

**Status of the Waste Isolation Pilot Plant (WIPP) following the underground detection of airborne radiation on Feb. 14, 2014:**

- At 11:30 PM on Friday, Feb. 14<sup>th</sup>, a continuous air monitor (CAM) detected airborne radiation underground at the active hazardous waste disposal unit (HWDU), configured as Panel 7. The CAM radiation alarm automatically switched the underground ventilation system to filtration mode. Normally mine air is exhausted to the atmosphere. It was believed that the high efficiency particulate air (HEPA) filter system performed as expected, mitigating releases. Took one minute or so for filtration to kick on.
- No personnel were underground (2150 ft below ground level) at the time.
- Personnel on site at above-ground locations were instructed to shelter in place.
- Initial measurements from multiple perimeter monitors at the WIPP boundary suggested that there was no detectable release from the repository and, therefore, no danger to human health or the environment.
- Personnel that are considered non-essential were allowed to leave the site at 5:00 PM on Saturday, Feb. 15<sup>th</sup>. None were found to have any contamination on their bodies.
- WIPP was already in stand down following a vehicle fire in the underground that occurred on Feb. 5<sup>th</sup>. Initial thoughts were that naturally occurring radon had pooled due to the carbon buildup from the fire causing the radiation alarm to trigger.
- The Department of Energy is investigating both events. No personnel have been allowed underground since the radiological event. Limited personnel were permitted underground after the fire.
- Panel 7, Room 7 is the active panel where the CAM alarm activated. There are approximately 238 containers in the room.
- Until the phone conference on Feb 19<sup>th</sup> at 4:00 PM, DOE had provided the NMED with limited information.
- At the Feb 19<sup>th</sup> meeting, DOE informed NMED of the following:
  - Station A (air monitoring and sampling site located at exhaust) data showed a maximum of 4.4 million dpm for the alpha (disintegrations per minute) on the morning after the onset of the event (Feb. 15<sup>th</sup>), comprised of americium and plutonium. Americium and plutonium are transuranic elements permitted for disposal at the WIPP. Station B showed a maximum of 28,205 dpm for the alpha.
  - Station A data is declining and now showing values around 326 dpm.
  - Station B (at filter exhaust) shows activity of 42 dpm.
  - DOE is looking across the complex for personnel with expertise for this type of circumstance. A team from the Savannah River Site may be deployed.
  - There is no underground monitoring beyond Station A - deeper into the repository.
  - DOE is performing plume modeling (computer simulation of air dispersion) to determine where releases may have gone. The plume went from the SE to the NW.
  - The ventilation system is still operating at a decreased level and venting through the filtration system.
  - DOE is working on a re-entry plan to determine the cause of the release.
  - DOE is considering all options and may send robotic instrumentation underground.

- Decontamination of salt and all associated infrastructure may prove to be very tedious and difficult. WIPP may not be able to accept waste for an extended period of time.
- On Feb. 19<sup>th</sup>, the Carlsbad Environmental Monitoring and Research Center (CEMRC) announced they detected transuranic radionuclides on an air filter from a location approximately 0.6 mile northwest of the WIPP property boundary. CEMRC is a laboratory located in Carlsbad and is a division of the College of Engineering at New Mexico State University. CEMRC routinely analyzes air, water, and soil samples collected at WIPP. The reading from the filter (deployed from 2/11 – 2/18) indicates a small release of radioactive particles from the WIPP underground exhaust shaft in the brief moments following when the radiation event occurred and when the WIPP ventilation system shifted to the filtration mode, or from a release of particulates that were not removed by the HEPA filters.
  - The wind direction at the time of the incident was out of the southeast; a contamination NW of the site is consistent.
  - NMED DOE Oversight Bureau also takes samples at the Air Stations A and B. Currently, those samples are being held by CEMRC.
  - NMED also has ambient air monitoring locations: twenty (20) direct penetrating radiation (DPR) monitoring stations are located in the Carlsbad region: fourteen within the Exclusive Use Area and six off-site in Carlsbad, Loving and Malaga.
- Secretary Flynn and CBFO Manager, Joe Franco held a joint news conference in Carlsbad on February 20, 2014, to provide information to the public.
- On 2/23/14, results were obtained from air samples collected on 18 Feb from the Mills Ranch (2.7 DPM), Smith Ranch (4.2 DPM), and Carlsbad (1.3 DPM) sampling locations. These levels are below thresholds that would indicate a public or environmental hazard.
- On 2/24/14 1 PM call DOE informed NMED:
  - of new exhaust stack concerns - 2 louvers in exhaust, just passed the 700fan duct work, are “designed to leak”, DOE planning to foam and stop the leaks, Louver leak is at 250 cubic feet per minute (cfm)
  - DOE working on plan to change out the roughing filters
  - 60,000cfm passing through Station B, HEPA filtration
- DOE hosted a town hall meeting in Carlsbad on 2/24/14 to answer questions from the community. About 200 people attended. Joe Franco, Farok Sharif and Russell Hardy presented and took questions. This is available for viewing at: <http://new.livestream.com/accounts/85948/events/1702454> Scroll down to find the event.
- On 2/26/14 WIPP notified NMED that 13 employees of positive preliminary test results for radiological contamination. The results are based on samples taken as a precautionary measure from employees present during the recent February 14 radiological event.
- On 2/27/14 NMED issued an Administrative Order addressing storage time issues and requiring additional reporting to NMED.
- NMED collected their ambient air samples from the Salt Shaft, Far Field and Met Tower on 2/28. Results are expected 3/14. NMED installed an ambient air sampler at the Carlsbad field office.
- On 3/2/14 WIPP notified NMED that the first set of urinalyses results had come back and that the 8 all showed non-detect levels. DOE has a REART (SP?) group of doctors and health physicists who determined that “based on the results, the dose does not represent a clinically significant exposure”.

- A second Order is needed to address underground issues.
- On 3/4/14 1 PM call DOE informed NMED:
  - All four 10 inch widows have been cut in the ventilation system (between the 2 dampers/louvers). They have a video but it is too large to send and will try to load to the ICLN portal. Trais and Susan have successfully connected to this. They will be asking for opinions on the ICLM at some point.
  - One 10 inch plate from the cuts showed contamination.
  - Inside at the base of the ductwork also showed contamination.
  - 14 urine samples have been sent to the CDC for independent analysis.
- On 3/4/14 DOEOB deployed the solar powered air monitoring station at a ranch south of the site.
- On 3/4/14 DOEOB discussed and EPA R6 met with DOE and discussed sampling and budget issues including the Soil Sampling Analysis Plan (SAP) and filter sample status and collection. EPA is asking their laboratory contacts if they can help with data and data analysis.
- On 3/5/14 1 PM call DOE informed NMED:
  - They are working on applying high density foam – not sure if actually happening today because of high wind.
  - Working on plans for unmanned entry for air samples. Still planning. It will include several air monitors.
  - Probably a town hall meeting every week.
  - Pierce town hall meeting is also happening on Friday at 4:00 PM – Leo Sweet Center on Mission Avenue
  - They will send several docs related to filtration and louvers. They said the 99.97% control efficiency is “just for the filter system”, not for the entire ventilation system.... “apples and oranges” ... [!@#\*^\$!]
- There is a DOE town hall meeting at 5:30 PM 3/6/14 and press conference at 7:30 PM at the Civic Center across from DOE Offices.
- HWB WIPP group will be meeting with DOE/NWP on Monday at 10:30 AM to discuss the report required by the Administrative Order and the requirements for the underground that will be part of the second Order.