



U.S. HOUSE OF REPRESENTATIVES  
COMMITTEE ON ENERGY AND COMMERCE

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June 10, 2015

TO: Members, Subcommittee on Oversight and Investigations

FROM: Committee Majority Staff

RE: Hearing entitled “Oversight Failures Behind the Radiological Incident at DOE’s Waste Isolation Pilot Plant”

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On Friday, June 12, 2015, at 9:45 a.m. in 2322 Rayburn House Office Building, the Subcommittee on Oversight and Investigations will hold a hearing entitled “Oversight Failures Behind the Radiological Incident at DOE’s Waste Isolation Pilot Plant.” The hearing will examine the Federal oversight failures that contributed to a radiological incident last year that shut down the Department of Energy’s (DOE) Waste Isolation Pilot Plant (WIPP). The incident involved operational and process errors at WIPP, as well as the Los Alamos National Laboratory (LANL) — the source of the radiological waste material — and may cost taxpayers upwards of an estimated \$500 million to resume WIPP operations fully. The hearing also will examine certain questions about the current quality of the Department’s contractor oversight.

## I. WITNESSES

- **The Honorable Madelyn R. Creedon**, Principal Deputy Administrator, National Nuclear Security Administration;
- **Mr. Mark Whitney**, (Acting) Assistant Secretary for Environmental Management, Department of Energy,
  - Accompanied by **Mr. Theodore A. Wyka**, Chairperson, Accident Investigation Board, and Chief Nuclear Safety Officer, Environmental Management; and
- **Ms. Allison B. Bawden**, Acting Director, Natural Resources and Environment, Government Accountability Office.

## II. BACKGROUND

The Department of Energy carries out many of the nation’s most critical national security-related missions, including stewardship of the nation’s nuclear weapons stockpile and the environmental remediation of the Cold War era nuclear weapons complex. This work involves high-hazard nuclear facilities and materials, nuclear weapons components, and highly sensitive, top secret national security information. It also includes technically complex, expensive, often one-of-a-kind construction and cleanup operations that pose significant safety, public health, and environmental risks.

**DOE's Reliance on Contractors:** DOE relies primarily on contractors to carry out its diverse missions, including to operate most of its national laboratories and to conduct environmental cleanup, which account collectively for about 90 percent of an annual budget that exceeds \$27 billion. Use of contractors stems from the development of the nation's nuclear weapons program during World War II, in which the Federal government sought to harness the scientific, engineering, and management expertise of academia and industry that did not exist in the Federal government. Management and Operating (M&O) contracts remain a central feature of DOE's business model. As a result, DOE is the largest non-Defense Department contracting agency in the Federal government, with approximately 16,000 Federal employees and more than 92,000 contractors.

Ensuring implementation of the necessary safeguards and security measures, the safety processes, and public health protections — combined with the managerial challenges for construction, cleanup, and other operations — has long posed tremendous contract administration and oversight challenges for the Department. At present, the Government Accountability Office (GAO) designates two DOE program elements as “[high risk](#)” — the Office of Environmental Management (EM), which is responsible for the safe cleanup of the nation's nuclear weapons complex, and the National Nuclear Security Administration (NNSA), which is responsible for DOE's nuclear weapons and related security operations.<sup>1</sup> These two program elements account for about 63 percent of DOE's annual budget.

Over the past two decades, GAO has documented in testimony and numerous reports for the Energy and Commerce Committee that DOE's contractor oversight framework has repeatedly fallen short of what is necessary to ensure safe, secure operations. In recent years, the Committee has examined whether contractor oversight reform efforts initiated by DOE in 2009 have effectively addressed the ongoing oversight challenges.<sup>2</sup> Subcommittee on Oversight and Investigations hearings in 2012 and 2013 highlighted DOE's current oversight and contractor management challenges, which were most notably demonstrated by the serious security breach at the Y-12 National Security Complex in July 2012.<sup>3</sup> The Committee has also sought to examine whether contractor self-assurance and assessment systems are adequate or sufficiently developed to meet DOE oversight responsibilities.<sup>4</sup> GAO testimony at the hearing will discuss the status of contractor assessment systems.

**The Waste Isolation Pilot Plant:** Located in southeastern New Mexico near Carlsbad, WIPP serves to provide for the permanent disposal of transuranic (TRU) waste from nuclear weapons activities from DOE sites around the nation into an underground repository of mined salt

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<sup>1</sup> The GAO first designated DOE contract management as a “high risk” area in 1990 because DOE's record of inadequate management and oversight of contractors has left the department vulnerable to fraud, waste, abuse, and mismanagement. See GAO's [2015 High Risk Report](#).

<sup>2</sup> See the then Ranking Member Barton and Ranking Member Burgess [letters to DOE and GAO, March 30, 2010](#). Then Chairman Waxman and Ranking Member DeGette later joined the request. GAO issued [a report on safety reforms](#) in April 2012 and [a report on security reforms](#) in May 2014.

<sup>3</sup> See Subcommittee on Oversight and Investigations hearings on [September 12, 2012](#), [March 13, 2013](#), and [July 24, 2013](#).

<sup>4</sup> See Chairman Upton, Ranking Member Waxman, Subcommittee Chairman Stearns, and Ranking Member DeGette [June 26, 2012 letter to GAO](#) concerning contractor assurance programs.

caverns, 2150 feet below ground. TRU waste is composed primarily of discarded tools, clothing, equipment, liquids, soils, and other debris contaminated by man-made radioactive elements, particularly plutonium. The Carlsbad Field Office, operated by DOE's Office of Environmental Management, oversees the site contractor, is responsible for DOE's national transuranic waste program, and coordinates with all DOE sites that generate the relevant radiological waste to characterize, ship, and dispose of the waste appropriately at WIPP.<sup>5</sup>

**Los Alamos National Laboratory (LANL):** Located in New Mexico, northwest of Santa Fe and 300 miles from WIPP, LANL is a weapons design laboratory responsible for the safety and reliability of nuclear explosives. Over nearly 70 years, LANL has generated a substantial amount of hazardous chemical and radiological waste, necessitating significant site cleanup, including the packaging and disposal of TRU waste at the WIPP site. The Los Alamos Field Office, operated by NNSA, is responsible for administering the site contract and oversight of the management and operating contractor for LANL.<sup>6</sup>

**A Fire and then Radiological Incident at WIPP:** Two isolated incidents occurred at WIPP in February 2014, both indicative of oversight failures. On February 5, a salt haul truck in the WIPP mine caught fire. Eighty-six people were in the mine at the time and were evacuated safely. The underground portion of WIPP was shut down. Nine days later, in the late evening of February 14, an air monitor in the WIPP mine detected airborne radioactivity and sounded an alarm. The alarm triggered the closure of exhaust ducts in the ventilation system and use of filters to remove radioactive particles. Fortunately, no one was in the mine at the time, due to closure related to the previous fire. However, due to flaws in the ventilation systems design, small amounts of radioactivity escaped into the surface environment, though the levels were well below any health or environmental hazard. Tests conducted on all 150 personnel on site that night identified 21 people who experienced low levels of internal contamination. WIPP's above-ground operations were shut down and the site has not operated since that date.<sup>7</sup>

DOE is presently implementing a recovery plan to resume site operations. According to the plan, the agency will resume emplacing waste that has been staged at the WIPP site in the first quarter of calendar year 2016. Costs to resume these limited operations are estimated to be approximately \$242 million. Full operations that include resuming transportation from DOE sites around the nation will require the construction of a new ventilation system, which will add an estimated \$77 million to \$309 million to recovery costs, according to initial estimates.<sup>8</sup> DOE does not anticipate construction until sometime in FY 2017.<sup>9</sup>

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<sup>5</sup> Additional information about WIPP is located at [www.wipp.energy.gov](http://www.wipp.energy.gov). The site M&O contractor is [Nuclear Waste Partnership LLC](#), an AECOM led partnership with Babcock & Wilcox Technical Services Group, and AREVA Federal Services, which also supports the national TRU waste program.

<sup>6</sup> Additional information about LANL is located at [nnsa.energy.gov](http://nnsa.energy.gov). The site M&O contractor is [Los Alamos National Security, LLC](#), or LANS LLC, which is formed by a partnership of University of California, Bechtel National, Inc., Babcock & Wilcox Technical Services Group, Inc., and URS Energy and Construction Corporation.

<sup>7</sup> Information on the [incidents, timelines, and supporting materials](#) are available at [wipp.energy.gov/wipprecovery/recovery.html](http://wipp.energy.gov/wipprecovery/recovery.html).

<sup>8</sup> See [Waste Isolation Pilot Plant Recovery Plan](#), DOE, September 30, 2014. In addition to the recovery costs, LANL's contractor lost \$57 million in fees as a result of the incident, WIPP's contractor lost \$8 million in fees, and DOE agreed to a \$73 million settlement with the State of New Mexico.

<sup>9</sup> See Department of Energy FY2016 Congressional Budget Justification.

**Accident Investigation Board:** On February 10, 2014, DOE appointed an Accident Investigation Board (AIB) to investigate the fire event. In its March 2014 report, AIB identified oversight failures at the WIPP site among the contributing causes for the fire. For example, the AIB found that the Federal oversight at the field office “was ineffective in implementing line management oversight programs and processes that would have identified” the contractors oversight weaknesses. In addition, the AIB observed that repeat deficiencies identified in DOE and external agencies assessments were allowed to remain unresolved for extended periods of time.<sup>10</sup>

Following the February 14 radiological event, a second AIB investigation commenced on March 3, 2014. Because of the contamination underground, investigative reports on the radiological incident were released in two phases. The Phase 1 report, released in April 2014, focused on the environmental release of the TRU waste radioactivity at WIPP. The Phase 2 report, which was released on April 16, 2015, focused more broadly on what caused the leak. This report confirmed the source of the radiological material from LANL and the direct and systemic failures at LANL that caused inappropriate mixing of organic kitty litter in the waste containers, which created a reactive and ignitable waste form.

The two AIB reports on the radiological incident identified oversight failures at WIPP and at LANL.<sup>11</sup> With regard to the radiological incident, the AIB confirmed a series of errors beginning in 2011 that led to the ignition of waste and rupture a waste container in the WIPP facility, which released radiation into the mine and through the ventilation system. The activity behind these errors should have invited closer LANL management scrutiny and Federal oversight review, which did not occur. Among the key events outlined by AIB:

- In June and July 2011, a wildfire occurred near the LANL storage area for above-ground TRU waste. This prompted DOE and the State of New Mexico to reach agreement in January 2012 to modify a consent agreement governing hazardous waste cleanup across the site and to establish a June 2014 deadline for the accelerated removal of 3,706 cubic meters of TRU waste at risk of wildfires. This so-called “3706 campaign” commenced in September 2011.
- In September 2011, a subcontractor at LANL began remediating drums storing nitrate salts and liquid waste produced from plutonium processing at the Lab. The process involved mixing the nitrate salt bearing waste with an organic absorbent. It was subsequently determined that mixing this waste and an organic material created combustion risks.
- From March 8, 2012 until October 1, 2012, processing of nitrate salt waste was suspended to review and develop an appropriate processing procedure. In the course of this review, LANL’s “difficult waste team” issued a white paper that directed use of inorganic absorbent for the processing of the waste. (This could include inorganic kitty litter.) The NNSA’s field office directed the contractor to implement this new procedure.

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<sup>10</sup> See [AIB Investigation Report on the February 5 Fire](#), March 2014, at ES-4.

<sup>11</sup> See [AIB Investigation Reports on the Radiological Release Event](#), April 2014 and April 2015.

- On October 1, 2012, processing of the nitrate salt bearing waste resumed. However, an apparent clerical error by the subcontractor responsible for waste packaging at LANL incorrectly specified “organic” kitty litter as the appropriate absorbent to mix with the waste. Due to oversight process failures, this change was not elevated to, and thus not identified by, LANL management. Further, the process change was not reviewed by NNSA’s field office. The Lab proceeded to mix organic kitty litter into about 480 containers of nitrate salt waste.<sup>12</sup>
- On January 21, 2014, the container that would eventually cause the incident was certified for shipment by LANL, delivered and accepted for emplacement in the WIPP underground on January 31. Its contents reacted, ignited, and burst the drum on February 14.

The AIB identified a number of oversight failures, including failures of the LANL management to identify process weaknesses, failure of Federal site officials to establish and implement adequate line management oversight, and failure of DOE headquarters to perform adequate or effective line management oversight. The AIB issued a number of recommendations and DOE is in the process of identifying how it will implement a program of effective oversight.

### **III. ISSUES**

The following issues may be examined at the hearing:

- What does DOE plan to do to address identified management and oversight deficiencies in the wake of the WIPP incident?
- What do lessons of the oversight failures at WIPP and LANL indicate about the safety process oversight throughout DOE’s high hazard operations?
- What is necessary for an effective “contractor assurance system”?

### **IV. STAFF CONTACTS**

If you have any questions regarding this hearing, please contact Peter Spencer or John Ohly of the Committee staff at (202) 225-2927.

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<sup>12</sup> See DOE fact sheet at [wipp.energy.gov/wipprecovery/recovery.html](http://wipp.energy.gov/wipprecovery/recovery.html). DOE also has informed staff that 710 drums are currently known to contain nitrate salt waste. Of that, 507 are empaneled at WIPP.