

**CITIZEN ACTION NEW MEXICO SUPPLEMENT TO
NEW MEXICO ENVIRONMENT DEPARTMENT BRIEFING
FOR SANDIA NATIONAL LABORATORIES MIXED WASTE LANDFILL 5-YEAR REPORT
JULY 20, 2020**

I. SUMMARY

Citizen Action New Mexico (“CANM”) and other organizations encourage the New Mexico Environment Department (“NMED”) to issue an order to Sandia National Laboratories’ (“Sandia”) to plan for cleanup of the Mixed Waste Landfill (“dump” or “MWL”) using excavation with offsite disposal. The Cold War legacy dump’s unlined cover, pits and trenches are filled with mixed toxic chemical and radioactive wastes leaking toward Albuquerque’s drinking water aquifer. The MWL does not meet the protective requirements of federal hazardous waste law.

A March 2020 NMED MWL Briefing and five emails were obtained from a CANM public records request.¹ The Briefing misrepresents the Sandia 5-Year Report as solely providing that the current “remedy [of a dirt cover] is protective now and in the future” for “human health and the environment.” NMED’s Briefing omits the 5-Year Report (December 2018) conclusion that excavation and offsite disposal is feasible, the safest and most effective long-term MWL cleanup remedy with disposal pathways for all contaminants.

The public records response shows that NMED has not responded for over a year to the report or public comments requesting NMED action to move forward with MWL cleanup. The NMED has required cleanup of numerous hazardous dumpsites at Sandia in the past. NMED should protect public health and safety by ordering Sandia to begin a Corrective Measures Implementation Plan (“CMIP”) for cleanup of the MWL.

The 2016 NMED Final Order² required Sandia to consider two options for the dump in its 5-Year Report:

- excavation with offsite disposal or
- excavation with onsite disposal in a landfill meeting modern legal standards.³

¹The May 26, 2020 CANM Public Records Request was for the following:

All documents whether drafts or in final form of notes, phone logs, calendars, drafts, telephone messages, time tables, electronic or written by other means related to the NMED evaluation of the Sandia National Laboratories 2018 5-Year Review for the Mixed Waste Landfill;

1. NMED or SNL review/responses to all public comments received;
2. Any records of consultations or documents whether internal to NMED or sent to or received from SNL or other state or federal entities with respect to the MWL 5-Year Review;
3. Records related to assignment of duties of NMED personnel or outside contractors to the above items.

² 2016 Final Order <https://hwbdocuments.env.nm.gov/Sandia%20National%20Labs/2016-02-12%20Final%20Order%20-%20MWL.pdf>

³The 2016 Final Order states in pertinent part (p. 8):

[W]ith this Order, the scope of the five-year review and Feasibility Report is now expanded to require the evaluation of the installation of a RCRA Subtitle C liner system in addition to the evaluation of excavation, removal and disposal of all of the waste in the MWL.

In this paper, Citizen Action is supplementing the May 2020 NMED Overview (“Briefing”)⁴ for the MWL. Citizen Action supports excavation and offsite disposal. Benefits of excavation and removal include:

- Removal of long-term danger to nearby population of Albuquerque from disposal of toxic chemical and radionuclides with half-lives of millions of years from atomic bomb production and testing, nuclear reactor meltdown experiments and military experiments. The wastes will remain toxic for millions of years and require perpetual monitoring and maintenance.
- Compared to installing another onsite regulated landfill, excavation with offsite disposal has a lower cost, less risk to workers and the public, will take less time, utilize a smaller footprint, and decrease the amount of time devoted to regulatory issues.
- The risk of contaminants such as Volatile Organic Compounds reaching groundwater is halted by excavation and disposal offsite.
- Removal allows the MWL site and surrounding land to return to residential or industrial use
- No need for permanent inspection, monitoring and maintenance of cover activities
- Financial burdens for removal falls on the federal government and not the State of New Mexico. Costs are uncertain if DOE/SNL leave the Kirtland AFB site.
- Removal of a national security hazard since the MWL is located on a military base with nuclear weapons, 20,000+ personnel, potential terrorist target, aircraft take-offs and landings with fuel loads and live bombs or dropping of bombs like occurred at Mesa del Sol.
- The Fate and Transport analysis fails to consider that the dump is already leaking toxic solvents PCE and TCE to Albuquerque’s drinking water aquifer. Corrective action is necessary to halt the flow of contamination. Would probably require partial or complete cover removal depending on contamination.
- Removes risk of potential accidents such as the metallic sodium explosions that occurred at Beatty, NV in 2015 that sent a radioactive cloud over four states; removes presence of other incompatible, reactive chemicals and *spent fuel elements*.
- Removal reduces risk from rupture of the Tijeras sewer line affecting the MWL and its contents.
- No specific emergency plan exists for dump accidents.
- Halts wastes continuing to leak from deteriorating containment such as cardboard boxes, plastic bags, wooden crates, rusting steel drums that can lead to cracking and dirt cover subsidence.

The May 2020 NMED Briefing for management did not consider factors concerning the dump that are raised by:

1. The May 26, 2005 Final Order and the 2016 Final Order,
2. Conclusions of the Sandia 5-Year Report⁵ confirming the feasibility and preferred option of excavation and offsite disposal,
3. Federal hazardous waste law of the Resource Conservation and Recovery Act (“RCRA”).
4. History of the MWL and types of toxic chemical and radioactive waste,
5. Defective groundwater monitoring wells (EPA Hotline Report).

⁴ See Briefing Attachment A

⁵ Sandia National Laboratories 12/14/2018 5-Year Report
<https://hwbdocuments.env.nm.gov/Sandia%20National%20Labs/2018-12-14%20MWL%205%20Year%20Report.pdf>

6. The dirt cover does not meet RCRA requirements (2006 TechLaw, Inc. report, 2016 Final Order).
7. Public and agency comments. The dump has been an official concern for the US Environmental Protection Agency, the New Mexico Environment Department, the City of Albuquerque Water Protection Advisory Board, independent technical experts and the public requests for cleanup for 20 years by attending hearings, filing thousands of letters and comments, presenting expert witnesses and lawsuits.

The 2015 expert testimony⁶ of Dr. Michael Barcelona, Ph.D., stated:

“The [MWL] cover will not last sufficient time considering the persistence for millennia of the Mixed Waste Landfill contents. The use of a dirt cover without a liner beneath the cover and the waste is completely worthless. [R]elease can be expected to increase over time as containers break down, making it necessary to consider timely excavation of the wastes. Dirt covers can increase the transport of some chlorinated solvents, perchloroethylene, trichloroethylene, PCBs, to the groundwater. Radioactive wastes such as plutonium can travel to the groundwater in colloidal form, that means suspended, not dissolved, but suspended in the fluid.”

Citizen Action sees no reason why DOE/Sandia should not begin developing a CMIP to submit to NMED. However, Sandia needs an order from NMED to proceed. The current 678 page 5-Year Report contains descriptions from 2003 and 2018 for how excavation and offsite removal would be safely accomplished for workers and the public. Leaving the dump in place cannot be considered a final remedy given that the 2005 Final Order requires Sandia to consider the feasibility of excavation every five years, monitor, maintain the cover and respond to public comments. Several of the radionuclides have half-lives from hundreds to millions of years. Installing another onsite landfill would continue the need for possible removal and still require continuing inspections, monitoring and maintenance.

Citizen Action requests that NMED issue an Order to DOE/Sandia to begin a Corrective Measures Implementation Plan (“CMIP”) for excavation with offsite disposal. The MWL does not meet RCRA Subtitle C requirements for its dirt cover.⁷ DOE/Sandia supports the offsite alternative for several reasons discussed below.

II. THE PUBLIC RECORDS REQUEST

Citizen Action sent a May 26, 2020 public records request⁸ to find out 1) what NMED is considering in light of Sandia’s statement that NMED approval of a Corrective Measures implementation Plan (“CMIP”) would start cleanup of the MWL, and 2) what response there might be to the hundreds of public comments/letters/petitions requesting such action.

⁶July 10, 2015 Proposed Permit Modification Corrective Action Complete Transcript pp. 878-79

⁷See 40 CFR 264.228 Closure and Post Closure Care and liner requirements 264.221

⁸ See fn. 1

The NMED response to CANM for its May 26, 2020 public records request include an 11 page March 2020 power point *SNL Mixed Waste Landfill Overview* (“Briefing”) and five emails. As of December 2018 when the 5-Year Report was submitted, Sandia estimated it could begin the CMIP planning process by 6/30/2020. (Pg. D 3-11). There are no emails or other documents showing that NMED made efforts during the 1½ year period from December 2018 to May 2020 to consider the DOE/Sandia recommendations of excavation and offsite disposal.⁹ Understandably, there have been NMED concerns for the Covid-19 situation, budget cuts, new staffing with loss of institutional memory about the MWL, and opposition to the HOLTEC licensing.

The 2005 Final Order requires repeated 5-year Reports from Sandia regarding the feasibility of excavation and continued consideration of the effectiveness of the dirt cover remedy. The 2005 Final Order for the MWL requires that citizens be granted a comment period for each 5-Year Report and that the NMED respond to citizen comments.¹⁰

Citizen Action Comments and hundreds of public comments for the 5-Year Reports submitted in July 2019¹¹ requested that the NMED issue Sandia National Laboratories an Order for a Corrective Implementation Plan to Sandia National Laboratories to excavate and dispose off-site the mixed radioactive and hazardous waste in the Mixed Waste Landfill (“dump”). Sandia states (p. 5-13):

The regulatory authority for modification of the Resource Conservation and Recovery Act [RCRA] Permit would be the NMED, and the EPA would be the regulatory authority for the project-specific TSCA Permit Application.¹²

NMED has not responded to public comments for the December 2018 Sandia 5-Year Report.

On February 12, 2020, CANM requested a meeting with NMED Secretary James Kenney to discuss the 5-Year Report. No meeting was held with Citizen Action and other groups. On February 28, 2020 after Citizen Action’s request for a meeting, NMED Kevin Pierard, Chief Hazardous Waste Bureau asked David Cobrain for a briefing. The briefing was arranged for March 19, 2020 by Naomi Davidson Environmental Scientist. The public comment period ended on July 23, 2019. NMED has

⁹ Section 1.6 “The NMED is responsible for review and approval of this report, and providing a process whereby members of the public may comment on the report and its conclusions. The NMED is also responsible for responding to public comments submitted during the specified public comment period.”

¹⁰ The 2005 Final Order schedule was not followed by the NMED. No report occurred in 2010 or 2015. Citizen Action brought an unsuccessful lawsuit seeking the report in 2015 but submission of the Report was delayed until January 2019.

¹¹ Citizen Action made a public records request on 1/28/2019 to obtain the 5-Year Report. The comment period for the 5-Year Report opened May 24, 2019 for 60 days. <https://www.env.nm.gov/wp-content/uploads/sites/12/2017/05/MWL-5-Yr-Report-Public-Notice-2019-5-24-English.pdf>

¹² No effort has been made for the MWL to comply with the Toxic Substances and Control Act (TSCA) regulations for the Polychlorinated Biphenyl (“PCB”) disposal or remediation. PCB was disposed of in a quantity of 251 cu yd. (50,827 gallons) in the MWL. Corrective Measures Study, Appendix H, Table J- and J-2 (November 2002) https://www.env.nm.gov/wp-content/uploads/sites/12/2019/10/App_H_Eval_of_Near-Term_Excavation.pdf. This amount of PCB could contaminate trillions of gallons of water alone. No effort has been made to comply with the Toxic Substances and Control Act (TSCA) regulations for the PCB disposal or remediation.

not provided response to public comments.¹³NMED has had the SNL 5-Year Report since December 2018 since which time it could have at least preliminarily considered the Report, even issued an order for a CMIP.

If the NMED does not issue an Order to proceed with excavation and offsite disposal, CANM requests that 1) the NMED provide its reasons for why it should not issue such an Order and 2) provide reasonably timely written responses to the public comments that were provided to NMED during the comment period for the 5-Year Report of the MWL.

NMED has known since at least the 2016 Final Order and well before that the MWL remains in non-compliance with RCRA and that the dirt cover remedy cannot be considered complete. The February 12, 2016 NMED Final Order (Flynn) required: “1) evaluation of excavation, removal and appropriate disposal of all waste in the MWL and; 2) construction and installation of a modern landfill, which shall at a minimum include a RCRA Subtitle C liner system, an ET cover with bio-intrusion barrier, and appropriate post-closure controls and monitoring.”¹⁴
The remedy of a dirt cover cannot remain effective because the dump lacks a RCRA liner.

The NMED Secretary’s 2016 Final Order specifies that the 2005 remedy may not be “appropriate”:

The MWL is located just outside of New Mexico’s largest metropolitan area and does not meet modern environmental standards for disposing of hazardous waste. Specifically, even though the MWL is referred to as a landfill, it does not utilize a RCRA Subtitle C liner system (a double composite liner with leak detection). Instead, the waste at the MWL is buried in unlined pits. ... [T]he final remedy selected in 2005 (ET cover with bio-intrusion barrier) may not be the most appropriate long-term solution for this site. Absent complete excavation and off-site disposal, installation of a RCRA¹⁵ Subtitle C liner system would be the most protective, modern design for a mixed waste landfill.

At the 2015 Corrective Action Complete (“CAC”) public hearing, CANM presented substantial evidence that:

- The dump had a worthless dirt cover without liners and leachate collection;
- In 2007 NMED brought a lawsuit to keep Citizen Action from obtaining the 2006 TechLaw, Inc. report about the unsuitability of the MWL dirt cover and the Fate and transport Model for long-term protection before NMED installed that remedy (See pp. 13-14 infra);
- A history of defective groundwater monitoring; Collusion existed between NMED and the USEPA to wrongfully hide information under claims of “national security” that the dump did

¹³**The 2005 Final Order requires the evaluation of the feasibility of excavation every five years.** p. 5 para 5. “Sandia shall prepare a report every 5 years, re-evaluating the feasibility of excavation and analyzing the continued effectiveness of the selected remedy.”

¹⁴ 2016 Final Order, p. 9. <https://hwbdocuments.env.nm.gov/Sandia%20National%20Labs/2016-02-12%20Final%20Order%20-%20MWL.pdf>

¹⁵Resource Conservation and Recovery Act (“RCRA”) 42 U.S.C. § 6901et seq. Re hazardous waste see: <https://www.epa.gov/hw/defining-hazardous-waste-listed-characteristic-and-mixed-radiological-wastes#mixed>

not have groundwater monitoring wells installed that furnish reliable, accurate data to justify selection of the 2005 dirt cover remedy. (See pp. 10-12 infra)

- Volatile Organic Compounds (“VOCs”) are being released from MWL pits and trenches;
- Illegal spent fuel rod disposal from nuclear reactor meltdown testing and nuclear rocket fuel safety program (High-level Waste); Seventy-one (71) cu yds. of TRU waste was disposed of that requires deep geological disposal. Appendix H Table J-1 (See fn 12).
- Disposal of explosive metallic sodium. Explosions occurred at a similar dump at Beatty, NV in October 2015 after the CAC hearing concluded as CANM warns could happen for the MWL;
- Heavy metals disposal such as Mercury, Lead, Plutonium, Uranium, incompatible chemical wastes and unknown chemical disposal in the Classified section;
- Two uranium fires;
- 270,000 gallons of reactor waste water disposed in trenches;

III. THE NMED BRIEFING MISREPRESENTS THE 5-YEAR REPORT AND IGNORES STAKEHOLDER CONCERNS

The March 2020 NMED Briefing misrepresents the 5-Year Report as solely providing that the current “remedy [of a dirt cover] is protective now and in the future” for “human health and the environment.” Indeed, that is contrary to statements in the 2016 Final Order and the 5-Year Report. This statement also ignores that the MWL is a very dangerous dump next to Albuquerque’s urban setting on a military base with more than 20,000 employees, their families, schools, hospitals, airport and major transportation routes. The Briefing omits that according to the 2016 NMED Final Order, the MWL dump does not meet RCRA Subtitle C requirements for having a liner system and does not have a qualified RCRA “cap.” Clearly, the Briefing requires revision and inclusion of stakeholders concerns.

Contrary to the NMED Briefing, Sandia’s 5-Year Report concludes that:

- excavation and offsite disposal is safe,
- cost effective and
- There are disposal pathways for all of the hazardous and radioactive chemicals.
- The footprint requirements for any staging of materials would be considerably smaller using the offsite disposal option.
- Exceedance of regulatory standards for worker safety is unlikely
- Concern for groundwater contamination from excavation considered unlikely
- MWL is not “too hot” to excavate

The NMED Briefing omits the important conclusion of the 5-Year Report that complete excavation with off-site disposal is a feasible, safe, and cost effective alternative with disposal pathways for all of the dump’s toxic chemicals and long-lived radioactive wastes. If a new landfill were to be installed at Sandia, disposing of the chemical and radioactive wastes would still require a regulated landfill with monitoring, a later second excavation and off-site removal. NMED should require DOE/Sandia to identify the offsite disposal locations.

The 5-Year Report states that the preferred alternative is excavation with offsite disposal as a remedy rather than the onsite disposal alternative(ES p. iii):

The 2018 excavation feasibility evaluation updates the 2003 evaluation and includes both the offsite and onsite disposal alternatives. Advances in technology since 2003 have not fundamentally changed the excavation and waste management approach. However, radiological decay, use of a more conventional excavation approach, and a streamlined waste management approach represent significant changes. In addition, ***long-term onsite storage of excavated waste was eliminated for the 2018 evaluation because there are current disposal pathways for all anticipated waste streams.*** (Emphasis supplied).

Section 5.4 -- Comparison of Offsite and Onsite Disposal Alternatives

For this Five-Year Report, complete excavation with disposal in an onsite engineered cell with a RCRA Subtitle C liner was evaluated along with offsite disposal. The fundamental technical approach and requirements for both disposal alternatives are very similar. Onsite disposal is a viable alternative, with the primary benefit of reduction in transportation risk. However, with this alternative comes the long-term costs and liability of maintaining a permitted disposal facility. **Given the current availability of offsite disposal options, this would be the preferred disposal alternative.** As the evaluation of onsite disposal was specific to this first Five-Year Report, subsequent Five-Year Reports will not evaluate onsite disposal. (Emphasis supplied).

The 5-Year Report Section 5.3.6 Summary states the criteria used to evaluate offsite disposal with the onsite disposal alternative as follows:

“A reevaluation of the complete excavation alternative with offsite disposal was conducted in accordance with the NMED Final Orders (NMED May 2005 and February 2016) and MWL LTMMMP (SNL/NM March 2012) requirements. The 2018 evaluation presents updates to the 2003 evaluation¹⁶, including excavation and waste management technologies and approaches, waste disposal pathways, site worker risk, and cost. In addition, the 2018 evaluation includes the onsite disposal alternative in an engineered cell with a RCRA Subtitle C liner system and an ET cover. The evaluation followed the same approach as presented in the 2003 MWL CMS Final Report (SNL/NM May 2003) and is based on the following criteria:

- Long-term reliability and effectiveness
- Reduction of toxicity, mobility, or volume of wastes
- Short-term effectiveness
- Implementability
- Cost”

One internal NMED email¹⁷ in the public records response to CANM opines, without any evidentiary basis, that the writer thinks “the MWL is too hot to excavate at this point.” *Sandia’s conclusion is otherwise. The expiration of several half-lives has occurred for radionuclides such as Tritium and Cobalt-60 so that the excavation could proceed (5.3.3.4).*

“Consistent with the 2003 evaluation, physical risks associated with transportation and remediation construction far exceed the chemical or radionuclide exposure risk associated

¹⁶ See Appendix H – Alternate V-b Complete Excavation with Off-site Disposal https://www.env.nm.gov/wp-content/uploads/sites/12/2019/10/App_H_Eval_of_Near-Term_Excavation.pdf

¹⁷ See ATTACHMENT B EMAILS

with excavation and waste management activities. The substantial decay of some radionuclides, in particular cobalt-60 and tritium, has decreased the overall site worker radiological exposure risk.”

Additionally, there is access to robotic equipment. (5.3.4.4):

“The conveyor system in the Debris Segregation & Management Sprung™ would be equipped with radiation sensors, an overhead crane, and robotic manipulators to allow for remote segregation of higher hazard items.”

The 2016 Final Order concern for worker risk from excavation is mitigated. There are available means for decreasing any occupational hazards due to excavation of the site through the use of both conventional and remote controlled robotic equipment. Sandia states (p. 5-6):

Risk to site workers would be a primary concern for the multi-year duration of excavation and waste management activities. In addition to performing activities in ventilated Sprungs™, worker risk mitigations would include detailed planning, use of Level B personal protective equipment (PPE) with supplied-air full-face respirators, real time monitoring with alarms and action levels, use of distance and shielding, and limiting time of exposure to radiation.

Section 5.3.3:

The MWL inventory would be used to develop trench/pit-specific plans and waste profiles to minimize waste handling and processing steps, simplify the waste management process, and reduce site worker risk. Most work duties would be performed in Level B PPE with supplied air full-face respirators or in supplied-air, sealed equipment cabs. Excavation and waste management activities would be performed in ventilated Sprungs™ and include dust control measures. All vented air from the Sprung™ structures would be filtered through high efficiency particulate air (HEPA) filters. This approach would help mitigate the hazards from airborne particulates, but would not be effective for removal of VOCs and tritium vapor. Based upon the 2003 evaluation, these inhalation hazards were not a major health and safety concern, as VOCs occur at very low concentrations and the inhalation hazard for tritium was not a significant risk concern.

Section 5.3.3.1:

The Future Excavation radiological risk screening results provide a conservative estimate of potential site worker risk for the purpose of this evaluation and demonstrate that exceedance of the applicable regulatory limit in 10 CFR 835 “Occupational Radiation Protection” of 5,000 mrem/year per worker is unlikely. Adherence to DOE and SNL/NM dose guidelines is achievable following ALARA principles using sound health physics-based approaches (i.e., hazard mitigation planning and controls) as previously described in Section 5.3.3.

Section 5.3.4.3

The Classified Area approach integrates the use of remote operations and specialized equipment to mitigate site worker risk. Whenever possible, intact shielding would be left surrounding radiation sources and higher-activity items. Special shielding, standard waste containers, and remote-handling equipment would be used to safely manage and process smaller items with radiation or other hazards.

Section 5.3.4.4

[T]he waste characterization process would begin prior to excavation during the Permitting & Planning phase. Available information for each trench and pit would be evaluated to determine waste profiles and streamline the waste characterization process. This approach would be designed to minimize, to the extent possible, site worker risk throughout the waste management process while meeting acceptance criteria for disposal.

The 2016 Final Order (p. 7) has the concern that excavation would cause further contamination of the groundwater. That is considered unlikely by Sandia (at Section ES iii):

The updated, simplistic model that conservatively maximizes transport to groundwater predicts VOC soil-vapor concentrations will continue to decrease over time and are unlikely to impact groundwater.

A more thorough Briefing analysis of the 5-Year Report would consider the important factors for public concerns, the history of the dump, leakage of toxic contents, regulatory requirements, benefits of cleanup of the dump and changes to the assumptions in the 2016 Final Order. Sandia now states (5-Year Report Section 5.4) that the preferred alternative is excavation with offsite disposal as a remedy rather than the onsite disposal alternative. This is the same alternative that the public argued for in public hearings in December 2004. Instead:

- MWL is a non-RCRA dump without liners below the pits and trenches and the dirt cover.
- NMED lawsuit against CANM to suppress evidence against the flawed dirt cover remedy, lack of transparency (2006 TechLaw, Inc.)
- Leaving dangerous waste in place; the unknown contents of the MWL, especially in the Classified area (WERC, Nuttall, DOE/Sandia Memoranda) including presence of high-level radioactive waste, TRU waste, explosive metallic sodium and other incompatible chemicals.
- MWL should have been classified as a “regulated unit” with a closure and post-closure plan since it received RCRA hazardous waste after July 26, 1982 (June 11, 1998 NMED Dinwiddie letter to DOE Zamorski – “demonstrate equivalency with post-closure care requirements”). <https://www.radfreenm.org/index.php/sandia-national-laboratories-mixed-waste-landfill/mwl-regulatory/80-affidavit-robert-dinwiddie-in-support-of-enforcing-mwl-5-year-review>
- Defective groundwater monitoring wells and unreliable data (Moats and Winn, NODs, Gilkeson, see fn 18)
- Potential for accidents including explosions such as occurred at Beatty, NV from metallic sodium. The failure of SNL to furnish information regarding the sodium/uranium loading facility has been brought to NMED’s attention but with no agency pursuit of the information.
- Fate and Transport Modeling does not consider leakage and accidents,
- Leaking to Albuquerque’s aquifer is now occurring with no corrective action.
- The site and its surroundings will remain unusable for industrial or residential use.

The Briefing does not describe the toxicity of the dump’s wastes. The Department of Energy’s unlined dump contains hundreds of long-lived radionuclides, solvents, and heavy metals in unlined pits and trenches leaking to Albuquerque’s drinking water aquifer. These are the most toxic types of waste on the planet from nuclear weapons production, nuclear reactor meltdown testing, atomic bomb testing, nuclear rocket testing and the military: Examples of waste disposal from more than

5000 Radioactive and Toxic Material disposal sheets include: spent fuel ends, fuel rods, 119 drums of Plutonium and Americium contaminated waste, TRU waste, large quantities of multiple fission products (MFP), often along with beryllium, lithium, lead, liquid mercury (10 gallon metal drum 7 June 1971 buried in Pit 25), nickel-63, metallic sodium, Lead Azide and Lithium (explosives), Plutonium-238, -239, Americium 241, hundreds of tons of Depleted Uranium-238, Uranium 235 (2 September 1971- 85 kg buried in Trench 25), Thorium, Cesium-137, Strontium-90, Iodine-131, Tantalum, Vanadium isotope, Gold-198, cadmium, tritium in liquid and solid form, barrels and containers of unknown quantities of toxic chemicals including chlorinated solvents such as PCB, PCE, TCE, toluene, organic resins.

Chlorinated solvents, such as PCE and TCE, are very close to or already entering Albuquerque's drinking water aquifer.

IV. THE NMED BRIEFING CONTINUES TO IGNORE RECORDS ABOUT THE DEFECTIVE GROUNDWATER MONITORING WELL DATA, THE INEFFECTIVE REMEDY OF A DIRT COVER AND STAKEHOLDER MEETINGS THAT VIOLATE ADMINISTRATIVE DUE PROCESS

USEPA, NMED and DOE/Sandia have a history of knowingly hiding and omitting documents, and decision-making based on materially false and misleading data and omissions.

DEFECTIVE GROUNDWATER MONITORING WELL DATA

It is important to recognize that the MWL groundwater monitoring well data did not support the selection of the 2005 remedy of the dirt cover.¹⁸¹⁹The Long-Term Monitoring and Maintenance Plan ("LTMP") was also approved based on information from defective groundwater monitoring wells. NMED Notices of Deficiency²⁰ showed that DOE, Sandia, and NMED knew all along that the groundwater monitoring network of seven groundwater monitoring wells installed beginning in 1989 did not supply reliable, representative data to support installation of the dirt cover as a remedy made by the 2005 Final Order. Yet the false and misleading groundwater well monitoring data was submitted at all permitting proceedings to the present to continue the remedy of the dirt cover that is not RCRA qualified. Such presentation of false and misleading data constitutes clear violation of RCRA. (42 U.S.C. 6928(d) (3))

In May 2007 CANM made a complaint about the defective MWL groundwater monitoring network to the USEPA. An April 14, 2010 EPA Office of Inspector General Hotline Report identified EPA staff concerns for defective groundwater monitoring that the EPA Region 6 management and NMED colluded to hide from Citizen Action and the public. The concerns were hidden in an EPA technical Oversight Review. <https://www.epa.gov/sites/production/files/201510/documents/20100414->

¹⁸*Defective Groundwater Protection Practices at the Sandia National Laboratories' Mixed Waste Landfill – The Sandia MWL Dump*, (Version January 22, 2011) See Appendix A 1998 Notice of Deficiency and Appendix B Moats and Winn Report. - https://www.radfree.nm.gov/old_web/pages/GroundWater.htm

¹⁹ Affidavit of Registered Geologist Robert Gilkeson in Support of Enforcing the 5-Year Review (2015) <https://www.radfree.nm.gov/index.php/recent-updates/8-mixed-waste-landfill/78-sandia-haz-waste-hearing>

²⁰ Ibid. fn18 and fn19

[10-p-0100.pdf](#)²¹EPA Region 6 lied to CANM that no such technical report existed. However, NMED Will Moats received a draft copy of the EPA Oversight Review in 2007 attached to an email from EPA Richard Maher²² that described the defective groundwater monitoring wells at the MWL. Mr. Moats never placed the oversight document in the administrative record for the public to see even though he knew the document described defects found in his earlier Notices of Deficiencies²³ and CANM's complaint.²⁴

According to the EPA Inspector General, NMED made an agreement with the technical staff at EPA Region 6 to not document conversations between NMED and EPA Region 6 regarding the MWL dump monitoring well network. The agreement was made so that Citizen Action could not obtain documentation regarding the discussions. Concerns in the EPA Region 6 Oversight Report for the groundwater monitoring well network were orally conveyed to NMED so that Citizen Action could not see the Oversight Report and know the EPA concerns.

(<http://www.epa.gov/oig/reports/2010/20100414-10-P-0100.pdf>, at p.3). The EPA Hotline Report stated (p. 4-5):

[T]he Project Engineer for Sandia intentionally did not document concerns with NMED's management of the MWL monitoring wells specifically to withhold the information from the public.

... In five cases, EPA rescinded its recommendations with regard to the MWL monitoring wells in favor of NMED's proposed plan. Although the Region told us the issues were resolved orally (meetings, conference calls, and individual phone calls), the Region was unable to provide any documentation to support or document the rationale for these compromises. We found that one Oversight Review team member felt the team was pushed to agree with NMED's position regarding the MWL monitoring wells.

Thus, EPA and NMED colluded to prevent public participation and to withhold relevant facts from the public during the RCRA process for corrective measures. Withholding relevant facts and reports

²¹The EPA OIG 2010 Hotline Report identified the lack of documentation for the Region 6 conclusion about the MWL groundwater monitoring wells and stated:

Specifically, Region 6 staff (1) took inappropriate steps to keep the details of the MWL monitoring wells assessment from the public, (2) decided not to provide documentation or sometimes not to document their concerns about the MWL monitoring wells, (3) provided a letter to CANM that did not note the specific details of the assessment, or (4) improperly placed a national security marking (Confidential) on the assessment. The Region's actions are a violation of EPA's Public Involvement Policy and EPA's Records Management Policy.

²² See Attachment C email of EPA Richard Maher to NMED Will Moats Draft MWL groundwater monitoring wells per citizen request

²³ See Fn 18.

²⁴The misrepresentation or omission of any relevant facts *at any time* can be grounds for the termination, modification, revocation or reissuance of a RCRA permit.) (40 CFR §§ 270.41-270.43, 270.43(2).

allowed NMED and DOE/Sandia to proceed with constructing the dirt cover without the opposition from an informed public with full access to the facts.²⁵

Citizen Action again sued (August 8, 2011) EPA Region 6 and the EPA Inspector General to obtain the EPA Region 6 Oversight Review wrongly labelled "CONFIDENTIAL." The Oversight Review and hundreds of other documents contained the EPA staff concerns that NMED and the USEPA hid from the public about the defective MWL groundwater monitoring wells and unreliable data. EPA Region 6 staff concerns fundamentally echoed CANM concerns.

Finally in late 2012, as result of the second FOIA lawsuit, Citizen Action obtained some 20 different versions of the Region 6 EPA Oversight Review, five years after the initial 2007 complaint about the defective ground water monitoring well network at the MWL.

The EPA Inspector General Auditors documented interviews of Region 6 technical staff as part of the Oversight Review cited in the Hotline Report indicated that the team's initial analysis of the MWL groundwater monitoring network would not have supported the "solution" [of a dirt cover]. According to the Region 6 technical staff person, as the Region 6 drafts reviews were rewritten, NMED pushed "extremely hard" on EPA Region 6 not to question the past results of groundwater monitoring and not to review the decision for the dirt cover "solution" of leaving hazardous wastes in place at the MWL. Over 20 drafts of the Region 6 Oversight Review were written to make changes that would make it appear that groundwater monitoring and decision making for the MWL had been properly made by NMED. The Oversight Report and the EPA Auditor reviews were not obtained until after Citizen Action filed a FOIA lawsuit.

The 12/12/2007 EPA Region 6 Program Oversight Review 12 page letter stamped "Confidential" contained significant technical paragraphs that were deleted from the three page 12/13/2007 letter that was sent to Citizen Action. One deleted paragraph stated:

The decision to cover the MWL was made to reduce the potential for erosion, water infiltration, and animal intrusion; it is not 'Final Closure' with a permanent RCRA 'cap.' ... The potential exists for future excavation if deemed necessary.

The 2005 Final Order requires that

[T]he report [5-Year Report] shall detail all efforts to ensure any future releases or movement of contaminants are detected and addressed well before any effect on groundwater or increased risk to public health or the environment.

²⁵The incorrect information has not been corrected. (40 CFR 270.30 (l)(11) and 20.4.1.900 NMAC -- Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information. Also, 270.41-270.43, 270.43(2) -- The permittee's failure in the application or during the permit issuance process to disclose fully all relevant facts, or the permittee's misrepresentation of any relevant facts at any time).

Evidence at the 2015 Corrective Action Complete hearing showed that volatile organic solvents leaked from the dump to at least within 50 ft. of groundwater beneath the dump. No corrective action has been taken to halt the escape of contaminants from the unlined pits and trenches.

The April 20, 2005 Final Order states in pertinent part (p. 5, ¶ 5):

NMED shall provide a process whereby members of the public may comment on the report and its conclusions, and shall respond to those comments in its final approval of the report.

NMED still conceals the April 2010 EPA Hotline Report by not placing it in the administrative record for the MWL as has been done for other MWL legal decisions. (42 U.S.C.

6928(d)(4)). Obviously, when the facts are hidden from the public there can be no meaningful opportunity for public comment and agency responses become merely pro forma without real substance. Decisions are made without genuine public participation. Administrative due process is denied and the Administrative Procedures Act is violated. (5 U.S.C. §§ 551-559).

The EPA Hotline Report states the public involvement policy that is also applicable to NMED as a program manager (Hotline Report at p. 4):

EPA's Public Involvement Policy instructs EPA managers and staff to 'work to ensure that decision-making processes are open and accessible to all interested groups.' This policy also instructs EPA to approach all decision making with a bias in favor of significant and meaningful public involvement. The Region's actions do not do that.

NMED is still allowing the use of three of the original known defective groundwater monitoring wells at the MWL.

- MW4 with its two screens served as a conduit for Contaminants to migrate between the different zones of saturation. Well MW4 was installed to investigate groundwater contamination below Trench D because of the disposal of 271,500 gallons of reactor coolant water in the trench. The purpose of well MW4 was to investigate contamination at the water table beneath Trench D. However, the top screen in well MW4 was installed too deep below the water table, and the well has not met its important purpose to investigate contamination at the water table. The bottom screen in well MW4 is installed across the contact of the AF sediments with the ARG strata.
- MWL-MW5 is screened across the Alluvial Fan (AF) and the Ancient Rio Grande (ARG) strata. MW5 can serve as a conduit for cross contamination between these different zones of saturation.
- Well MW6 is in the productive groundwater strata but is 500 ft. distant to the northwest corner from the dump. MW6 cannot yield high quality, representative samples because of its great distance from the MWL dump. MW6 does not meet its intended purpose to monitor releases from the MWL dump and groundwater as defined by the Consent Order.

Although three of the older groundwater monitoring wells were replaced by MWL-MW7, -MW8 and -MW9, the work plans and the installation of the new groundwater monitoring wells were not presented to the public prior to approval and installation. 40 CFR 270.42 and Appendix I – Classification of Permit Modification-- section C. GroundWater Protection, sections 1-8 thereto.

The erroneous low water levels measured in the three new monitoring wells MWL-MW7, -MW8 and -MW9 that represent a sudden decline in the water table of approximately 20 feet are because of mistakes in the drilling method, drilling operations and the 30-foot length of the well screens.²⁶

THE DIRT COVER “CAP” IS UNQUALIFIED UNDER RCRA AND NOT A PROTECTIVE REMEDY

The MWL is an unlined dumpsite that is in violation of the Resource Conservation and Recovery Act because it lacks the required liners beneath a qualified RCRA “cap” and a liner beneath the pits and trenches of the dump. There is no system for leachate collection. The dirt cover cannot be a “final remedy” because dirt covers always fail from subsidence, erosion, lack of maintenance and other factors. A dirt cover can also speed the transport of VOCs and other chemicals to groundwater.²⁷ Even small earthquakes can affect a dirt cover and lead to cracking, subsidence and entry of water causing explosions as occurred at Beatty, NV.²⁸

The MWL is leaking its contents toward Albuquerque’s drinking water aquifer and cannot contain its contents for the period of time that such hazardous and radioactive waste will remain toxic and endanger public health and safety.

NMED knew from a 2006 TechLaw, Inc. report that the MWL dirt cover would not be a protective remedy as required by RCRA.²⁹ When CANM sought the TechLaw report in a 2006 public records request, NMED sued CANM and claimed “executive privilege” to prevent the TechLaw document from being acquired.³⁰ The 2006 TechLaw, Inc. document was finally obtained in 2009 after the Court dismissal of the NMED lawsuit.³¹ TechLaw, Inc. reported to NMED about the unprotective features of the dirt cover before it was installed at the MWL. The TechLaw report also described the uselessness of the Fate and Transport Model.

²⁶ *Defective Groundwater Protection Practices at the Sandia National Laboratories’ Mixed Waste Landfill – The Sandia MWL Dump*, p.31-32 https://www.radfreenm.org/old_web/pages/GroundWater.htm

²⁷ *Review of Sandia National Laboratories/New Mexico Evapotranspiration Cap Closure Plans for the Mixed Waste Landfill* by Tom Hakonson, Ph.D. Biointrusion, fire, disease, and drought in combination with erosion can affect integrity of soil cover resulting in increased percolation of water into landfill. https://www.radfreenm.org/old_web/pages/hakonson_full.htm

²⁸ *A year after fiery accident at radioactive waste dump in Nevada, the meter is running on a fix* Las Vegas Review Journal (October 23, 2016) <https://www.reviewjournal.com/local/local-nevada/a-year-after-fiery-accident-at-radioactive-waste-dump-in-nevada-the-meter-is-running-on-a-fix/> A report by the NRC’s Mandeville after his team’s visit in November speculates that “numerous smaller earthquakes with a magnitude range between 2 and 5” might have caused new cracks or widened ones that were already there. The U.S. Geological Survey’s website bolsters that theory, showing that 21 earthquakes of magnitude 2.0 or greater and centered within a 35-mile radius of the Beatty dump occurred between the inspection and the accident. Water entered into explosive metallic sodium at Beatty. Metallic sodium is also present in the MWL

²⁹ See 2006 TechLaw, Inc. Report <https://www.radfreenm.org/index.php/sandia-national-laboratories-mixed-waste-landfill/mwl-technical/177-2006-techlaw-inc-report>

³⁰ <https://www.abqjournal.com/news/state/604899nm10-24-07.htm> NMED Sues to Keep Report Closed

³¹ See court dismissal of NMED lawsuit: https://www.radfreenm.org/old_web/pages/Legal/lg-2008oct08a.pdf

NMED still has not placed the 2006 TechLaw, Inc. report and the Court of Appeals decision releasing the document in the MWL administrative record as has been done for other MWL legal decisions. (42 U.S.C. 6928(d)(4)).

Although the 2016 Final Order (p. 4-5) mentions the “ill-considered” NMED lawsuit against CANM, the TechLaw report and its significance for the defective dirt cover remedy are conspicuously unstated.The TechLaw report rejected dirt cover durability for the necessary time period (1000 years), lack of liners, the absence of moisture monitoring beneath the cover, the lack of a membrane to remove water to the sides of the cover, and the lack of leachate collection capability. TechLaw rejected the Fate and Transport Model labeling it a “Black Box” for its unusable computer codes. CANM was denied valuable information during the period of negotiations for the Fate and Transport Model that were a requirement of the 2005 Final Order.

The 2016 Final Order describes the NMED public records lawsuit as “ill conceived” without mentioning the name of TechLaw and the flaws described by the 2006 TechLaw, Inc. report (P. 4-5). But the delay imposed by the NMED lawsuit against releasing the TechLaw report allowed the installation of the dirt cover to proceed without addressing the problems with the dirt cover remedy. The 2016 Final Order also states:

“The essence of Dr. Nuttall’s testimony is that NMED still does not definitively understand what was buried in the MWL and therefore the final remedy selected in 2005 is not protective of human health and the environment.”

Dr. Nuttall’s 2015 sworn technical testimony was quite clear in stating that DOE/Sandia intentionally deceived WERC and the NMED about high level waste and metallic sodium that is buried in the MWL and that represents an ongoing threat:³²

If the WERC panel had known of the nature of the mixed High-level wastes and the capacity of Sandia for safe, remote, robotic excavation, the conclusions of the WERC would have been far different. The information presented to WERC was intentionally deceptive and supportive of Sandia’s concealed plan generated in 1997-98 by Sandia management to never excavate the MWL. The current plan places the MWL under long-term stewardship and circumvents the 5-year report requirement of the Final Order for consideration of excavation. Ultimately, Sandia intends to leave the MWL wastes only subject to institutional controls and that violates the 5-year report consideration.

The issue of HWL waste within the MWL was of concern. Sandia National Laboratory denied ever having conducted experiments using uranium fuel pins. Sandia stated that the only fuel pins at SNL were in the ACRR (Annular Core Research Reactor) and those were regulated by the NRC. In fact, NRC has not had regulatory authority over the ACRR. Sandia’s statement of denial redirected the questioning of the WERC panel away from the issue of HLW

³²*Technical Testimony on the Sandia National Laboratories (SNL) Mixed Waste Landfill (MWL) in Opposition to Corrective Action Complete* (Direct Testimony July 8, 2015) By: Dr. Eric Nuttall, Ph.D., Emeritus, Chemical and Nuclear Engineering, Department of Chemical and Nuclear Engineering, University of New Mexico, Albuquerque, New Mexico 87106. Dr. Nuttall was a WERC panel member for the “Independent Peer Review of the MWL” (8/31/2001). <https://www.newmexicopbs.org/productions/newmexicoinfocus/wp-content/uploads/2014/12/August-31-2001-WERC-Report-Inventory.pdf>

disposal in the MWL. Hence the topic was not further investigated by either WERC panel and misled the conclusions of the two panels. Sodium was listed in the inventory descriptions and was identified as metallic sodium, but Sandia refused to disclose how the metallic sodium had been or disposed of. The refusal to state how the metallic sodium was used further misled the WERC panel review. This appears to have been premeditated deception regarding the use of sodium in the meltdown experiments for studying the Liquid Metal Fast Breeder Reactor (LMFBR) in which sodium was used as a coolant. The WERC panel was also deceived as to the risk assessment for the MWL. In the Phase 2 RCRA Facility investigation, sodium was described only as an “Essential nutrient” and it was not disclosed that it was mixed inseparably in the experiments.

Findings through FOIA documents and careful review of SAND reports showed that Sandia had extensively conducted nuclear reactor meltdown experiments. The disposal sheets were never shown to the panel and the conclusions of WERC would likely have been different, i.e. requiring Sandia to excavate the MWL. The disposal sheets were not shown to NMED and Roger Kennett for his report. NMED was unaware of the disposal sheets until April 2015. The different conclusion would have been made by the WERC panels because it would have been shown that the MWL contained Mixed High-Level Waste that would have contained metallic sodium intimately mixed with Enriched Uranium-235, and multiple fission products. A disposal sheet that I will show in the slide presentation refers to a fuel pin.³³

The 2018 5-Year Report offers an opportunity to move forward for cleanup of the MWL that the NMED should not lose. A major problem with environmental analysis for the MWL is that the past unspoken goal of the NMED and DOE/Sandia was to leave the MWL waste in place under the dirt cover and avoid the broader issues requiring MWL clean closure. To achieve the goal, the administrative public hearings rejected, discounted, minimized and ignored federal law, experts, evidence, comments and issues presented by the public. Public concerns and expert technical evidence were disregarded and superseded by the administrative political goals. For the MWL, agency presentations were adopted and approved by hearing officers selected by and favorable to the agency, or even from within the NMED, reciting the evidence of the agency witnesses as conclusive in their findings of fact.

NMED statements to protect New Mexico from the disposal of all the nation’s nuclear reactor waste at Holtec starkly contrast with a decades long delay to issue an order for cleanup of the 2.6 acre Mixed Waste Landfill that is an *existing source* of contamination along with the Kirtland AFB jet fuel spill.

Respectfully submitted,

³³ Covering Up 30 Years of Radioactive and Hazardous Waste: Mixed Waste Landfill, Dayton, p.3-7 (March 29, 2004) http://www2.clarku.edu/mtafund/prodlib/newmexico/Covering_Up.pdf NMED Kennett Report failure to address the issues of spent fuel disposal in 2003.

David B. McCoy, Executive Director
Citizen Action New Mexico
dave@radfreenm.org

ATTACHMENT A -- NMED BRIEFING



MWL Five Year Report

- Summarizes past four years of monitoring and maintenance under LTMMP (No analytes above regulatory standards, trigger levels, or have increasing concentrations; indicates remedy is protective of human health and environment)
- Updates to fate and transport model with newer monitoring data (indicates remedy is protective now and in future)

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ATTACHMENT B -- EMAILS

- From: dave mccoey Sent: Wednesday, February 12, 2020 10:44 PM To: Stringer, Stephanie, NMENV Cc: Sam Weisberg ; Eric Nuttall ; Janet Greenwald/CARD ; Leona Morgan ; Eileen Shaughnessy ; CCNS/Joni Arends Subject: [EXT] SNL Mixed Waste Landfill
Dear Stephanie, It has been over a year since Sandia National Laboratories submitted its 5-Year Report for the Mixed Waste Landfill. There have been no updates or responses to comments by Citizen Action or the public regarding our request for the NMED to issue an Order to SNL to begin the process for excavation and cleanup of the MWL. We would like to meet with the NMED regarding this matter. Thank you. Best Wishes, Dave McCoy, Executive Director Citizen Action New Mexico 818 448-9981
- From: Stringer, Stephanie, NMENV Sent: Thursday, February 13, 2020 9:23 AM To: Pierard, Kevin, NMENV Subject: FW: [EXT] SNL Mixed Waste Landfill Kevin,
Another item on our list. We can discuss when you get back. It looks like the HWB Used Oil Bill has died. It is not getting scheduled and numerous groups came out in opposition. It also had a third committee scheduled, which is usually a very bad sign. I hope all is going well. -Stephanie
- From: Pierard, Kevin, NMENV To: Cobrain, Dave, NMENV Subject: FW: [EXT] SNL Mixed Waste Landfill Date: Monday, February 17, 2020 8:17:16 AM
I need a briefing on the MWL sometime this week.
- On Thu, Feb 27, 2020 at 5:02 PM -0700, "Stringer, Stephanie, NMENV" wrote:

Kevin, Can I ask you to take lead on getting this meeting set up (please include me on the invite) as well as an internal meeting for you, me and other staff as appropriate prior to meeting with Mr. McCoy? Thanks, -Stephanie

- From: Pierard, Kevin, NMENV To: Stringer, Stephanie, NMENV Subject: Re: [EXT] SNL Mixed Waste Landfill Date: Thursday, February 27, 2020 5:23:29 PM
Sure. I think the MWL is too hot to excavate at this point and little leakage but that doesn't explain the lack of a response. I'll contact Dave just to let him know we're looking into it and commit to get back to him. I'll set up the internal meeting for us on this as well.
- On February 28, 2020 email from Kevin Pierard, Chief Hazardous Waste Bureau to David Cobrain stated: "Please set up a briefing for me and Stephanie on SNL specifically related to the MWL. Background info and 5 year review will be of greatest interest. Some time in the next few weeks is fine. thanks"
- From: Pierard, Kevin, NMENV To: Stringer, Stephanie, NMENV Subject: SNL - MWL / Triassic park Date: Tuesday, March 31, 2020 2:26:05 PM SNL-MWL –
Dave should have the draft RTC and approval letter to me by mid-April for my review. Triassic Park – Permit issuance will require a hearing. Apparently there has not been budget for this for the past two years. If our fiscal 21 budget includes sufficient resources we can move this permit. We anticipate needing approx. \$75K for the hearing. The attorney on this has left so we will need another attorney assigned and we will need to get folks here geared up. In addition EPA just cut our grant funding for FY20 by \$30K.
- From: Davidson, Naomi, NMENV To: Cobrain, Dave, NMENV
Subject: MWL presentation
Date: Thursday, March 19, 2020 1:59:43 PM
Attachments: MWL Briefing 2020.pptx
Naomi Davidson Environmental Scientist
New Mexico Environment Department Hazardous Waste Bureau
District 1 Office 121 Tijeras Ave NE, Suite 1000
Albuquerque, NM
87102 (505) 222-9504 (w)
(505) 222-9510 (f) naomi.davidson@state.nm.
us www.env.nm.gov/HWB/
- **From:** Cobrain, Dave, NMENV <dave.cobrain@state.nm.us>**Sent:** Tuesday, May 5, 2020 11:41 AM

To: Tavarez, Isreal L. <ITavarez@cabq.gov>

Subject: Sandia National Laboratory Mixed Waste Landfill Air Monitoring data

Isreal,

It's been a while since we were in a Kirtland fuel spill meeting at the same time. This is a question on a different issue. Are you aware of any air monitoring data collected for the Sandia National Laboratory Mixed Waste Landfill?

I hope you're getting through all this COVID-related disruption. Thanks.

Dave Cobrain

New Mexico Environment Department
Hazardous Waste Bureau
2905 Rodeo Park Drive East Bldg 1

From: [Tavarez, Isreal L.](#)

To: [Cobrain, Dave, NMENV](#)

Subject: [EXT] RE: Sandia National Laboratory Mixed Waste Landfill Air Monitoring data

Date: Friday, May 8, 2020 3:23:25 PM

- **Attachments:** [01.png](#)

Dave,

No, I am not aware of any air monitoring data collected for the Sandia National Laboratory Mixed

Attachment C- Email of EPA Richard Mayer to NMED William Moats

-----Original Message-----

From: Mayer.Richard@epamail.epa.gov [mailto:Mayer.Richard@epamail.epa.gov]

Sent: Friday, August 10, 2007 3:06 PM

To: Moats, William, NMENV

Cc: King.Laurie@epamail.epa.gov

Subject: Draft Mixed Waste Landfill Groundwater Monitoring Comments per citizens request

Will, the attached comments are draft and may have some changes, although I don't expect major changes. One of the questions pertaining to groundwater flow does not have a comment. I'll be out all of next week, but should be back in office Mon. the 20th. I included two versions, wordperfect (the original) and word (converted from wordperfect). (See attached file: mixedwlandfcomm.doc)The commentors are Chuck Hendrickson, Scott Ellinger, and Rich Mayer.(See attached file: mixedwlandfcomm.wpd)

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