

Sandia National Laboratories Mixed Waste Landfill Corrective Measures Implementation Report

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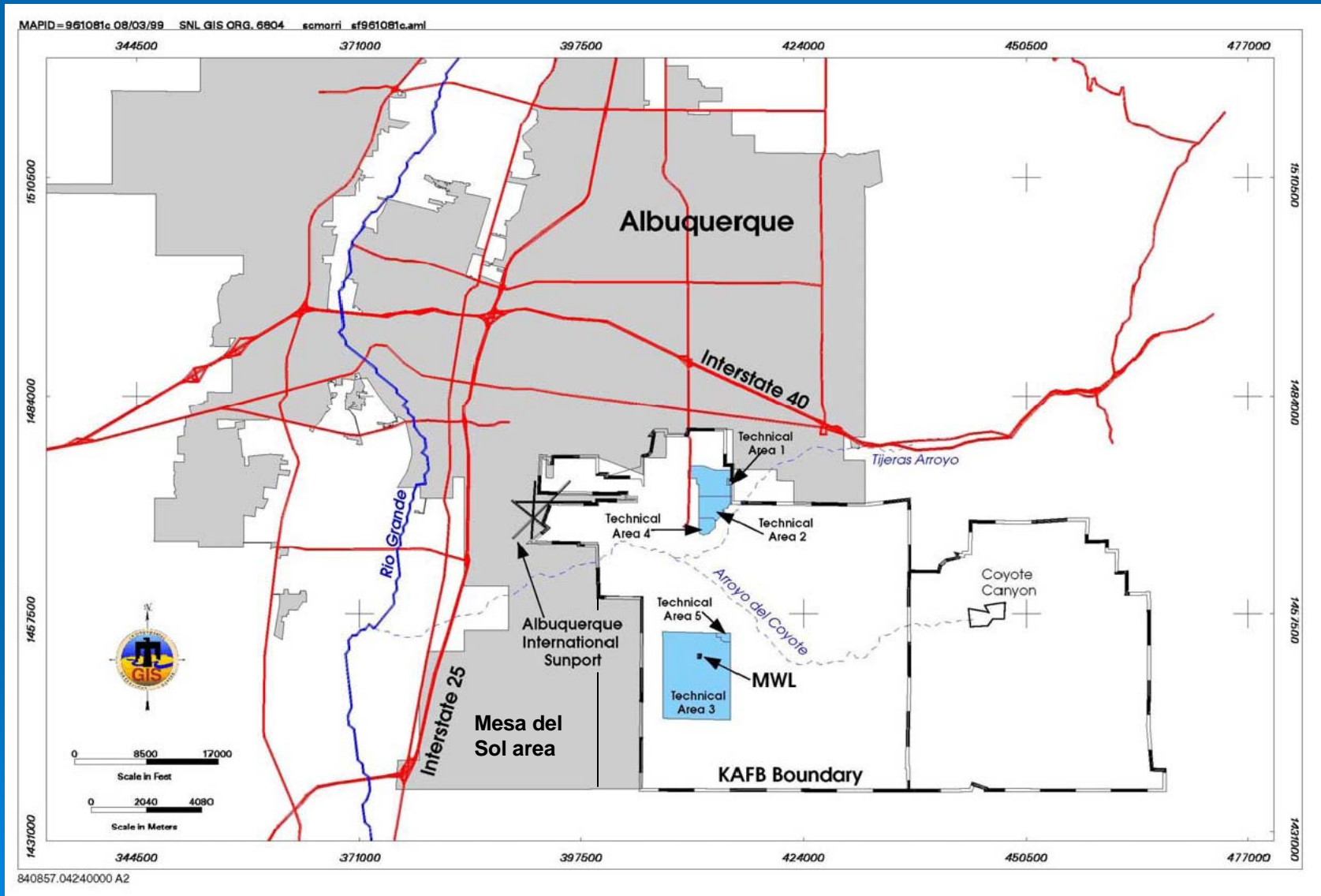
*Cesar Chavez Community Center
December 14, 2010*



Mixed Waste Landfill (MWL)

- Trenches/pits containing mixed waste (both hazardous and radioactive components) and radioactive waste
- 2.6 acres (original footprint, now 4.1 acres with cover)
- Used from 1959-1988
- Located near center TA-III, 5 miles southeast of Sunport and 2.1 miles east of Mesa del Sol
- Groundwater at 470 feet below ground surface
- Tritium and VOCs are the mobile contaminants
- Risk at acceptable levels (current industrial land use)
- Regulated under New Mexico Hazardous Waste Act

Location Map



Purpose of Corrective Measures Implementation Report

- Documents cover construction for Mixed Waste Landfill, including:
 - construction quality control data
 - variances from approved plan
- Provides assurance that approved remedy is in place, has been implemented as designed, and is operational

Background Information

- Public hearing 4 days, December 2-3 and 8-9, 2004
 - Final remedy debated at hearing
- Secretary's Final Order of May 26, 2005
 - Final remedy decision:
 - Vegetative (ET) cover with bio-intrusion barrier
 - Long-term monitoring and maintenance plan
 - Report on remedy and feasibility of excavation every 5 years
 - Prepare fate and transport model
 - Establish monitoring "triggers" for future actions
 - Additional public participation requirements
- Remedy upheld by NM Court of Appeals (December 19, 2007)
- Writ denied by NM Supreme Court (February 26, 2008)

Background Information (Continued)

- Corrective Measures Implementation (CMI) Plan (approved December 22, 2008)
 - ET cover design and construction specifications
 - Fate and transport model (Appendix E of CMI Plan)
 - Monitoring triggers established
- Corrective Measures Implementation (CMI) Report
 - NMED reviewing whether cover construction substantially complies with approved CMI Plan

Public Participation

- NMED accepting public comment on CMI Report
 - Written comments due by **5:00 p.m. MST, January 28, 2011**
 - E-mail comments are OK
 - john.kieling@state.nm.us
 - please reference MWL CMI Report
- NMED considers all written or e-mailed public comments before taking a final action on CMI Report

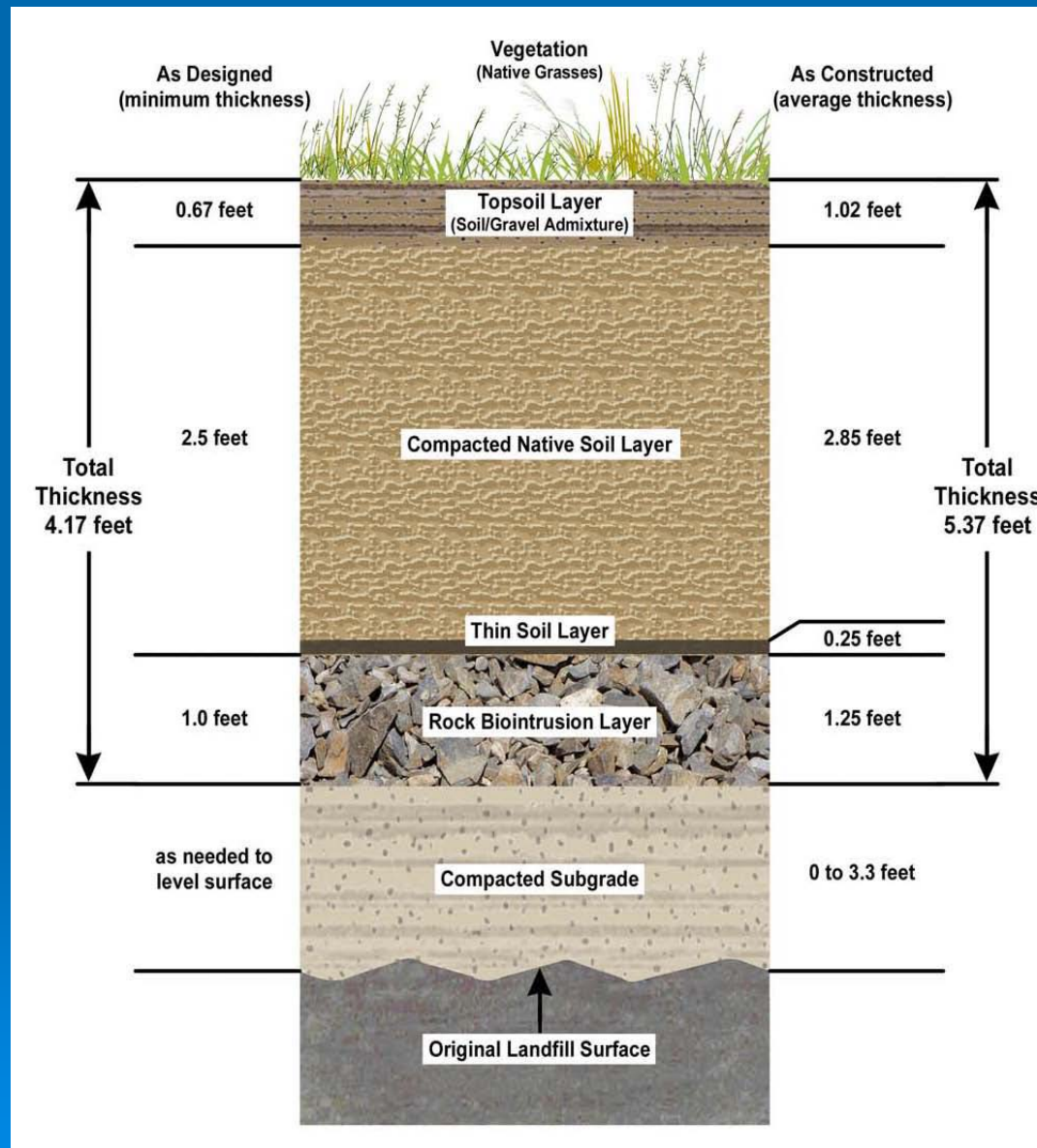
Finding a Copy of the CMI Report to Review and Comment On

- Easiest Way – Go to our web site
 - www.nmenv.state.nm.us/hwb/snlperm.html
- Make arrangements to see report
 - Albuquerque – William Moats (505) 222-9551
 - Santa Fe – Pam Allen (505) 476-6064

Evapotranspiration (ET) Covers

- Constructed of fine-grained soil (but not clay)
- Typically 2-3 ft thick
- Gentle top slope to promote run-off of storm water
- Vegetation (grass) grown on surface
- Stores water that infiltrates into cover for later removal by evaporation and plant transpiration
- Performs well in arid environments, especially where there is little snowfall

MWL Cover Components



Construction Quality Control

- Overseen by QA contractor independent of construction contractor
- 271 field tests (density, moisture)
- 113 laboratory tests (standard Proctor, gradation, hydraulic conductivity)
- Visual inspections

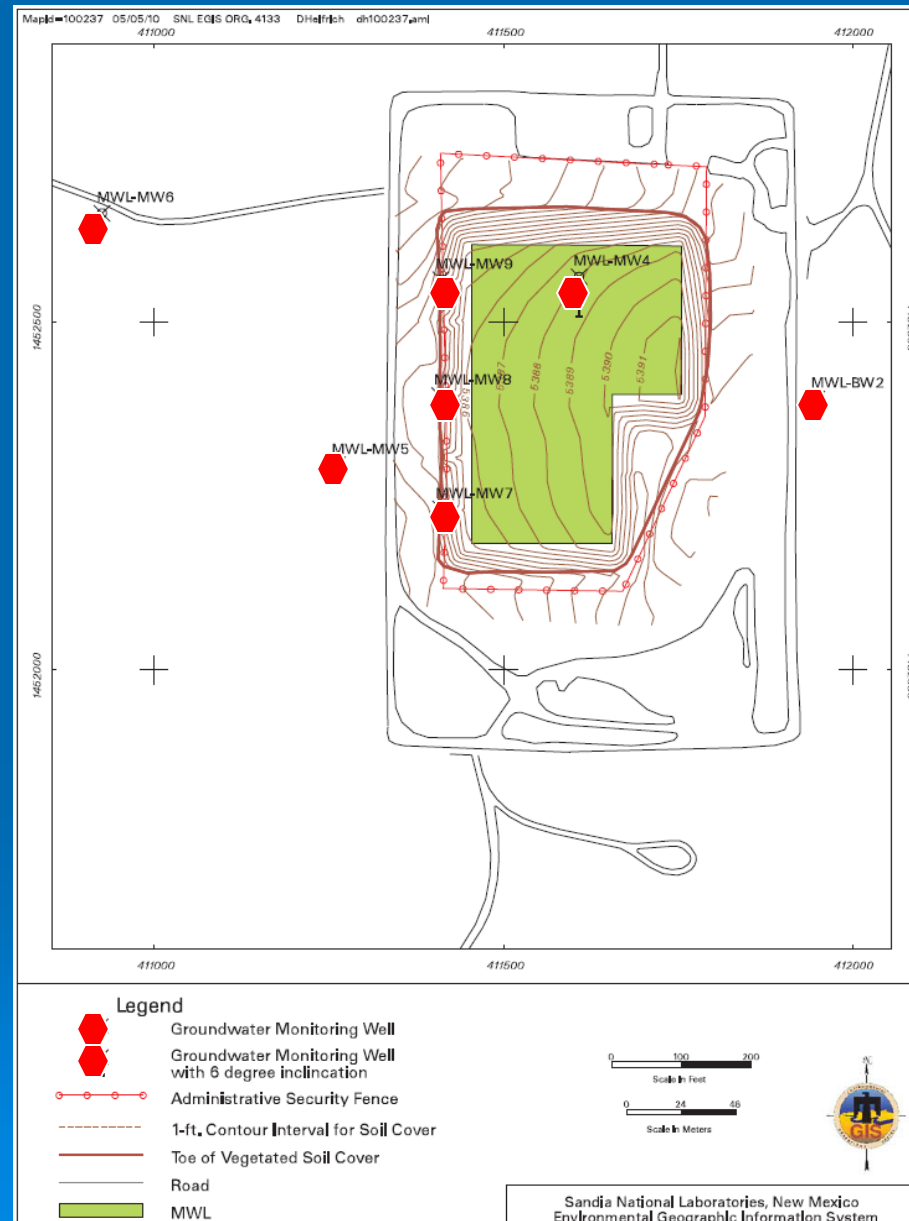
Variations from CMI Plan

- Top and side slopes of subgrade brought to grade with additions to compacted native soil layer
- Thickness increased for bio-intrusion barrier, compacted native soil layer, topsoil layer
- Seeding rate increased
- Supplemental watering, only to establish vegetation
- 3/8" gravel (admixed with topsoil) failed gradation requirement for #4 sieve

What about Long-Term Monitoring and Maintenance?

- The next step
- Long-term monitoring and maintenance (LTMM) to be addressed under a stand-alone plan
- Original LTMM Plan to be revised
- NMED will issue a notice establishing a public comment period for the revised LTMM Plan
- NMED will hold a public informational meeting on the revised LTMM Plan
- 5-year reevaluation of effectiveness of the remedy

Groundwater Monitoring Wells



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