



*Kirtland Air Force Base
Citizen's Advisory Board (CAB)*

*Cesar Chavez Community Center
7505 Kathryn Avenue SE
Albuquerque, New Mexico 87108*



*November 27, 2012
5:30 – 7:30 p.m.*



Meeting Format



- **Introduction**
- **Bulk Fuels Facility Update**
- **ATSDR Update**
- **Public Questions/Discussion**
 - One question/comment per turn at the microphone
 - Each question/comment will be allotted 3 minutes
- **CAB Process and Agenda for next CAB**



Acronyms



- **ABCWUA – Albuquerque Bernalillo County Water Utility Authority**
- **ATSDR – Agency for Toxic Substances and Disease Registry**
- **BTEX – Benzene, toluene, ethylbenzene, xylene**
- **CAB – Citizen’s Advisory Board**
- **CME – Corrective Measures Evaluation**
- **EDB – Ethylene dibromide**
- **FFOR – Former Fuel Offloading Rack**
- **HDPE – High-density polyethylene**
- **ICE – Internal combustion engine**
- **DPT – Direct Push Technology**
- **IM – Interim Measure**
- **LNAPL – Light Non-Aqueous Phase Liquid**



Acronyms Continued



- **NMAC – New Mexico Administrative Code**
- **NMED – New Mexico Environment Department**
- **PBC – Performance Based Contract**
- **RCRA – Resource Conservation and Recovery Act**
- **RFI – RCRA Facility Investigation**
- **ROI - Radius of influence**
- **SMWU – Solid Waste Management Unit**
- **SVE – Soil vapor extraction**

RCRA PROCESS OVERVIEW

CHARACTERIZATION

RCRA Facility Investigation

- ✓ Installation of 78 Groundwater Wells
- ✓ Installation of 35 Soil Vapor Wells
- ✓ DPT Soil Samples at FFOR
- ✓ Installation of 9 Pneulog Wells
- ✓ Installation of 9 Groundwater Wells



EVALUATION

Corrective Measures Evaluations

- ✓ Baildown Testing
- ROI Testing
- Quarterly Monitoring
- ✓ Pneulog Well Testing
- ✓ Slug Testing
- Use Phase II IM to Conduct Extended ROI Testing
- Continue to Evaluate Early Treatment



Interim Measures

- ICE Unit Operation - Pre-Remedy O&M
- Soil Removal at FFOR - Phase I Interim Measures
- SVE Treatment System - Phase II Interim Measures
- In-Well Treatment Interim Measure
- ✓ Move ICE Units to New SVE Wells
- Design and Build of Centralized SVE Treatment System



FEEDBACK

FEEDBACK

EARLY/INITIAL TREATMENT

**FINAL
REMEDY
REMEDY IN PLACE**



Regulatory Framework



- **Completion of characterization of groundwater and vadose zone**
 - Adequately define the nature and extent of contamination related to the release of jet fuel at ST-106 and SS-111
- ➔ **NMED approval of RFI Report for both groundwater and vadose zone**
- **RFI results, as well as quarterly monitoring data, will be used to inform a Corrective Measures Evaluation (CME)**
 - Must be submitted within 180 days of RFI report approval
 - Will propose a final remedy
 - Requires a 45 day public comment period prior to NMED approval
- ➔ **NMED approval of CME → development of Corrective Measures Implementation plan**
- **Implementation of Final Remedy (remedy in place)**



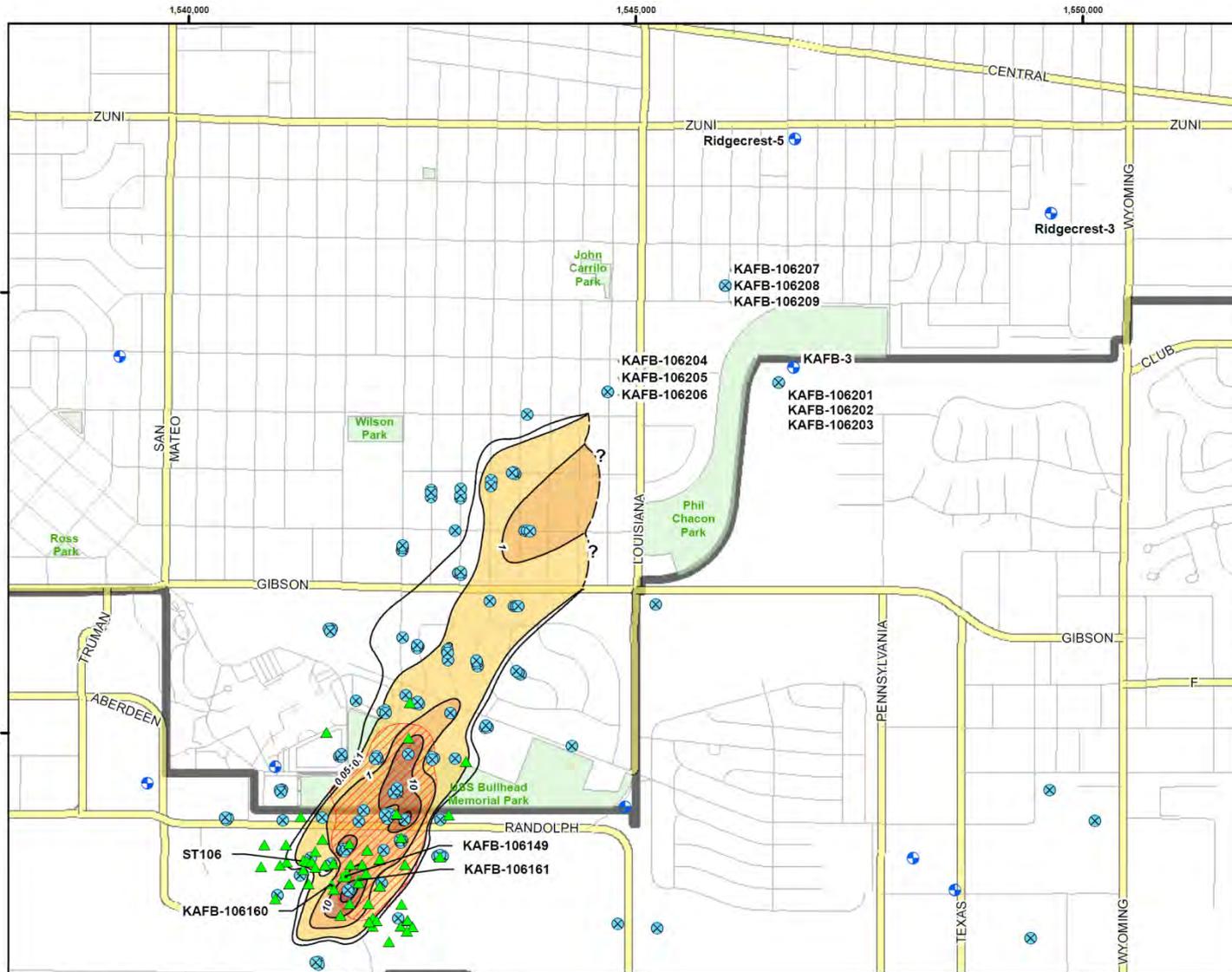
Regulatory Framework



- **Interim measures allow for early treatment/remediation while completing the RFI and CME**
 - Permit and NMAC requirements for interim measure work plans and reporting
 - Results from interim measures (e.g., system operation) are used in the evaluation of remediation technologies for final remedy
 - Will be incorporated in the CME and determination of final remedy
 - Interim measures are not end points of remediation
 - **Interim measures are in action at Kirtland AFB**
 - Shallow soil excavation
 - Operation and maintenance of SVE ICE units at existing monitoring wells
 - Design, construction, and operation of SVE CATOX treatment system
 - Development of in-well treatment for dissolved phase contamination
 - Others
- Goal is to treat source in vadose zone while evaluating remedy**



Groundwater Monitoring Wells



Legend

- Pneu Log
- Monitor Well
- SVE Monitor Well
- Water Supply Well
- SVE Extraction Well
- Proposed Monitor Well
- EDB Concentration Contour (ug/L)
- NAPL Area

EDB Concentration (ug/L)

- 0.014 - 0.1
- 0.11 - 1
- 1.1 - 10
- 11 - 100
- 110 - 310
- Major Road
- Road
- Park
- Installation Boundary

SITE LOCATION

Revision Date: 10/19/12

N

0 600 1,200 2,400
Feet
1 inch = 1,200 feet

Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

BULK FUELS FACILITY
KIRTLAND AIR FORCE BASE, NEW MEXICO

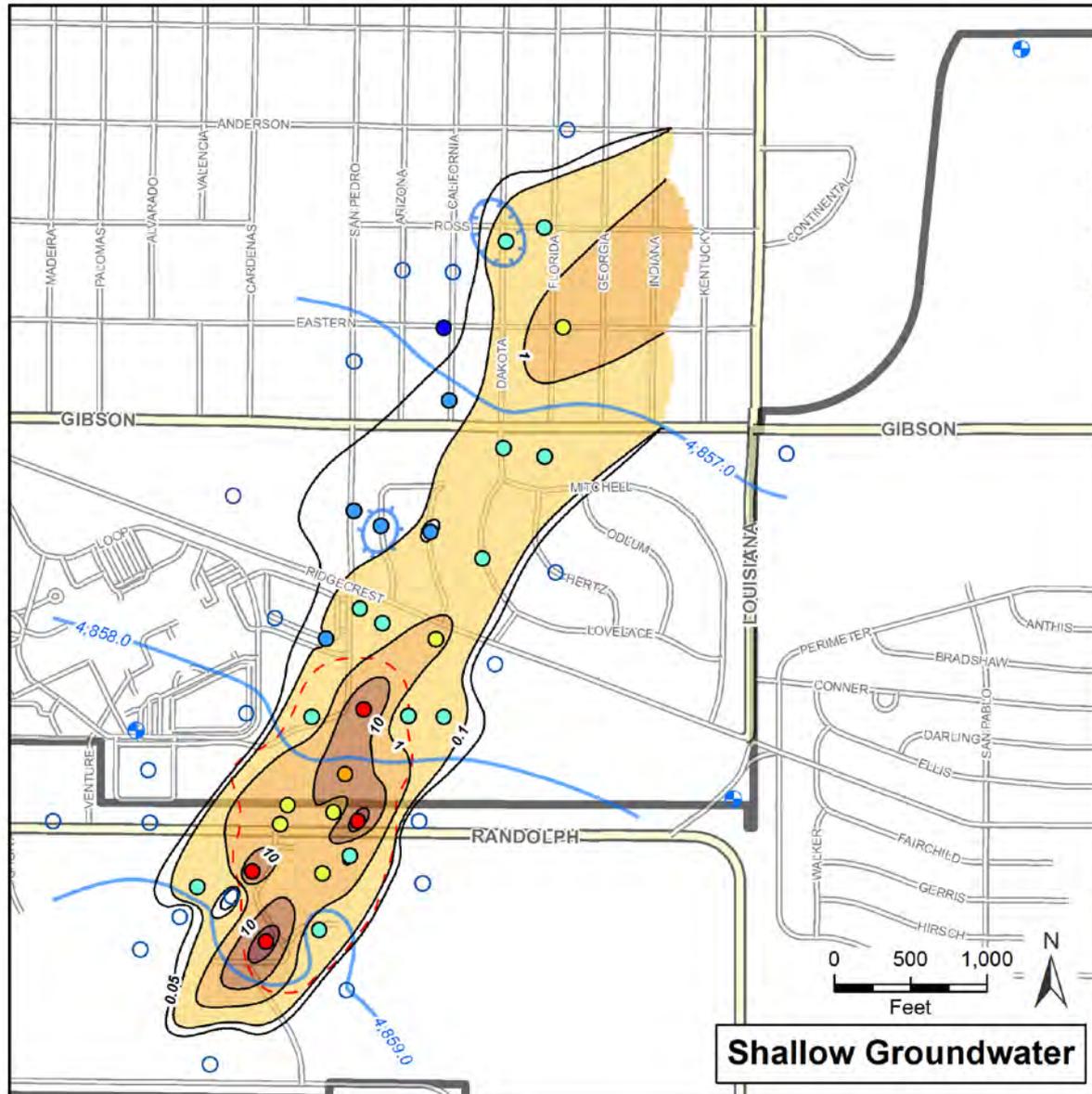
FIGURE 1

MONITORING WELLS



EDB Plume: Shallow

April – June 2012

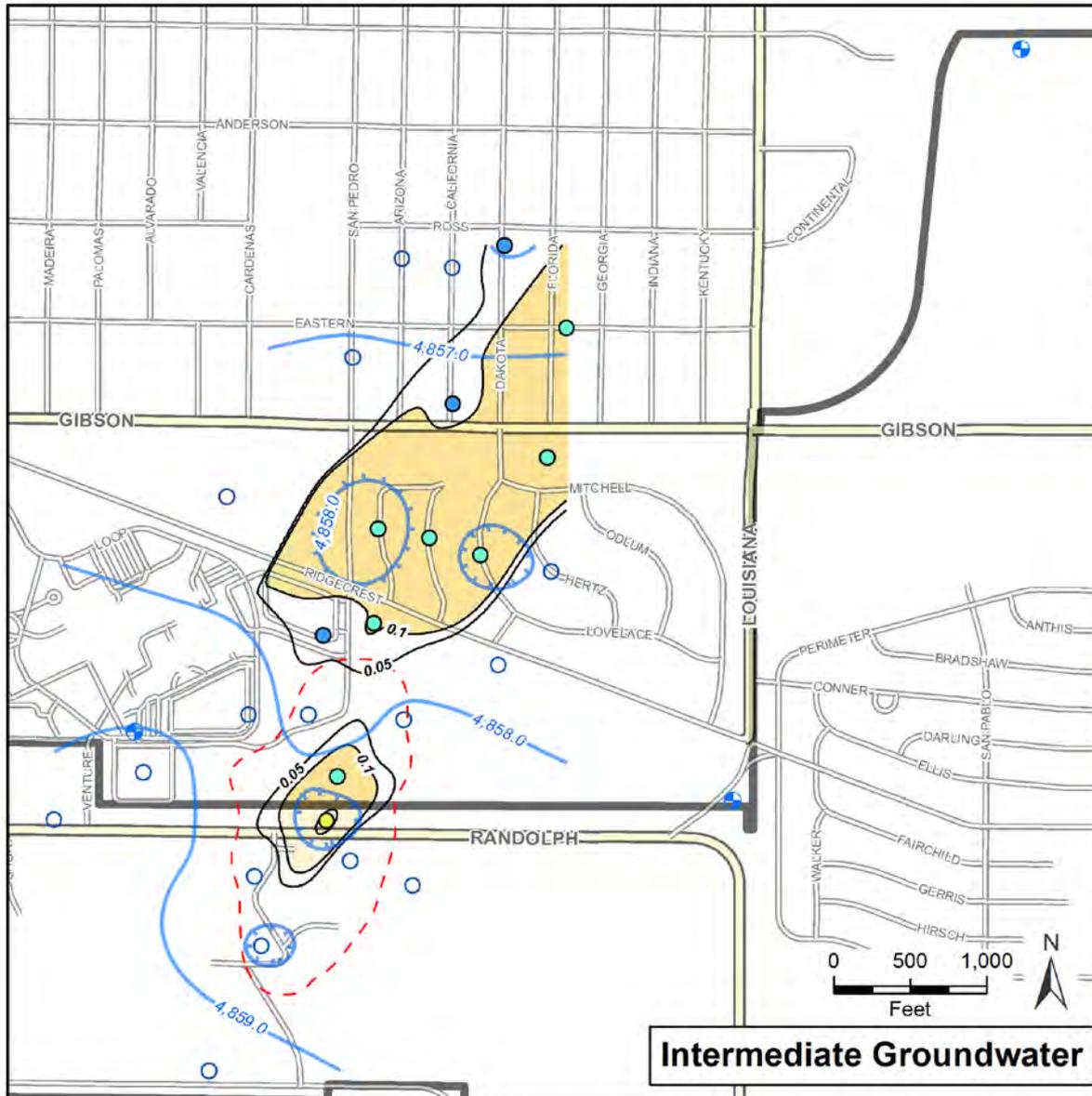


Legend

- Water Supply Well
- EDB Result (ug/L)
 - 0.047 - 0.050
 - 0.051 - 0.10
 - 0.11 - 1.0
 - 1.1 - 10
 - 11 - 100
 - 110 - 320
 - Nondetect
- Groundwater Level Contour (ft msl)
- Groundwater High
- Groundwater Depression
- EDB Concentration Contour (ug/L)
- EDB Concentration (ug/L)
 - 0.014 - 0.1
 - 0.11 - 1
 - 1.1 - 10
 - 11 - 100
 - 110 - 310
- NAPL Area



EDB Plume: Intermediate April – June 2012



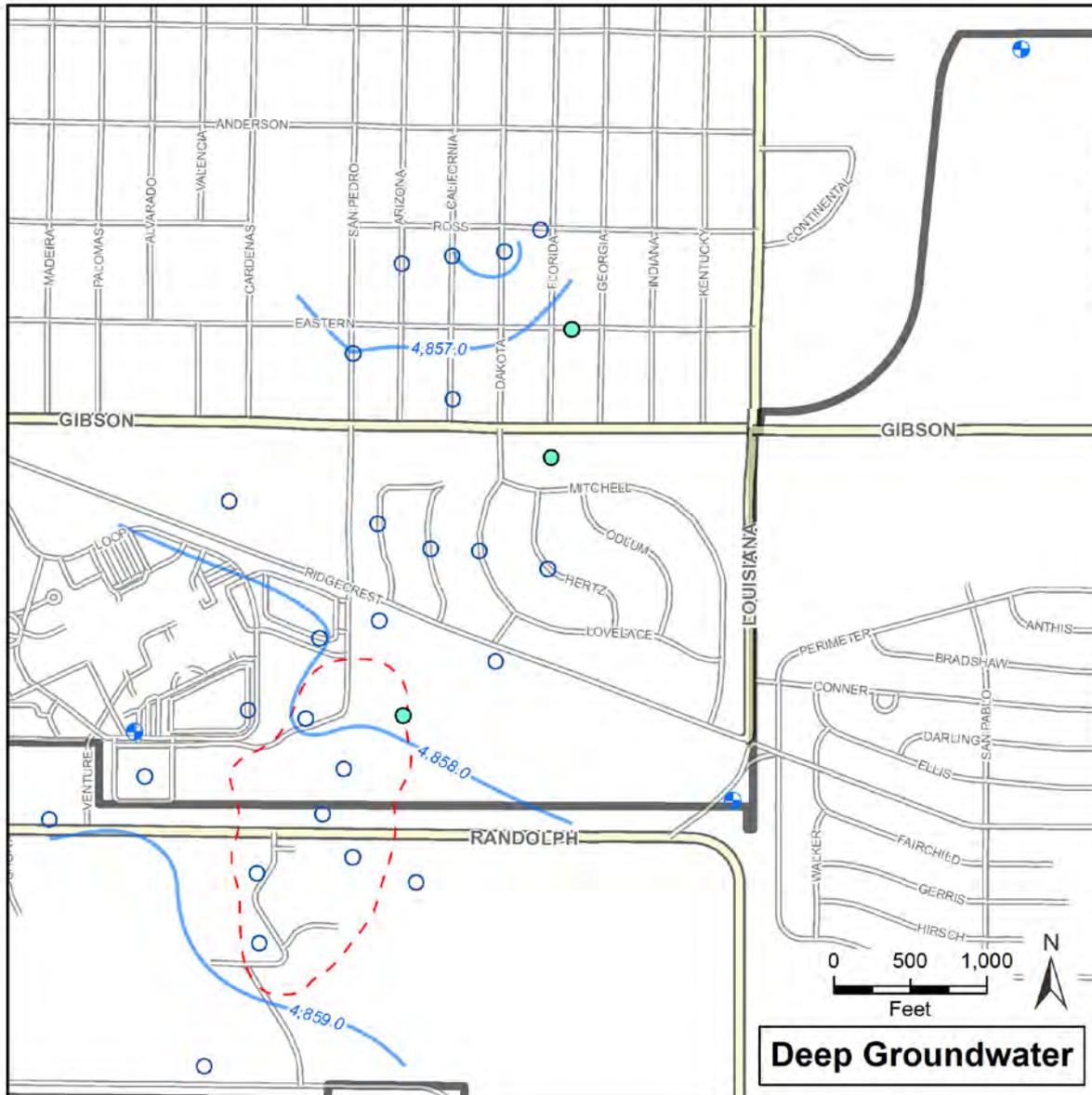
Intermediate Groundwater

Legend

- Water Supply Well
- EDB Result (ug/L)
 - 0.028 - 0.050
 - 0.051 - 0.10
 - 0.11 - 1.0
 - 1.1 - 1.2
 - Nondetect
- Groundwater Level Contour (ft msl)
- Groundwater High
- Groundwater Depression
- EDB Concentration Contour (ug/L)
- NAPL Area
- EDB Concentration (ug/L)
 - 0.01 - 0.1
 - 0.1 - 1.0
 - 1.0 - 1.2



EDB Plume: Deep April – June 2012



Legend

EDB Result (ug/L)

- 0.028 - 0.050
- 0.051 - 0.10
- 0.11 - 0.52
- Nondetect

⊕ Water Supply Well

— Groundwater Level Contour (ft msl)

- - - NAPL Area



EDB Extent: Shallow July – September 2011



EDB QTR 03 2011 (>0.05 µg/L)

- Groundwater Level Contour (ft msl)
- Groundwater High
- Groundwater Depression
- Wells with Nondetect for EDB (2nd Quarter 2012)
- Groundwater Monitoring Well
- Monitor Well with NAPL (2nd Quarter 2012)
- Historical Area of Observed NAPL (July 2009)
- Major Road
- Road
- Structure
- Runway
- Park
- Installation Boundary

Revision Date: 03/05/12

0 450 900 1,800
Feet
1 inch = 900 feet

Projection: NAD83 State Plane New Mexico Central FIPS3002 Feet

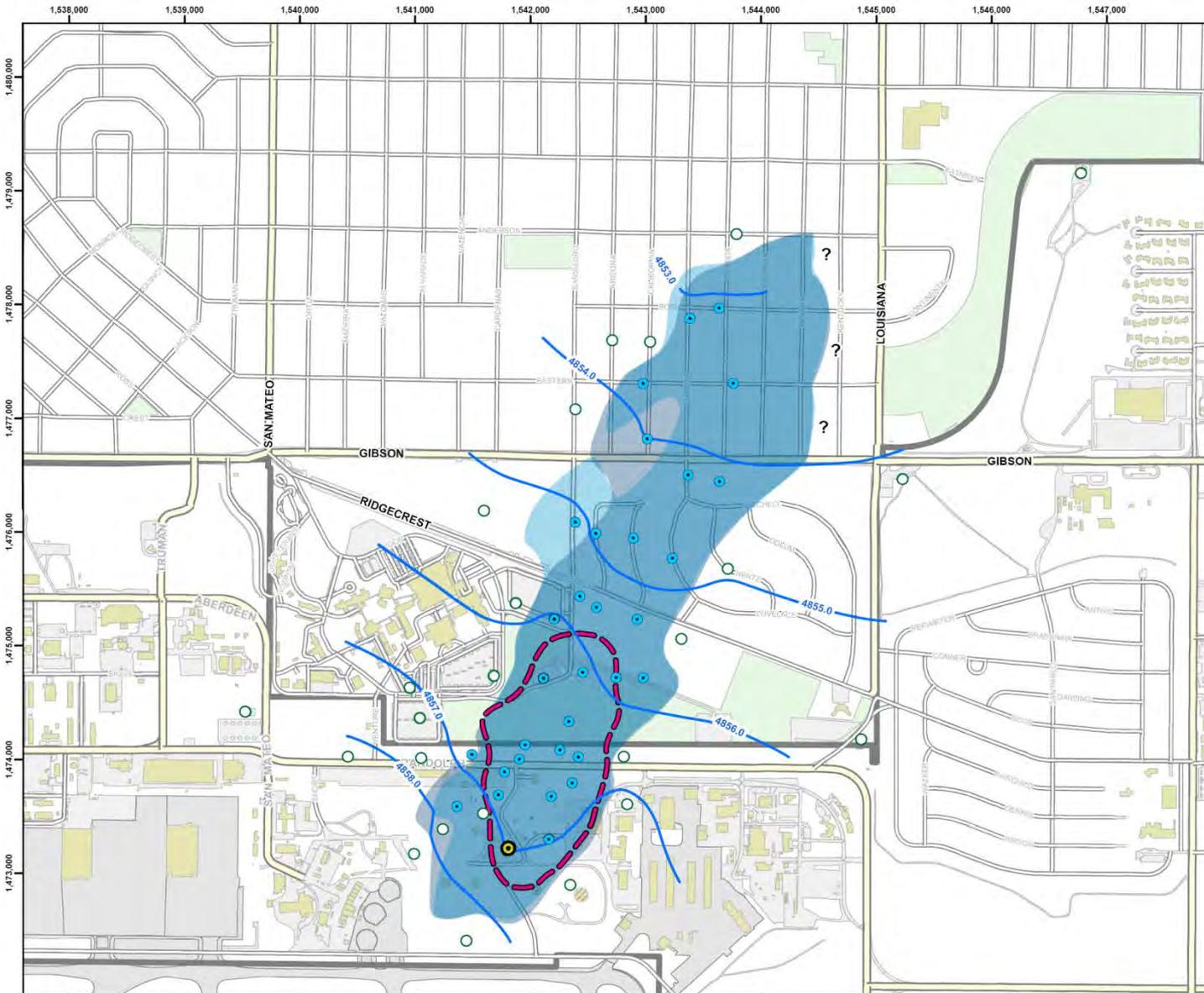
BULK FUELS FACILITY
KIRTLAND AIR FORCE BASE, NEW MEXICO

**SUMMARY OF CONCENTRATIONS
IN SHALLOW GROUNDWATER
BY QUARTER**





EDB Extent: Shallow October – December 2011



- EDB QTR 03 2011 (>0.05 µg/L)
- EDB QTR 04 2011 (>0.05 µg/L)

- Groundwater Level Contour (ft msl)
- Groundwater High
- Groundwater Depression
- Wells with Nondetect for EDB (2nd Quarter 2012)
- Groundwater Monitoring Well
- Monitor Well with NAPL (2nd Quarter 2012)
- Historical Area of Observed NAPL (July 2009)

- Major Road
 - Road
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 - Runway
 - Park
 - Installation Boundary
-
- SITE LOCATION

Revision Date: 03/05/12

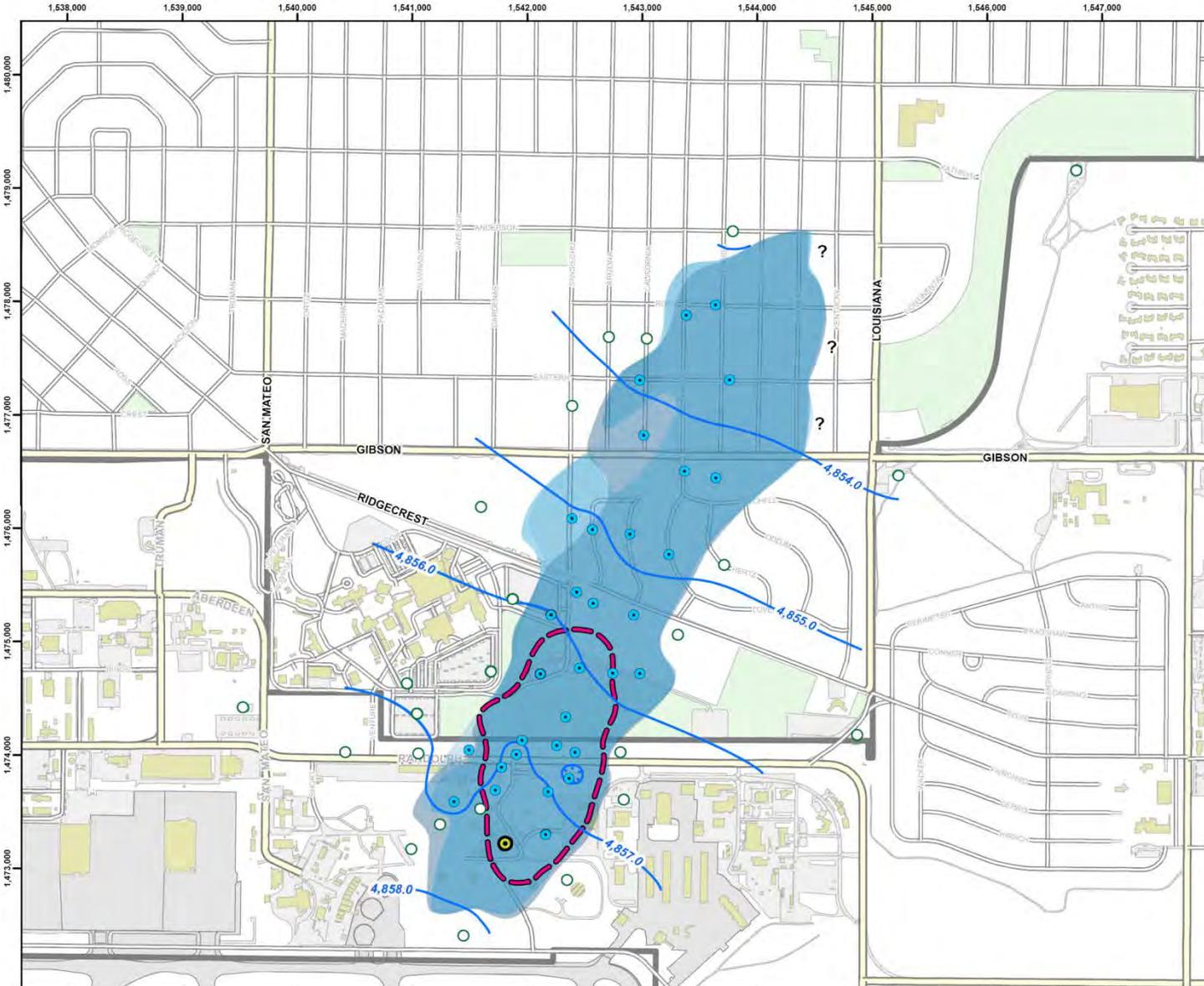
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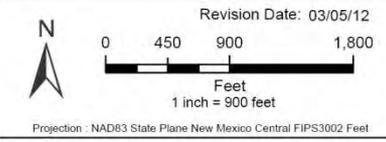
**SUMMARY OF CONCENTRATIONS
IN SHALLOW GROUNDWATER
BY QUARTER**



EDB Extent: Shallow January – March 2012



- EDB QTR 03 2011 (>0.05 µg/L)
- EDB QTR 04 2011 (>0.05 µg/L)
- EDB QTR 01 2012 (>0.05 µg/L)
- Groundwater Level Contour (ft msl)
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- Groundwater Depression
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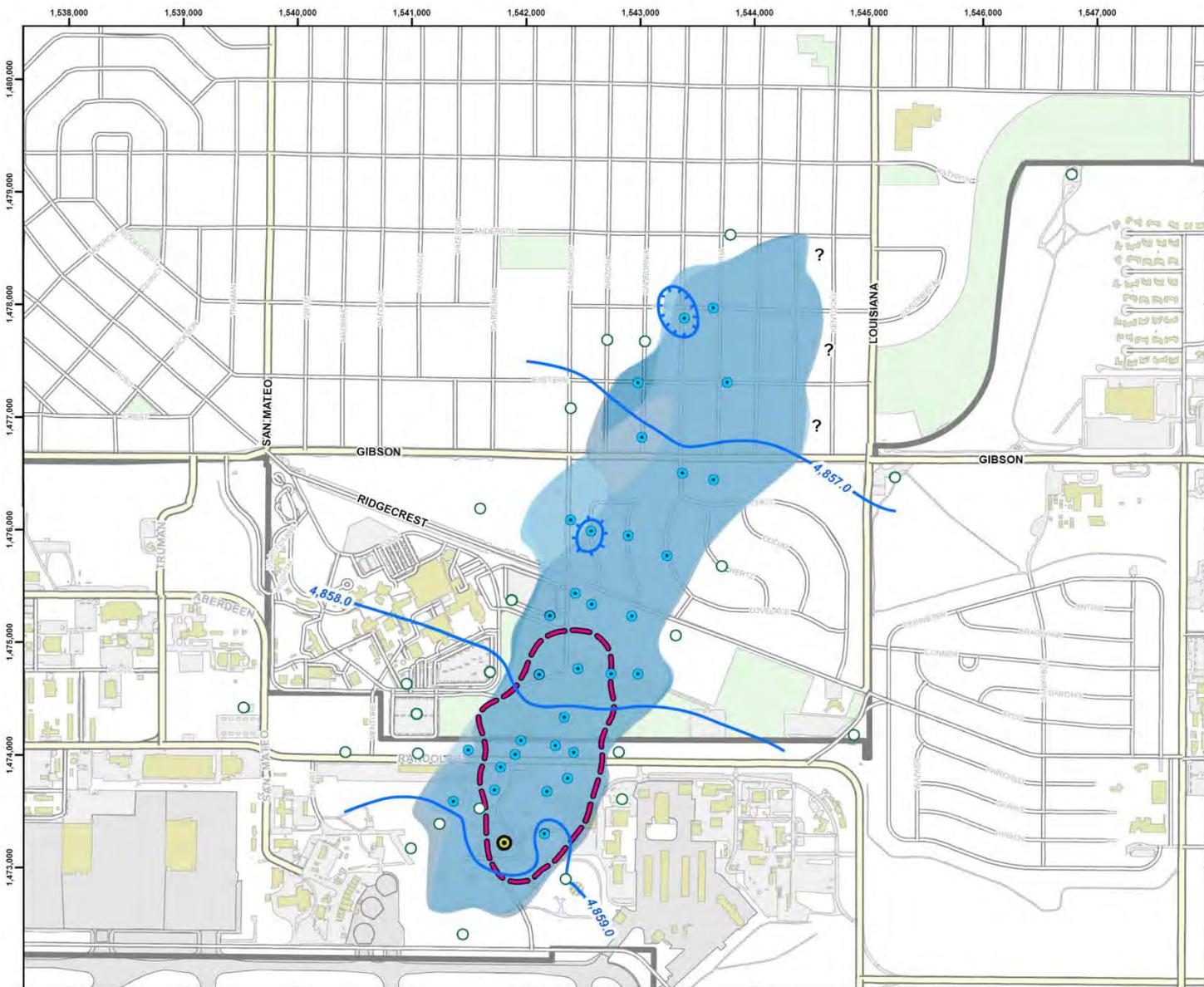


BULK FUELS FACILITY
KIRTLAND AIR FORCE BASE, NEW MEXICO

SUMMARY OF CONCENTRATIONS IN SHALLOW GROUNDWATER BY QUARTER



EDB Extent: Shallow April – June 2012



- EDB QTR 03 2011 (>0.05 µg/L)
- EDB QTR 04 2011 (>0.05 µg/L)
- EDB QTR 01 2012 (>0.05 µg/L)
- EDB QTR 02 2012 (>0.05 µg/L)

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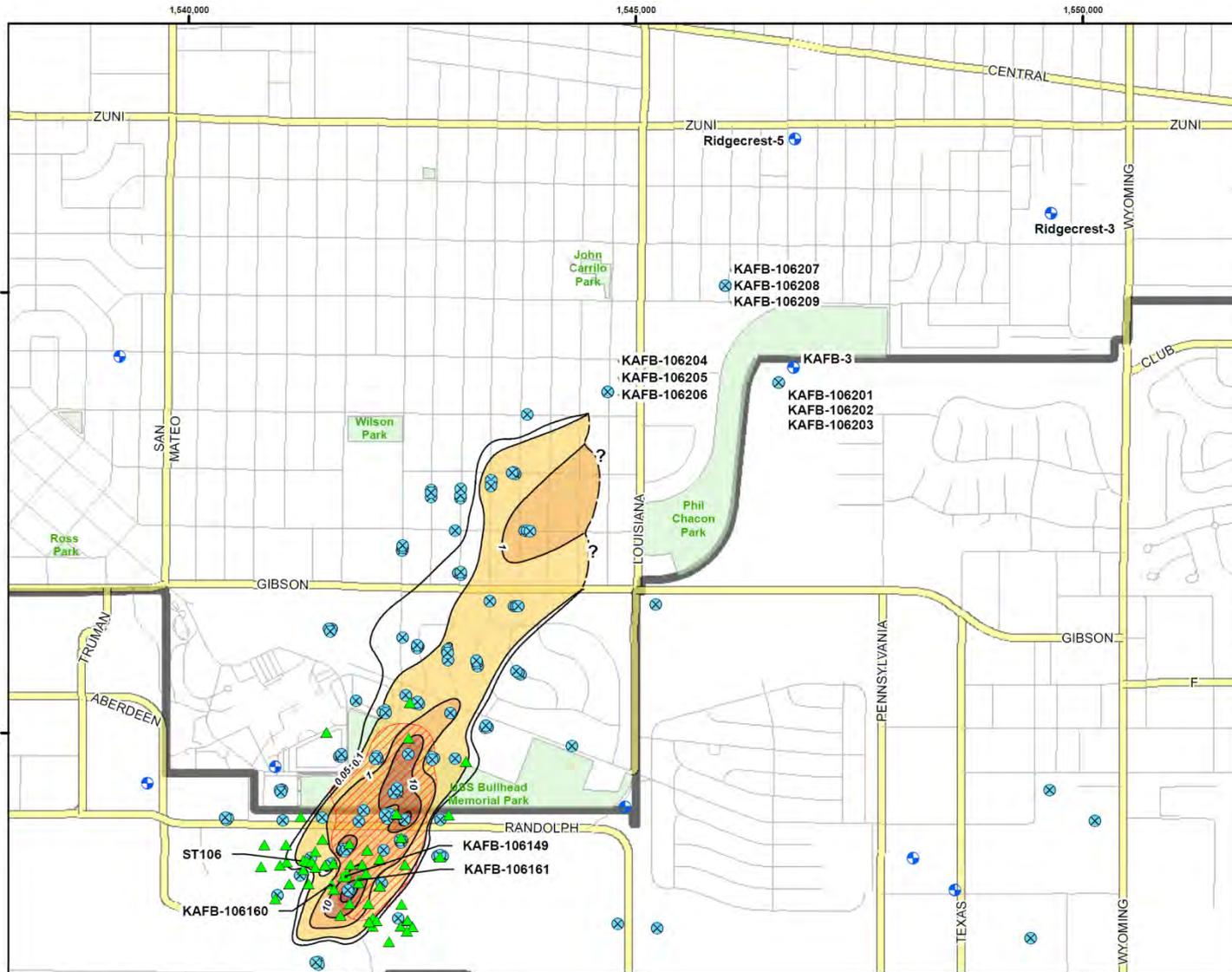
EDB Characterization



- **Completed drilling of 9 new groundwater monitoring wells on 4 October 2012 (KAFB-106201 through KAFB-106209)**
- **Completed well development and slug testing of the new wells 19 October 2012**
- **Dedicated pumps were installed between October 30th and November 12th**
- **All 9 new wells have been sampled**
 - **NMED collected split samples from all 9 new wells**
 - **Data letter report will be delivered to the NMED on 26 December 2012**
- **Data from 9 new wells will fill in EDB horizontal and vertical extent in northeastern corner**
- **The 9 new wells are integrated into quarterly monitoring**



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FIGURE 1

MONITORING WELLS



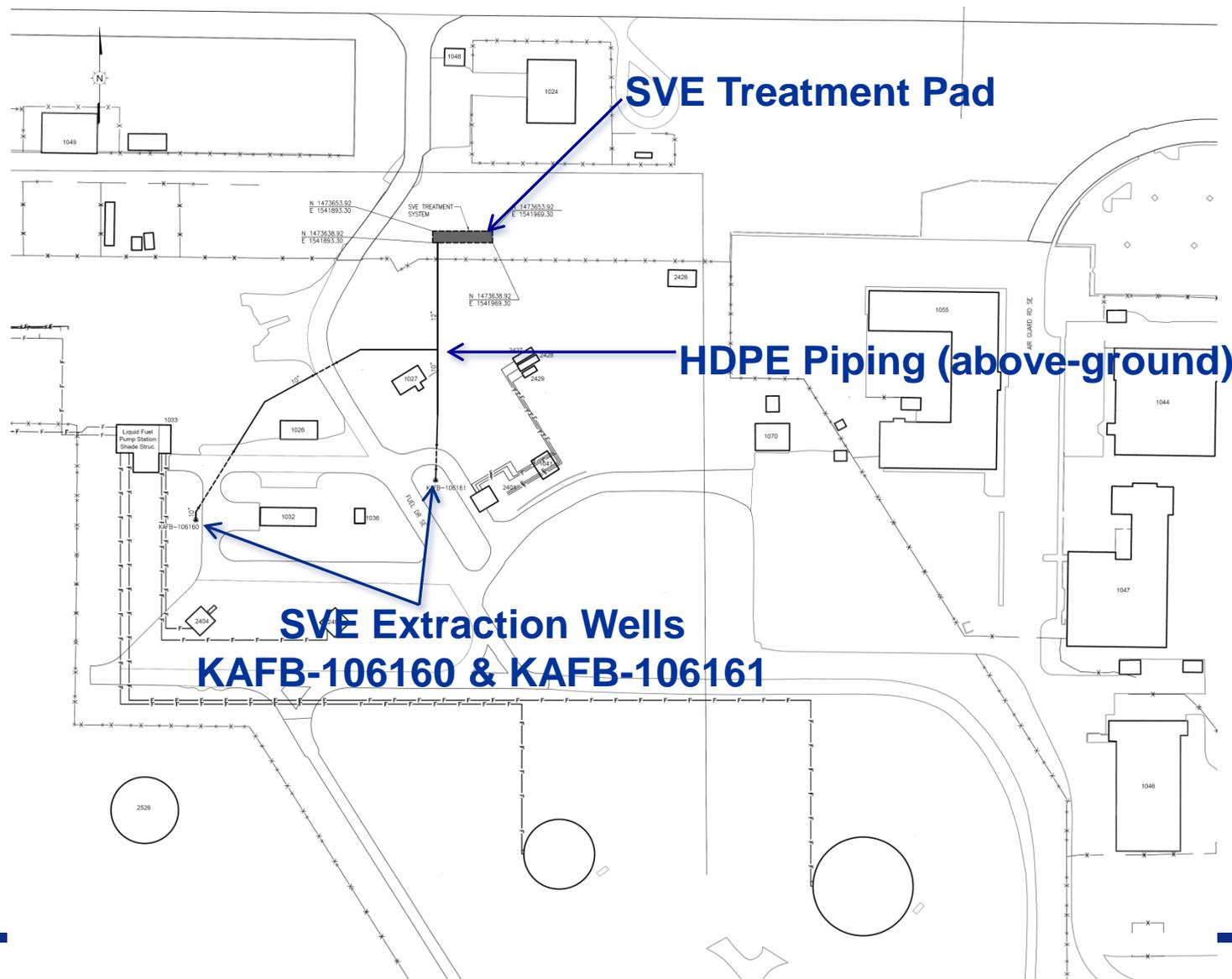
Phase II Interim Measure



- **Construction of concrete pad and electrical lines are complete**
 - **Ready for SVE skid placement on 28 November 2012**
 - **Construction of natural gas and HDPE pipelines is on-going**
 - **Operation of the new system will begin December 2012**
 - **NMED currently reviewing the stamped drawings for the Phase II Remediation Interim Measure Plan**
 - **AEHD approved emergency air permit letter has been approved; KAFB will submit a modification to the current air permit within 45 days of NMED approval of remediation plan**
 - **Operational data from SVE system will be incorporated into the data evaluation and development of the Corrective Measures Evaluation**
- Final remedy will likely include this system, plus any expansion and/or additional treatment technology required**



SVE Treatment System





Up and Coming



- **Data letter report with first sample results from 9 new monitoring wells will be delivered to NMED on 26 December 2012**
- **New treatment system estimated completion date of December 2012**
- **Submittal of groundwater and vadose zone RFI anticipated Summer 2013**
- **A website specific to the Bulk Fuels Facility spill is being developed – will go “live” February 2013**
- **Communication to develop formal advisory board**



Path Forward



Task/Milestone	Schedule
Finalize SVE treatment system design (submit to NMED)	November 2012
SVE treatment system begins operation	December 2012
Complete soil removal at FFOR	Spring 2013
Submittal of Groundwater RFI to NMED	Summer 2013
ABCWUA Contingency Plan	In process – Air Force and ABCWUA
ATSDR Draft Report	February 2013



POINTS OF CONTACT



Col. Jeff Lanning

377 ABW.pa@kirtland.af.mil

(505) 846-5991

Citizens may review Air Force Environmental Restoration Program (ERP) documents at the Kirtland AFB Information Repository (IR) located at the Central New Mexico (CNM) Community College-Montoya Campus Library, 4700 Morris NE, (505) 224-5721

or

by visiting the Kirtland AFB website at <http://www.kirtland.af.mil> in the Environmental Issues section for Public Records.



ATSDR Update





Discussion



Meeting Dates

19 February 2013

21 May 2013

20 August 2013

19 November 2013



Request for Agenda