



**DEPARTMENT OF THE AIR FORCE
AIR FORCE CIVIL ENGINEER CENTER
INSTALLATION SUPPORT TEAM
EDWARDS AIR FORCE BASE, CALIFORNIA**

19 November 2015

MEMORANDUM FOR SEE DISTRIBUTION

FROM: AFCEC/CZOW
12 Laboratory Road
Edwards AFB CA 93524

SUBJECT: Minutes of the Edwards Air Force Base (AFB) Restoration Advisory Board (RAB)
Meeting, 21 May 2015

1. Time: 1735
2. Place: California City, California
3. Chairman: David Smith, Air Force Co-chair
4. The following RAB members were present:

<u>Name</u>	<u>Position</u>
Mr. Kevin Depies	California Environmental Protection Agency (Cal/EPA) Department of Toxic Substances Control (DTSC) Remedial Project Manager (RPM)
Mr. Ai Duong	Edwards AFB RPM
Mr. Edward Fuller	California City Public Representative
Mr. William Gaddis	Rosamond Public Representative
Ms. Christina Guerra	Lahontan Regional Water Quality Control Board (LRWQCB) RPM
Mr. Kevin Mayer	United States Environmental Protection Agency (U.S. EPA) RPM
Dr. David Smith	Air Force Co-chair
Ms. Amber Sweeney	Edwards AFB Base Housing Public Representative
Rev. Philip Thompson	Boron Public Representative
Mr. Victor Yaw	Mojave Public Representative
Mr. Otto Zahn	Edwards AFB Main Base Test Wing Public Representative

5. The following members were absent:

<u>Name</u>	<u>Position</u>
Mr. Bruce Davies	Public Co-chair/North Edwards Public Representative
Mr. Marvin Crist	Lancaster Public Representative (Alternate)
Mr. Milton McKay	Air Force Research Laboratory, Det 7 (AFRL) Public Representative

Ms. Kerri Stewart	National Aeronautics and Space Administration (NASA) Armstrong Public Representative
Ms. Jocelyn Swain	Lancaster Public Representative
Dr. Leslie Uhazy	Rosamond Public Representative (Alternate)
Vacant	Edwards AFB North Base Public Representative
Vacant	Edwards AFB South Base Public Representative

6. The following advisors were present:

<u>Name</u>	<u>Organization</u>
Mr. Ranney Adams	AFRL Environmental Manager
Mr. Joseph Dunwoody	Air Force Civil Engineer Center (AFCEC)/Installation Support Team-West (CZOW)
Mr. William Hall	AFCEC/Environmental Restoration Division (CZR)
Mr. Gary Hatch	412th Test Wing (412 TW)/Public Affairs (PA)
Ms. Rebecca Hobbs	AFCEC/CZOW
Mr. Tom Merendini	AFCEC/CZOW
Mr. Michael Rohall	AFCEC/CZOW
Dr. Nash Saleh	AFCEC/CZOW
Mr. Paul Schiff	AFCEC/CZOW
Mr. Warren Seidel	412 TW/Judge Advocate (JA)

7. Others present were as follows:

<u>Name</u>	<u>Organization</u>
Mr. James Elliot	TetraTech
Ms. Maribel Harms	JT3/CH2M
Mr. Chris Higgins	Media Fusion
Mr. Manish Joshi	AECOM
Mr. John Perry	Media Fusion
Ms. Leilani Richardson	JT3/CH2M (Recorder)
Mr. Herb Roraback	412 CEG/Environmental Management (CEV)
MSgt Robert Sims	Public
Ms. Dena Sims	Public

8. Dr. Smith read the *Statement of Purpose and Conduct*.

9. Dr. Smith introduced Amber Sweeney, the new public representative for the Base Housing community.

10. Dr. Smith presented the 5 March 2015 RAB meeting minutes for acceptance. The RAB accepted the minutes as presented.

11. New Business – *Environmental Restoration Program (ERP) Update* (Attachment 1).
Dr. Smith introduced Mr. Duong, Chief of Environmental Restoration at Edwards AFB.

a. Mr. Duong provided the status of two formal disputes at Edwards AFB. The South AFRL Explanation of Significant Differences dispute was elevated to the Senior Executive Committee

(SEC), chaired by the Regional Administrator from U.S. EPA Region 9. The committee includes senior representatives of California agencies and the Air Force. The SEC met via a conference call on 20 May 2015. The U.S. EPA Region 9 Administrator will issue a decision on the dispute. According to the Federal Facility Agreement (FFA), if the U.S. EPA Region 9 decision is challenged by any of the FFA signatories, then the ultimate decision will be elevated to the U.S. EPA Administrator in Washington, D.C.

b. Mr. Duong said the dispute for the AFRL Arroyos Record of Decision (ROD) was discussed informally by the Dispute Resolution Committee (DRC) in late April, where the group tentatively resolved eight issues. Three more issues, primarily regarding risk determinations, require further discussion.

(1) Mr. Gaddis asked about follow-up progress on the AFRL Arroyos ROD dispute. Mr. Duong said the Air Force is compiling an agreement document regarding the eight issues that were tentatively resolved by the DRC. The Air Force plans to submit the document to the regulatory agencies for approval in the next few weeks. Mr. Duong estimates it may be July or August before the remaining three issues are revisited by the DRC. If the DRC cannot resolve the remaining issues, then the dispute will have to be elevated to the SEC.

(2) Dr. Smith asked if cleanup continues during the dispute resolution process. Mr. Duong said cleanup activities continue to progress at sites unaffected by the dispute. However, there will be further delays on projects that rely on decisions related to the dispute, particularly risk calculations. Cleanup projects mainly affected by the dispute are in the pre-ROD stage. Mr. Duong's team is trying to work around the disputes as much as possible, continuing cleanup efforts on all post-ROD sites.

c. Mr. Duong presented the progress of the base's cleanup program, highlighting cleanup activities performed within the last 6 months.

(1) Mr. Duong said preliminary results for a second round of vapor intrusion sampling conducted in February 2015 for 11 buildings on base did not show any significant issues. If the data had shown any significant results, Mr. Duong's team would have followed the response steps as outlined in the base's *Vapor Intrusion Pathway Communications Plan* to notify the appropriate parties.

(2) Mr. Gaddis asked when the Site 18 Interim Dual Extraction System is expected to be turned back on. Mr. Duong replied the timeline depends on the outcome of the second round of vapor intrusion sampling that occurred in February 2015. If the regulatory agencies are satisfied with the data from both sampling events and agree with the Air Force's recommendations in the sampling report, then the agencies can evaluate whether the system should be turned back on. However, if the sampling events do not meet regulatory agency requirements, the system will remain off until further sampling events are conducted. The system was originally shut off to provide accurate readings of vapor intrusion sampling conducted in buildings near Site 18.

(3) Mr. Duong noted Ms. Hobbs' Sites 81 and 102 cleanup action will save the base an estimated \$24 million in crushed runway disposal costs. Ms. Hobbs designed a cleanup work plan to use excess runway concrete as land cover for the skeet target sites. For her cost-saving efforts,

Ms. Hobbs was selected as the Science and Engineer Employee of the Quarter for the 412th Civil Engineer Group.

(4) Mr. Duong explained the vapor intrusion assessment at AFRL identified the only building on base—Building 8753—with an elevated indoor air reading. In keeping with the response steps outlined in the base’s *Vapor Intrusion Pathway Communications Plan*, Mr. Duong’s team notified AFRL employees and the commander, and held two public meetings at AFRL to address questions and concerns. Mr. Duong noted Building 8753 is a test facility only accessed by one or two AFRL employees on an infrequent basis. Regardless of this infrequent occupancy, AFRL leadership proactively enforced building access restrictions to further limit possible exposure.

(5) Responding to a bullet on the Military Munitions Response Program (MMRP) presentation slide, Mr. Schiff said 42 parcel owners have yet to grant the Air Force permission to access their property. The Air Force needs to evaluate these parcels for possible munitions debris from past military activities. The Air Force is in discussion with the regulatory agencies about alternate access methods.

(6) Mr. Fuller asked if the base has experienced issues with the water table level dropping, making production wells non-functional. He also wondered if the drop in water levels had any significant effect on plume movement. Mr. Depies said most of the well pumping is done in Lancaster and Palmdale, which is causing the water table to drop significantly in that area. But Mr. Depies does not think that is something the Air Force monitors, as most of the groundwater contamination is located in Main Base and the northern portion of the base. If the pumping from Lancaster and Palmdale was impacting the Main Base area, it could potentially increase the rate of plume migration because there would be a steeper slope in the water table, causing the contamination to move faster. However, Mr. Depies does not see that happening. Mr. Depies also noted well pumping occurs outside of the northern boundary of the base, but not at a substantial rate due to the high arsenic levels naturally found in local well water. As far as Mr. Depies knows, Edwards AFB is not seeing a correlation between water levels dropping and plume migration rates. Mr. Duong added the base regularly monitors and tracks the base’s groundwater contaminant plumes. Mr. Depies noted there were production wells on base, such as those at Mary’s Field, which were turned off because of subsidence concerns with the lakebed.

(7) Dr. Smith said within the last 7 years, Edwards AFB has reduced water consumption by approximately 50 percent. In the last year alone, water consumption on base was cut by approximately 11 percent. Edwards AFB officials continue to look for new ways to reduce water consumption.

(8) Dr. Smith asked when the base last invited its community partners to tour the cleanup areas. Mr. Hatch estimated it has been 4 to 6 months ago. Dr. Smith said he would like to set up another tour for the RAB members, possibly in October, so they can see firsthand the sites discussed at the meetings.

12. Opportunity for Public Comment – Mr. Hatch reported no comment cards were received from members of the public to address the RAB members during the meeting. Dr. Smith asked if there were any last-minute submissions from the audience. There were none.

13. Old Business – *Status of RAB Vacancies* – Mr. Hatch said the RAB has two vacancies now that Ms. Sweeney and Rev. Thompson have joined the board. Volunteers are still needed to represent the South Base and North Base communities. One person showed interest in the North Base position, but has yet to fill out an application. The South Base vacancy has been open for approximately 2 months. The base continues to advertise the vacancies and will accept applications until the positions are filled.

a. Dr. Smith asked about the requirements for being a public representative. Mr. Hatch responded the person needs to live or work in the area he or she seeks to represent.

14. Reports from Public Representatives.

a. Rev. Thompson, Boron, said he appreciated Mr. Duong’s briefing, which he felt was well presented. He said community leaders and the Boron Water Board have not shown much interest in the base’s cleanup program. Rev. Thompson also offered to assist the Air Force with obtaining land-access permission from property owners in the AL505-2 MMRP area, which looks to be near Boron. He said he may know most of the property owners by name and may be able to contact them personally.

b. Mr. Yaw, Mojave, reported he was asked for more *Report to Stakeholders* when he was handing out meeting notifications at the Mojave Water District office. Mr. Yaw said he would take extra copies of the newsletter that were available at the meeting.

c. Mr. Gaddis, Rosamond, said he last reported on his briefing to the Rosamond Municipal Advisory Council about the RAB, with assistance from Ms. Hobbs. He said the briefing introduced him to another community group called the Rosamond Community Watch, who wanted more information about the base’s cleanup program. He directed the group to the RAB’s Facebook website. Mr. Gaddis noted interest in the cleanup program comes mainly from Rosamond residents who work at Edwards AFB.

d. Ms. Sweeney, Base Housing, said she appreciates the opportunity to represent the Base Housing community.

e. Mr. Fuller, California City, thanked Dr. Smith for bringing the RAB to his community. He also noted people are taking the meeting flyers and newsletters he leaves at the city hall.

f. Mr. Zahn, Main Base Test Wing, did not have anything new to report.

15. Reports from RPMs.

a. Mr. Depies, Cal/EPA DTSC, said Mr. Duong’s briefing did not mention a facility on the east side of AFRL that is being added to the base’s cleanup program. Historically, the former open burn/open detonation (OB/OD) site—permitted to operate under the *Resource Conservation and Recovery Act*—was used to burn or detonate munitions or explosives that were no longer needed. The Air Force recently succeeded in obtaining the state’s permission to move the OB/OD facility to a more remote location, south of AFRL. Now the former OB/OD site is becoming a new Superfund site that will be cleaned up under the *Comprehensive Environmental Response, Compensation, and Liability Act*. Mr. Depies expects the Air Force to conduct surface soil

sampling at the site to see if there are any residual contaminants, which should be fairly quick to clean up.

b. Ms. Velasquez, LRWQCB, did not have anything new to report.

c. Mr. Mayer, U.S. EPA, expressed his appreciation for members of the board and the public for volunteering their time in support of the RAB. He emphasized communication and knowing how people use environmental resources as key factors in protecting human health and the environment. Mr. Mayer also said groundwater monitoring data is important not only for defining the extent and movement of contaminants, but also for determining if a certain treatment is effective or not.

d. Mr. Duong, Edwards AFB, did not have anything new to report.

16. Dr. Smith shared an anecdote about his undergraduate thesis that related to the chemical munitions slide Mr. Duong presented earlier. He also shared information about a presentation dinner for the 163rd Reconnaissance Wing out of March Air Reserve Base, Calif., who flew MQ-1 Predators under state control for the first time about a year ago to help allocate resources for the Rim Fire. The wing was given the Award for Excellence in Aviation this year by the Flight Test Historical Foundation. The dinner will be held on 13 June at the Proud Bird. Tickets can be accessed through the Edwards AFB Flight Test Museum website.

17. Dr. Smith adjourned the meeting at 1845. The next RAB meeting is proposed for 19 November 2015 in Boron.

//original signed by//

DAVID G. SMITH, NH-IV, DAF
Air Force Co-chair
Restoration Advisory Board

//original signed by//

BRUCE H. DAVIES
Public Co-chair
Restoration Advisory Board

Attachment:

1. Environmental Restoration Program Update for Edwards Air Force Base, CA

DISTRIBUTION:

AFCEC
412 TW/DS/JA/PAE/SE
412 AMDS/SGPB/SGPM
AFRL
RAB Members
Cal/EPA DTSC
Cal/EPA RWQCB
Kern County Environmental Health Services Department
U.S. EPA



Environmental Restoration Program Update for Edwards AFB, Calif.

Ai Duong
Edwards AFB Restoration Chief
May 2015

1



List of Acronyms

-
- **AFB = Air Force Base**
 - **AFRL = Air Force Research Laboratory, Det 7**
 - **CWM = Chemical Warfare Materiel**
 - **FS = Feasibility Study**
 - **MMRP = Military Munitions Response Program**
 - **OU = Operable Unit**
 - **RAWP = Remedial Action Work Plan**
 - **RPM = Remedial Project Manager**
 - **RTC = response to (regulatory) comment**
 - **VIP = vapor intrusion pathway**



OU1/8 Main Base

2015 OU1/8 Groundwater Monitoring

- **Preparing responses to regulator comments (RTCs) on Draft Sampling and Analysis Plan**
- **Comprehensive sampling will occur this summer**
- **Data will support the Draft OU1/8 Feasibility Study (FS) Addendum expected to be submitted in early 2016**

Integrity - Service - Excellence

5



OU1/8 Main Base

Well Installations within OU1/8

- **Work Plan currently in regulatory review**
- **Approx. 10 new wells to be installed later this year to improve plume delineations**
- **Data will support the OU1/8 FS Addendum**

Integrity - Service - Excellence

6



**OU1/8
Main Base**

Vapor Intrusion (VI) Pathway Assessments

- **First (summer) round of VI sampling conducted in August 2013**
 - Eight OU1 buildings, one OU8 building, two OU5/10 buildings
- **Second (winter) round of VI sampling conducted in February 2015**
 - Draft report to be issued later this year

Integrity - Service - Excellence

7



**OU1/8
Main Base**

Treatment Systems

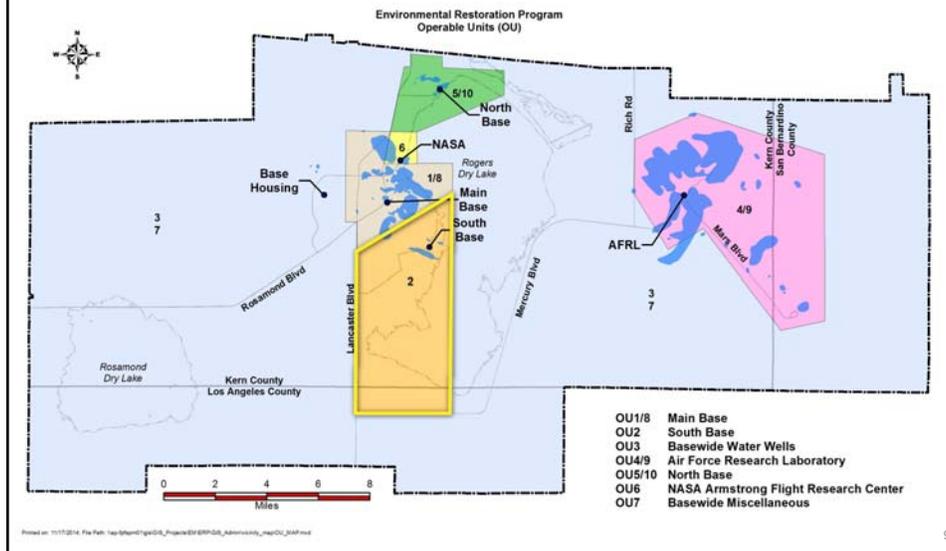
- **Site 18 Interim Dual Extraction System**
 - Interim system (which operated 2000-2012) has been offline since 2012, in order to complete vapor intrusion pathway assessments still in progress
- **Site 58 Interim Soil Vapor Extraction System**
 - Recent Rebound Assessment concluded shutdown of interim system (which operated 2005-2013) is appropriate
 - Final remedial action at site will be determined in forthcoming OU1/8 Record of Decision

Integrity - Service - Excellence

8



OU2 South Base



OU2 South Base

OU2 Sites 5/14, 76, and 86

- Fieldwork is ongoing to determine the extent of the three groundwater contaminant plumes
- Treatment systems continue operating at the three sites



OU2 South Base

Sites 81 and 102

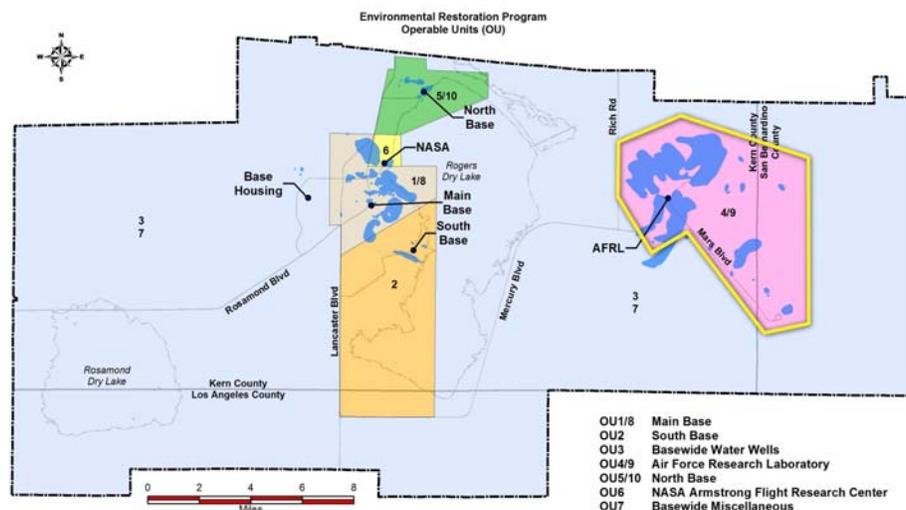
- A removal action will be implemented in 2016
 - Removal of lead shot and skeet target debris from the lakebed
 - Hand removal of some lead shot and skeet target debris to maintain select areas of vegetation
 - Covering of the remaining lead shot and skeet target debris with crushed runway concrete
- This remedy is protective of human health and the environment and eliminates the Air Force's environmental liability for the runway concrete because it is being beneficially reused

Integrity - Service - Excellence

11



OU4/9 Air Force Research Laboratory



Printed on: 11/17/2014. File Path: \\afce\shared\regis\GIS_Reports\ERPR\GIS_Admin\erpr_map\OU_2.mxd

12



OU5/10 North Base

2014 Groundwater Monitoring

- Expecting Draft Report 31 July 2015
- Data will be included in the OU5/10 FS Addendum

OU5/10 Feasibility Study Work Plan

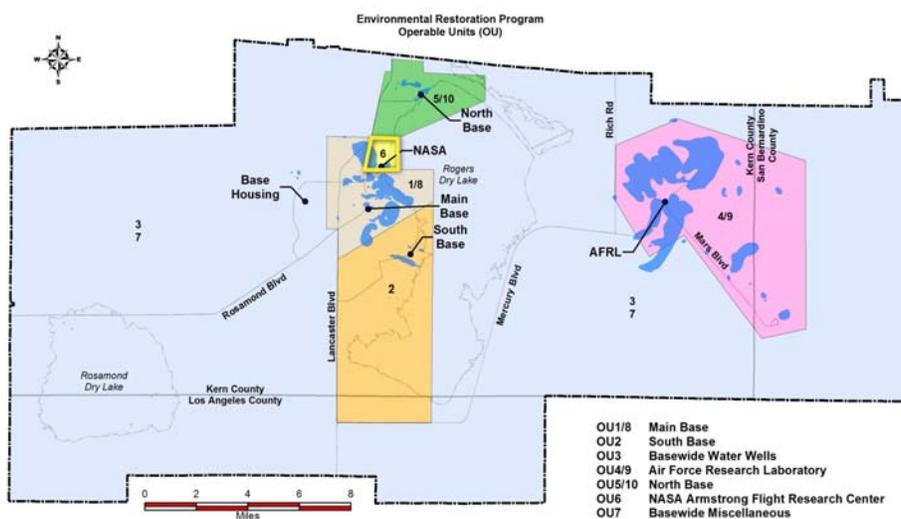
- Air Force currently preparing RTCs
- Draft Final OU5/10 FS Work Plan will be submitted after clarification on RTCs during the RPM meeting on 21 May 2015

Integrity - Service - Excellence

15



OU6 NASA Armstrong



Printed on: 11/17/2014, File Path: \\afce\shared\egw\GIS_Papers\DIR\DIR\OU_Admin\ou_map.mxd

16



OU6 NASA Armstrong

Five-Year Review delayed

- U.S. EPA Region 9 did not concur that the Air Force had enough data to confirm a protective remedy

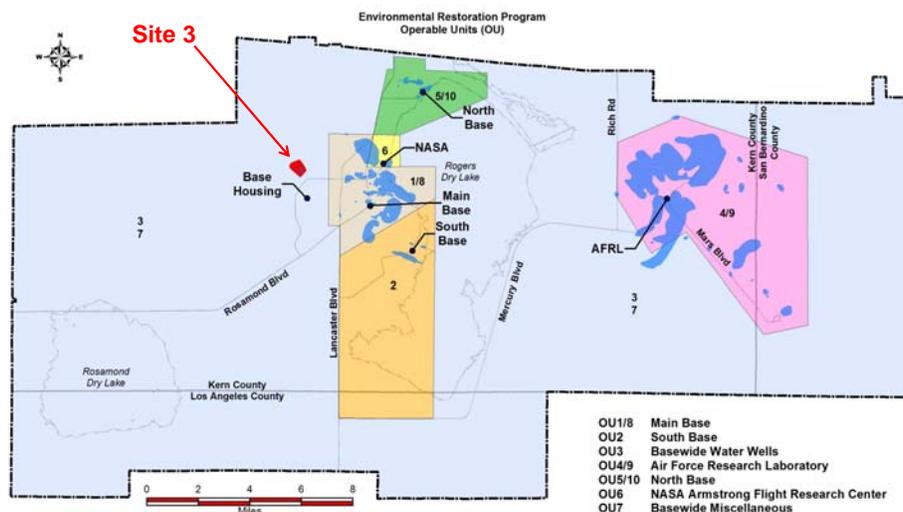
Draft Final First Five-Year Review Report Addendum submitted to regulators for review on 15 May 2015

- VIP data and results included as an attachment

Integrity - Service - Excellence



OU7 Site 3





OU7 Site 3 Landfill

Volumes I and II of the Remedial Action Work Plan (RAWP), which document waste consolidation and cover requirements, are being reviewed by the RPMs

Volume III of the RAWP, which will document long-term monitoring and maintenance, will be submitted to the RPMs for review in June 2015

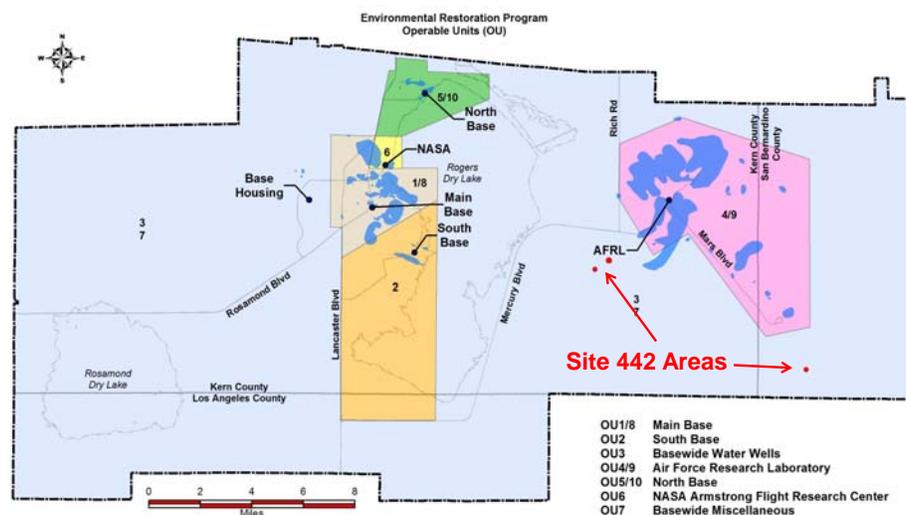
Fieldwork expected to begin later this year to cover the waste cells

Integrity - Service - Excellence

19



OU7 Chemical Warfare Materiel



Printed on: 11/17/2014, File Path: sap:\p\er\ou7\ou7_ProposedEIR\ER\GIS\Accessories_map\OU_2014.mxd

20



OU7

Chemical Warfare Materiel

First Five-Year Review completed in September 2014

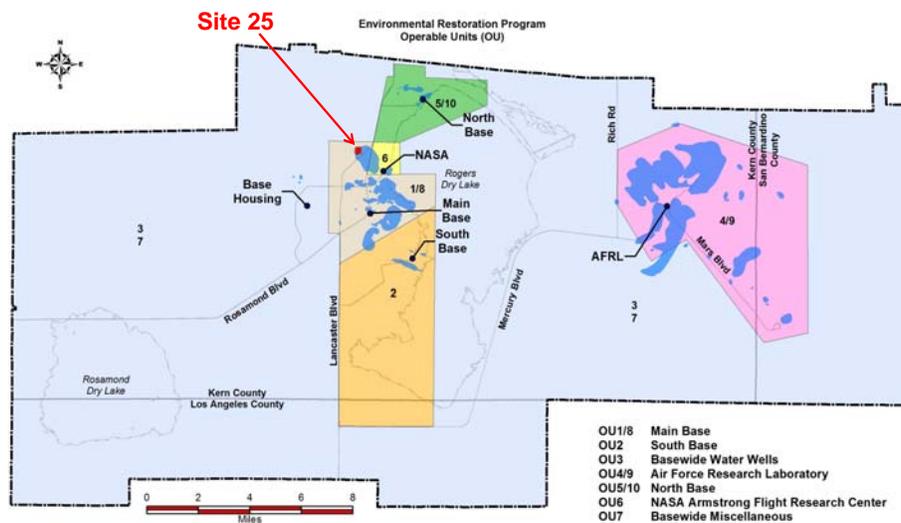
Maintenance of the cover and land use controls ongoing



Integrity - Service - Excellence



**OU8
Site 25**



Printed on: 11/12/2014, File Path: \\app\apps\er\ou8_Proposed\ERF\OU8_Admin\ou8_map\OU_25AF.mxd



**OU8
Site 25**

Remedial Investigation/Feasibility Study

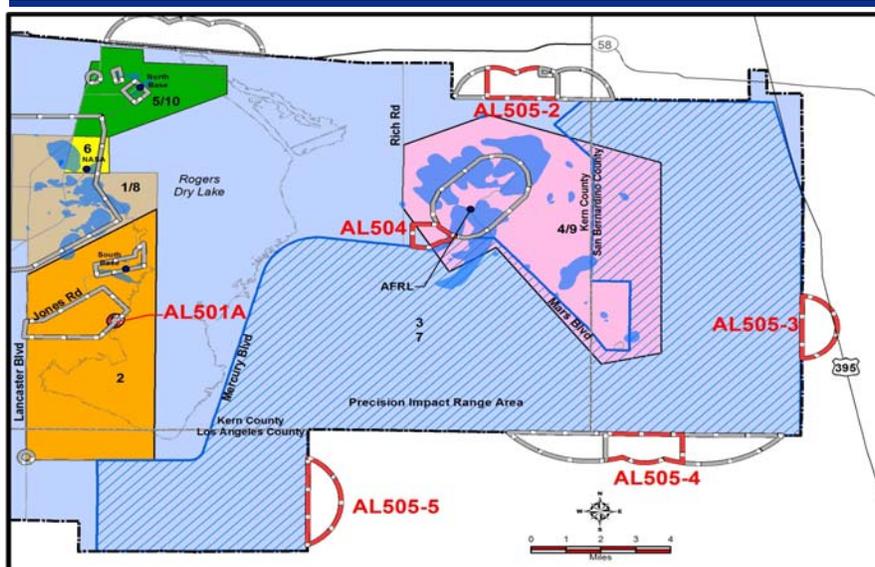
- Draft Remedial Investigation Report Addendum submitted to RPMs on 24 April 2015
- Draft Feasibility Study scheduled for March 2016

Integrity - Service - Excellence

23



Military Munitions Response Program



24



Military Munitions Response Program

Currently preparing RTCs on Remedial Investigation Work Plan for AL504, AL505-2, and AL505-4

Currently preparing RTCs on Supplemental Comprehensive Site Evaluation Phase II (Superfund Site Inspection equivalent) Work Plan for AL505-3 and AL505-5

In process of obtaining Right-of-Entry from landowners for private property parcels within off-base MMRP areas

Fieldwork to begin in the fall of 2015



Integrity - Service - Excellence

25

Questions?



Integrity - Service - Excellence

26