



Kirtland Air Force Base (KAFB) Bulk Fuels Facility Leak Cleanup

Bulk Fuels Facility Project Update

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Discussion Topics



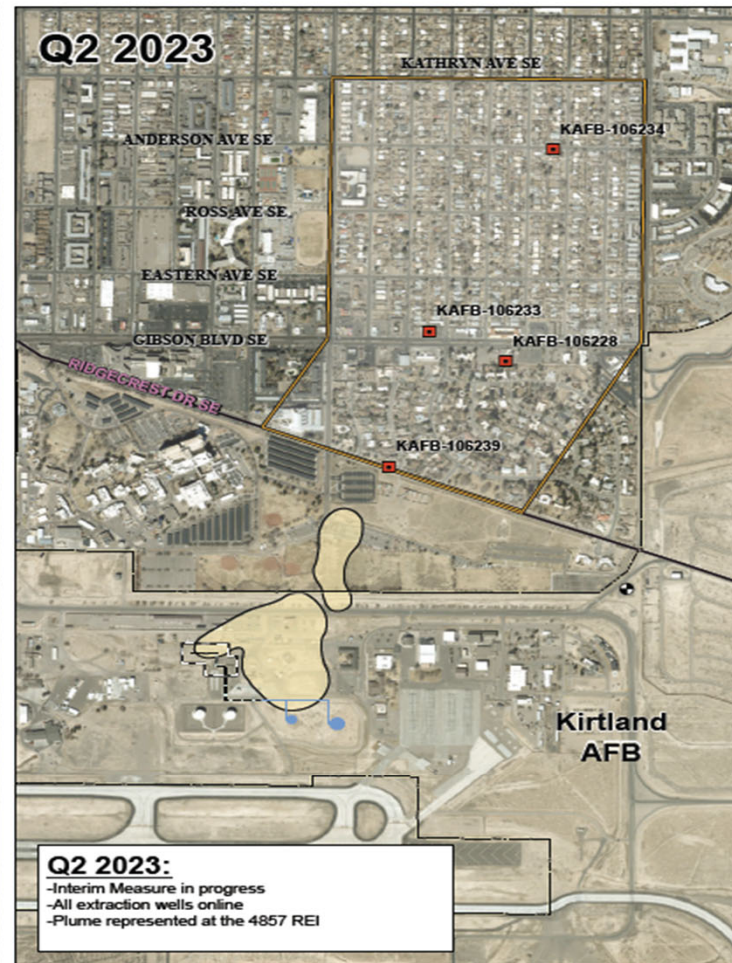
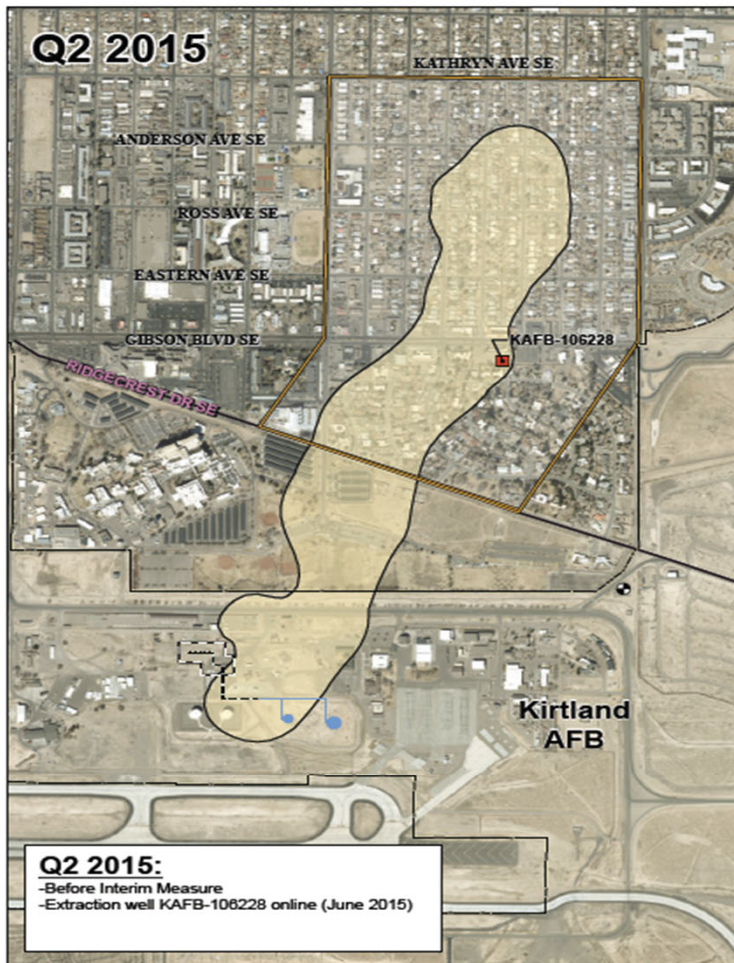
- Ethylene Dibromide (EDB) Plume
 - 2015 vs 2023
 - Interim Measure (IM) Status
- Site Activity Timeline
- Benzene Plume Stability
- Resource Conservation and Recovery Act (RCRA) Corrective Action Process
- Funding
- Recent NMED Direction on Monitoring Work Plans
 - Groundwater Monitoring Work Plan
 - Soil Vapor Monitoring Work Plan
- Path forward to Corrective Measures Evaluation (CME)



EDB Plume – 2015 vs 2023



Comparison of Dissolved-phase EDB Collapse in the Interim Measure Operational Area between Q2 2015 and Q2 2023



Legend

- Extraction Well
- Drinking Water Supply Well
- Former Aboveground Storage Tank
- Former Buried Fuel Transfer Line
- Former Aboveground Fuel Transfer Line
- Ridgcrest Drive SE
- Interim Measure Operational Area
- Installation Fence Boundary
- Source Area
- Dissolved-Phase EDB = 0.05 µg/L (EPA MCL)

SITE LOCATION

Scale:
 0 500 1,000 2,000 Feet
 1 inch = 1,000 feet
 Projection: NAD83 State Plane New Mexico Central FIP83002 Feet

General Notes:
 Aerial imagery provided by ESRI Online service. EDB plume contour generated with ESRI Spatial Analyst and adjusted with professional judgement.

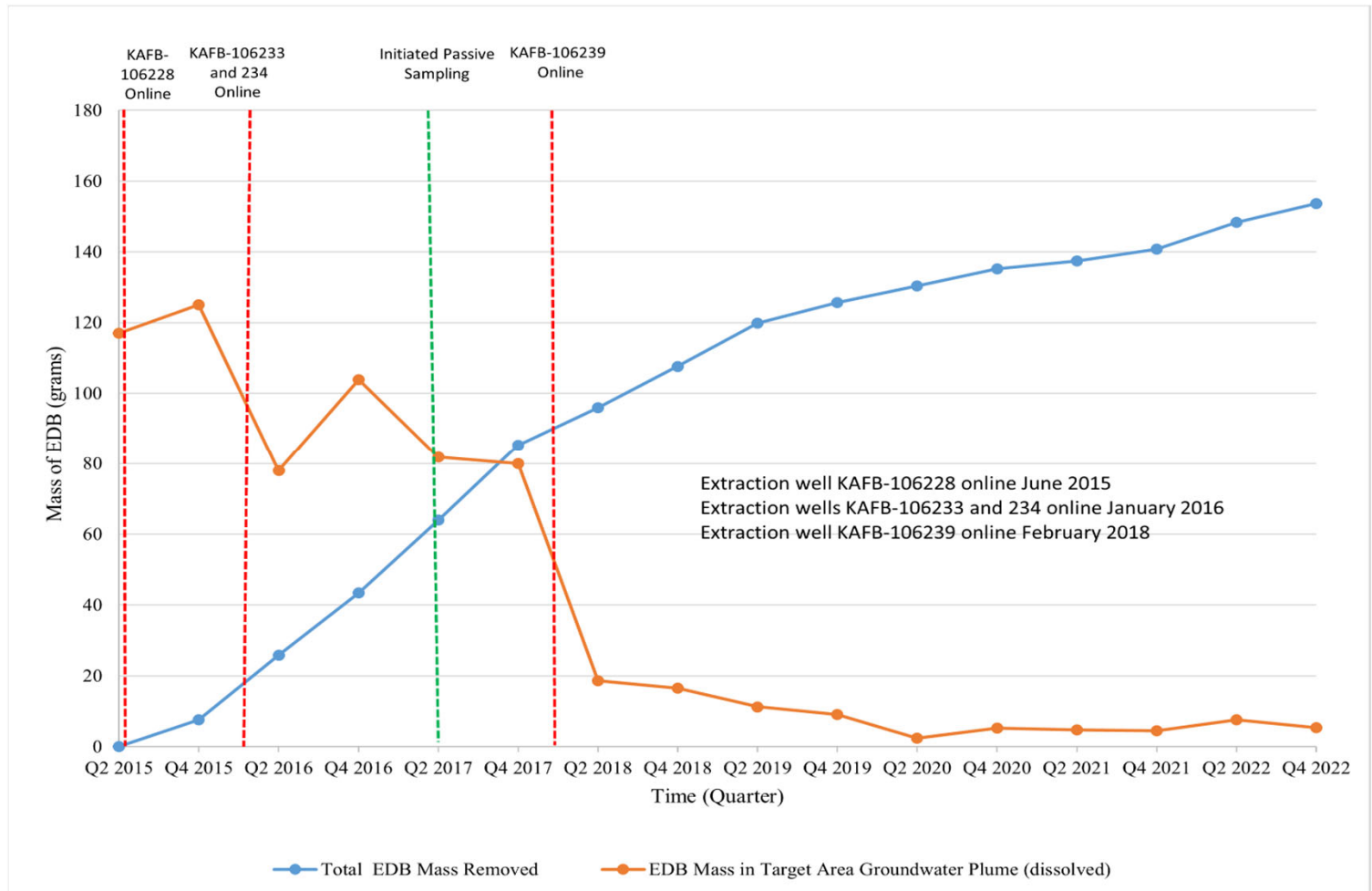
Acronym(s):
 AFB = Air Force Base
 EDB = 1,2-dibromoethane (ethylene dibromide)
 EPA MCL = Environmental Protection Agency maximum contaminant level
 REI = reference elevation interval
 µg/L = microgram(s) per liter
 Q2 = quarter 2



Status Update: EDB Interim Measure

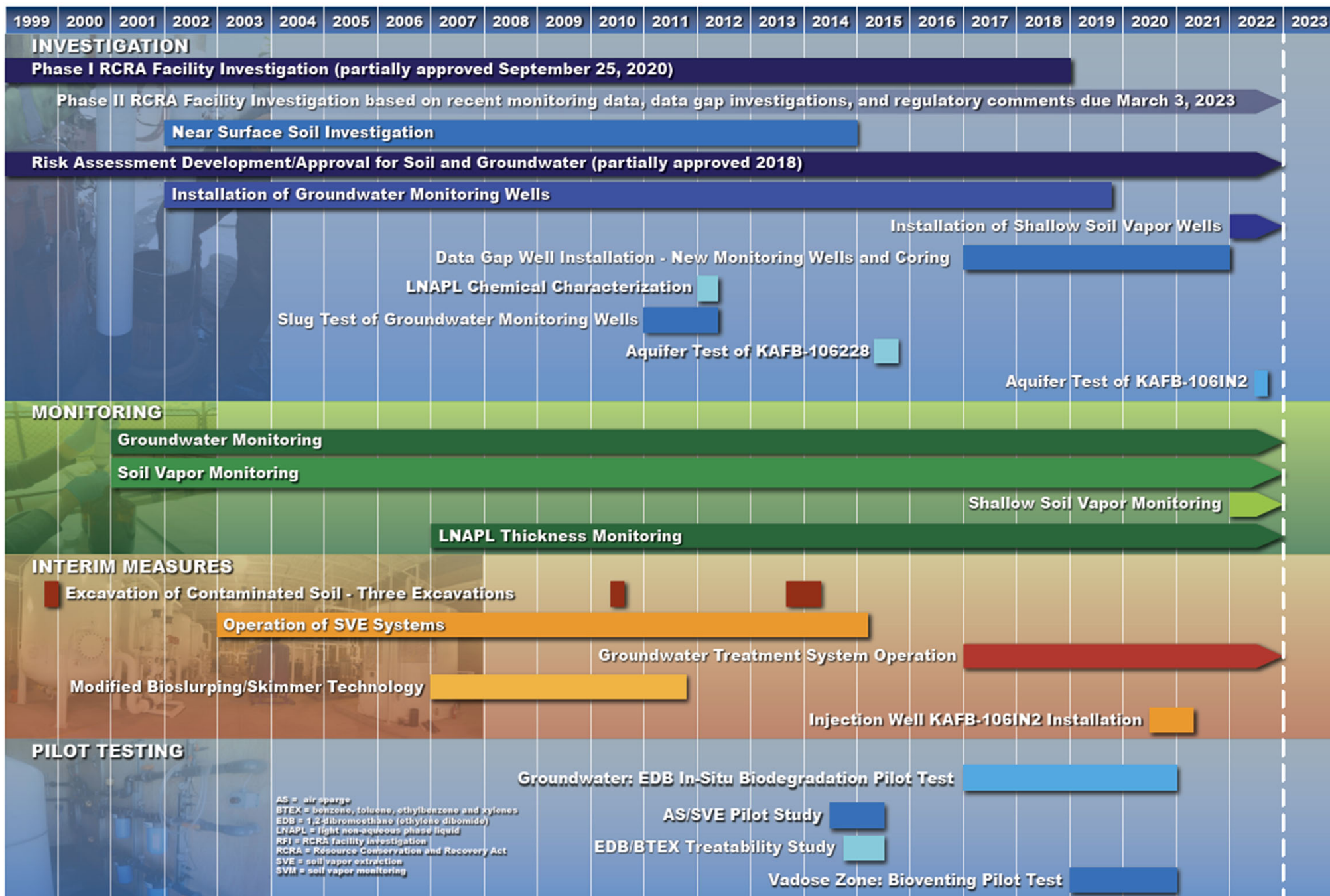


EDB Mass in Groundwater vs. Time



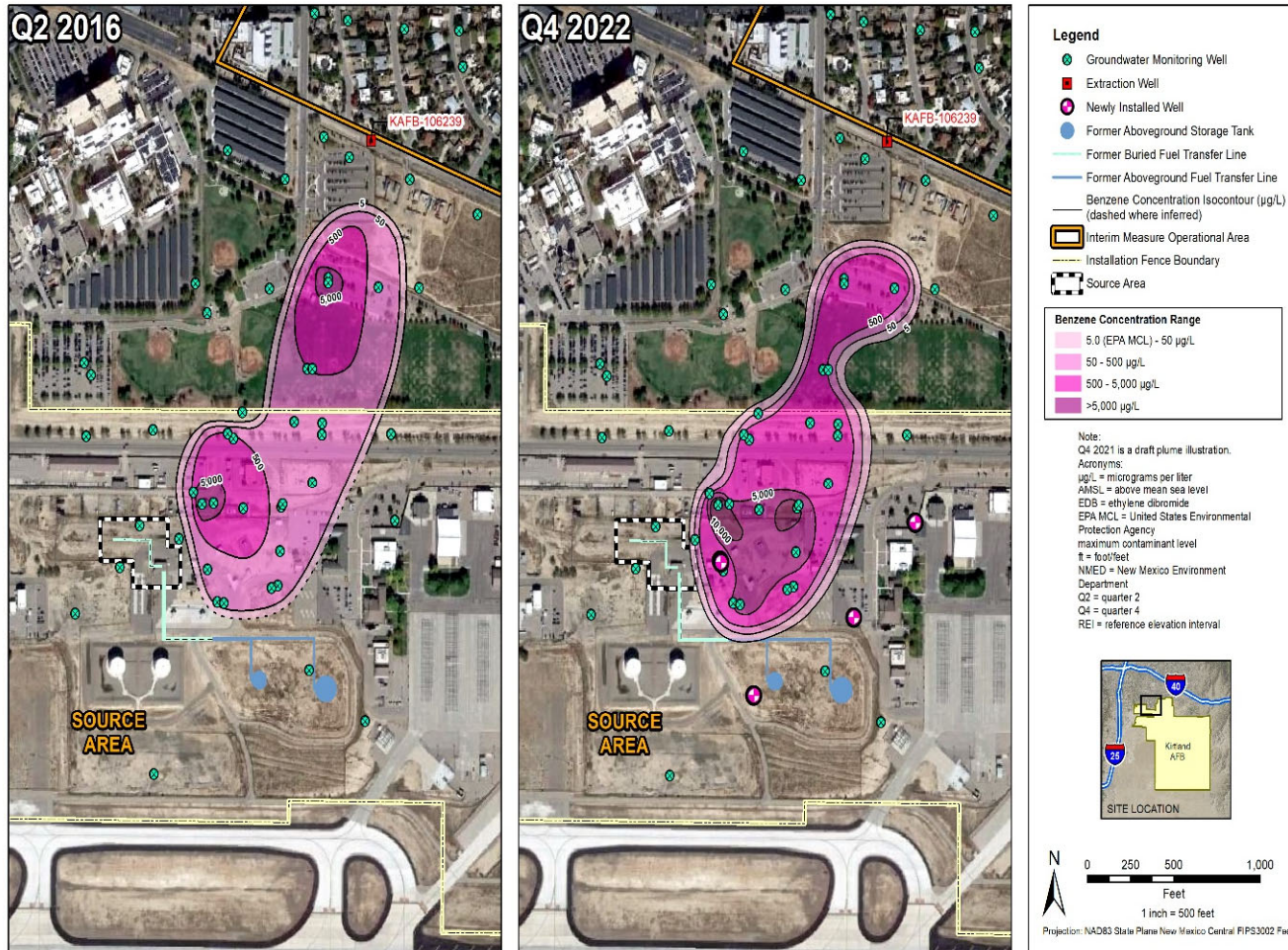
Pump and treat interim measure has achieved an estimated 96% reduction in the interim measure operational area of the dissolved EDB mass since 2015

Site Activity Timeline





Benzene Plume Stability



- Benzene plume located south of Ridgcrest Dr SE
- Benzene plume has been stable and does not threaten drinking water wells (no current complete exposure pathway)

***Plume maps are based on actual measurements and not simulations**

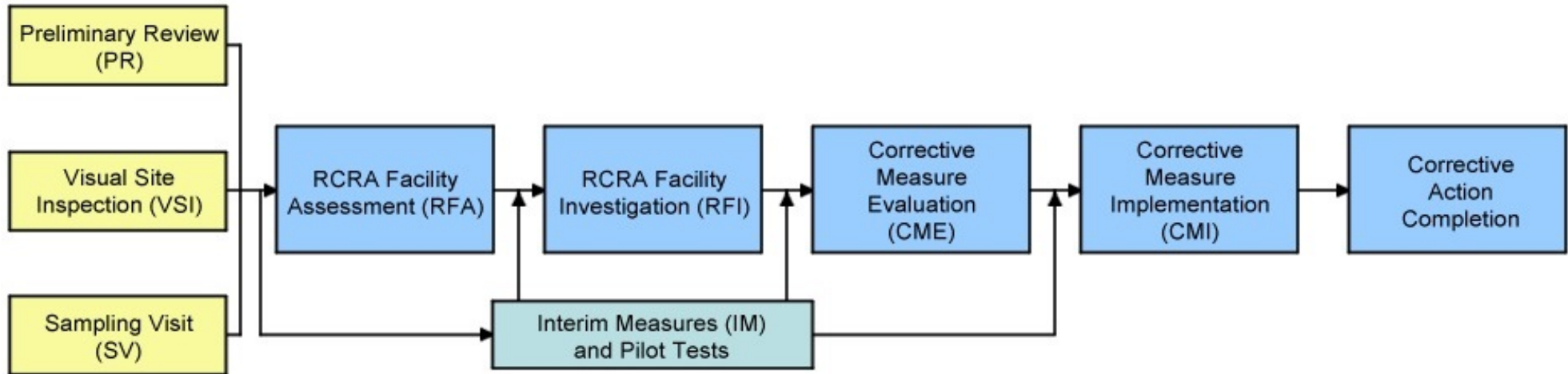
UNCLASSIFIED



RCRA Corrective Action Process



*Image adapted from California Department of Toxic Substances Control (<https://dtsc-topock.com/resource-conservation-and-recovery-act>)



- Pace of cleanup is driven by the iterative corrective action (CA) process in KAFB's RCRA permit
- IMs are allowed under the permit when actions necessary to minimize or prevent the further migration of contaminants and limit actual or potential human and environmental exposure to contaminants before the CME and corrective measures implementation plan.
- All activities in the RCRA CA process inform the CME: IMs, pilot studies, RCRA Facility Investigation (RFI) I and II, and ongoing monitoring results



Funding



- Over \$130M has been provided to the project to date
- Air Force has always ensured sufficient funding is available as needed, and funding has never been in jeopardy on this project
- Funding amounts vary year-to-year based on project requirements (e.g., field investigations, operational activities, and permanent infrastructure)



NMED Direction on Monitoring Work Plans



- KAFB received Notice of Disapproval on 8 Nov 2022, for Groundwater Monitoring (GWM) Work Plan
 - NMED requiring change from passive sampling to active sampling
- NMED also requested a Revised Soil Vapor Monitoring Work Plan on 16 Sept 2022
- NMED has declared that eight years of soil vapor data and six years groundwater of data are “unrepresentative” without supportable evidence
 - Since these data were collected under NMED-approved work plans these data *are* representative as stated in the RCRA Permit.
 - Additionally, methods within NMED-approved work plans were discussed at Technical Working Groups



Groundwater Monitoring Work Plan



- KAFB submitted a response to NMED on 31 July 2023 declining to submit a revised GWM work plan at this time
- KAFB will continue to monitor and report under NMED-approved work plans
 - Air Force has a right to rely on previous approvals
 - Never received sufficient technical justification for the need to revise sampling methods



GWM Work Plan Continued Community Impacts



- Historically/currently utilizing passive sampling methods
 - 15 to 30 minutes outside resident's houses
 - No noise generated
- Active Sampling will require
 - 3 to 4 hours per well outside resident's houses
 - All day for well clusters
 - Continuous operation of noisy generators
 - Operators are required to wear hearing protection
 - Will restrict traffic flow with one-ton flat bed truck, cranes, water tanks, and working area around the well



Soil Vapor Monitoring Work Plan



- KAFB submitted a Soil Vapor Monitoring Work Plan to meet NMED Requirements on 31 July 2023
 - Air Force will continue to assert that eight years of soil vapor data collected following NMED-approved work plans are representative
- KAFB does not agree that sampling methods need to be modified. However, submitting work plan because NMED modified their 16 Sept 2022, sampling requirements based on KAFB's correspondence
- NMED Modification to their initial requirements included:
 - Modification accounted for site specific conditions
 - Increase flow rate consistent with previous methods
 - Modification reduced sampling time from 18 months to six weeks



Path Forward to Corrective Measures Evaluation



- Air Force's top environmental engineers state that KAFB has sufficiently defined the nature and extent to the degree necessary to move to CME
- KAFB's assessment of NMED direction to revise sampling methods and potential investigations provide no value in refining the nature and extent
- Path forward to reduce impacts and delays, KAFB needs:
 - NMED to honor historical decisions and approvals
 - NMED clearly defines additional investigation data gaps and rational (if warranted)
 - NMED direct KAFB to begin CME



Questions?



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Additional information:

Online at <https://www.kirtland.af.mil/Home/BFF/> and <https://ar.afcec-cloud.af.mil/> or visit our New Information Station at the New Mexico Veterans Memorial at 1100 Louisiana Blvd SE, Albuquerque, NM