

Before the Albuquerque Bernalillo County Water Utility Authority Board
Citizen Action New Mexico Presentation
Our Endangered Aquifer – The Air Force Jet Fuel Spill
March 21, 2012

Citizen Action New Mexico encourages the Water Utility Authority to coordinate state and federal efforts to create and implement an effective and scientific plan for the Kirtland Air Force Base (“KAFB”) 8,000,000 gallon spill of aviation gas and jet fuel on the aquifer. The KAFB Fuel oil plume may have devastating impacts on all ABQ wells North of this moving Fuel plume, on the ability of the Water Utility to deliver water to ABQ residences, on the environment and on the economic conditions of businesses and home owners.

There has not been a main WUA agenda item on Kirtland since October 2011. We need the KAFB Fuel Plume status on the WUA agenda every month for a status report as to what the Air Force, NMED, and WUA have accomplished. Do all the Ridgecrest wells have to be lost before the WUA takes action? *There needs to be a WUA action plan to minimize the up coming possible ABQ well losses.*

The Air Force has ignored the New Mexico Environment Department’s (NMED’s) orders on four occasions to produce an Interim Measures Work Plan for full remediation of the Fuel oil plume sitting on the ABQ aquifer within 5 years. No IM plan has been submitted by the Air Force even though the 8,000,000 gallons of jet fuel moved closer to the Ridgecrest well field by another 1,200 ft in only 7 months. One Veterans Administration well was shutdown over a year ago due to this fuel oil plume and another is contaminated with diesel fuel. The VA is now receiving city water further adversely affecting the plume travel.

The Air Force is not displaying a sense of urgency for this emergency. The Air Force has not removed a single gallon of jet fuel from the groundwater in 2 years. No soil vapor was extracted for the past 7 months despite NMED’s demand for removal. Available fuel oil extraction equipment is kept idle. There is currently no containment of either the dissolved fuel oil plume or the liquid jet fuel plume migrating Northward towards the RidgeCrest wells. Colonel Conley stated at his March 13, 2012 public meeting that the Air Force has no plans to remediate the dissolved plume. Col. Conley also stated at the same meeting that the Air Force's action plan if the fuel oil contamination reaches a Ridgecrest well is to “shutdown the well.” The Ridgecrest wells supply up to 30% of Albuquerque’s potable groundwater. Is this the best the Air Force can do for the public?

The dissolved plume of carcinogenic Ethylene Dibromide (“EDB”) is spreading directly toward the 5 Ridgecrest wells, 5 Burton wells, and 40+ other wells in the North East area of ABQ. The dissolved plume may be only a *few years away* from these municipal wells. In April 2010, the furthest well toward Ridgecrest, the “sentry well,” showed signs of contamination when it was first drilled. In July 2011 the plume contaminated with EDB extended 1,200 feet further toward the Ridgecrest wells than was estimated in December 2010.

The WUA hydrologist raised the issue that Shaw Environmental (Air Force’s contractor) is using a less sensitive detection method for EDB than used by former

contractor CH2M Hill. *This means that the dissolved EDB plume is much larger than shown on Kirtland's outdated maps and the fuel oil plume's extent is unknown.*

Rather than wait for the shutdown of any municipal or private wells and lawsuits from residents, the WUA should demand that The Air Force:

- Pay for an independent WUA advisor to: Review the present jet fuel contamination situation in ABQ, offer recommendations/guidance to the WUA Board regarding what the WUA Board can do to minimize the impact of this terrible threat to ABQ's water supply.
- Pay for the immediate designing, costing, and construction of a water treatment plant for the Veteran's Administration well to eliminate the VA demand for ABQ.
- Pay for the immediate planning, designing, costing of a water treatment system for the Ridgecrest wells that may be impacted by this fuel oil dissolve plume.
- Pay for the immediate planning, designing, costing of new wells to replace any RidgeCrest wells lost to this fuel oil dissolve plume.

Water Utility ratepayers should not have to pay any of the costs for lost water production due to the Air Forces contamination of the ABQ aquifer.

The Air Force has failed to comply four times with requirements of the New Mexico Environment Department ("NMED") for an Interim Measures Work Plan to Remove the 8 MILLION gallons of jet fuel floating on the ABQ drinking water aquifer. The Air Force has stated they have no plan for addressing the dissolved jet fuel plume in the ABQ drinking water aquifer.

The New Mexico Environment Department ordered the Air Force on April 2, 2010, August 6, 2010 and December 10, 2010 to:

- Provide an Interim Measures Work Plan to remediate the jet fuel WITHIN 5 YEARS and
- take IMMEDIATE ACTION to conduct jet fuel remediation.

Again on March 31, 2011, NMED criticized the Air Force's Work Plan for containing the liquid jet fuel (LNAPL) phase. The Air Force emphasized that their proposed pump and treat plan could not be developed because characterization of the plume had not been obtained.

- NMED ordered the Air Force to provide more detail and clarification of the criteria to be used to demonstrate that there would be adequate capture of the jet fuel by the use of extraction wells.
- NMED questioned the use of extraction wells at the outer edge of the plume because the jet fuel could be spread further.
- NMED asked which wells would be used to assess the performance of the remediation system.
- NMED raised the issue that the Air Force lacks extraction and discharge permits from several agencies for contaminated water that would be brought to the surface.
- NMED stated that the WUA comments on the Work Plan needed to be considered by Kirtland.

In making a demand for 5-year remediation, the Hazardous Waste Bureau is obviously more worried about the speed of the plume and the consequences than The Air Force. The WUA should be even more worried because the NMED has been politically compromised.

In June 2011, after a phone call from the Air Force Assistant Secretary Terry Yonkers to Governor Martinez, NMED James Bearzi was ordered not to speak to the press and removed as Chief of the Hazardous Waste Bureau.

As a result, on August 3, 2011, NMED gave partial approval for the pump and treat well construction to begin -- even though it is contrary to NMED's earlier orders. The Air Force still has not characterized the extent of the dissolved and liquid jet fuel plume along with the other above requirements.

How long does the NMED and the public have to wait for the Air Force to present an the Interim Measures Work Plan that was requested on four different occasions? The WUA should address and remedy this problem.

The National Academies of Science ("NAS") has advised against pump and treat technology as being ineffective and too expensive.

The Air Force's proposal for Soil Vapor Extraction ("SVE") will not contain or remove the bulk of the Jet Fuels. The NMED agrees that Soil Vapor Extraction technology cannot remove jet fuel. (John Kieling email 6/28/2011).

The US Environmental Protection Agency Office of Underground Storage Tanks determined years ago that fuels such as jet fuel cannot be effectively removed by Soil Vapor Extraction from an aquifer. (EPA 510-B-95-007 OUST document).

Dwight Patterson, an environmental engineer informed the Water Utility Advisory Protection Board (4/15/2011 Minutes) that he is "very concerned about the size of this contamination and that the proposed cleanup activities will not be enough to clean up this plume in time before it impacts the Water Authority's wells."

Flying in the face of NAS and EPA science, the Air Force Report to Congressional Committees of March 2011 stated that "The Air Force remains committed to removing fuel from the ground water as quickly as possible through the LNAPL containment plan and continued Soil Vapor Extraction [SVE] operation."

The Air Force should have been characterizing and remediating the jet fuel for over 10 years. The Air Force has only removed a paltry 223,000 gallons of vapor while claiming credit for removal of 400,000 gallons at public meetings. At a March 2012 Citizen Advisory Board meeting, Col. Conley could not provide the figure for how much soil vapor has been removed since the April 2, 2010 letter of the NMED demanding remediation in 5-years. None of the Liquid Non-aqueous Phase Liquid (LNAPL) has been removed according to Col. Conley.

The WUA has the legal and political authority to obtain immediate and extensive action for ongoing Air force violations of the nation's hazardous waste act laws known as the Resource Conservation and Recovery Act ("RCRA") (42 U.S.C. Section 6972). The plume is an 'imminent and substantial endangerment' to city wells and water users. The USEPA recommendation is for zero exposure to Ethylene Dibromide ("EDB"). Useless and unscientific plans are being put in place that will not result in protection of public health and the environment in a timely fashion. The Air Force's plans and actions do not meet the NMED's requirements nor resolve the Notices of Deficiency.

The WUA could request from Congress and the USEPA that this RCRA action be converted to an aggressive cleanup under CERCLA.

Soil Vapor Extraction was terminated 7 months ago in September 2011. There is a breach of Shaw Environmental's contract with the Army Corps of Engineers because Shaw is failing to conduct the contractual obligation of continual remediation.

Why has the Air force or Shaw not presented any up to date maps of the extent of the plume with the filing of the 3d Q December 2011 Report? The dissolved plume was present at the sentry well in 2010 and has traveled an unknown distance since then. Shaw Environmental's 3d Quarter December 2011 report states that EDB has entered all monitoring wells at all depths. The outer edge of the plume must be found with new sentry wells.

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