

**Working Title: Remediation of the Kirtland Bulk Fuels Facility Plume:
Successful application of an adaptive and iterative approach to
CSM refinement and remedy optimization**

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Case study presentation focused on the adaptive/iterative process used to refine the CSM and design/implement/optimize remediation systems (SVE for vadose, P&T for dissolved-phase plume) for the large EDB plume remediation at Kirtland AFB (Albuquerque).

This plume has a thick (500 ft) vadose zone with substantial BTEX and EDB, a fairly substantial NAPL source zone at the water table which is off base, and a dissolved phase plume of EDB extending roughly 1.5 miles to threaten high capacity production wells that provide much of the drinking water for the city. The remedial process consisted of stepwise/iterative process of CSM refinement (e.g. sequence stratigraphy and other methods) and locating/installing/operating SVE and groundwater extraction wells, performance monitoring, updating CSM, and selecting locations for subsequent SVE and groundwater extraction wells.

This stepwise effort began in 2014. To date, it has decreased vadose zone contamination substantially and effectively collapsed the distal groundwater plume to MCL. Remedy planning now is refocusing on the remaining vadose zone hot spots, the near-source NAPL/BTEX plume. The NAPL and BTEX plumes appear to be stable but active remediation alternatives currently are being considered.