

**CITIZEN PETITION FOR INCLUSION OF THE  
KIRTLAND AIR FORCE BASE JET FUEL SPILL (ST-106 AND ST-111) ON  
THE NATIONAL PRIORITIES LIST**

Sep 23, 2013

Ron Curry

Regional Administrator, Region 6

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**Re: Petition for Preliminary Assessment of the Kirtland Air Force Base Jet Fuel Spill in Order to Fully Address the Sources and Hazards Posed by Contamination of Albuquerque, New Mexico Drinking Water Aquifer.**

Dear Sir/Madam,

Under the authority of Section 105 (d), as amended, of the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. §§ 9601 et seq., the undersigned petitioners hereby request that the U.S. EPA Region 6 conduct a preliminary assessment of the release of hazardous substances, pollutants, and contaminants at the following location: Kirtland Air Force Base (KAFB), Albuquerque, New Mexico.

CERCLA, which was enacted “in response to the serious environmental and health risks posed by industrial pollution,” must be interpreted liberally so as to accomplish its remedial goals. United States v. Bestfoods, 524 U.S. 51, 55 (1998). A “major purpose” of the statute is “to alert the appropriate government officials to releases of hazardous substances that may require rapid response to protect public health and welfare and the environment.” 50 Fed. Reg. 13,456 (April 4, 1985). As the nation’s premier mechanism for undertaking cleanups in response to the presence of pollutants in our environment, CERCLA requires that EPA conduct a preliminary assessment to evaluate the hazards of the KAFB jet fuel spill.

A preliminary assessment is the first step in the process of including an area on the National Priorities List, and guides EPA in determining which sites warrant further investigation to assess the nature and extent of the risk associated with a release of hazardous substances, pollutants or contaminants. A preliminary assessment will enable the agency to begin the process of remediation of the KAFB jet fuel spill and protecting Albuquerque's municipal drinking water resource.

We request the assessment be made to consider inclusion of the KAFB jet fuel and aviation gas disaster on the National Priorities List as one of the sites most in need of cleanup. The KAFB jet fuel catastrophe is far larger by volume and toxicity than any of

the other listed 42 Air Force Superfund sites and threatens a major metropolitan water supply. The KAFB jet fuel disaster should be immediately placed on the National Priorities List and considered for implementation for an emergency response program for clean up.

**Right to Petition:**

The right of an interested party to petition a federal agency is a freedom guaranteed by the first amendment: “Congress shall make no law ... abridging the ... right of people ... to petition the Government for redress of grievances.” U.S. Const., Amend I. See also *United Mine Workers v. Illinois State Bar Ass’n*, 389 U.S. 217, 222 (1967) (right to petition for redress of grievances is among most precious of liberties without which the government could erode rights).

CERCLA grants citizens the right to petition for a preliminary assessment if they are “or may be, affected by a release or threatened release of a hazardous substance or pollutant or contaminate.” 42 U.S.C. § 9605(d).

“Any person who is, or may be, affected by a release or threatened release of a hazardous substance of pollutant or contaminate, may petition the President to conduct a preliminary assessment of the hazards to public health and the environment which are associated with such release or threatened release.”

The Code of Federal Regulations further stipulates that

“[a]ny person may petition the lead federal agency to perform a PA (preliminary assessment) of a release when such person is, or may be, affected by a release of a hazardous substance, pollutant, or contaminant.” 40 CFR § 300.420(b)(5). This petition must be directed to the EPA Regional Administrator covering the location of the site.”

*Id.* If the EPA has not previously conducted a preliminary assessment of such release, the EPA “shall, within 12 months after the receipt of any such petition, complete such assessment or provide an explanation of why the assessment is not appropriate.” 42 U.S.C. § 9605(d)(emphasis added).

The APA provides for judicial review of a final agency action, including CERCLA determination. 5 U.S.C. § 704. The scope of review by the courts is determined by section 706 of the APA. 5 U.S.C. § 706. The APA also permits courts to compel agency action unlawfully withheld or unreasonably delayed. 5 U.S.C. § 706. The provisions of this Petition are severable. If any provision of this Petition is found to be invalid or unenforceable, the invalidity or lack of legal obligation shall not affect other provisions of the Petition.

**See attached map for the location of the release.**

**Petitioner(s) are affected by the release because:**

KAFB has caused the largest underground contamination threatening a city's drinking water supply in the history of the U.S. The Kirtland AFB Jet Fuel Spill is now estimated at 24,000,000 gallons by the New Mexico Environment Department -- a volume twice the size of the Exxon-Valdez spill in Alaska.

[http://www.huffingtonpost.com/2012/07/20/kirtland-air-force-base-fuel-spill\\_n\\_1688603.html](http://www.huffingtonpost.com/2012/07/20/kirtland-air-force-base-fuel-spill_n_1688603.html)

The New Mexico Environment Department (NMED) described the mobile plume of EDB contamination:

“The Bulk Fuels Facility Spill is the most significant groundwater contamination site in New Mexico because of contaminant types and concentrations, and the plume's proximity to water supply wells serving the most populated community in the state.”

Contamination of the drinking water for the City of Albuquerque and petitioners, the Veterans Administration hospital and KAFB supply wells is imminently threatened by arrival the highly toxic plume of EDB.

Albuquerque's population of 600,000+ and petitioners receive drinking water from the sole source Albuquerque aquifer that is distributed by the Albuquerque Bernalillo County Water Utility Authority (ABCWUA). The Albuquerque (ABQ) municipal drinking water wells lie less than ¾ mile to the northeast of the plume of Ethylene Dibromide (EDB) that is dissolved in the groundwater and spreading some 6000 ft distant from its source at the former KAFB fuels facility. Eighty percent of the EDB plume has spread off-base from KAFB and is under Albuquerque homes and businesses. Sixty percent of ABQ's water supply is provided from groundwater.

The EDB plume is headed directly toward KAFB supply wells #3 and #5 and could eventually reach dozens of municipal supply wells to the north of the five Ridgecrest wells.

The Veterans Administration's only supply well (VA2) is threatened with shutdown due to the imminent arrival of EDB and the presence of gasoline and diesel range organics.

There is no plan for containment or remediation of the dissolved EDB plume that is traveling in the Albuquerque aquifer and neared approximately ¾ mile to the municipal supply wells. The concentration of EDB throughout the known extent of the plume exceeds the EPA Maximum Contaminant Level (MCL). There are areas where the EDB concentration is thousands of times in excess of the MCL.

There is no evidence to indicate that bioremediation or “natural processes” are removing EDB dissolved in the groundwater. The hazard associated with EDB can persist indefinitely. The Agency for Toxic Substances and Disease Registry characterizes EDB breakdown in ground water as “hardly at all.” *The Potential for Ground Water Contamination by the Gasoline Lead Scavengers Ethylene Dibromide and 1,2-Dichloroethane* <http://info.ngwa.org/GWOL/pdf/041879375.pdf>, p.81-82. Nevertheless, the Air Force intends to rely upon leaving the offbase EDB contamination to “natural processes.” (March 2011 Air Force Report to Congressional Committees). NMED informed KAFB that EDB does not naturally attenuate or biodegrade.

[http://www.nmenv.state.nm.us/HWB/documents/KAFB-12-026\\_3-27-2012\\_BFFS\\_In-well\\_treatment\\_disapproval.pdf](http://www.nmenv.state.nm.us/HWB/documents/KAFB-12-026_3-27-2012_BFFS_In-well_treatment_disapproval.pdf), p.2.

According to the NMED, KAFB underestimates the flow velocity of the groundwater for the EDB plume to reach the municipal wells.

[http://www.nmenv.state.nm.us/HWB/documents/KAFB-12-026\\_3-27-2012\\_BFFS\\_In-well\\_treatment\\_disapproval.pdf](http://www.nmenv.state.nm.us/HWB/documents/KAFB-12-026_3-27-2012_BFFS_In-well_treatment_disapproval.pdf), p.5, item 6.

The Albuquerque Bernalillo County Water Utility Authority (ABCWUA) Resolution 12-14 requests “emergency measures” to deal with the jet fuel spill. The resolution has not resulted in installation of groundwater monitoring near the Ridgecrest supply wells or measures to halt the EDB plume. (See Attachment -- WUA Resolution 12-14).

A May 21, 2010 Memorandum of the USEPA Office of Solid Waste and Emergency Response to UST/LUST Regional Division Directors, Regions 1-10 provides that there must be “aggressive remediation” of lead scavengers such as EDB “when such constituents could threaten a source of drinking water.” Aggressive remediation is not in place for the dissolved plume of EDB.

**Type or characteristics of the substance(s) involved:**

Numerous carcinogenic chemicals such as Benzene, Toluene, Ethylbenzene, Xylene, Diesel, Polyaromatic Hydrocarbons (PAHs) and Ethylene Dibromide (EDB) are moving toward ABQ’s municipal wells. The chemicals contained in the soil and groundwater include EDB, nitrates, Benzene, Toluene, Ethylbenzene and Xylene from jet fuels JP-4, JP-8 and Aviation Gas. The Ridgecrest municipal wells that will be the most immediately impacted are among the highest producing in the water service area and the lowest in arsenic concentration for blending purposes with other municipal wells that exceed the EPA MCL for arsenic.

Unlike the other diesel and gasoline contaminants that tend to float on top of the aquifer, EDB is highly soluble in water, highly mobile and can travel separately from the original spill. The hazard associated with EDB can persist indefinitely. The Agency for Toxic Substances and Disease Registry characterizes EDB breakdown in ground water as “hardly at all.” *The Potential for Ground Water Contamination by the Gasoline Lead Scavengers Ethylene Dibromide and 1,2-Dichloroethane*  
<http://www.atsdr.cdc.gov/toxfaqs/tf.asp?id=725&tid=131>  
<http://info.ngwa.org/GWOL/pdf/041879375.pdf>, p.81-82. Ethylene Dibromide is toxic in parts per trillion. The groundwater in some locations has been contaminated by EDB thousands of times above the EPA MCL.

**Nature and history of any activities that have occurred regarding the release:**

Air Force Manual 85-16, in force from the 1950s, required annual pipeline inspections and a hydrostatic pressure test every 5-years. The Air Force has no evidence that the pipeline testing requirements were complied with. The Air Force issued a waiver for conducting pipelines pressure tests for the fuels facility beginning in 1985 and again in 1994 because it was known the pipeline could not pass the annual inspection and pressure test requirements.

Leaking was first identified in 1992 at the bulk fuels facility pump house Bldg. #1033 (SWMU ST-341) and later in 1999 at the offloading rack pipelines connected to the pump house. The size of the leak estimate has gone from 158,000 gallons in 2000 to 24,000,000 gallons in 2012. Only a very limited amount of jet fuel LNAPL has been removed since it was discovered floating on the aquifer off-base in 2006.

Kirtland has a long history of not complying with New Mexico Environment Department orders to determine the size and extent of the jet fuel leak as the basis of a plan to clean up the massive contamination. Non-enforcement of NMED orders and failure to issue sanctions is an ongoing problem.

Continuing contamination of the Albuquerque aquifer is resulting from the dissolving Light Non-Aqueous Phase Liquid (LNAPL) plume that is trapped beneath the aquifer. The plume of EDB remains mobile and is moving along a steep hydraulic gradient toward Albuquerque's municipal wells. No financial sanctions for KAFB's violation of NMED letter orders for the jet fuel spill under the Resource Conservation and Recovery Act (RCRA) have ever been levied by NMED. These include:

[http://www.nmenv.state.nm.us/HWB/documents/KAFB\\_4-2-2010\\_Bulk\\_Fuel\\_Spill\\_GWQB\\_Letter.pdf](http://www.nmenv.state.nm.us/HWB/documents/KAFB_4-2-2010_Bulk_Fuel_Spill_GWQB_Letter.pdf);

[http://www.nmenv.state.nm.us/HWB/documents/KAFB\\_4-2-2010\\_Bulk\\_Fuel\\_Spill\\_GWQB\\_Letter.PDF](http://www.nmenv.state.nm.us/HWB/documents/KAFB_4-2-2010_Bulk_Fuel_Spill_GWQB_Letter.PDF);

[http://www.nmenv.state.nm.us/HWB/documents/KAFB\\_4-2-2010\\_Bulk\\_Fuel\\_Spill\\_HWB\\_Letter.PDF](http://www.nmenv.state.nm.us/HWB/documents/KAFB_4-2-2010_Bulk_Fuel_Spill_HWB_Letter.PDF);

[ftp://ftp.nmenv.state.nm.us/hwbdocs/HWB/KAFB/Bulk\\_Fuels\\_Facility\\_Spill/KAFB\\_8-6-2010\\_Fuel\\_Spill\\_NOD\\_and\\_Direction.pdf](ftp://ftp.nmenv.state.nm.us/hwbdocs/HWB/KAFB/Bulk_Fuels_Facility_Spill/KAFB_8-6-2010_Fuel_Spill_NOD_and_Direction.pdf)

The magnitude of the leak, how far and how fast the EDB plume has traveled has been underestimated, minimized and remains undetermined. The depth, horizontal extent and plume velocity have not been characterized. Planning for and installation of clean up technology has been minimal and inadequate to address the plume of carcinogenic contamination that has traveled off-base.

From 2004 until 2009, only four Soil Vapor Extraction (SVE) units were installed, operating sporadically, often poorly located and shut down since December 2012. NMED requested that there be 16 operating units. KAFB did not comply. KAFB installed two thermal oxidizer (TO) units in November 2012 but changed the design without notifying NMED. ([http://www.nmenv.state.nm.us/HWB/documents/KAFB-12-024\\_5-23-2013\\_Disapproval\\_SVE\\_Treatment\\_System\\_WP.pdf](http://www.nmenv.state.nm.us/HWB/documents/KAFB-12-024_5-23-2013_Disapproval_SVE_Treatment_System_WP.pdf))

No groundwater monitoring has been conducted in the vicinity of ABQ's wells despite the ABCWUA Resolution 12-14. The nearest USGS monitoring well is over 2000 ft away from the Ridgecrest #5 well.

The claim that municipal drinking water is "safe" comes from monitoring 600-800 ft long municipal well screens at the Ridgecrest municipal wells that provide enormous dilution of samples. The wells do not have annular rings and were drilled using mud rotary that hides evidence of contamination. Due to the age of the municipal wells, corrosion of the well screens may be present. The monitoring well located in the parking lot of the Veteran's Hospital has had samples of Benzo (a) pyrene that exceed the EPA MCL along with the presence of other petroleum compounds.

KAFB, after receiving a Freedom of Information Act request, has not provided actual laboratory sampling data for the groundwater monitoring wells nearest to the VA. The nearest monitoring wells to the VA supply well is KAFB 1064 located 200 ft distant in the VA Hospital parking lot and a more distant KAFB 1062.

Currently, at least ten (10) shallow groundwater monitoring wells have flooded well screens that cannot provide reliable and representative groundwater samples. This includes KAFB 1064, which is the monitoring well nearest to the VA Hospital supply well. (Quarterly Pre-Remedy Monitoring and Site Investigation Report for January-March 2013 (<https://kirtlandafb.tlisolutions.com/sitedocs/PDFS/36/3611.01.PDF>, p. ES-3).

The thermal oxidizer technology in use will not contain or remove dissolved constituents or the LNAPL, the bulk of which is now trapped beneath the water table, which has risen somewhat due to reduced groundwater pumping. According to the NMED and EPA, SVE technology will not remove EDB or LNAPL trapped beneath the water table. The LNAPL (JP-4 and JP-8) contains little to no volatiles and does not readily vaporize even when floating on the aquifer.

The sampling of soil and groundwater has been conducted inappropriately and resulted in data that is flawed. Numerous groundwater monitoring wells have had air bubbles in the samples that vitiates the reliability of the samples for decision making. The sampling of Volatile Organic Compounds (VOCs) in the 4<sup>th</sup> Quarter of 2012 violated EPA protocols for sampling. The laboratory sample checklist shows that seals on sample bottles were not intact upon arrival; temperatures were not within the correct range of > 0° C to 6° C; sample temperatures were not taken and recorded upon receipt; traffic report or a packing receipt was not present. VOC sample analysis took place weeks later. Mixed air samples in Tedlar bags could not be performed at all. Use of such flawed sampling data for decision making defeats characterization of the nature and extent of the plume. [http://www.nmenv.state.nm.us/HWB/documents/KAFB\\_9-18-2012\\_Extension\\_Rqst\\_Qrtly\\_Rpt.pdf](http://www.nmenv.state.nm.us/HWB/documents/KAFB_9-18-2012_Extension_Rqst_Qrtly_Rpt.pdf)

Deep monitoring wells show the presence of EDB at depths greater than 100 ft at a magnitude above the EPA Maximum Contaminant Level (MCL). That is indication that the EDB is moving downward due to the hydraulic gradient from the pumping of the Ridgecrest municipal wells.

Thank you for your consideration of this petition. Please inform us of the numerical score determined from the assessment for listing the KAFB jet fuel spill on the National Priorities List.

Petitioners,

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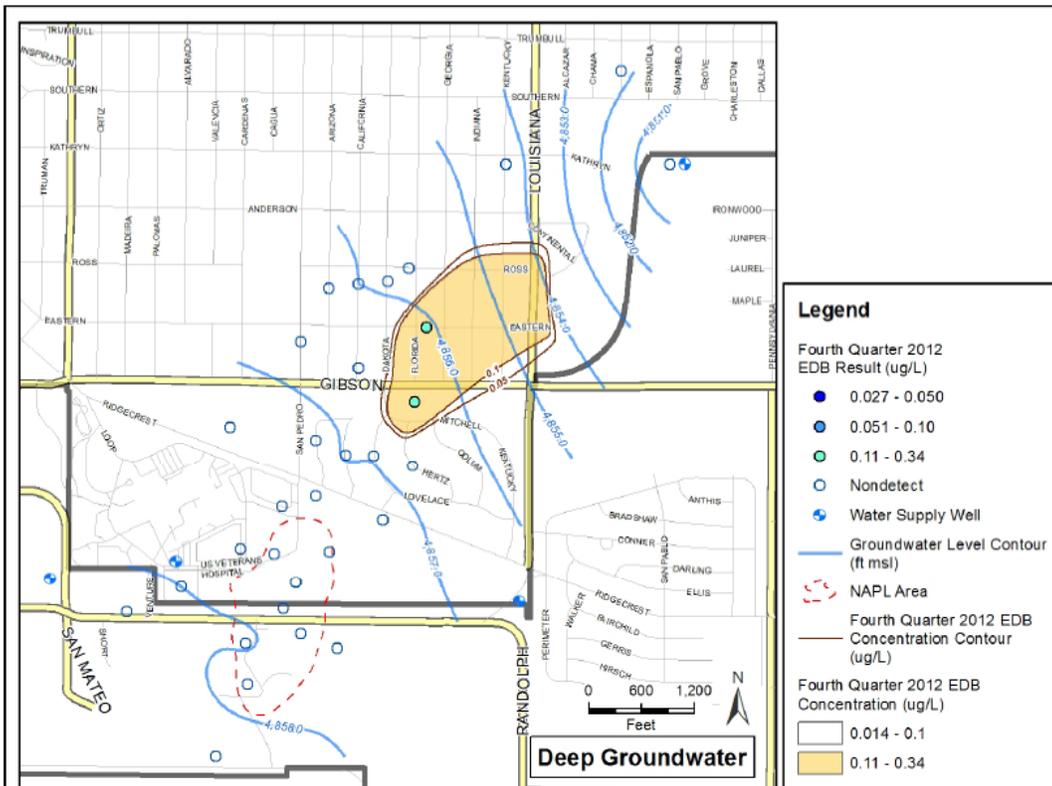
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1 to implement treatment technology to save the City's highly productive Ridgecrest and  
2 other drinking water wells from the dissolved EDB plume:

3 BE IT RESOLVED BY THE WATER AUTHORITY:

4 Section 1. That in order to protect the public health and environment, the City  
5 of Albuquerque and Bernalillo County through its Water Utility Authority act immediately  
6 to enter into negotiations with the Air Force for emergency measures:

7 A. To save Albuquerque's drinking water resource;

8 B. To place groundwater monitoring as close as possible to the Ridgecrest  
9 municipal wells;

10 C. To begin the investigation for technologies and installation of water treatment  
11 facilities for the wells including financial assurance;

12 D. To halt the further movement of the liquid LNAPL jet fuel;

13 E. To plan for and implement remediation technology to address the long-term  
14 contamination of soils and the aquifer.

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