


Project Status Report

New Mexico Environment Department
August 21, 2013



Albuquerque-Bernalillo County Water Utility Authority
Governing Board



**Kirtland AFB
Bulk Fuels Facility Spill**

**Regulatory Authority and
Implementation of Corrective
Action under**

**Resource Conservation and
Recovery Act (RCRA)**

Project Overview

- KAFB Bulk Fuel Release (BFR) is broken into **3 Tasks**:
 - **Task 1** – Vadose Zone
 - **Task 2** - Light Non Aqueous Phase Liquid (LNAPL)
 - **Task 3** - Ethylene Dibromide (EDB)
- Project Goals:
 - Select, Design and Implement Interim Measures for Vadose Zone Remediation
 - Implement Interim Measures for Treatment of LNAPL
 - Select, Design and Implement Treatment for EDB



Definition of Tasks

- **Task 1 – SVE** – Treatment conducted in the vadose zone above the water table in the release area. This targets contamination in the unsaturated zone, and to a lesser degree, LNAPL in/on the water table.

Current Status:

- There have been 19 SVE candidate wells drilled
- Extracting soil vapors from two wells and treating vapors in one Vapor Treatment Unit

Future Interim Measures will include:

- Pilot testing of 12 to 14 existing vapor monitoring wells
- Expand SVE treatment by adding up to 5 existing vapor monitoring wells to the existing treatment system
- Select additional SVE wells to expand Vadose Zone Treatment from wells included in the Pilot Test
- Installation of an additional Vapor Treatment Units

Definition of Tasks

- **Task 2 – LNAPL** – Treatment conducted in the saturated zone at the water table. This targets contamination in the liquid phase of the product. Removal of LNAPL will remove the source of EDB that is dissolving into the water.
 - The aquifer characterization is very near completion.
 - Within the next 60 days, pump test the extraction well **106157** (north of Bullhead Park)

Pump test will determine the wells for and technology for LNAPL treatment

- Pump and Treat
 - Air Sparging (Air Sparging works in concert with SVE systems)
 - Continued Evaluation of other treatment technologies
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- **Steps Required for Future Interim Measures will include:**
 - Pump testing existing well 106157
 - Determining aquifer characteristics for pump and treat system
 - Determine candidate wells for pump and treat option (if selected remedy)
 - Select wells for Air Sparging

Testing of technologies will be evaluated and implemented if necessary and appropriate.

Definition of Tasks

- **Task 3 – EDB** – Treatment conducted in the saturated zone in the water table This targets contamination in the dissolved phase of the product. EDB has dissolved out of the fuel and migrated towards the north.
 - The aquifer characterization is very near completion.
 - Within the next 60 days, pump test the extraction well **106157** (north of Bullhead Park)
 - Pump test determine the appropriateness of pump and treat method and if appropriate, will aid in the determination in the need for additional extraction wells and their locations.

Steps for Interim Treatment of EDB in groundwater includes:

- Design Treatment Technology
 - In-well Aeration (if selected remedy)
 - » Aeration Rates
 - » Number of wells
 - » Location of wells
 - Pump and Treat (if selected remedy)
 - » Pumping rate
 - » Number of wells
 - » Location of wells
- **Short and Long term solution for handling treated water**
 - **KAFB / Water Authority partnership to maximize the use of the water resource**
 - » Non-potable reuse
 - » Aquifer recharge and storage
 - » Aquifer reinjection

Testing of technologies will be evaluated and implemented if necessary and appropriate.

Interim Measures Timeline

