Sandia National Laboratories

Technical Area-V Groundwater (TAVG) Investigation

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Environmental Restoration Operations

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U.S. DEPARTMENT OF ENERGY | NNSA National Nuclear Security Administration

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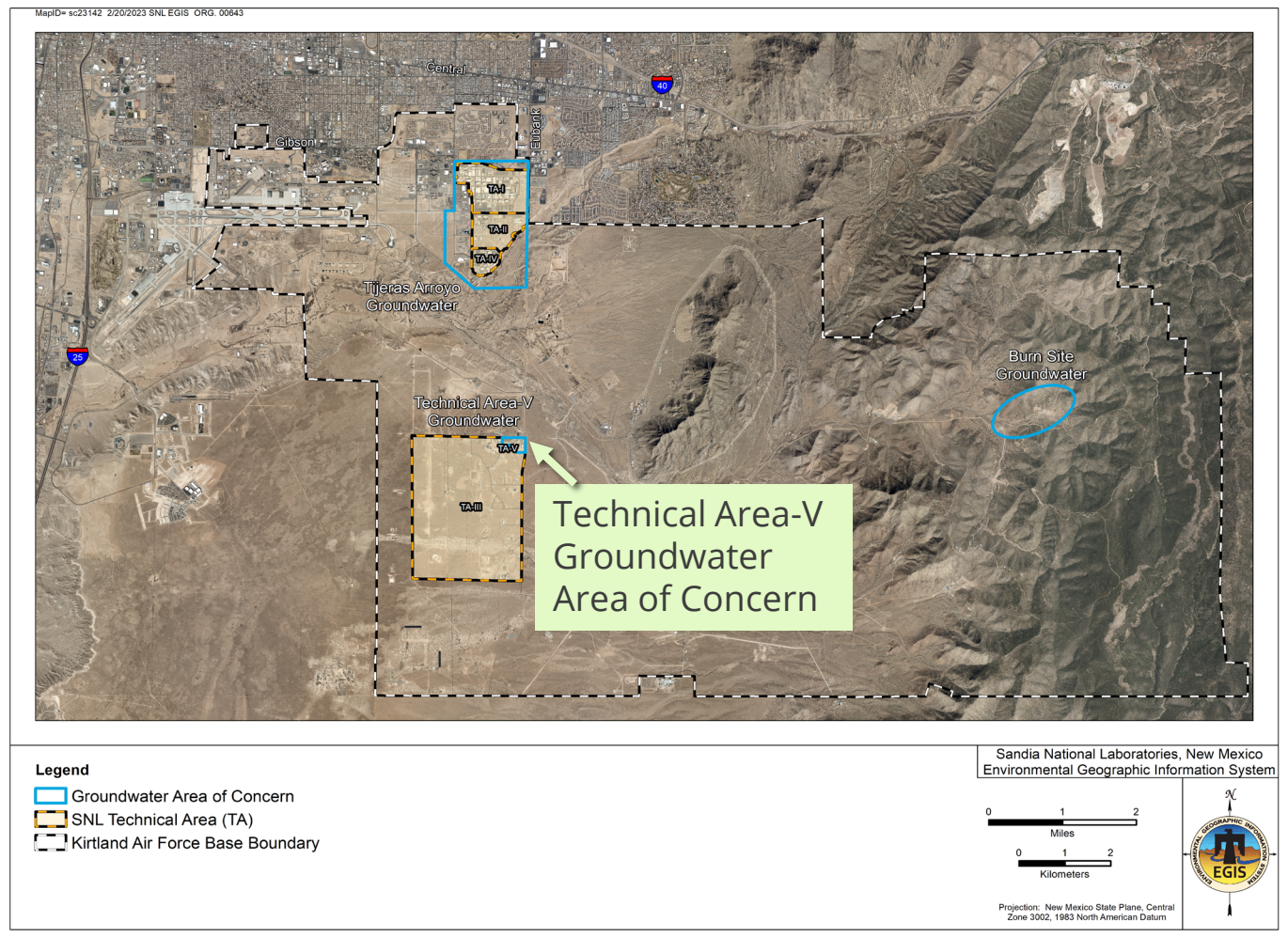
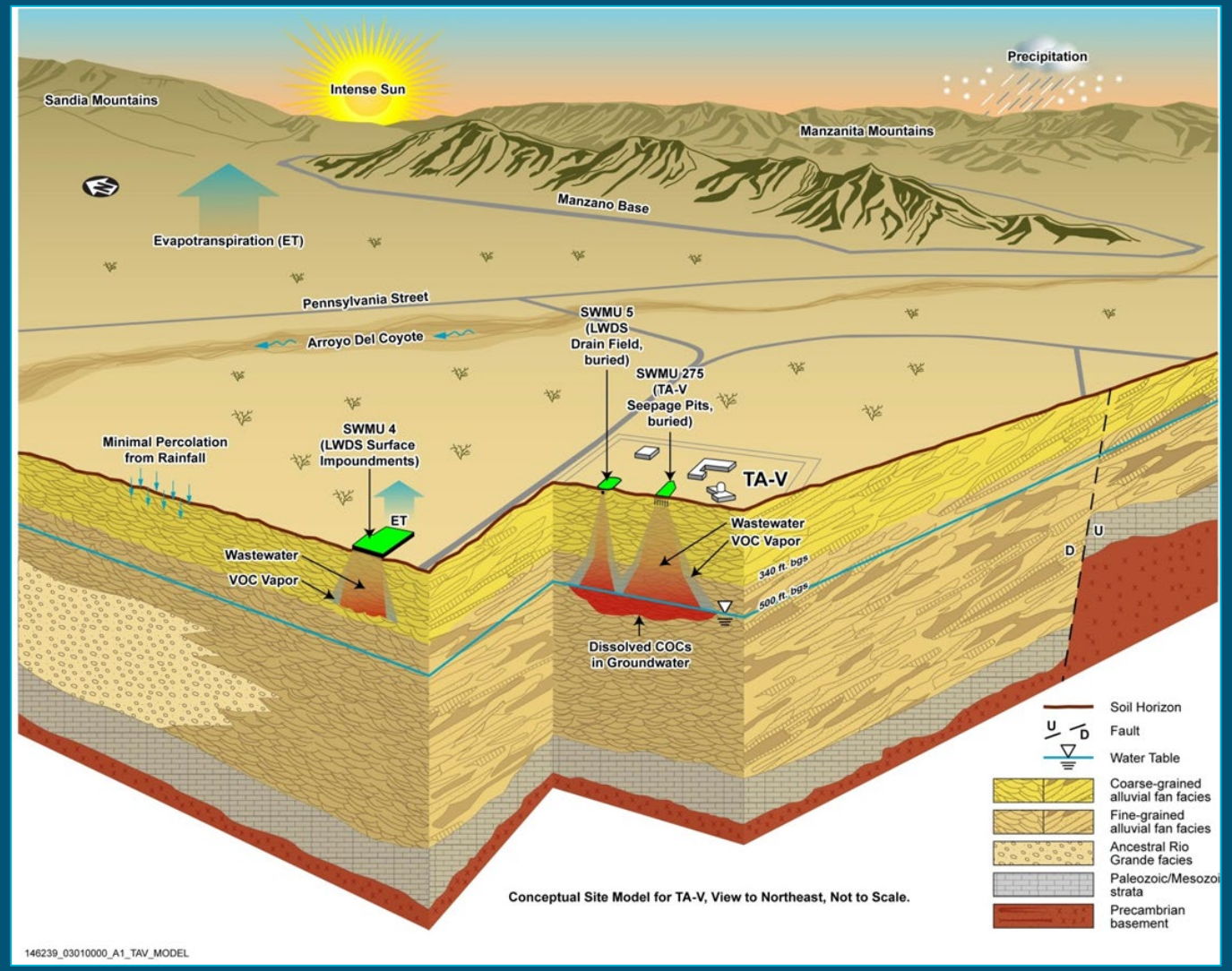
Site Description



- Technical Area-V (TA-V) covers approximately **35 acres**.
- Sandia National Laboratories (SNL) activities in TA-V **began in 1961**.
- Corrective action for all the surface and shallow subsurface contamination in TA-V is complete.
- Only the groundwater in TA-V, designated as the **TAVG Area of Concern (AOC)**, requires corrective action.

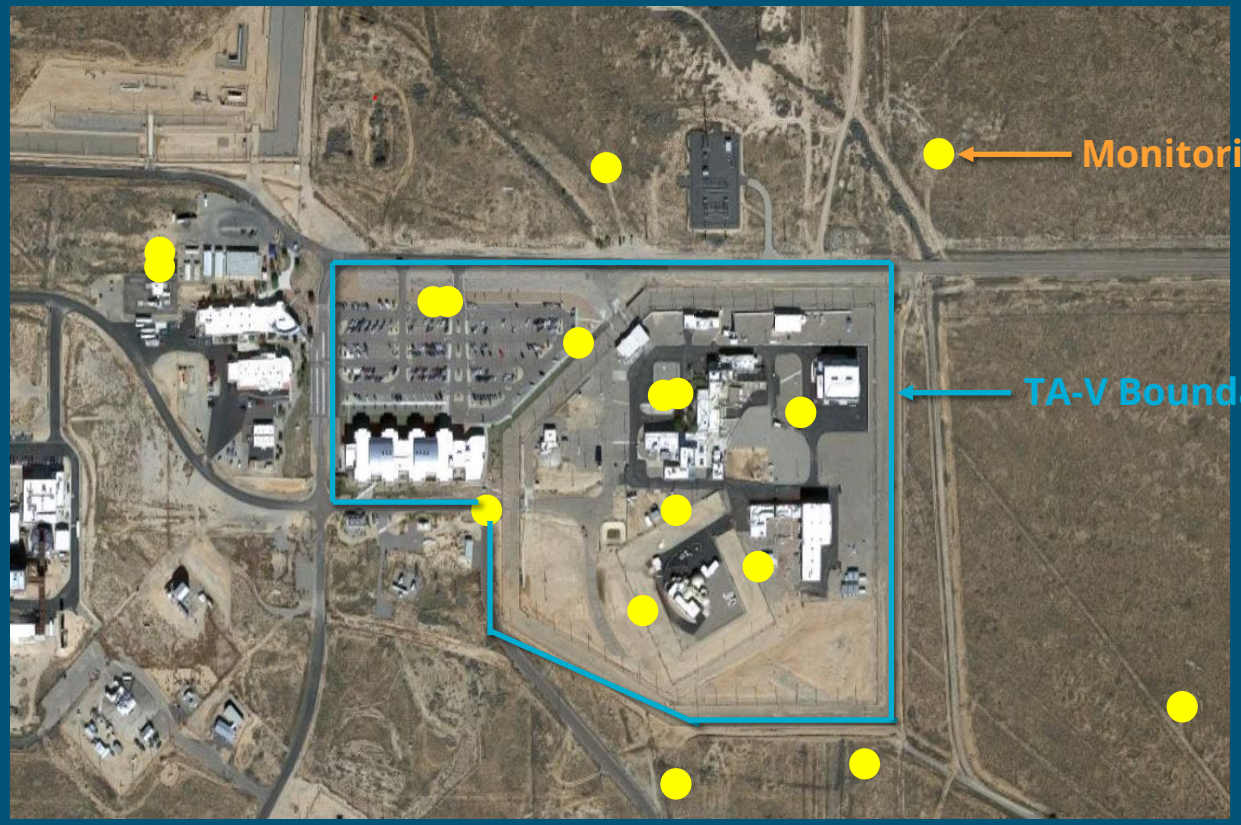
Conceptual Site Model for the TAVG AOC



- The groundwater in TA-V occurs in the **Regional Aquifer** in fine-grained, clay-rich alluvial-fan sediments.
- The water table in TA-V is approximately **500 – 550 feet below ground surface**.
- The groundwater in the Regional Aquifer flows to the west, then turns northeast toward production wells.
- The nearest drinking water supply well (KAFB-4) is 2.8 miles northwest of TA-V.

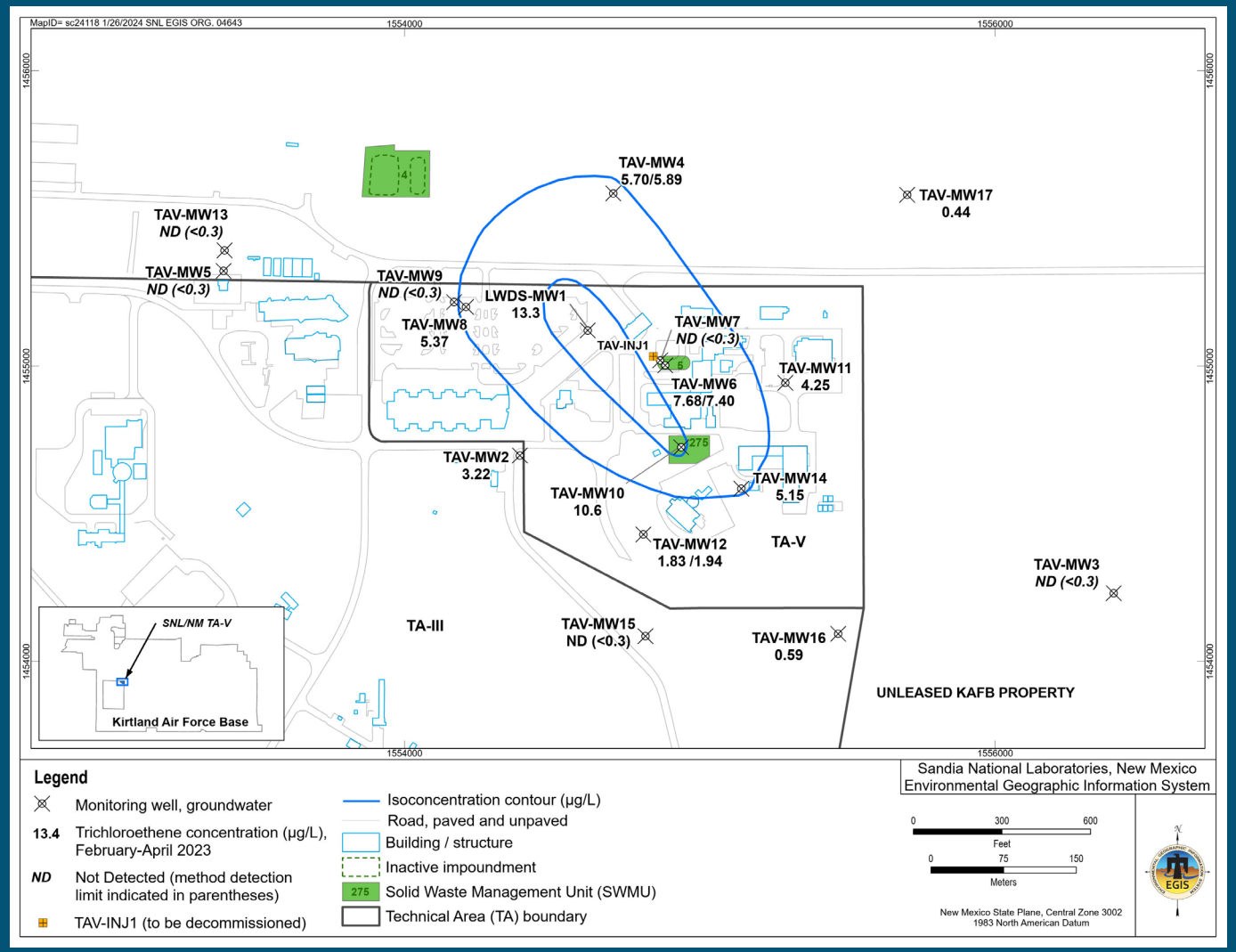
  - KAFB = Kirtland Air Force Base

TAVG AOC Groundwater Monitoring



- Groundwater monitoring **began in 1992**, with 21 monitoring wells installed to date.
- The current monitoring well network consists of **17 active wells**.
- Groundwater levels are measured quarterly.
- 11 monitoring wells are sampled semiannually and 6 monitoring wells are sampled annually.

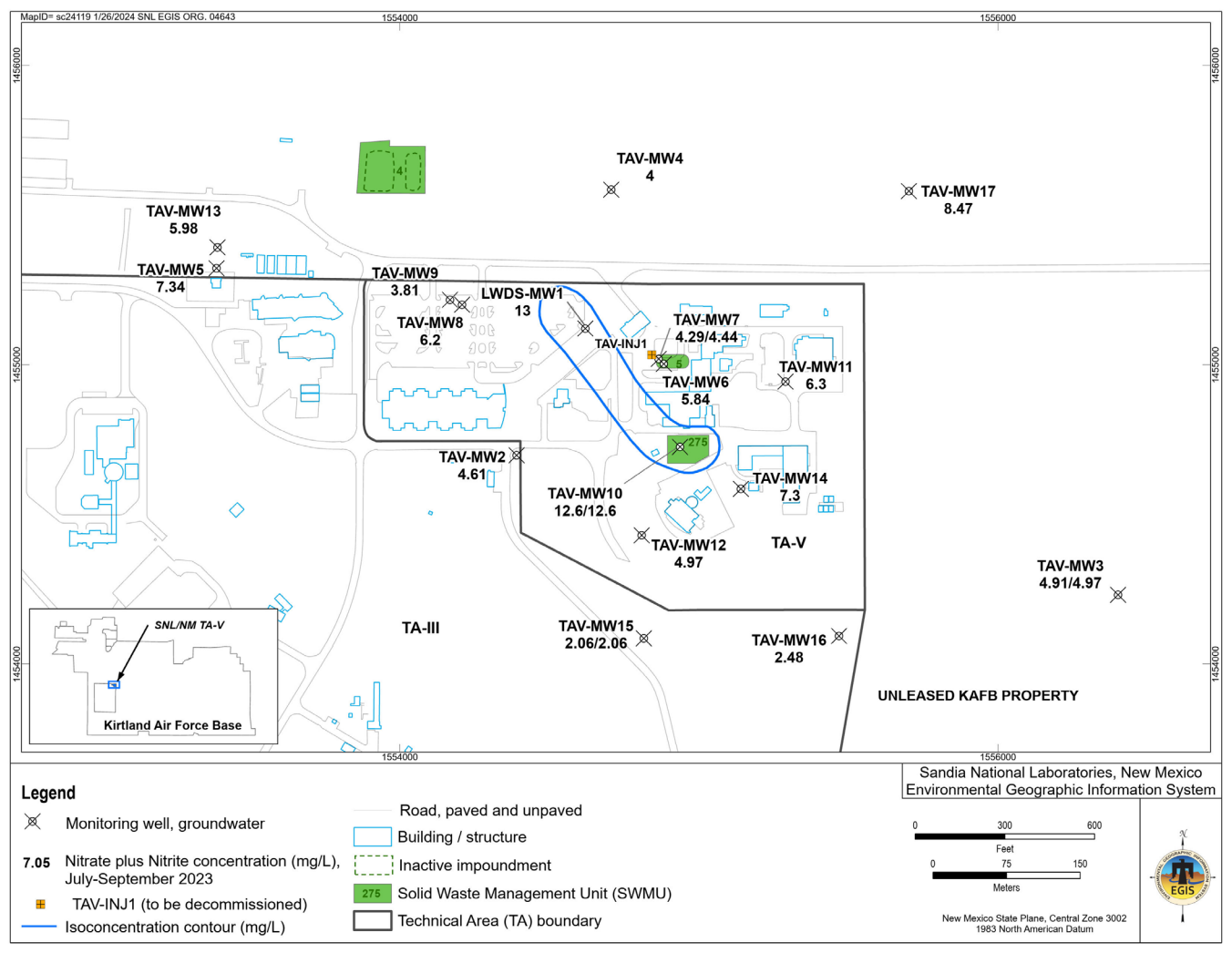
TAVG AOC Groundwater Monitoring (continued)



- The groundwater contaminant **trichloroethene (TCE)** is derived from industrial wastewater discharged from the 1960s to 1992.
- In 2023, the TCE plume covered approximately 17 acres.
- In 2023, the maximum TCE concentration was 13.3 µg/L (EPA MCL is 5 µg/L).
- The TCE plume is **not migrating off site** and is not adversely impacting human health or the environment.

  - EPA = U.S. Environmental Protection Agency
  - MCL = maximum contaminant level
  - µg/L = micrograms per liter

TAVG AOC Groundwater Monitoring (concluded)



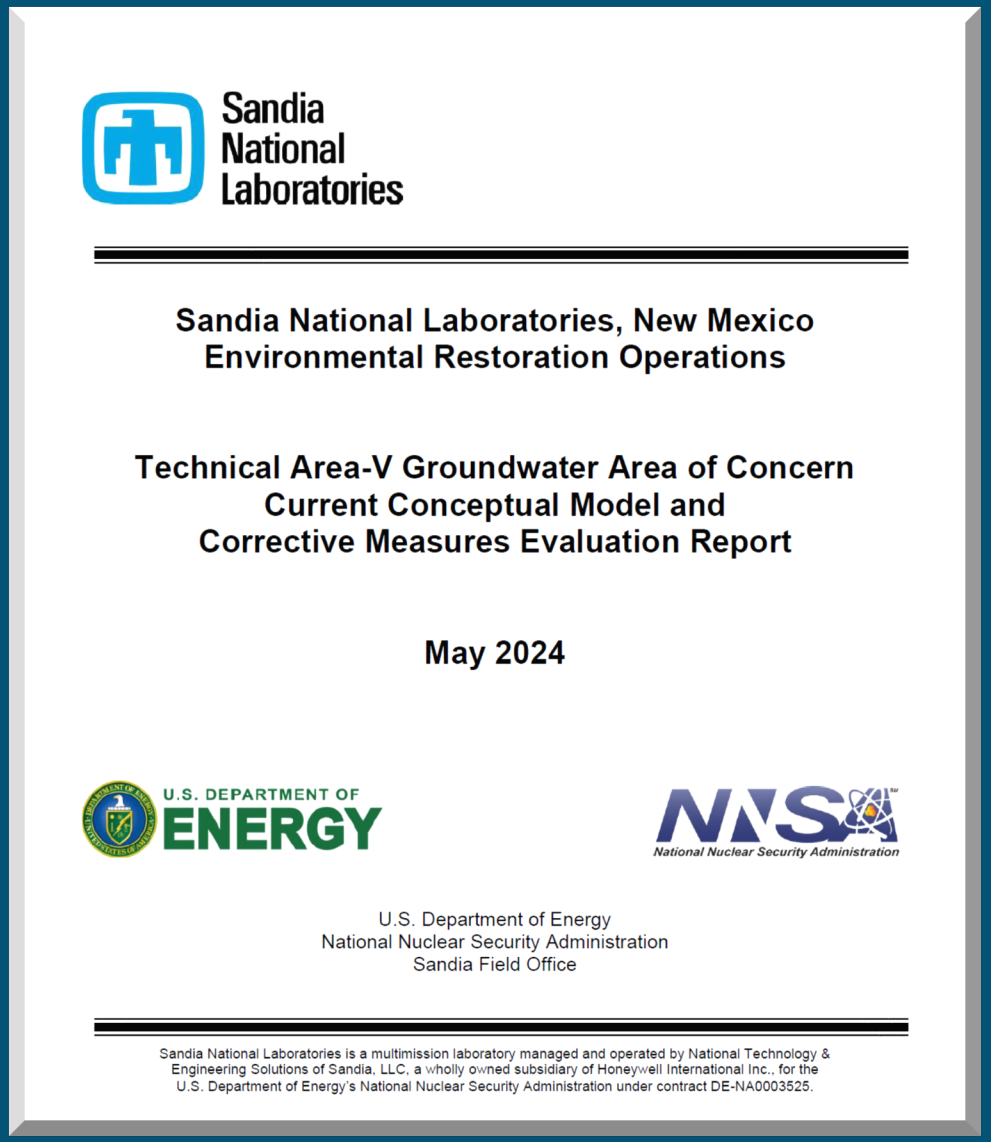
- The groundwater contaminant **nitrate** is derived from septic wastewater discharged from the 1960s to 1992.
  - Nitrate could also be naturally occurring.
- In 2023, the nitrate plume covered approximately 2.7 acres.
- In 2023, the maximum nitrate concentration was 13 mg/L (EPA MCL is 10 mg/L).
- The nitrate plume is **not migrating off site** and is not adversely impacting human health or the environment.
  - mg/L = milligrams per liter

Current Status and Recent Activities

- The TAVG AOC is in the **Corrective Action Process**.

- CCM = current conceptual model
- CME = corrective measures evaluation
- ISB = in-situ bioremediation

Current Status and Recent Activities (continued)



Sandia National Laboratories

Sandia National Laboratories, New Mexico
Environmental Restoration Operations

Technical Area-V Groundwater Area of Concern
Current Conceptual Model and
Corrective Measures Evaluation Report

May 2024

U.S. DEPARTMENT OF ENERGY

National Nuclear Security Administration

U.S. Department of Energy
National Nuclear Security Administration
Sandia Field Office

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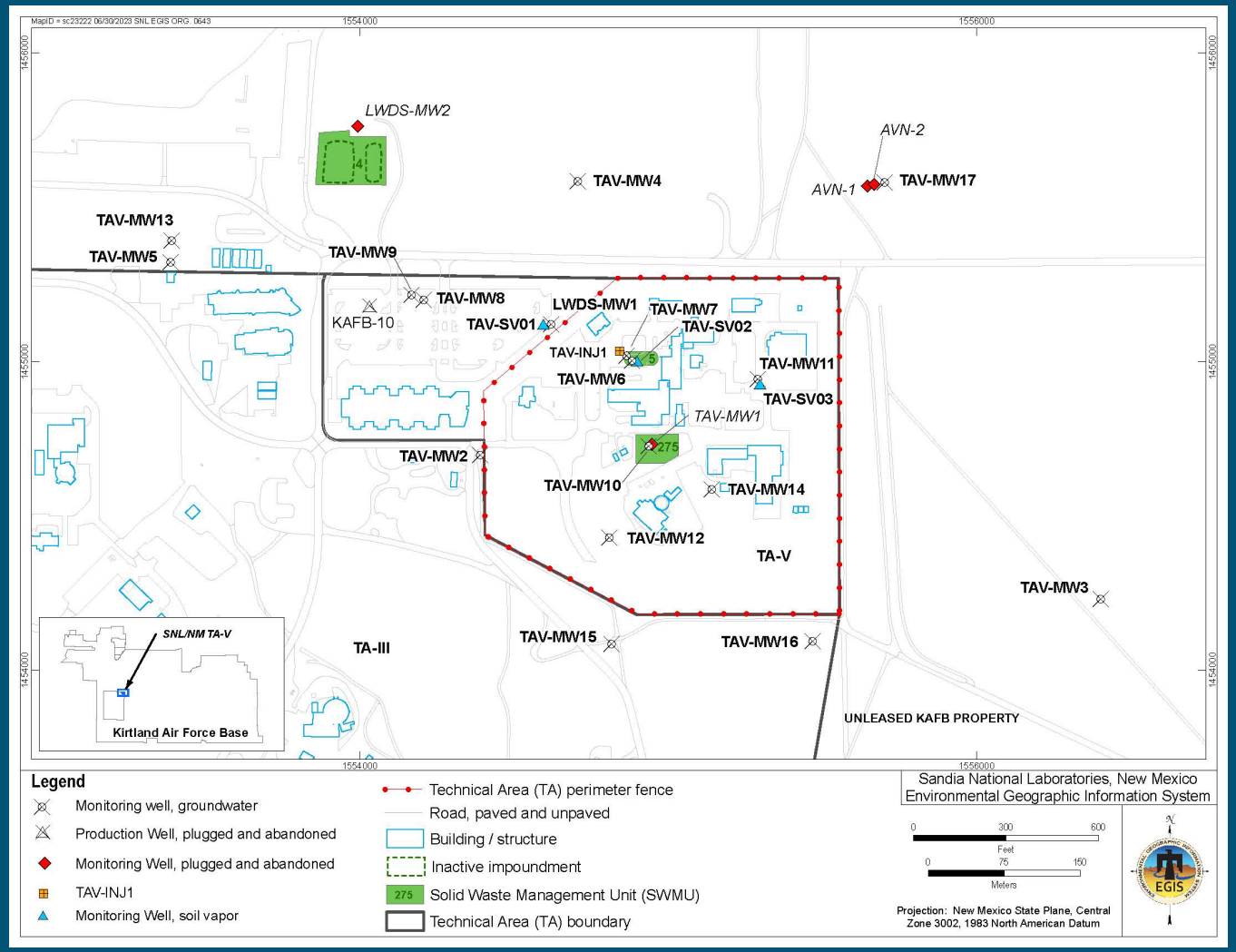
- SNL submitted the **TAVG AOC CCM CME Report** to the NMED HWB in May 2024.
- **NMED will**
  - Select a final remedy for the TAVG AOC,
  - Issue a Statement of Basis for selection of the remedy, and
  - Receive public comment on the remedy.

- NMED = New Mexico Environment Department
- HWB = Hazardous Waste Bureau

Current Status and Recent Activities (continued)



- SNL personnel sampled all 17 active monitoring wells in July and August 2024.
- Sampled for **nitrate, TCE, and waste characterization parameters**.

Current Status and Recent Activities (concluded)

- Injection Well TAV-INJ1
  - The **NMOSE requirement** is that the well "shall be plugged upon completion of permitted use."
  - The NMED HWB approved the decommissioning work plan in March 2023.
  - SNL submitted the Well Plugging Plan of Operations (WD-08) to the NMOSE in June 2024.

    - NMOSE = New Mexico Office of the State Engineer