DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 95TH AIR BASE WING (AFMC)
EDWARDS AIR FORCE BASE CALIFORNIA

17 May 2012

MEMORANDUM FOR SEE DISTRIBUTION

FROM: 95 ABW/CEVR

SUBJECT: Minutes of the Environmental Restoration Program, Restoration Advisory Board (RAB) Meeting, 17 November 2011

1. Time: 1736

2. Place: Lancaster, California

3. Chairman: Col Amy Arwood, Air Force Co-chair

4. The following RAB members were present:

Name	Position
Mr. Bruce Davies	North Edwards Public Representative/Public Co-chair
Mr. Kevin Depies	California Environmental Protection Agency (Cal/EPA) Department of Toxic Substances Control (DTSC) Remedial Project Manager (RPM)
Mr. Ai Duong	Edwards Air Force Base (AFB) RPM
Mr. Bill Gaddis	Rosamond Public Representative
Dr. Joseph Healy, Jr.	United States Environmental Protection Agency (U.S. EPA) RPM
Mr. Milton McKay	Air Force Research Laboratory (AFRL) Public Representative
Mr. Tim Post	Lahontan Regional Water Quality Control Board (LRWQCB) RPM
Ms. Jocelyn Swain	Lancaster Public Representative
Ms. Brenda Weems-Hunter	Edwards AFB South Base Public Representative
Mr. Victor Yaw	Mojave Public Representative

5. The following members were absent:

Name	Position
Mr. Marvin Crist	Lancaster Public Representative (Alternate)
Ms. Julie English	Boron Public Representative
Mr. James Ricks	U.S. EPA RPM
Mr. Richard Salazar	Edwards AFB Main Base Test Wing Public Representative
Mr. Robert Smith	California City Public Representative
Mr. John Steude	LRWQCB RPM
Dr. Leslie Uhazy	Rosamond Public Representative (Alternate)
Vacant	Edwards AFB Housing Public Representative

Vacant	Edwards AFB Main Base Air Base Wing Public Representative
Vacant	Edwards AFB North Base Public Representative
Vacant	National Aeronautics and Space Administration (NASA) Public Representative

6. The following advisors were present:

Name	Organization
Mr. Ranney Adams	AFRL Det 7/SEE
Mr. Joseph Dunwoody	95 ABW/CEVR
Ms. Patrice Hallman	95 ABW/CEVR
Mr. Gary Hatch	95 ABW/PA
Ms. Rebecca Hobbs	95 ABW/CEVR
Mr. Tom Merendini	95 ABW/CEVR
Mr. Bruce Oshita	95 ABW/CEVR
Mr. Paul Schiff	95ABW/CEVR
Mr. Warren Seidel	AFFTC/JA
Dr. Stephen Watts	95 ABW/CEVR

7. Others present were as follows:

Name	Organization
Mr. Eric Barefoot	Air Force Center for Engineering and the Environment (AFCEE)
Ms. Adria Bodour	AFCEE
Mr. Daniel Medina	AFCEE
Ms. Tara MacHarg	AECOM
Ms. Patti Kumazawa	JT3/CH2M HILL (Recorder)
Ms. Leilani Richardson	JT3/CH2M HILL

8. Col Arwood read the *Statement of Purpose and Conduct*.

9. Mr. Duong introduced Col Arwood, the new Air Force Co-chair, and Ms. Swain, the new primary public representative for Lancaster.

10. Col Arwood presented the 17 February 2011 RAB meeting minutes for acceptance. The minutes were accepted as presented.

11. New Business – *Federal Facility Agreement Agency Roles* (attachment 1). Mr. Duong introduced Mr. Post from LRWQCB.

a. Mr. Post briefed that although the Air Force treats the U.S. EPA, Cal/EPA DTSC, and LRWQCB equally, only the U.S. EPA and the Air Force make the actual decisions regarding Restoration Program actions. However, the state has input throughout the process. This is outlined in Section 120(f) of the *Comprehensive Environmental Response, Compensation, and Liability Act* (*CERCLA*).

b. He discussed State Board Resolution 92-49 and the disagreement between the state and the Air Force on whether it is an applicable and relevant requirement (ARAR) for groundwater cleanup. Section III(g) of the resolution states that water must be cleaned to background concentrations. The Air Force position is to clean groundwater to the maximum contaminant level.

c. However, Mr. Post said the Air Force likes Section III(h) which describes how to set up a containment zone.

d. Through the course of several decision documents over the years, the agencies have come up with *agree-to-disagree* language, for example: "The parties (USAF, U.S. EPA, Cal/EPA DTSC, and RWQCB), while disagreeing on whether certain provisions of state law are ARARs, agree to a TI [technical impracticability] waiver and with the selected remedy for groundwater." This language allows the program to move forward and keeps the water board's concerns from slowing down forward progress in cleaning up the base.

12. *RAB Facebook Site Update* –Ms. Richardson briefed on the Air Force activities regarding the Facebook site since the last meeting (attachment 2).

a. Ms. Richardson said the Facebook page went live on 1 August 2011. Three training sessions for the RAB were offered at the time. An ad ran in the *Antelope Valley Press* at the end of September and Edwards Public Affairs posted the link on their Facebook site.

b. Ms. Richardson conducted a live demonstration of Facebook features.

c. Ms. Richardson said photos to be taken at the meeting will be posted on the site to help the public identify representatives.

d. Mr. Depies asked if he could use a work account, instead of a private e-mail account to sign up for Facebook. Ms. Richardson indicated she had some problems using a work e-mail address.

e. Mr. Depies asked if there was a link on the *Report to Stakeholders* (RTS) for the Facebook page. Ms. Richardson said the link had been published in a story, but the Air Force can start including the address on the back page.

f. Ms. Richardson stated that the Air Force will be printing hard copies of the RTS again in response to RAB concerns. Ms. Richardson showed attendees where the RTS is available online (*www.eafb.mojavedata.gov*). Mr. Depies asked if the meeting minutes were also available online. Ms. Richardson said they were on the same site.

g. Col Arwood commented that an individual's Facebook account can be configured to limit the kinds of information that other Facebook users or friends can see.

h. Dr. Healy asked how the public would contact him through Facebook. Ms. Richardson said that currently RAB members' e-mail addresses and phone numbers are listed. Dr. Healy's work e-mail is listed on the site. Ms. Richardson visited two personal pages to show the depth of information that users can reveal on their personal pages without being "Friends."

i. Ms. Weems-Hunter had concerns about her personal privacy on Facebook. Col Arwood explained that it's up to the users of the site to restrict or allow what information different individuals will see, depending on who they are. Ms. Weems-Hunter also asked how people would be able to contact her. Col Arwood responded there are two ways: an individual can find her contact information on the member page or click on her name when Ms. Weems-Hunter 'likes' a page.

j. Mr. Duong asked about setting up an online meeting through Facebook. Ms. Richardson said the free online meeting forums limit the number of people who can attend at one time. There is also Defense Connect Online, but it requires a common access card.

k. Mr. Depies asked if representatives had received any feedback regarding the reduction in the number of meetings per year. Ms. Weems-Hunter said she was talking to people as she walked around with RTSs (that she had printed out herself). She said her constituents did not miss the meetings as much as the printed RTS. Mr. Depies said his agency is quite reluctant to go along with the reduction in RAB meetings. One reason that the agency may be persuaded the reduction in meetings is not an issue is because of the lack of public attendance at the meetings.

l. Mr. Davies said that e-mails are important to him. He doesn't access Facebook often. So an e-mail notifying RAB members about Facebook updates would be beneficial.

m. Dr. Healy said he does not check his home e-mail address very often. Ms. Richardson said the home e-mail would only be required for registration purposes.

n. Col Arwood said the RAB may need to establish a communications plan to further discuss the options for the RAB and the public to communicate.

13. Opportunity for Public Comment –Mr. Hatch reported that no comment cards were received and that there were apparently no members of the public at the meeting to comment.

14. Status of RAB Vacancies–Mr. Hatch said the RAB had recently lost the Base Housing and Air Base Wing representatives. That makes a total of four vacancies (with North Base and NASA). The Lancaster slot was filled by Ms. Swain. Advertisements have recently run in the base newspaper and the NASA newsletter. Basewide e-mails were also sent out. There was no interest. Mr. Hatch thought advertising the vacancies on Facebook was a good idea. Mr. Depies asked if the Air Force has posted fliers on bulletin boards. Col Arwood suggested putting fliers in the Housing office and the U-Fix-It store. Mr. Hatch said the Air Force would pursue the flier idea.

15. Reports from Representatives.

a. Mr. Post, LRWQCB, welcomed Col Arwood to the RAB.

b. Dr. Healy, U.S. EPA, said there have been changes in conducting risk assessments and this is delaying the review of some documents. At the end of September, the U.S. EPA decided to non-concur with the 5-year review of the NASA Dryden Remedial Action until they can get more data on vapor intrusion at the operable unit (OU). The U.S. EPA also released a study on trichloroethene (TCE) in late September. The toxicology has been reevaluated–TCE is more

carcinogenic than previously thought and its noncancer effects are more dangerous. The U.S. EPA is reevaluating sites throughout the country as a result.

c. Mr. Yaw, Mojave, said Facebook looked interesting.

d. Mr. McKay, AFRL, had correspondence with Ms. Hallman about a vapor intrusion study at AFRL that includes the building in which he works.

e. Ms. Weems-Hunter, South Base, reported that some young employees at South Base are interested in doing something for the RAB. Mr. Depies responded that the program needs input from the public to help make decisions. He noted that we have received little public input on most of our Proposed Plans, and told Ms. Weems-Hunter that input from the public would be appreciated. Col Arwood said she should encourage younger employees to post comments and questions on Facebook.

f. Mr. Davies, North Edwards, said his community is very concerned about funding for the program being eliminated because of Air Force budget cuts. His constituents would like to see projects continue; they want the contaminated groundwater to be remediated.

g. Mr. Gaddis, Rosamond, is trying to contact the Rosamond Community Services District and Rosamond Municipal Advisory Council to offer an update on the RAB. He toured Site 25 and some sites at South Base with Col Arwood.

16. Report from Base Remedial Project Manager

a. Mr. Duong briefed the status of his staff's projects (attachment 3).

b. Mr. Davies asked the difference between the $20 million in funding expected for Fiscal Year 2012 and last year's funding. Mr. Duong said that the Edwards program received $20 to $25 million in Fiscal Year 2011.

c. Operable Unit 7. Mr. Gaddis asked if OU7 was basewide. Mr. Duong explained that OU7 covers all sites/areas of concern outside the other operable units. Mr. Duong said the Air Force will send Mr. Gaddis a map showing all the sites within OU7 and Mr. Gaddis can contact his staff with questions about specific sites.

d. Operable Unit 7, Site 3 (landfill). Mr. Davies asked what it means to cap a landfill. Ms. Hobbs described different kinds of caps to keep water from reaching buried waste. Mr. Davies asked if the area was a major drainage area. Ms. Hobbs said the plan includes a 32-acre evapotranspirative cover and creating stormwater control in the area to keep water from coming in contact with the waste.

e. Site 25.

1) Mr. Gaddis asked if the results of the *in situ* chemical oxidation treatability study are an update from the video the RAB saw 6 months ago. Mr. Merendini said the study showed that the fractured bedrock in the area made the treatment ineffective.

2) Mr. Davies asked the depth of the Site 25 plume. Mr. Merendini said it was 600 feet deep in areas. Mr. Davies asked if there was a model of the plume for 5 and 10 years out. Mr. Duong said the model was modified for the conditions at the site with input from the regulatory agencies. The Air Force used the model to determine how long it will take before this plume reaches NASA or Main Base.

3) Mr. Davies asked if the Air Force knew if the Site 25 plume was accelerating or slowing down. Col Arwood said it was slowing down. Mr. Duong said that because the geology is flattening out, the edge of the plume is also flattening out and slowing down compared to the early years. Mr. Post said all we know for sure is that it took 50 years to get from the top of the hill to the bottom. We have snapshots in time from our sampling. Many more wells are being installed to understand the plume better.

4) Mr. Depies noted there is a disagreement between Cal/EPA DTSC and the Air Force on how the plume is moving.

5) Mr. Duong said the Air Force and Cal/EPA DTSC are working through the differing options and collecting more data. Conditions are very similar to AFRL, and the Air Force is looking at a TI waiver for Site 25 like the Air Force has at AFRL.

f. Dr. Healy asked about the location of the large solar installation planned for a corner of the base. Mr. Duong indicated the area on a map. Dr. Healy said it would be 2 or 3 years for the project to get through state permitting agencies. The U.S. EPA is not involved. Dr. Healy said there does not appear to be any *CERCLA* sites in the area. He said most of the sites within OU7 lie closer to the center of the base or in the remote area on the east side of the base.

17. Col Arwood said the next regular meeting is proposed for May 2012 in California City.

18. Mr. Depies asked about the Facebook meetings originally proposed between the RAB's regular meetings and suggested asking RAB public representatives if they want to have a non-face-to-face meeting in 3 months.

a. Ms. Richardson said the RAB can do telephone conferencing and exchange information through Facebook. The Air Force is currently unable to support online meetings.

b. Col Arwood said she supports a test case using a teleconference to conduct a limited meeting of some kind.

c. Mr. Gaddis said we need to explore some options and try something.

d. Dr. Healy suggested meeting on base while the RPMs are on base for other meetings. Members who could not make it onto the base could call in.

e. Mr. Post suggested February to see if it would work. There could be an update on potential disputes and disagreements. Col Arwood agreed and proposed 1 or 2 February 2012, adding that the meeting would be shorter than a regular meeting.

f. Dr. Healy suggested an update on the budget for the February working-group session.

g. Mr. Gaddis thought the communications plan could be explored at the working-group session as well.

h. Col Arwood said meeting material needs to be easily downloaded by people who cannot make the meeting.

19. Mr. Duong asked about the May meeting. Ms. Richardson said an e-mail poll of the RAB members showed Tuesday and Thursday as the most popular days for a meeting. For this reason, the next meeting is recommended for 15 or 17 May 2012.

20. Ms. Brenda Weems-Hunter said the RAB is used to holding the meetings on Thursday. Dr. Healy agreed, saying he prefers Thursdays.

21. Col Arwood said exploring affordable technology solutions should be a priority.

22. The next meeting is proposed for 17 May 2012 in California City.

23. Col Arwood adjourned the meeting at 1941.

//**original signed by**//	//**original signed by**//
AMY V. ARWOOD, Colonel, USAF Air Force Co-chair Restoration Advisory Board	BRUCE H. DAVIES Public Representative Co-chair Restoration Advisory Board

Attachments:
1. Federal Facility Agreement Agency Roles
2. RAB Facebook Site Update
3. Reports from Environmental Management Program Managers

DISTRIBUTION:
AFFTC/JA/PA/SE
95 ABW/CV/EM/JA/PAE
95 AMDS/SGPB/SGPM
412 TW/CC
AFRL/Det 7/SEE
RAB Members
Cal/EPA DTSC
Cal/EPA, RWQCB
Kern County Environmental Health Services Department
U.S. EPA

Federal Facility Agreement Agency Roles

Tim Post
Remedial Project Manager,
Lahontan Regional Water Quality Control Board

17 November 2011

Lead vs. Support Agencies

"The United States Air Force (USAF) and the U.S. Environmental Protection Agency (USEPA) are selecting the remedies in this Record of Decision ***in concurrence with*** the California Department of Toxic Substances Control (DTSC) and Regional Water Quality Control Board (RWQCB)."

Lead vs. Support Agencies

- DTSC and RWQCB agreed to enter into EAFB's Federal Facility Agreement pursuant to §120(f) of CERCLA; which states:

  [USEPA's] "Administrator shall afford to relevant State officials the opportunity to participate in the planning and selection of the remedial action."

CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act

Agree to Disagree

- The RWQCB's position is that State Board Resolution 92-49 is an applicable and relevant requirement (ARAR) for groundwater cleanup.
- For various reasons, the USAF's position is (most of the provisions of) 92-49 is not an ARAR.

Agree to Disagree Language

The parties (USAF, USEPA, DTSC, and RWQCB), while disagreeing on whether certain provisions of State Law are ARARs, agree to a TI waiver and with the selected remedy for groundwater.

(This language is how we've been able to move forward and not go to dispute.)

TI = Technical Impracticability

95 ABW

RAB Facebook Site Update

Leilani Richardson
JT3/CH2M HILL

17 November 2011

95 ABW

Overview

- **Facebook page went live 1 August**
  - Three training sessions were offered in August
  - The link was advertised in the *Antelope Valley Press* at the end of September
  - Public Affairs posted the link on their Facebook site

Facebook Features

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- **RAB members and the public can:**
  - Post questions or comments and receive feedback
  - View documents and information
  - Chat live with each other
  - Upload photos and create albums
    - Give public representatives a “face” in their respective communities

3

Live demo of RAB Facebook page

Link

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- URL = www.facebook.com/RAB.Edwards

5

Increasing Usage

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- What would you like to see on the Facebook page?
- Would you like to receive e-mails when new things are posted on Facebook?
- What has been your experience with this Facebook page so far?

6

RAB Facebook Site

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Questions?

7

95 ABW

Environmental Restoration Program (ERP) Update for Edwards AFB, CA

Ai Duong
Environmental Restoration Chief

17 November 2011

1

Human Health Risk Management

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- **The Air Force and regulatory agencies are working to resolve human health risk calculation and management issues**
  - Three Record of Decision documents on hold
  - Operable Unit 6 Five-Year Review report has been postponed

2

Fiscal Year 2012 Restoration Budget

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- **Funds of ~$20 million are expected to continue ongoing system operations and site investigations necessary to protect human health and the environment and meet Federal Facility Agreement requirements**
- **Staff have begun preparing for transition of the Restoration program into fence-to-fence Performance-Based Contracts (PBCs) in FY14**
  - Several PBCs may be awarded to achieve site cleanup and completion of Edwards sites

3

Operable Unit (OU) 1 Main Base Flightline

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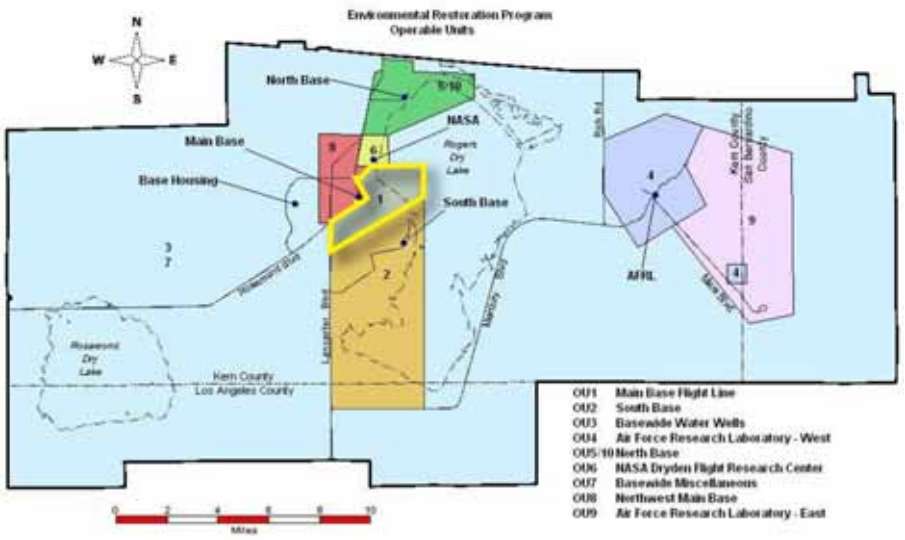

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OU1
Main Base Flightline

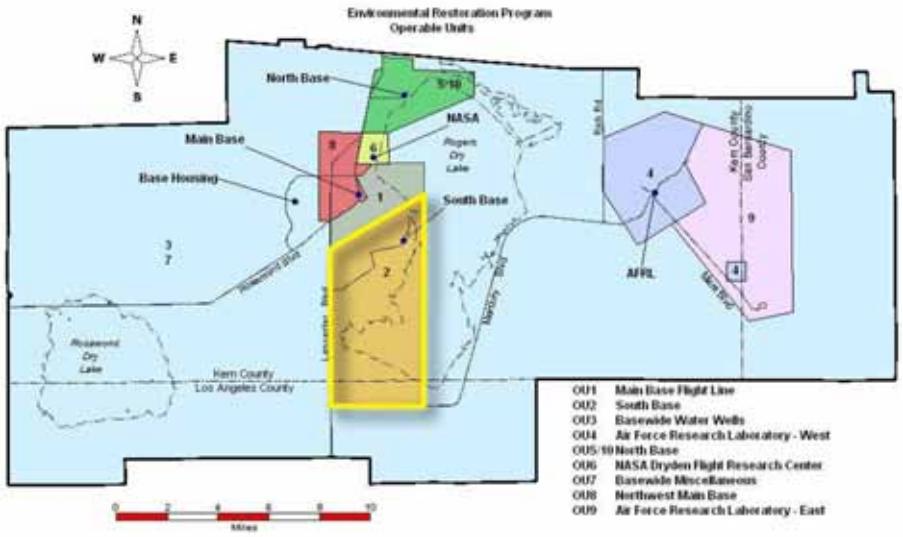
95 ABW

- **OU1 Groundwater Modeling Report**
  - Currently being reviewed in draft form
    - Air Force comments have been incorporated
    - Regulatory review expected to start in December
  - Revised modeling provides better estimates of plume behavior (i.e., stability and/or migration) and will assist with remedy selection for OU1 groundwater contamination
- **Vapor Intrusion Pathway Work Plan being finalized**

5

OU2
South Base

95 ABW



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OU2
South Base

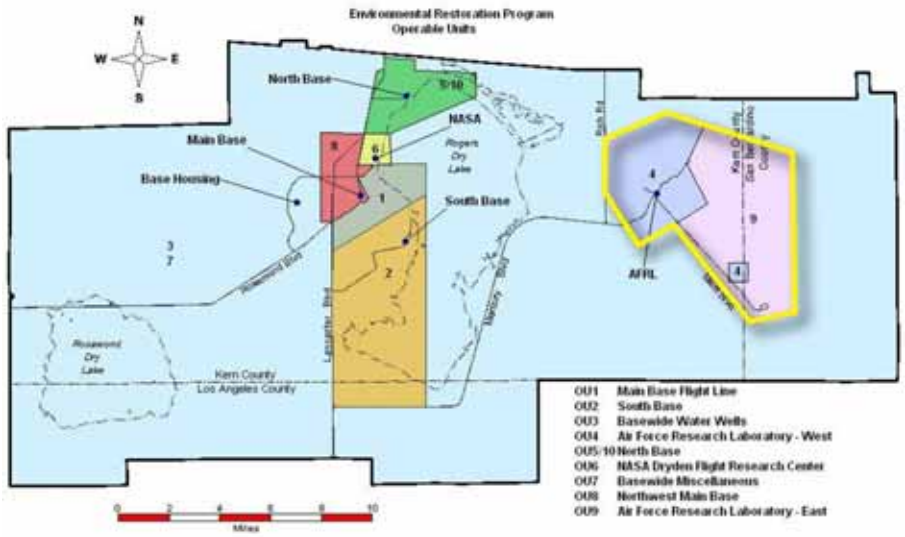
95 ABW

- **Final Remedy Implementation**
  - Potassium permanganate injections have been performed at Sites 5/14 and 76
  - Gaseous nutrient injection is ongoing at Sites 5/14 and 86
- **Site 29**
  - Record of Decision Amendment being prepared
    - Documents the final remedy of Clean Closure for the Site 29 landfill

7

OUs 4 & 9
Air Force Research Laboratory

95 ABW



8

Operable Units 4 & 9 (AFRL)

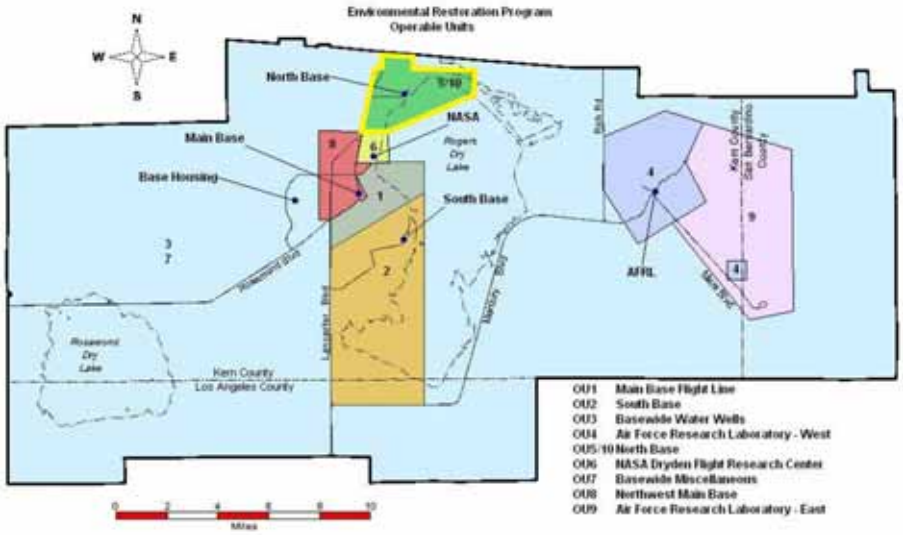
95 ABW

- **Vapor Intrusion Pathway Work Plans being finalized**
- **Base-wide Conceptual Site Model finalized**

9

OU5/10
North Base

95 ABW



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OU5/10
North Base

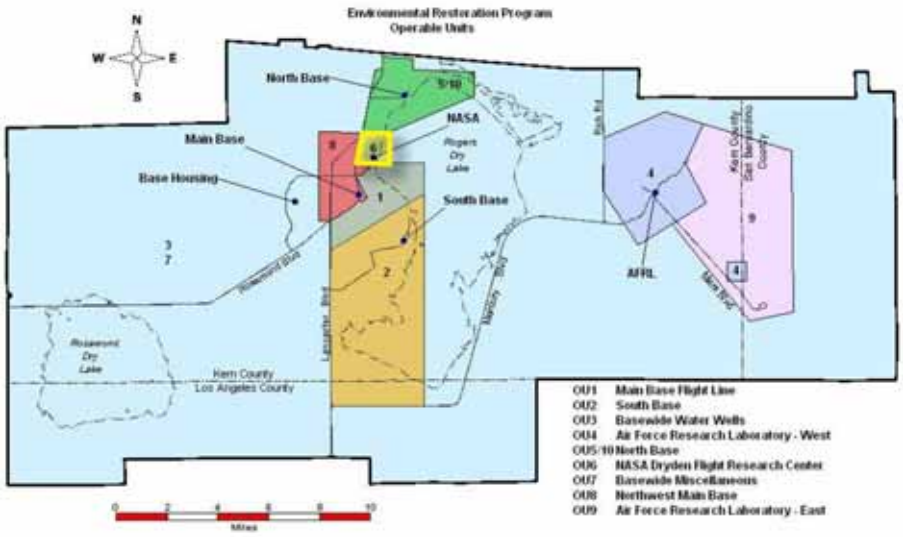
95 ABW

- **Site 275**
  - Conducted a surface sweep for buried ordnance prior to drilling
  - Discovered four unexploded ordnance items which were detonated onsite by EOD
- **A draft of the Data Gap Summary Report will be ready for regulatory review by March 2012, and should be final no later than September 2012**

11

OU6
NASA Dryden

95 ABW



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OU6
NASA Dryden

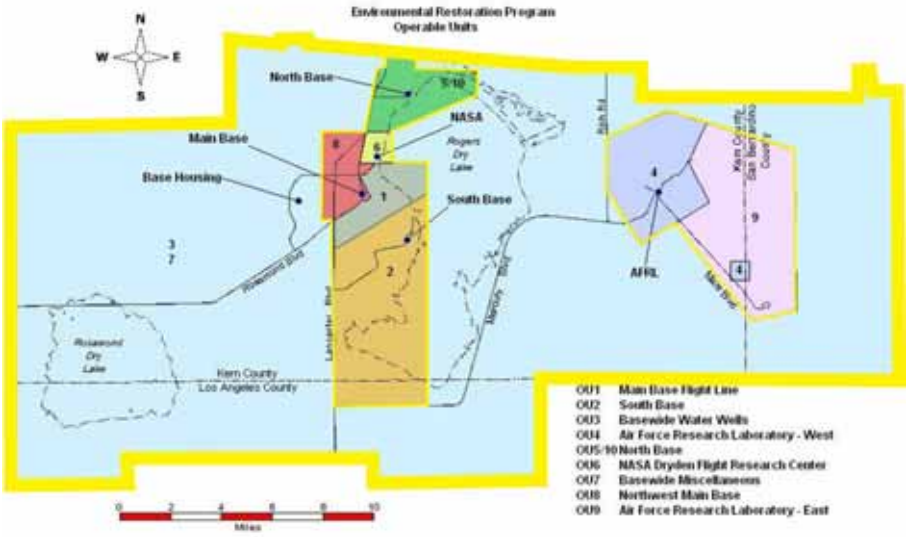
95 ABW

- **Post-ROD**
  - Five-Year Review delayed
    - Non-concurrence between the Air Force and regulatory agencies with respect to data gaps
    - The Air Force agreed to conduct Vapor Intrusion Pathway assessments to address data gaps

13

OU7
Base-wide Miscellaneous

95 ABW



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OU7
Base-wide Miscellaneous

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- **Collecting additional data to revise the Feasibility Study**

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OU7 Site 3

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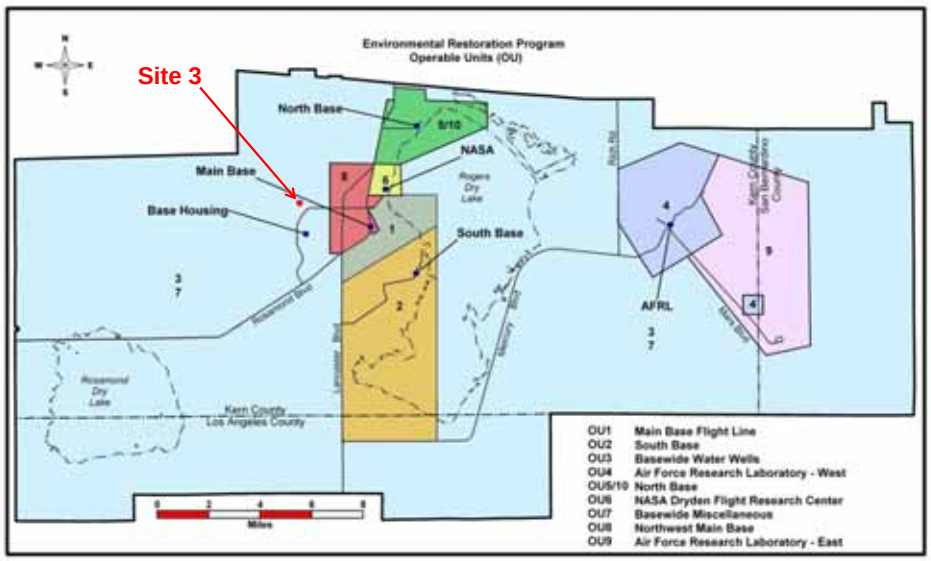

OU7 Site 3 Landfill

95 ABW

- **Record of Decision being prepared**
  - Potential for dispute due to human health risk

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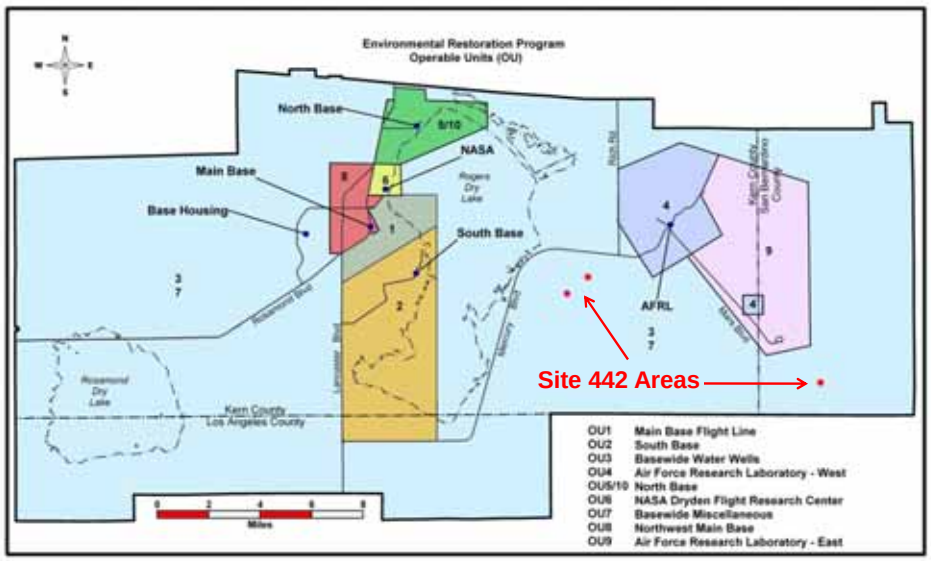
OU7
Chemical Warfare Materiel

95 ABW



OU7
Chemical Warfare Materiel

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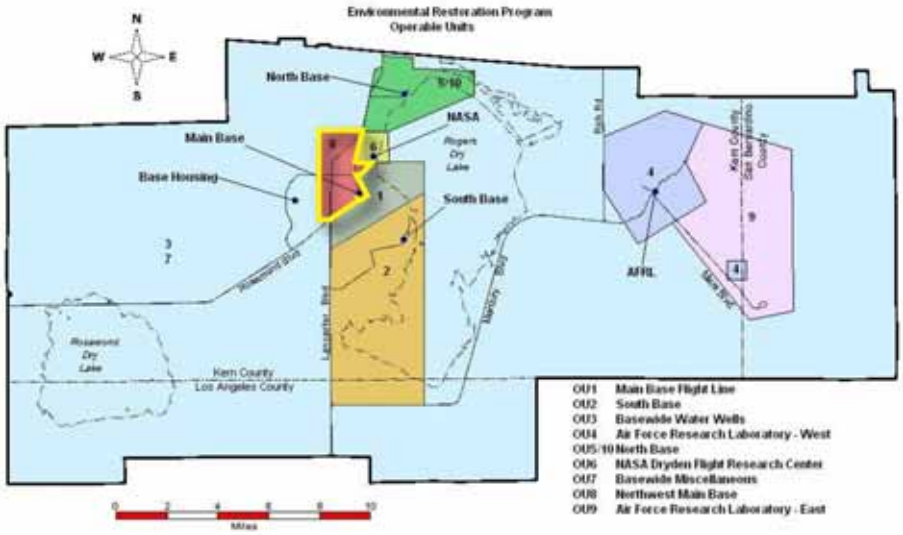
- **Post-ROD**
  - Site 442
    - Explosives Safety Submission (ESS) being prepared
    - Implementation of final remedies at the three burial areas may begin after the ESS has been finalized

19

OU8
Northwest Main Base

95 ABW



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OU8
Northwest Main Base

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- **Field work to address data gaps to revise Feasibility Study**

21

OU8
Site 25

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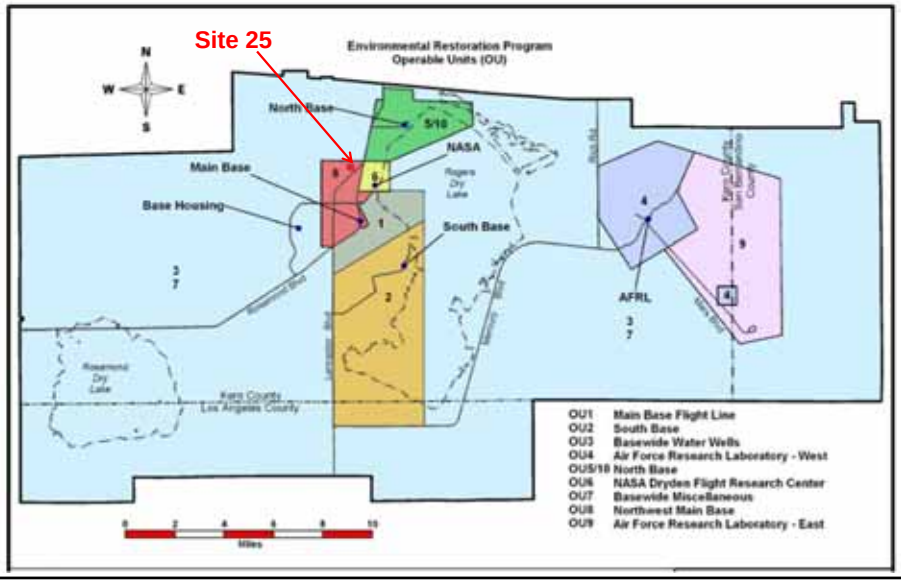


OU8
Site 25

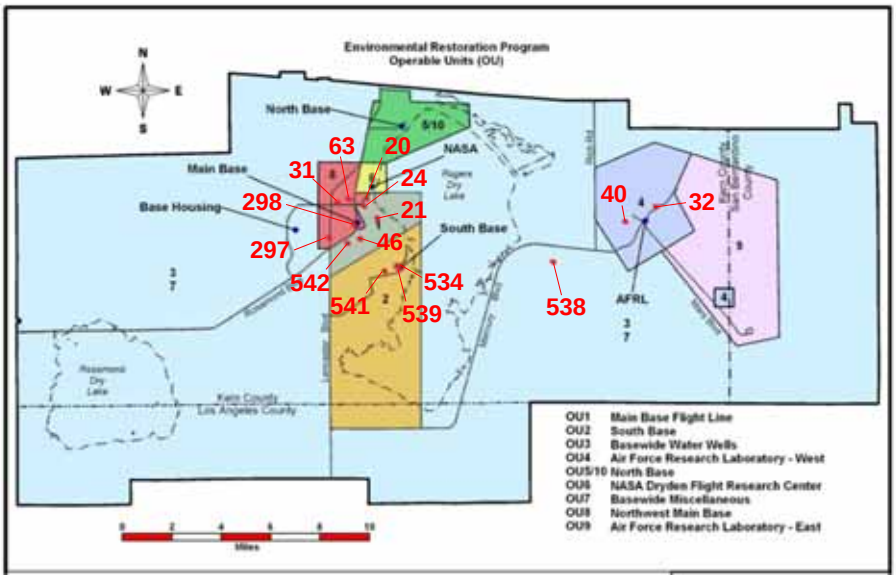
95 ABW

- **Collecting additional data to revise the Feasibility Study**
  - Evaluating the site for Technical Impracticability Waiver
- ***In Situ* Chemical Oxidation Treatability Study completed**
  - Site conditions (fractured bedrock) made treatment methodology ineffective

23

Petroleum Sites Location Map

95 ABW



Petroleum Sites & Compliance Restoration Program

95 ABW

- Site 21 Vapor Intrusion Pathway Work Plan being finalized
- Site 31 Bulk Fuel Storage Facility Work Plan completed for site investigation
- Base-wide Oil/Water Separator evaluation concluded

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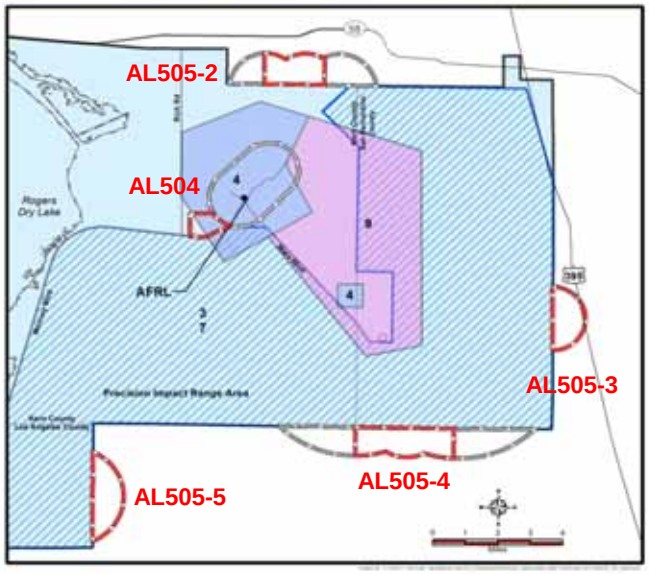
Military Munitions Response Program (MMRP)

95 ABW



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Military Munitions Response Program (MMRP)

95 ABW

- **Obtained approval from DOD Explosives Safety Board to begin surface clearances in three MMRP areas**
  - AL504 Battleship
  - AL505-2 near Boron
  - AL505-4 south of the Precision Impact Range Area
- **Surface clearances are expected to begin late January 2012 and be completed in 4 months**
- **The Action Memorandum and Work Plan are being prepared**

27

95 ABW

Questions or Comments?