned into a parking lot.</p>

Site(s)	Site Description	Summary of Data Supporting Proposed NFA Proposed Remedy
PRL T-062 ²	<p>This site is part of the Core Aviation/Industrial District and consists of Building 1075 and a small portion of the southern part of Building 1074. Buildings 1074 and 1075, built circa 1957, served as a fire station and pump house, respectively. Building 1074 reportedly stored paint and ammonia, and Building 1075 contained lead-acid batteries associated with the backup generator. A 550-gallon fuel UST (removed in 1988) was formerly located at Building 1075. The UST has not been granted closure and will need to be closed by the Central Valley Water Board after the NFA ROD is completed. One diesel AST, which was removed in 1985, was also located at this building. Four 250-gallon diesel ASTs located within concrete bermed area were located west of Building 1075. In 1994, 150 gallons of glycol ether was reportedly released to the ground surface at Building 1074. Emergency fuel dumping was reportedly a common practice in the area surrounding site. COPCs include VOCs, SVOCs, PAHs, TPH, and metals.</p>	<p>Data indicates that the site has not been significantly impacted. Soil and SSG samples were collected, and results were evaluated in a risk assessment. No COCs have been identified.</p> <p>SSG risk for unrestricted use is 3×10^{-6} (from chloroform), which is at the lower end of the risk management range. SSG risk for industrial use is 2×10^{-7}, which is less than the risk management range. The HI is less than 1 for both scenarios. Chloroform and naphthalene were detected at concentrations slightly exceeding their unrestricted use screening level in one soil gas sample from a single boring. Four other shallow soil gas samples did not contain VOCs at concentrations greater than screening levels.</p> <p>Soil risk for unrestricted use is 1×10^{-6} (from benzo(a)pyrene), which is at the low end of the risk management range. Soil risk for industrial use is 1×10^{-7}, which is below the risk management range. The HI is less than 1 for both use scenarios.</p> <p>Soil data do not indicate potential impacts to groundwater or surface water.</p>
SA 034 ³	<p>This site consists of former Building 18 (a former police station, plumbing shop, and electrical maintenance shop built in the early 1940s and demolished in 2008), a small storage area at north end of the site, and a transformer northwest of Building 18. Acids, bases, fuels, oils, solvents, and heavy metals were handled in Building 18; small quantities of waste were containerized and transported to Building 19 for proper storage and disposal. COPCs include VOCs, SVOCs, PCBs, TPH, and metals.</p>	<p>Data does not indicate releases occurred. Soil and SSG samples were collected, and results were evaluated in a risk assessment. No COCs have been identified.</p> <p>SSG risk for unrestricted use is 1×10^{-6} (from benzene, carbon tetrachloride, and naphthalene), which is at the low end of the risk management range. SSG risk for industrial use is 7×10^{-8}, which is below the risk management range. The HI is less than 1 for both use scenarios.</p> <p>Soil risk for unrestricted use is 5×10^{-5} (from arsenic) and for industrial use is 3×10^{-6}, both of which are within the risk management range. The HI is 6 (from thallium) for unrestricted use and is less than 1 for industrial use. Samples with arsenic and thallium exceeding screening levels in soil were analyzed by SW6010, which was considered unreliable for these analytes at the reported concentrations. All arsenic samples analyzed by Method SW7060 were less than background levels with the exception of a single sample.</p> <p>There are potential impacts to groundwater from arsenic and thallium and a potential risk to surface water from arsenic, but data were obtained with Method SW6010 and are considered unreliable at the reported concentrations.</p>
SA 046 ¹	<p>This site consists of Building 209, including former Buildings 209A and 209B, which was used as an administrative building and had two USTs. The UST at Building 209A was located north-northwest of the building and contained gasoline to fuel the building's boiler. The UST at Building 209B was on the west side of the building and contained diesel for a backup generator. The USTs were removed in 1988 and 2003, respectively. The USTs were granted closure in 2004. COPCs include TPH, metals, SVOCs, and VOCs.</p>	<p>Data does not indicate that significant releases occurred. Soil and SSG samples were collected, and SSG results were evaluated in a risk assessment. No COCs have been identified.</p> <p>No VOCs in SSG were detected at concentrations greater than screening levels. Cumulative SSG risk values were not calculated because the analytes detected in SSG do not have associated cancer toxicity. The total HIs are less than the risk management range ($HI < 1$) for both unrestricted and industrial use.</p> <p>Only arsenic and thallium were detected in soil at concentrations greater than screening levels; however, with the exception of one arsenic detection (8.11 mg/kg; analyzed by Method SW7060), arsenic and thallium were detected using Method SW6010, which may produce unreliable results at the reported concentrations for these analytes. The arsenic detection by Method SW7060 is within the range of background. No soil COPCs were identified at SA 046. Thus, no risk values or HIs for soil exposures were calculated.</p> <p>Soil data do not indicate potential impacts to groundwater or surface water.</p>

Site(s)	Site Description	Summary of Data Supporting Proposed NFA Proposed Remedy
SA 052* ²	<p>This site is the former location of Building 486 (which was used as an auxiliary steam generation facility from 1943 to 1979 and was demolished in 1993), two 12,000-gallon No. 5 bunker fuel USTs, and an underground steam blow-down tank. The USTs were used to heat boilers in Building 486. Both USTs were reportedly leak-tested in 1988 and passed. The USTs were granted closure by the Central Valley Water Board in 1996. The underground steam blow-down tank was located beneath the gravel parking lot southeast of Building 486 and was used to collect steam from boilers. Steam condensate from the blow-down tank drained to the IWL. The USTs and blow-down tank were removed in 1991. COPCs include TPH, metals, SVOCs, and VOCs.</p>	<p>Data does not indicate that significant releases occurred. Soil and SSG samples were collected, and results were evaluated in a risk assessment. Hexane, naphthalene, and PCE were identified as COCs in SSG.</p> <p>SSG risk for unrestricted use is 5×10^{-6} (from naphthalene and PCE), which is within the risk management range. SSG risk for industrial use is 3×10^{-7}, which is less than the risk management range. The HI is equal to 1 for unrestricted use and is less than 1 for industrial use.</p> <p>Soil risk for unrestricted use is 3×10^{-11} and for industrial use is 2×10^{-11}, both of which are below the risk management range. The HI is less than 1 for both use scenarios.</p> <p>There are potential impacts to groundwater from arsenic and potential impacts to groundwater and surface water from C10-C28 Petroleum Hydrocarbons. However, the arsenic concentration (13 mg/kg by Method SW6020) only slightly exceeds background. In addition, impacts to surface water are not expected because surface releases are not consistent with the conceptual site model.</p>
SA 054 ³	<p>This site is the location of a former 500,000-gallon steel AST (Tank 318) that stored diesel fuel and bunker oil from 1975 to 1989. Building 319 (the pump house associated with the tank) is in the eastern portion of the site. A portion of underground fuel line crosses the western portion of the site. The AST rested on a concrete pad and was surrounded by a 4-foot-high asphalt berm. Prior to 1975, the area was used for vehicle parking and material storage. The tank and associated aboveground piping were emptied and cleaned in 1989. Concrete around the tank was demolished in 1994. The tank, associated conveyance piping, and underlying pad have also been removed. Impacted soil beneath the tank was excavated and removed in 1999. The excavation was 97 feet by 144 feet with a maximum depth of 23 feet. While the excavation was open, a passive bioventing system was installed beneath an area where soil could not be excavated. The excavation was backfilled, and confirmation soil samples were collected. All impacted soil that was excavated was removed. COPCs include VOCs, TPH, and metals.</p>	<p>Data indicates that no impacts are present at this site. Soil and SSG samples were collected, and soil results were evaluated in a risk assessment. No COCs were identified.</p> <p>SSG samples were not collected from SA 054. Potential shallow soil gas contamination from the diesel AST was likely addressed by the 1999 soil excavation.</p> <p>Soil risk for unrestricted use is 4×10^{-8} and for industrial use is 1×10^{-8}, both of which are less than the risk management range. The HI is 7 (from thallium and cobalt) for unrestricted use and less than 1 for industrial use. Excluding cobalt and thallium, the HI for the residential scenario is less than 1. Cobalt was only detected at a concentration (21 mg/kg) greater than combined background (17 mg/kg) in one of 18 samples and likely does not represent a source of contamination. The thallium concentrations greater than screening levels were detected using Method SW6010, which is known to be unreliable for thallium at the reported concentrations. The single lead exceedance is considered isolated and does not represent a significant source of contamination.</p> <p>There is a potential impact to groundwater from arsenic and potential impacts to surface water from arsenic and cadmium, but arsenic data were obtained with Method SW6010 and are considered unreliable at the reported concentrations. Cadmium and arsenic were not detected at concentrations greater than screening levels using Methods SW7131 and SW7060, respectively. No COCs were identified.</p>
SA 056 ²	<p>This site consists of former Building 426 (a portable shed), an oil-water separator, a steam cleaning area, a sump, an IWL trench drain, a hazardous waste drum storage area, and a generator storage area. A wash rack within Building 426 was used for cleaning diesel generator units. Wash water passed through the oil-water separator and was then collected in the IWL trench drain. A steel berm surrounded the south and west sides of the wash rack, and another steel berm ran along the north side of the IWL trench drain near the northwest boundary of the site. All steel berms have been removed. If the trench drain overflowed, wastewater flowed north onto the gravel surface or west toward the storm sewer drop inlet to the west. COPCs include VOCs, SVOCs, TPH, pesticides, and metals.</p>	<p>Data indicates that this site has not been significantly impacted. Soil and SSG samples were collected, and results were evaluated in a risk assessment. No COCs were identified.</p> <p>SSG risk for unrestricted use is 4×10^{-6} (from naphthalene), which is at the low end of the risk management range. SSG risk for industrial use is 3×10^{-7}, which is less than the risk management range. The HI is less than 1 for both use scenarios. Benzene and naphthalene were detected in one boring north of SA 056 at concentrations exceeding unrestricted use screening levels, but less than industrial use screening levels. VOCs were not identified as COCs for shallow soil gas.</p> <p>Soil risk for unrestricted use is 3×10^{-11} and for industrial use is 1×10^{-11}, both of which are less than the risk management range. The HI is less than 1 for both use scenarios.</p> <p>Soil data do not indicate potential impacts to groundwater or surface water.</p>

Site(s)	Site Description	Summary of Data Supporting Proposed NFA Proposed Remedy
SA 061 ^{4b}	<p>This site is the location of Building 344, which was built in 1943. Between 1943 and 1945 this building was used for radar equipment storage. From 1945 to 1986, it was used as a maintenance facility that housed electrical, plumbing, welding, and machine shops. Between 1986 and 1989, this building was a tool crib and laser storage facility. Since 1989, this building has been used as a soil, materials, and metallurgical test laboratory. Laboratory testing operations have involved the use of solvent wash basins. Unused solvents were stored in 55-gallon drums. Spent solvents were transferred back to their original 55-gallon drums and stored in the adjacent hazardous materials storage building. Drums were then picked up by the Defense Reutilization and Marketing Office for appropriate recycling or disposal. COPCs include VOCs, SVOCs, and PCBs.</p>	<p>Data indicates that this site has not been significantly impacted. Soil and SSG samples were collected, and results were evaluated in a risk assessment. No COCs were identified.</p> <p>SSG risk for unrestricted use is 7×10^{-7} and for industrial use is 4×10^{-8}, both of which are less than the risk management range. The HI is less than 1 for both use scenarios.</p> <p>Soil risk for unrestricted use is 1×10^{-4} (arsenic), which is at the upper end of the risk management range. Soil risk for industrial use is 9×10^{-6}, which is within the risk management range. The HI is 2 (arsenic) for unrestricted use and less than 1 for industrial use. Soil risks (excluding arsenic) are less than the risk management range for unrestricted use. Arsenic was detected using Method SW7060 at a concentration greater than the background level in one sample, but the extent of arsenic is limited and defined, so the exceedance is considered isolated and does not appear to represent a source of contamination.</p> <p>There is a potential impact to groundwater from arsenic, but this appears to be an isolated occurrence and is most likely the result of natural variations in background concentrations. There is a potential impact to surface water from PCBs and TPH-G, but the entire area is paved so impacts to surface water are unlikely.</p>
SA 065 ^{*2}	<p>This site consists of Building 354 (the base print shop), which had printing presses, lithographic equipment, and photographic equipment that used various chemicals. The building is surrounded by asphalt, concrete, and a sump adjacent to the west side. COPCs include VOCs, SVOCs, PCBs, metals, and cyanide.</p>	<p>Data indicates that minor releases may have occurred at this site. Soil and SSG samples were collected, and results were evaluated in a risk assessment. Benzene, chloroform, naphthalene, PCE, and TCE were identified as COCs in SSG because they were detected above screening levels.</p> <p>SSG risk for unrestricted use is 2×10^{-5} (from chloroform) and for industrial use is 1×10^{-6}, both of which are within the risk management range. The HI is less than 1 for both scenarios. Chloroform is present at concentrations exceeding the industrial SSG screening level. However, overall contamination is from a small volume and SSG risks are within the risk management range.</p> <p>Soil risk for unrestricted use is 6×10^{-5} (from arsenic) and for industrial use is 4×10^{-6}, both of which are within the risk management range. The HI is less than 1 for both use scenarios. Arsenic was detected in two soil samples at concentrations greater than the industrial use screening level; however, because of the analytical method used (Method SW6010), one of the results is not reliable at the reported concentration. The other arsenic concentration (by Method SW6020) is within the range of concentrations in the background data set, but the detection is considered isolated.</p> <p>Soil data do not indicate potential impacts to groundwater. The arsenic detection exceeding surface water protection screening levels is below background (12 mg/kg). PCBs were detected in one sample above surface water protection screening levels, but were not detected in the sample collected at the next deeper sample interval at 2 feet bgs. The soil in this area is compacted and covered by gravel or concrete. The surrounding site is covered by asphalt, and surface water that does not infiltrate the ground flows into the storm drain system.</p>
SA 070 ²	<p>This location consists of Building 368, which was used as a physical testing laboratory and a radio, machine, and parachute maintenance shop. The physical laboratory tested hazardous materials, aircraft parts, fuels, industrial waste, soils, and water collected throughout the base. COPCs include metals, PAHs, SVOCs, TPH, and VOCs.</p>	<p>Data indicates that minor releases of fuels may have occurred at this site. Soil and SSG samples were collected, and results were evaluated in a risk assessment. No COCs were identified.</p> <p>SSG risk for unrestricted use is 1×10^{-5} (from carbon tetrachloride, naphthalene, and PCE), which is within the risk management range. SSG risk for industrial use is 8×10^{-7}, which is less than the risk management range. The HI is less than 1 for both scenarios. No COCs were identified in soil gas at SA 070 because the concentrations of VOCs were low (less than industrial use screening levels), samples were collected at biased locations (where contamination would likely be found), and the extent has been defined.</p> <p>Soil risk for unrestricted use is 1×10^{-8} and for industrial use is 1×10^{-9}, both of which are less than the risk management range. The HI is equal to 1 (from vanadium) for unrestricted use and less than 1 for industrial use. Vanadium was only detected in one sample collected from SA 070. This isolated detection most likely is not from contamination. Excluding vanadium, the HI for the residential scenario is less than 1.</p> <p>There are potential impacts to groundwater from arsenic and thallium, but data were obtained with Method SW6010 and are considered unreliable at the reported concentrations. Arsenic detected using Method SW7060 is less than background and does not appear to indicate contamination. Soil data do not indicate potential impacts to surface water.</p>

Site(s)	Site Description	Summary of Data Supporting Proposed NFA Proposed Remedy
SA 074 ²	This site consists of Building 395, which served as pump house for Base Well 12. Base Well 12 operated from 1942 until 1980. Chlorine contained in cylinders was used to chlorinate the well water. In 1942, a 200-gallon UST was installed west of Building 395 to supply leaded gasoline to the generator used to power pump. The UST was replaced with a diesel AST in 1978 but was not removed until 1989. A fenced concrete berm surrounds the AST and basement of the building. The UST was granted closure by the Central Valley Water Board in 1996. COPCs include lead, SVOCs, TPH, and VOCs.	<p>Data indicates that little or no surface or subsurface releases occurred at this site. Soil and SSG samples were collected, and results were evaluated in a risk assessment. No COCs were identified.</p> <p>SSG risk for unrestricted use is 2×10^{-6} (from naphthalene and benzene), which is at the low end of the risk management range. SSG risk for industrial use is 9×10^{-8}, which is less than the risk management range. The HI is less than 1 for both use scenarios.</p> <p>No analytes exceeded screening levels in soil at SA 074. Thus, no risk values or HIs for soil exposures have been calculated.</p> <p>Soil data do not indicate potential impacts to groundwater or surface water.</p>
SA 075 ²	This site consists of a former metal segregation building (dismantled in 1973) and an automotive body repair shop, which included a paint booth (Building 405, constructed in 1973). Two IWL drains are located in the central part of Building 405. Unidentified materials were stored next to the metal segregation building from 1953 to 1973. Building 405 was later dismantled. There is a potential for contamination related to materials stored in the metal segregation building, chemicals used or stored at former Building 405, and potential leaks in IWL drains formerly inside Building 405. COPCs include metals, TPH, SVOCs, and VOCs.	<p>Data indicates that minor subsurface releases from the IWL drains and very minor surface releases from the paint booth within Building 405 have occurred. Soil and SSG samples were collected, and results were evaluated in a risk assessment. No COCs have been identified.</p> <p>SSG risk for unrestricted use is 8×10^{-6} (from benzene), which is at the low end of the risk management range. SSG risk for industrial use is 5×10^{-7}, which is less than the risk management range. The HI is less than 1 for both use scenarios. Results from previous investigations suggest soil gas contamination detected southeast of SA 075 are not associated with releases from activities at Building 405 and may be the result of migration of a soil gas plume from a nearby site.</p> <p>Soil risk for unrestricted use is 4×10^{-7} and for industrial use is 6×10^{-8}, both of which are less than the risk management range. The HI is less than 1 for both use scenarios.</p> <p>Soil data do not indicate potential impacts to groundwater. There is a potential impact to surface water from cadmium, but data were obtained with Method SW6010. Results for cadmium at the reported concentrations are considered unreliable and were not confirmed when samples at this site were analyzed by Method SW6020.</p>
SA 076 ^{4b}	This site consists of former Storage Lot No. 5 and a soil/gravel area. Storage of unknown materials in this area began in 1946 while the site was unpaved. Railroad tracks run along the southeast and southwest edges of the site. A gravel ditch runs along Dudley Boulevard on the northwest side of the site. A draftsman, who was employed at headquarters building, indicated solvents may have been disposed of at this site. COPCs include VOCs, SVOCs, and metals.	<p>Data does not indicate that significant releases occurred. Soil and SSG samples were collected, and results were evaluated in a risk assessment. No COCs were identified.</p> <p>SSG risk for unrestricted use is 1×10^{-5} (from carbon tetrachloride and chloroform), which is within the risk management range. SSG risk for industrial use is 7×10^{-7}, which is less than the risk management range. The HI is less than 1 for both use scenarios. Samples were collected from biased locations and SSG contamination is limited in extent.</p> <p>Soil risk for unrestricted use is 3×10^{-4} (from arsenic), which is greater than the risk management. Soil risk for industrial use is 2×10^{-5}, which is within the risk management range. The HI is 5 (from arsenic and aluminum) for unrestricted use and is less than 1 for industrial use. Soil risks (excluding arsenic) are less than the risk management range. Aluminum was detected within the range of natural background variation. Arsenic was detected using Method SW6010, which is known to be unreliable at the reported concentrations.</p> <p>There are potential impacts to groundwater and surface water from arsenic, but data were obtained with Method SW6010 and are considered unreliable at the reported concentrations. The lead detection exceeding the surface water protection screening level is considered to be the result of natural variation in background.</p>
SA 084 ²	This site consists of former Building 443, which housed a paint spray booth, soldering booth, and hydrostatic fire extinguisher testing facility. Waste from a concrete-lined hydrostatic testing trench drained to the IWL north of the building. Building 443 was demolished in 1992, and this site is currently an open gravel lot. COPCs include metals, SVOCs, and VOCs.	<p>Data does not indicate that surface or subsurface releases occurred at this site. Soil and SSG samples were collected, and results were evaluated in a risk assessment. No COCs have been identified.</p> <p>Soil gas samples collected during previous investigations indicate that shallow soil gas contamination is not present at SA 084. SSG samples were not evaluated in the HHRA because of their proximity to the radius of influence for the SVE systems.</p> <p>Soil risk for unrestricted use is 4×10^{-5} (from arsenic) and for industrial use is 3×10^{-6}, both of which are within the risk management range. The HI is less than 1 for both use scenarios. Arsenic detections (using Method SW6020) were less than the combined background level, suggesting it is not representative of contamination.</p> <p>Soil data do not indicate potential impacts to groundwater. There are potential impacts to surface water from lead and chrysene. However, the lead concentration is less than the surface soil background, and chrysene is considered an isolated detection.</p>

Site(s)	Site Description	Summary of Data Supporting Proposed NFA Proposed Remedy
SA 085 ³	<p>Prior to 1985, this site was undeveloped and used for vehicle parking. After 1985, this site included Building 450, two 5,000-gallon ASTs, a drum staging area, an oil-water separator, and an industrial waste sump. These facilities were constructed as a utility control unit and were operated by the Sacramento Municipal Utility District (SMUD). Site activities included demineralizing water, cleaning and maintaining small parts, and operating power generation facility with transformers. The ASTs contained sulfuric acid and sodium hydroxide needed to demineralizing the system. SMUD disposed of used solvent off-site. The staging area stored drums of diesel and hydraulic fluid. The oil-water separator collected runoff and surface spills outside of the building. This site has a total of 29 IWL drains; six within the building that drain to industrial waste sump and then to the IWL, and the remaining 23 drain to the oil-water separator and then to IWL. Drains were inspected in 1997 and found to be in good condition. A documented surface release of approximately 3,450 gallons of diesel fuel occurred in 1992. COPCs include VOCs, SVOCs, TPH, PCBs, and metals.</p>	<p>Data does not indicate that significant impacts remain as a result of the documented release of diesel fuel or other activities performed at this site. Soil and SSG samples were collected, and results were evaluated in a risk assessment. No COCs were identified.</p> <p>No VOCs were detected in the SSG samples collected at SA 085; therefore, soil gas risks were not calculated.</p> <p>Soil risk for unrestricted use is 5×10^{-5} (from arsenic) and for industrial use is 3×10^{-6}, both of which are within the risk management range. The HI is 9 (from thallium and cadmium) for unrestricted use and less than 1 for industrial use. Soil risks (excluding arsenic, cadmium, and thallium) are less than the risk management range for unrestricted use. Arsenic and thallium were only detected at concentrations greater than screening levels in samples analyzed using Method SW6010, which may not be a reliable method for these metals at the reported concentrations. Arsenic was not detected by SW7060. Cadmium by Method 7131 was only detected at a concentration greater than screening levels in 1 of 10 samples. Cadmium is limited in extent and the extent is defined, so the exceedance is considered isolated and does not to represent a source of contamination. Arsenic and thallium were detected above screening levels so infrequently across the site that these metals do not represent a source of contamination.</p> <p>There are potential impacts to groundwater and surface water from arsenic and thallium and to surface water from cadmium, but data were obtained with Method SW6010 and are considered unreliable for arsenic and thallium at the reported concentrations. The cadmium sample was collected from 1 to 1.5 feet below ground surface, which is unlikely to impact surface water quality. No COCs were identified.</p>
SA 087* ^{4a}	<p>This site consists of six former USTs (four containing lubricating oil and two containing gasoline), an area where discolored soil was identified, and former Building 482 (a former engine testing facility and automobile wash rack). A segment of the IWL trench, a segment of an inactive fuel line, and a vapor trap are also located within the site. The IWL trench received wastewater drainage from the engine test cells and a wash rack and was connected to Building 482 at six locations. Wastewater flowed to the vapor trap west of the building where it was diverted to the main IWL or stormwater/sewer system. In 1984, the IWL trench connected to the vapor trap was plugged and all wastewater flowed into the stormwater drain. The USTs have not been granted closure and will need to be closed by the Central Valley Water Board after the NFA ROD is completed. COPCs include metals, TPH, SVOCs, and VOCs.</p>	<p>Data indicates that minor releases occurred at the site. Soil and SSG samples were collected, and results were evaluated in a risk assessment. Benzene, ethylbenzene, naphthalene, and 1,2,4-TMB were detected in SSG at concentrations exceeding unrestricted use screening levels (but less than industrial use screening levels). This site is within the radius of influence of the SVE systems at IC 34 and IC 37, which have significantly reduced VOC concentrations in soil gas and are still operating.</p> <p>SSG risk for unrestricted use is 2×10^{-5} (from benzene, ethylbenzene, and naphthalene), which is within the risk management range. SSG risk for industrial use is 1×10^{-6}, which is at the low end of the risk management range. The HI is 2 (from 1,2,4-TMB) for unrestricted use and is less than 1 for industrial use.</p> <p>Soil risk for unrestricted use is 5×10^{-5} (from arsenic) and for industrial use is 4×10^{-6}, both of which are within the risk management range. The HI is 2 (from aluminum, vanadium, and arsenic) for unrestricted use and is less than 1 for industrial use. Soil risks (excluding aluminum, arsenic, and vanadium) are less than the risk management range. Concentrations of arsenic (using data from Methods SW6010B and SW6020) and aluminum are consistent with naturally occurring background levels.</p> <p>The TPH contamination detected at SA87SB009 exceeding groundwater and surface water protection screening levels appears to be the result of a minor surface release that was very limited in volume. There are potential impacts to surface water from arsenic and cadmium, but the detections appear to be minor and no COCs were identified for soil. The lead concentrations exceeding the surface water protection screening level appear to be related to a minor, isolated release.</p>
SA 099 ³	<p>This site comprises the former domestic sewage transfer facility (i.e., pump station) along the former McClellan AFB boundary. Raw sewage was chopped, de-gritted, and pumped to an off-base treatment plant. This facility included Building 329 (generator), Building 331 (switching house), a sewage lift station, and a water pumping station. Diesel fuel was stored in an AST and a 125-gallon UST near Building 329. An 80-gallon diesel spill caused by overfilling the UST was reported in February 1990. The diesel spill entered a shallow concrete lined ditch, which flows into an unlined ditch. The spill reportedly reached Magpie Creek but was contained on-base. No staining is evident in the concrete-lined ditch, and only minor cracks in the concrete are present. The UST was removed in 1990. The UST has not been granted closure and will need to be closed by the Central Valley Water Board after the NFA ROD is completed. COPCs include VOCs, TPH, PAHs, and PCBs.</p>	<p>Data indicates that the site was not significantly impacted. Soil and SSG samples were collected and results were evaluated in a risk assessment. No COCs were identified.</p> <p>VOCs were not detected in SSG; therefore, soil gas risks were not calculated.</p> <p>Soil risk for unrestricted use is 3×10^{-6} (from benzo(a)pyrene), which is within the risk management range. SSG risk for industrial use is 3×10^{-7}, which is less than the risk management range. The HI is 3 (from thallium) for unrestricted use and is less than 1 for industrial use. However, benzo(a)pyrene was only detected at a concentration slightly greater than the unrestricted use screening level in one of 12 samples collected from biased locations. In addition, risk values are on the low end of the risk management range for unrestricted use when excluding thallium. Further, thallium results were obtained using Method SW6010, which is considered unreliable for this metal at the reported concentrations.</p> <p>There are potential impacts to groundwater and surface water from arsenic, but results were obtained with Method SW6010 and are considered unreliable at the reported concentrations.</p>

Site(s)	Site Description	Summary of Data Supporting Proposed NFA Proposed Remedy
SA 103 ²	This site comprises the former location of a 250-gallon diesel UST approximately 5 feet northeast of Building 617, which operated between 1962 and 1987. The UST was replaced in 1987 by a 200-gallon diesel AST located northwest of Building 617. Building 617 is a wooden shed that houses an emergency power generator and is connected to the AST by underground fuel lines. The AST has been in use since 1987. The UST was granted closure by the Central Valley Water Board in 1996. COPCs at this site include VOCs, TPH, metals, and PAHs.	<p>Data indicates that no significant impacts remain from the presence of the UST or AST. Soil and SSG samples were collected, and soil results were evaluated in a risk assessment. No COCs were identified.</p> <p>SSG samples did not contain VOCs at concentrations greater than any screening levels; a risk assessment was not performed because there are no associated risks for unrestricted use.</p> <p>Soil risk for unrestricted use is 4×10^{-5} (from arsenic) and for industrial use is 3×10^{-6}, both of which are within the risk management range. However, excluding arsenic, soil risks are less than the risk management range for unrestricted and industrial use. The HI is less than 1 for both use scenarios. Initially, arsenic was detected above the background arsenic level using Method SW6010, and are not considered reliable at these concentrations. Soil from the site was later resampled using a more reliable laboratory method, and no metals were detected above background concentrations.</p> <p>There are potential impacts to groundwater from arsenic and to surface water from cadmium, but arsenic data were obtained with Method SW6010, which is considered unreliable at the reported concentrations, and no COCs were identified.</p>
SA 106 ²	This site includes the former location of Building 434 and UST 405. Building 434 was constructed in the early 1940s and demolished in 1990. No information is available regarding activities conducted in the building. The UST was removed in 1988. The UST was granted closure by the Central Valley Water Board in 1996. The rest of the site was used as a reclamation/salvage yard from 1946 to 1965 and a parking lot for Building T-410 (motor pool). The salvage yard was used to store old pieces of machinery, equipment, metal scraps, and miscellaneous items. The majority of the site is covered with asphalt and concrete. COPCs include VOCs, SVOCs, PCBs, pesticides/herbicides, TPH, and metals.	<p>Data does not indicate that significant releases occurred at this site. Soil and SSG samples were collected, and results were evaluated in a risk assessment. No COCs were identified.</p> <p>SSG risk for unrestricted use is 8×10^{-6} (from benzene), which is at the low end of the risk management range. SSG risk for industrial use is 5×10^{-7}, which is less than the risk management range. The HI is less than 1 for both use scenarios. Potential soil gas contamination beneath SA 106 is likely associated with overlapping or adjacent sites (SA 060, SA 075, SA 077, SA 099, and PRL L-004B), which are addressed separately.</p> <p>Soil risk for unrestricted use is 4×10^{-7} and for industrial use is 7×10^{-8}, both of which are less than the risk management range. The HI is less than 1 for both use scenarios.</p> <p>There is a potential impact to groundwater from arsenic and to surface water from cadmium, but arsenic data were obtained with Method SW6010, which is considered unreliable at the reported concentrations, and no COCs were identified.</p>

References: Information for sites in blue was obtained from the *Final Small Volume Sites Remedial Investigation Characterization Summaries/Feasibility Study* (McClellan AR #7326). Information for sites in green was obtained from the *Final Follow-on Strategic Sites Remedial Investigation Characterization Summaries/Feasibility Study* (McClellan AR #7572). Further information on the removal of radiological material from Dudley Boulevard can be found in the *Final Survey Status Report, Dudley Blvd Radiological Removal Action* (McClellan #7634).

- Notes:**
- 1) Risk Category 1: Below Risk Range/HI Less Than 1 - See Section G, item 1
 - 2) Risk Category 2: Within or Below Risk Range/HI Less Than 1 - See Section G, item 2
 - 3) Risk Category 3: Within or Below Risk Range/HI Greater Than 1 Due to Metals - See Section G item 3
 - 4a) Risk Category 4a: Above Risk Range/HI Greater Than 1 for soil and soil gas - See Section G, item 4a
 - 4b) Risk Category 4b: Above Risk Range/HI Greater Than 1 for soil- See Section G, item 4b
 - * The site was evaluated in the FS phase
 - (F2) Indicates portion of the IRP site within FOSET #2