NEW MEXICO LEGISLATURE

RADIOACTIVE AND HAZARDOUS MATERIALS COMMITTEE

2015 INTERIM FINAL REPORT

Legislative Council Service
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Interim summary

Radioactive and Hazardous Materials Committee
2015 Interim Summary

The committee's main interest during the 2015 interim continued to be the reopening of the Waste Isolation Pilot Plant (WIPP) following accidents that occurred in February 2014. The committee heard updates from WIPP, Los Alamos National Laboratory (LANL) and the New Mexico Department of Environment (NMED), but there is no firm date for re-initiation of operations, pending the outcome of negotiations between the state and the federal Department of Energy (DOE) on a settlement agreement over compliance orders and fines issued against the DOE and LANL.

The state has alleged violations of the federal Resource Conservation and Recovery Act of 1976 in operations of both WIPP and Kirtland Air Force Base (KAFB), and the committee heard a presentation on that act to establish some context. The KAFB bulk fuel spill status was reported on and discussed, as was the Animas River mine contamination caused by the federal Environmental Protection Agency. The state is still considering its options over the latter event.

The committee members asked several questions regarding mine source contamination, and the NMED gave two presentations on the Terrero Mine cleanup as a contrast to the situation in southern Colorado, which led to the Animas River discharge.

Testimonies were received on reorganization of the National Nuclear Security Administration's field office in Los Alamos, LANL's research program, temporary waste storage at Waste Control Specialists LLC in Texas, interim storage plans by the Eddy-Lea Energy Alliance LLC and expansion of URENCO in Lea County.

The status of the Carlsbad brine well situation was considered, and the committee endorsed legislation to address that issue.

WORK PLAN AND MEETING SCHEDULE

2015 APPROVED
WORK PLAN AND MEETING SCHEDULE
for the
RADIOACTIVE AND HAZARDOUS MATERIALS COMMITTEE

Members

Rep. Cathrynn N. Brown, Chair
Sen. Daniel A. Ivey-Soto, Vice Chair
Rep. Eliseo Lee Alcon
Sen. Ted Barela
Sen. Carlos R. Cisneros
Rep. Stephanie Garcia Richard
Sen. Gay G. Kernan
Sen. Carroll H. Leavell
Sen. Richard C. Martinez
Rep. G. Andres Romero
Rep. Larry R. Scott
Rep. James G. Townsend

Advisory Members

Sen. William F. Burt
Rep. David M. Gallegos
Sen. Ron Griggs
Sen. Stuart Ingle
Rep. Rod Montoya
Sen. William H. Payne
Sen. John Pinto
Sen. Nancy Rodriguez
Rep. Nick L. Salazar
Sen. Clemente Sanchez
Rep. Jim R. Trujillo

Work Plan

The Radioactive and Hazardous Materials Committee was created in 1979 pursuant to the provisions of the Radioactive and Hazardous Materials Act. During the 2015 interim, in concert with the duties identified in Section 74-4A-11 NMSA 1978, the committee will review:

(1) Waste Isolation Pilot Plant (WIPP) operations and management;

(2) federal nuclear energy initiatives;

(3) U.S. Department of Energy "energy park" initiatives for Los Alamos National Laboratory (LANL), WIPP and Sandia National Laboratories;

(4) Department of Environment programs and operations;

(5) LANL progress on uranium legacy site cleanup and shipment of waste to WIPP;

(6) renewable energy initiatives;

(7) small modular reactors;

(8) Kirtland Air Force Base fuel spill status and legacy military waste disposal; and

(9) utility infrastructure.

Radioactive and Hazardous Materials Committee
2015 Approved Meeting Schedule

Date	Location
June 2	Santa Fe
August 17	Albuquerque
September 25	Los Alamos
October 22	Carlsbad
November 12	Santa Fe

AGENDAS AND MINUTES

TENTATIVE AGENDA
for the
FIRST MEETING
of the
RADIOACTIVE AND HAZARDOUS MATERIALS COMMITTEE

June 2, 2015
Room 317, State Capitol

Tuesday, June 2

10:00 a.m.		**Call to Order and Introductions** —Representative Cathrynn N. Brown, Chair
10:10 a.m.	(1)	**Department of Environment (NMED) Update** —Ryan C. Flynn, Secretary, NMED
11:30 a.m.	(2)	**2015 Interim Work Plan and Meeting Schedule**
12:00 noon		**Adjourn**

MINUTES
of the
FIRST MEETING
of the
RADIOACTIVE AND HAZARDOUS MATERIALS COMMITTEE

June 2, 2015
Room 317, State Capitol
Santa Fe

The first meeting of the Radioactive and Hazardous Materials Committee (RHMC) was called to order by Representative Cathrynn N. Brown, chair, on Tuesday, June 2, 2015, at 10:08 a.m. in Room 317 of the State Capitol.

Present
Rep. Cathrynn N. Brown, Chair
Sen. Ted Barela
Sen. Carlos R. Cisneros
Sen. Richard C. Martinez
Rep. G. Andres Romero
Rep. Larry R. Scott
Rep. James G. Townsend

Absent
Sen. Daniel A. Ivey-Soto, Vice Chair
Rep. Eliseo Lee Alcon
Rep. Stephanie Garcia Richard
Sen. Gay G. Kernan
Sen. Carroll H. Leavell

Advisory Members
Sen. Ron Griggs
Sen. John Pinto
Sen. Nancy Rodriguez
Rep. Nick L. Salazar
Rep. Jim R. Trujillo

Sen. William F. Burt
Rep. David M. Gallegos
Sen. Stuart Ingle
Rep. Rod Montoya
Sen. William H. Payne
Sen. Clemente Sanchez

Staff
Gordon Meeks, Legislative Council Service (LCS)
Renée Gregorio, LCS
Taylor Smith, LCS

Guests
The guest list is in the meeting file.

Handouts
Handouts and written testimony are in the meeting file.

Tuesday, June 2

After committee members introduced themselves, Representative Brown spoke of how the Waste Isolation Pilot Plant (WIPP) is within the boundaries of her district and the status of WIPP would of course be highlighted during the committee's interim work. She then asked Mr. Meeks to introduce the legislative staff in attendance, with special attention being given to the LCS's law intern, Mr. Smith.

Department of Environment (NMED) Update

Ryan Flynn, secretary of environment, introduced members of his staff, including Katie Roberts, division director, Resource Protection Division; Jeffrey M. Kendall, general counsel; and Allison Majure, director of communications.

Secretary Flynn indicated that he would focus his presentation on the NMED's settlement agreement with the federal Department of Energy (DOE). He stated that he had some good news on progress at WIPP, which is that panel 6 and panel 7, room 7, have been closed. He added that there were approximately 422 containers with a problematic mix of materials, and that even though these containers have not been exhibiting the same problems as the breached drum, the closure will prevent any release. Secretary Flynn praised the work of WIPP employees and stated that operations at the facility would likely occur in the near future. He emphasized that the events at WIPP presented an unprecedented issue to deal with and that meaningful progress is now being realized.

In reviewing what led up to the current settlement agreement with the DOE, Secretary Flynn spoke of the two main events, the vehicle fire of February 5, 2014 and the radiological release of February 14, 2014. He reiterated that because of the fire, WIPP personnel were not working in the underground at the time of the release, which was fortunate. The release has been a major issue for the NMED to deal with, he emphasized, and there have been several detailed reports produced about these events. He added that the most important detail is that a small amount of radiation was released, well below the threshold of concern of adverse effects to humans or the environment. He explained that radiation escaped because a damper in the ventilation system did not shut, but that otherwise the system performed as it should. Typically, the ventilation is unfiltered, but when the alarm sounded at the time of the release, the mine shifted to filtered air through its high-efficiency particulate arrestance, or HEPA, filters. Because one damper did not completely shut, a small amount of unfiltered air escaped. Secretary Flynn stated firmly, however, that there is no margin for error at this facility, that actually WIPP is no longer a pilot project and that all such incidents are preventable. He pointed out the specific location of these events on a diagram and described the rupture of the container as a "flash", with the heat then causing the material in the drum to disintegrate quickly. He added that the investigations of the release were performed through fire modeling, which essentially provided a reconstruction of the release.

As part of the settlement agreement with the DOE, two compliance orders were issued, one to WIPP for $17.7 million for 13 permit violations and one to Los Alamos National Laboratory (LANL) for $36.6 million for 18 permit violations. WIPP's violations included a failure to notify the NMED of the release in a timely fashion as well as improper acceptance and disposal of incompatible and ignitable waste. LANL's violations included improperly treating hazardous waste without a permit, mixing incompatible waste (nitrate salt-bearing waste stream with oxidizer or organic kitty litter) and failing to adequately characterize waste. Secretary Flynn emphasized that the NMED's focus is on holding people accountable and in compliance and that the NMED prefers to head off issues before they happen rather than having to fine for violations.

Secretary Flynn next gave the highlights for the agreement, which include $73.25 million for various supplemental environmental projects as follows:

- $34 million for improving WIPP transportation routes in Department of Transportation-designated Region 2 in southeastern New Mexico;
- $12 million for improving Los Alamos transportation routes;
- $10 million for water line replacement at LANL;
- $9.5 million to improve engineering structures and monitoring capabilities to manage storm water flows near LANL;
- $5 million for an emergency operations center in Carlsbad and for training; and
- $2.75 million for an independent three-year review for compliance and operations.

Secretary Flynn said that the settlement agreement puts in place a system to ensure compliance and shows that complacency will not be allowed to creep into the safety culture again. Also, the Mine Safety and Health Administration (MSHA) had not audited WIPP for many years. The corrective actions at both LANL and WIPP will ensure that the issues that led to the radiological release and the fire are corrected in full before WIPP reopens. He admitted that although there have been many gains and productive conversations with WIPP, the dialogue with LANL has not been as successful, even though meetings with technical staff have occurred and progress has been made as related to necessary corrective actions. Within the next three to four months, these corrective actions will be identified and incorporated into the final agreement, he added.

Funding for projects related to the settlement agreement will not be diverted from existing operational or cleanup budgets for WIPP or LANL, Secretary Flynn assured the RHMC. Input from host communities, the federal government, the New Mexico congressional delegation, legislators, city officials, task forces and agencies all influenced the settlement agreement, he said. The NMED, as is typical with all settlement agreements, ensured that there is a connection between the violations and the projects suggested for corrective action, in this case largely health- and safety-related projects. Secretary Flynn spoke about addressing the issue of expiration of funding for the WIPP transportation routes, which occurred at the end of 2012. He said that Secretary of Transportation Tom Church estimates that over $49 million is needed annually to maintain these routes, but that at present between $5 million and $10 million can be delegated to

these projects. He concluded by stating that the governor, agency leadership and the New Mexico congressional delegation are working together to return to Congress to request renewed funding for these transportation routes to ensure safety on WIPP routes.

In response to committee members' questions and concerns, the following issues were raised and discussed.

- Although the MSHA had not been conducting regular inspections at WIPP, it is now doing so.
- The $12 million for routes at LANL would include maintenance of existing routes only.
- There is not enough funding at present to maintain the existing transportation routes to WIPP, so alternate routes will not be funded at this time.
- At present, waste is accumulating at the sites at which it is generated, which is accruing liability for the DOE for not addressing streams of waste at storage facilities across the country. The Waste Control Specialists site in Texas was taking on waste, but only for temporary storage; it has now ceased taking waste.
- The Yucca Mountain site is for high-level waste; the WIPP site is for defense-related transuranic (TRU) waste, which is a lower-level stream of waste. Non-defense TRU waste is identical to the waste that WIPP currently takes; there is not a scientific distinction between the two types of waste. Also, greater-than-class-C waste is very similar to TRU waste.
- Although the 21 employees who tested positive for radiological contamination received a dose that was not deemed "clinically significant", some also suffered injuries related to smoke inhalation.
- The NMED wants to keep facilitating relationships with community members to encourage direct interaction with NMED employees to increase trust.
- The Kirtland Air Force Base fuel spill has not been handled well historically within the NMED, but the NMED is now engaging in more direct communication with affected communities and requiring the United States Air Force to implement interim cleanup measures.
- Although there is a need to maintain Highway 599, as it is a WIPP route with much residential growth since it was built, the settlement agreement does not include this route, as the needs in the southeastern area of the state are seen as more pressing.
- ***The NMED will give LCS staff a copy of the Northern New Mexico Citizens Advisory Board's recommendation to the DOE for dispersal to RHMC members as well as a map of WIPP routes.*
- The NMED agrees with the goal of providing storage for spent nuclear fuel, but it is still in the information-gathering stage regarding the sites for such storage facilities.
- WIPP is the only storage facility in the nation for the permanent storage of TRU waste.
- The NMED has learned that it has been, at times, afraid to take action even if such action is believed to be appropriate; that it can be reluctant to make permit

modifications; that it needs to be prepared for criticism and pushback due to changes that might be viewed as politically unpopular; and that engagement is the key to success.

2015 Interim Work Plan/Schedule

Mr. Meeks reviewed the draft of the work plan, meeting dates and potential meeting locations. The chair proposed meeting in Albuquerque in August and in Los Alamos in September, he added. Among the suggestions for the scope of work were to cover WIPP issues in Carlsbad; the federal nuclear energy initiative in Los Alamos; the NMED secretary's report in November; renewable energy initiatives in August in Albuquerque along with legacy waste and the Kirtland Air Force Base spill; small modular reactors in Carlsbad; and a utility infrastructure presentation from PNM in November.

Committee discussion included the importance of continuing the dialogue on LANL violations, hearing from Sandia National Laboratories in Albuquerque and addressing the handling and monitoring of more everyday hazardous materials. On a motion and second to adopt the work plan, the RHMC adopted its plan without objection.

Adjournment

Before adjourning, the chair directed committee members' attention to the information memorandum from the LCS on interim committee process and asked members to review this. There being no further business, the committee adjourned at 12:30 p.m.

Revised: August 6, 2015

TENTATIVE AGENDA
for the
SECOND MEETING
of the
RADIOACTIVE AND HAZARDOUS MATERIALS COMMITTEE

August 17, 2015
Rotunda Room, University of New Mexico Science and Technology Park
801 University Boulevard
Albuquerque

Monday, August 17

10:00 a.m. **Call to Order and Introductions**
—Representative Cathrynn N. Brown, Chair

10:10 a.m. (1) **Federal Resource Conservation and Recovery Act of 1976 Overview**
—Kathryn Roberts, Director, Resource Protection Division, Department of Environment (NMED)

11:30 a.m. **Lunch**

12:30 p.m. (2) **Kirtland Air Force Base Bulk Fuel Spill Status**
—Dennis McQuillan, Project Lead, NMED
—Adria Bodour, Technical Project Lead, Air Force Civil Engineer Center
2:30 p.m. —Mary Lou Leonard, Director, Environmental Health Department, City of Albuquerque
2:45 p.m. —Maggie Hart Stebbins, Chair, Bernalillo County Commission; Chair, Albuquerque-Bernalillo County Water Utility Authority Board
—Rick Shean, Hydrologist, Albuquerque-Bernalillo County Water Utility Authority

3:30 p.m. **Adjourn**

MINUTES
of the
SECOND MEETING
of the
RADIOACTIVE AND HAZARDOUS MATERIALS COMMITTEE

August 17, 2015
Rotunda Room, University of New Mexico Science and Technology Park
Albuquerque

The second meeting of the Radioactive and Hazardous Materials Committee (RHMC) was called to order by Representative Cathrynn N. Brown, chair, on Monday, August 17, 2015, at 10:08 a.m. in the Rotunda Room at the University of New Mexico's Science and Technology Park in Albuquerque.

Present
Rep. Cathrynn N. Brown, Chair
Rep. Eliseo Lee Alcon
Sen. Ted Barela
Sen. Carlos R. Cisneros
Rep. Stephanie Garcia Richard
Sen. Carroll H. Leavell
Sen. Richard C. Martinez
Rep. G. Andres Romero
Rep. Larry R. Scott
Rep. James G. Townsend

Absent
Sen. Daniel A. Ivey-Soto, Vice Chair
Sen. Gay G. Kernan

Advisory Members
Sen. John Pinto
Sen. Nancy Rodriguez
Rep. Jim R. Trujillo
Sen. William F. Burt
Rep. David M. Gallegos
Sen. Ron Griggs
Sen. Stuart Ingle
Rep. Rod Montoya
Sen. William H. Payne
Rep. Nick L. Salazar
Sen. Clemente Sanchez

Guest Legislator
Sen. Jacob R. Candelaria

Staff
Gordon Meeks, Drafter, Legislative Council Service (LCS)
Renée Gregorio, Researcher II, LCS

- the use of risk assessment guidelines by the Hazardous Waste Bureau for allowable concentrations in soil;
- the NMED's choice to allow for 60-day comment periods in situations where public interest is high;
- the NMED's approach to public comments as related to technical aspects as well as the comments of concerned citizens;
- the manner in which the NMED garners public interest during the draft stages of permitting, then works with concerned parties to try to avoid the need for formal hearings;
- RCRA regulations concerning old gas station site remediation and the use of the Corrective Action Fund;
- ***cumulative information as related to contaminated gas stations (the NMED will provide numbers to the RHMC)*; and
- the length of permit applications as compared to the actual permit, which can amount to volumes.

At the end of this first presentation, Mr. Kendall introduced a new employee of the NMED, Michaelene Kyrala, who is the director of strategic initiatives and special projects.

KAFB Bulk Fuel Spill Status

Representative Brown spoke of how the fuel spill at KAFB had not been handled well historically, but that the NMED is now engaging with communities and requiring the U.S. Air Force to implement corrective measures, as Secretary of Environment Ryan C. Flynn said at the last meeting of the RHMC. He emphasized then that engagement is the key to success.

Ms. Roberts mentioned that she saw the morning's presentation as a critical lead-in to the afternoon's presentation on the status of the fuel spill. She added that Mr. McQuillan is a 36-year veteran of the NMED and has a wealth of knowledge about sites all over the state.

Mr. McQuillan was joined by Adria Bodour, technical project lead for the U.S. Air Force's Civil Engineer Center; Mary Lou Leonard, director of the City of Albuquerque's Environmental Health Department; Maggie Hart Stebbins, chair of the Albuquerque-Bernalillo County Water Utility Authority (WUA) Board and the Bernalillo County Commission; and Rick Shean, hydrologist for the Albuquerque-Bernalillo County WUA. Mr. McQuillan gave a brief history of the KAFB facility, highlighting the fact that although the facility was built in the 1950s and handled aviation gasoline and two types of jet fuel, neither of which contain the additive ethylene dibromide (EDB), and even though the handling of anything containing EDB ceased in 1975, what is contained in the ground water at the site is 40 years old. The main concern was the threat to the wells, but the plume is not exactly where it was originally thought to be, he said, and is not jeopardizing wells.

He then gave an overview of the spill discovery in 1999 and how residual fuel in the soil and ground water has been dealt with. He added that, although the City of Albuquerque used

surface water as part of the San Juan diversion to maintain a sustainable aquifer, this caused the water table to rise and oil to smear upwards. Mr. McQuillan spoke of the new initiatives that both Secretary Flynn and the Pentagon put together to create an interagency partnership to deal with the spill. He assured the RHMC that additional interim measures are being put into place, and progress is being made. In June of this year, the first gallon of ground water was removed, which is the first remediation, a significant step and a huge milestone.

Mr. McQuillan reviewed the regulatory basis for cleanup, which is driven by the NMED's administration of the federal Safe Drinking Water Act and the RCRA programs. Safe water that meets the standards under the act must be delivered, and public water systems must comply with these standards, he explained. KAFB also has to comply with the RCRA hazardous waste permit and corrective action process, he added. He explained that the RCRA process is now in a site-characterization phase, which will be followed by a robust public comment period in late 2016. He said that data will drive next steps and decisions and that these will be based on how the extraction wells perform and how the aquifer responds. Technical teams are reviewing various technologies to deal with the smeared oil, he added, and the U.S. Air Force is conducting tests; all interim measures will feed into the final corrective action remedy. Although the federal Safe Drinking Water Act requires that public water systems be tested every three years, KAFB has decided to test wells monthly instead, and no contamination has been found, he said.

Mr. McQuillan reviewed the anatomy and geology of the fuel spill, saying that within the spill site, the dissolved EDB is one of the most toxic and least biodegradable substances in the ground water. He pointed out the Rio Grande braided stream formation in the South Valley and how the footprint of the plume matches this stream path. He added that the alluvial fan and the ancestral Rio Grande areas are where the contamination lies. He also stated that there are nine supply wells in this area, and it looks like the plume is not migrating toward these wells but is migrating north-northwest, which is consistent with the geology.

Ms. Bodour reported that there has been a lot of progress in the past 12 months, some of which includes installing 16 new monitoring wells and a new extraction well. She said that the U.S. Air Force is also clear that there is no migration of the plume toward drinking water, but there are good reasons to be highly concerned because of the location of many drinking water supply wells near the plume. She added that when new wells were installed, the direction of the plume migration changed. She stated that the deeper monitoring wells help to show the extent of the body of the plume.

Ms. Bodour reviewed the methodology behind collapsing the EDB plume, which involves extracting, cooling, treating and ridding the area of contamination and happens over a 10-year period. A soil vapor system was installed in March 2003 through 2015, which removed and treated vapor. This system needs to be reviewed for efficiency, she added. For now, the focus is on the source area, with a new very sophisticated system completely above ground. She described the initial confusion at the former release area where the loading and unloading occurred, and a dime-sized hole was found where the leak occurred. The oil traveled across the

ground before going down; originally, it was thought there was a direct connection between the top surface and the underground, which is not so. There are monitoring wells in the area, which went through a shutdown test during which the system was turned off and the wells were monitored to evaluate the presence of vapor and hydrocarbons. These data are currently being evaluated, she added. Other technologies that are being investigated include microcosm testing, soil bio-respiration testing and bio-venting. An anaerobic biodegradation pilot test will also be done by the U.S. Department of Defense, she said.

In conclusion, Ms. Bodour stressed that drinking water supply wells show no contamination during monthly testing and that the EDB ground water plume is not migrating toward KAFB and Ridgecrest 3. She also mentioned that there will be a public field trip in October and a public meeting on November 17.

Ms. Leonard discussed the work of the City of Albuquerque, in which Mayor Richard Berry secured commitment from the U.S. Air Force for cleanup of the site and worked to ensure that progress was being made. She said that the city's Environmental Health Department brought its technical staff to the table and that an EQUIS database and mapping software were used as communication tools. She added that the city offered a licensing agreement and rights of way for well drilling, expedited the permitting process and coordinated community involvement and public participation.

Mr. Shean expressed appreciation for all parties involved in the cleanup work. He spoke about the 10 drinking water supply wells that the Albuquerque-Bernalillo County WUA has in the area of the plume and the needs for the WUA to know if the water is contaminated. The WUA also needs to share information with other stakeholders over time. He said that the WUA was able to provide guidance to the governing board and to consult with the city about strategies for dealing with the plume. He added that independent review and assistance have been active this past year and that although the WUA experienced a lot of initial discouragement, now it is clear that there is an aggressive plan.

The RHMC took a few minutes to receive a motion and a second and to unanimously approve the minutes for the June 2 meeting.

Ms. Stebbins, in her roles as chair of both the WUA and county commission, stressed that the delivery of safe, clean drinking water is the WUA's mission. She stated that the utility's nearest well is less than a mile from the heart of the contamination plume, which has been a significant concern. She said that the contamination is more than just a spill, that it affects the entire water supply as well as the economy and that in addition to protecting the water supply, the WUA has to ensure economic development of the city. She added that the solution has been the drilling of remediation wells to remove fuel before it reaches the production wells. In 2010, the WUA began inviting the U.S. Air Force and the NMED to its board meetings to discuss the spill and keep it informed on remediation efforts. She said she sponsored a resolution to get an environmental consultant on board when the U.S. Air Force was slow to respond initially, and

this helped immensely. She concluded by stating that, two years ago, she was not as optimistic as she is today, largely due to the changes that have produced aggressive action since Secretary Flynn took the reins, that the U.S. Air Force has brought the right resources to the table and that both New Mexico's congressional delegation and legislature have all contributed to the oversight and remediation efforts.

Committee members' questions and subsequent discussion included the following points:

- how difficult it is to nail down the number of gallons lost and treated, but the estimated loss is four million gallons, with 500,000 gallons treated;
- an estimate of fuels contained in soil and ground water and where recovery stands now;
- that the NMED provides free testing at private domestic wells, and 1,200 public supply sources are tested routinely as required by federal law;
- that sometimes the contamination of ground water follows underground utilities, and this may have happened at the Railroad Avenue plume in Espanola;
- ***a request for slides to be given to the RHMC on the treatment process for EDB*;
- an estimate of cleanup phases, with the dissolve phase taking 10 to 15 years;
- a cost estimate of cleanup work at $100 million from 1999 to now, with a projected 30-year-cycle cost of $125 million more;
- that the U.S. Air Force is committed to seeing this cleanup through;
- that more monitoring wells would be installed if there are more data gaps;
- the noise factor with extraction wells, but once installed, the work goes on underground;
- the strategic planning process as a public involvement process; in November, the NMED will have completed another strategic plan, which will be put out for public comment;
- determining compliance on the state's monitoring wells;
- how the leak went undetected and how this related to the design of the system and the way fuel measurements were made;
- the process and results of soil removal; and
- the effect, if any, of the spill on property values.

The chair called for any public comment, and the following people participated:

- the New Mexico Public Interest Research Group with a funding question, which revealed that the U.S. Air Force pays for the cleanup through congressional action;
- Mike Wallace, a hydrologist, clarifying whether the EDB plume is also a "floater", which reveals that EDB is soluble and will act and move with the water; and
- James Rivera, with a question about the extent of the leakage, revealing that the plume is 7,000 feet long.

Finally, Senator Pinto expressed concern over the San Juan River spill and subsequent contamination. Mr. McQuillan responded that the NMED is very concerned about the spill and is monitoring the Animas and San Juan rivers independent of the federal Environmental

Protection Agency. He reported that contamination levels decrease significantly as the river flows down into New Mexico but that there is a lot more work to be done to address the effects on wildlife in the area.

Adjournment

There being no further business, the committee adjourned at 2:43 p.m.

Revised: September 24, 2015

TENTATIVE AGENDA
for the
THIRD MEETING
of the
RADIOACTIVE AND HAZARDOUS MATERIALS COMMITTEE

September 25, 2015
Fuller Lodge
2132 Central Avenue
Los Alamos

Friday, September 25

10:00 a.m. **Welcome and Introductions**

10:10 a.m. (1) **National Nuclear Security Administration/U.S. Department of Energy (DOE) Update**
—Doug Hintze, Manager, Office of Environmental Management, Los Alamos Field Office, DOE

11:00 a.m. (2) **Chromium Contamination Status Report**
—David Rhodes, Federal Project Director, Office of Environmental Management, Los Alamos Field Office, DOE

12:00 noon **Working Lunch**

(3) **Laboratory Nuclear Energy Research**
—D.V. Rao, Director, Civilian Nuclear Programs, Los Alamos National Laboratory (LANL)

1:00 p.m. (4) **Animas River Contamination Status Report**
—Ryan C. Flynn, Secretary, Department of Environment (NMED)
—Dennis McQuillan, Chief Scientist, NMED

2:30 p.m. (5) **LANL Overview**
—Charles McMillan, Director, LANL

4:00 p.m. **Adjourn**

MINUTES
of the
THIRD MEETING
of the
RADIOACTIVE AND HAZARDOUS MATERIALS COMMITTEE

September 25, 2015
Los Alamos

The third meeting of the Radioactive and Hazardous Materials Committee (RHMC) was called to order by Representative Cathrynn N. Brown, chair, on Friday, September 25, 2015, at 10:00 a.m. at the Fuller Lodge in Los Alamos.

Present
Rep. Cathrynn N. Brown, Chair
Rep. Eliseo Lee Alcon
Sen. Ted Barela
Sen. Carlos R. Cisneros
Rep. Stephanie Garcia Richard
Rep. Larry R. Scott
Rep. James G. Townsend

Absent
Sen. Daniel A. Ivey-Soto, Vice Chair
Sen. Gay G. Kernan
Sen. Carroll H. Leavell
Sen. Richard C. Martinez
Rep. G. Andres Romero

Advisory Members
Rep. Rod Montoya
Rep. Nick L. Salazar
Rep. Jim R. Trujillo

Sen. William F. Burt
Rep. David M. Gallegos
Sen. Ron Griggs
Sen. Stuart Ingle
Sen. William H. Payne
Sen. John Pinto
Sen. Nancy Rodriguez
Sen. Clemente Sanchez

Guest Legislator
Rep. Patricia A. Lundstrom

Staff
Gordon Meeks, Drafter, Legislative Council Service (LCS)
Renée Gregorio, Researcher II, LCS

Guests
The guest list is in the meeting file.

Handouts
Handouts and other written testimony are in the meeting file.

Friday, September 25

After Representative Brown welcomed audience members, she asked committee members to introduce themselves, then she introduced the LCS staff. Representative Garcia Richard announced that several groups that partner with the legislature were in attendance, and she asked the RHMC to welcome them.

National Nuclear Security Administration (NNSA)/U.S. Department of Energy (DOE) Updates

Kim Davis Lebak, manager of the Los Alamos Field Office, and Doug Hintze, newly appointed manager of the Office of Environmental Management (EM), both of the DOE's NNSA, each presented updates to the RHMC. As Ms. Lebak remarked, she and Mr. Hintze were colleagues before, when they both worked at the Savannah River site.

Ms. Lebak began by highlighting the DOE's organizational chart. She specified that she works for the NNSA, which is a semi-autonomous part of the DOE; Mr. Hintze works for the EM; and Charles McMillan, who was on the agenda at the end of the day, is the director of Los Alamos National Laboratory (LANL). Ms. Lebak works for Frank G. Klotz, administrator, NNSA. She indicated that all of the field offices for the NNSA are listed on the handout. She said that the strategic vision of the NNSA is on its web site; highlights of its mission include providing a safe, secure and effective deterrent to the nuclear stockpile, nonproliferation and counterterrorism support. She also spoke of the many aging DOE sites and how each is facing infrastructure and security issues due to age.

The DOE has a $2 billion management and operating contract with Los Alamos National Security (LANS). She said that this involves having 10,000 employees and around 2,000 support service contracts. She added that the NNSA's budget is about 80% of the $2 billion. Ms. Lebak spoke of the EM's budget and said that its portfolio is being separated out. She indicated that Congress is deliberating on the budget for 2016. She reviewed the outlook for the federal budget, saying that the DOE is one of the smaller federal agencies, and it marked the fiscal year (FY) 2016 budget request from the NNSA at $12.6 billion. Of that, LANL's request for FY 2016 is just under $2 billion and is $75 million over the FY 2015 appropriation.

Mr. Lebak reviewed the nuclear facilities on site at LANL, which is the NNSA's oldest and second-largest site. Several of these sites are not in operation since the Waste Isolation Pilot Plant (WIPP) radiological event, and several others are in various stages of operation. She said that a priority had been placed on making shipments from LANL to WIPP, and about 93% of shipments were completed before the event there. She reviewed the history of that event briefly and said that LANL has complied with the Department of Environment (NMED) compliance order; that the accident investigation board issued its report in April of this year; and since that time, LANL has been investigating whether any of the same conditions that caused the breach to occur exist in any of its other waste streams. More testing is being done, although at this point, some of the same conditions have been found to exist in some of the waste streams. Current

construction projects include the radioactive and liquid waste treatment facility and the transuranic (TRU) waste facility. The NNSA is funding over $100 million in upgrades at various facilities, she added.

She ended by speaking about federal legislation that became law at the end of 2014 and established the Manhattan Project National Historical Park, which showcases facilities that formed the backdrop for that project and includes 17 properties at LANL.

Mr. Hintze announced that he has been in New Mexico for seven days and in his position as field manager for four days, although he has been at the DOE since 1992. He said that the EM has been in operation for six months and was established as a result of the incident at WIPP. He gave the oversight responsibilities of each field office, with the NNSA field office having oversight for legacy cleanup and the EM for safety reviews and approvals. He spoke of the bridge contract recently signed with LANS to implement legacy cleanup with increased management and control. The budget request for FY 2016 is $188.6 million; he added that this would include protection of surface water and ground water; actions to address the chromium plume; safe management of TRU waste and treatment; and soil and water remediation.

Mr. Hintze gave details about this year's efforts to manage nitrate salts by following the NMED's isolation plan and includes isolating drums under temperature control and determining waste treatment for the future to stabilize the drums. He added that safety is the DOE's first priority, and transparency is crucial. In his organization, hiring is occurring, with the goal of having 65 employees over the next year. He concluded by stating that the EM's plans include accomplishing its mission by defining its scope as it transitions away from the NNSA and into its own office. Project management is also crucial, he added, with plans always based on good science and safety evaluations.

Committee members' questions and subsequent discussion included the following points:

- what the bridge contract might mean for subcontractors, including that subcontracting plans would carry over, with the EM overseeing the scope and more oversight on the federal side;
- concern about the active groups of northern New Mexico having a seat at the table when priorities for cleanup are determined;
- the need for a new consent order and the fact that the DOE indicated in 2012 that it would not meet the current one; the NNSA remains primary on the permit, although discussions on what entity will be the new signatory, the NNSA or EM, are ongoing;
- the FY 2015 budget, which included work on a large TRU program, corrective action plans, revising programs for TRU waste, a compliance program for ground water and stormwater monitoring and cleanup and restoration of several sites;
- the shipment and monitoring of drums with TRU waste shipped to the Waste Control Specialists site in Texas;

- the NNSA's hope for continued federal funding and the fact that it does have some carryover funds to keep in operation;
- a need to look at the uniqueness of New Mexico's laboratories and how to build their missions and create jobs for New Mexicans;
- the impact of slowdowns on nuclear facilities and the fact that their budgets are up 10%; and
- LANL's inspection of different waste streams, its estimation of questionable drums and its subsequent reports to the NMED alongside LANL's commitment to manage a percentage of these drums until it gets testing results.

Chromium Contamination Status Report

David Rhodes, federal project director, EM, Los Alamos Field Office, DOE, began by informing the RHMC of his background and said that he has been in New Mexico for six years. He gave details of the hexavalent chromium plume that was found in the regional aquifer underneath Mortandad and Sandia canyons, stating the plume's size and shape and indicating that the plume's edge is about one-half mile from the nearest drinking water well. He said that the goal of the EM is to prevent migration of the plume, while a means of removing it from the aquifer is assessed.

The plume was discovered in 2005, and scientific characterizations have been conducted since that time, he added. Mr. Rhodes discussed the directionality of the plume, which flows southerly from Sandia Canyon and originated due to water being flushed out of a power plant's cooling towers from the mid-1950s to 1972. This water, which contained chromium, flowed down the canyon as surface water, penetrated rock layers and then the aquifer, he said, but 90% of the chromium that was released has returned to the wetland areas.

Among the project's features are the placement of wells around the plume to monitor ground water and pumping to determine if the migration could be controlled hydraulically. Mr. Rhodes said that an environmental assessment has to be completed at this point before more monitoring is done. There is a 30-day comment period in effect starting September 23 and a meeting on September 30, he informed the RHMC.

Because the plume borders the Pueblo of San Ildefonso, there is a need for immediate action, Mr. Rhodes stated, to control the plume's migration and to address the increased amount of chromium at the LANL boundary. He discussed various interim measures that the EM will be taking, which include pumping, installing another extraction well and injection wells and taking treated water and applying it to the land or returning it to the aquifer with the use of injection wells. He also spoke of the need to horizontally drill the monitoring wells because of the sensitive areas they are in, something that has not been done in New Mexico before for monitoring.

Committee members' questions and subsequent discussion included the following points:

- what is involved in water treatment and how it is sprayed on land or used to control dust on roads;
- the extraction of chromium as a treatment or chemically reducing the amount of chromium to a less toxic level;
- the location of segments of land on the Pueblo of San Ildefonso that are to be protected on the western side of the Rio Grande, where there is no pueblo human environment; and
- the substantial investment required for wells that cost $3.5 million each, with a budget at $33 million for 2015 and at $28 million this year.

While committee members gathered around a working lunch, the chair introduced several visiting groups in the audience. Robert Chavez, youth coordinator for the Communities for Clean Water Youth Council, addressed the RHMC. He spoke of the mix of cultures in the organization, the need for youth to be educated about issues so that they can be included in decision-making and the need to protect all that is important — family, water, air and culture — as the laboratory does its work in northern New Mexico. He thanked the legislators for their work in communities and offered his respect.

Next, the RHMC entertained a motion and a second and unanimously approved the minutes from the meeting on August 17.

Laboratory Nuclear Energy Research

D.V. Rao, director of civilian nuclear programs at LANL, gave some background on his experience, which includes a Ph.D. in nuclear engineering and teaching experience at the University of New Mexico (UNM), as well as serving in management positions at LANL. Dr. Rao spoke enthusiastically about the nuclear weapons programs at the laboratory and how LANL works closely with other national laboratories in research and development efforts. He went on to speak about the variety of work engagements, including: the development of small nuclear power sources for spacecraft; work across the entire nuclear fuel cycle, such as accident-tolerant fuels, multiphysics modeling and computer simulations of nuclear reactors; building small nuclear reactors; and the potential role New Mexico's communities could have in used-fuel disposition through partnering with LANL. He spoke of the partnerships LANL has formed as part of the consortium for advanced simulation of light water reactors, and he delineated LANL's role in development and delivery of these systems. Dr. Rao said that LANL is working closely with the DOE and Westinghouse to bring advanced and accident-tolerant fuels to the industry. He also spoke about considering what is best for New Mexico's economy when looking at small modular reactor (SMR) production in the state, specifically, how it could help the economy for New Mexico to get involved in fabrication.

Committee members' questions and subsequent discussion included the following points:

- engaging in light manufacturing of small nuclear reactors in New Mexico to build the state's manufacturing base and economy;
- studies that compare natural gas installation with small SMRs;
- safe utilization of SMRs with current technology, the main driver being how well these can be fabricated and what the capital costs would be;
- questions about pricing of nuclear power versus coal or natural gas, to which Dr. Rao responded that he could share study results on this issue;
- LANL's work with the UNM Nuclear Engineering Department, the stiff competition for partnerships and the process for choosing partners;
- LANL's separate organization within the laboratory and a pilot program set up to appoint high-caliber staff from universities to work with the laboratory and vice versa;
- issues around costs of construction and licensing as well as concern regarding the use of LANL's designs by other countries;
- concern over the failure to clean up old mining sites and nuclear facilities across the nation;
- the emissions impact of nuclear energy compared to other technologies (on a scale of one to 10, coal would be at 10, nuclear at about .5);
- online availability of the state's energy plan through the Energy, Minerals and Natural Resources Department's and governor's web pages; and
- the presence in the state of people with the intellectual assets and skill sets needed to succeed at SMR production.

Animas River Contamination Status Report

Ryan C. Flynn, secretary of environment, and Dennis McQuillan, chief scientist, NMED, updated the RHMC on the toxic spill in the Animas River. They showed dramatic footage of the north fork of Cement Creek, where the blowout occurred on August 5. Secretary Flynn explained that acid rock drainage occurs in abandoned mines and leaches into creeks as it did there, and then the U.S. Environmental Protection Agency (EPA) installed bulkheads to stop the drainage, which caused the water table to rise 1,000 feet. The EPA was replacing bulkheads when the blowout occurred, he added, which released highly toxic wastewater from the Gold King Mine site. He said that the immediate issue is, of course, the toxic water, but that the ongoing long-term issue is the sediment that builds up over time. Governor Susana Martinez and Secretary Ryan took immediate action, he said, and he was at the site within 18 hours of being notified and stayed there for nine days.

Secretary Flynn reported that state agencies and local communities worked together well in this emergency situation. One day after being notified of the spill, he authorized $500,000 in emergency expenditures, and by August 10, the NMED had 25 staff members on site. (See the time line in the handout for additional specific actions taken.)

Secretary Flynn added that the NMED contacted all downstream users immediately, as well as seven public water systems that draw from the Animas River. NMED staff was on the ground working with community members to close irrigation ditches and to ensure that there were backups in place for livestock, he added. Although the plume entered New Mexico on August 8, the EPA did not elevate the event to a regional emergency until August 9, he informed the RHMC, adding that the NMED and the EPA have a "major difference in approach".

When the plume arrived, there were high levels of turbidity in the river, and on August 12 and 13, there were spikes due to stormwater, he reported, which is part of the long-term issue at hand. He spoke of the sediment that contains high levels of metals settling on the bottom of the river, which are disturbed and dislodged when there is a storm event. He added that higher levels have settled up north in Colorado, and as the spring thaw comes and the water melts, this will need to be monitored.

Secretary Flynn mentioned that scientists at the NMED were offended by the EPA graph of the amount of dissolved metals in the surface water; nothing in the graph shows arsenic levels, and the graph gives the impression that lead concentrations are low or at zero. He then spoke of the ways in which the NMED worked with the public water systems and how his staff set up a mobile lab for testing domestic wells. He reported that there is no evidence that private wells were affected. The NMED also worked to provide backup supplies of water for farmers. Secretary Flynn reviewed actions taken by the NMED and suggested that legislators and the public could make their own conclusions by reviewing the extensive data on the NMED's web site: https://www.env.nm.gov/riverwatersafety/.

Mr. McQuillan spoke next on the NMED's long-term monitoring plan, which involves gathering data; making risk assessments; looking at background issues around the effects of spills; the blowout; and natural acid rock drainage over time. Mr. McQuillan pointed out that this recent spill was not the first, and in the 1970s, a spill occurred that killed the fish, although this one did not. He gave details on the existence of heavy metals in the watershed over time and said that with mining, there is more opportunity for oxidation.

New Mexico has been cleaning up its mines since the early 1980s, Mr. McQuillan said, with priority given to cleaning up the worst ones first. He cited the Terrero Mine cleanup as a success, along with El Molino mill and corresponding channels. He gave further details on other mines being remediated. Secretary Ryan spoke up to say that the NMED can successfully remediate mining issues, and the state does have a problem with abandoned mines in the state, which are public health risks. The debate, he added, is at the federal level and centers around who will pay for these cleanups — taxpayers or the industry. He added that New Mexico has 15,000 abandoned mine sites and that policymakers have to decide how these will be cleaned up.

Committee members' questions and subsequent discussion included the following points:

- the New Mexico congressional delegation's stance with the Martinez Administration on EPA reimbursement to the state and local communities, with assurance that the state receive compensation for cleanup going forward;
- the NMED's primary concern of the cleanup of abandoned mines;
- current stringent state requirements for new mining companies;
- dealing with suspended contaminants;
- how the City of Farmington will install a shut-down system in case of a storm event, although the EPA needs to step up and support this;
- the need for a locally driven monitoring effort; the efforts thus far have included the Navajo Nation, the State of Utah, public universities and local communities;
- full damage assessment would include the impact of the spill on the local farm economy;
- the EPA's ultimate responsibility for the spill and cleanup;
- cleanup as a long-term commitment that needs a long-term funding source and the suggestion that the RHMC look at this issue;
- Representative Brown's request to have a review of the 2008 legislation on November's agenda;
- coring work strongly suggests the presence of heavy metals before the Gold King Mine spill, and the NMED has data from before and after the spill;
- the NMED's mapping of New Mexico's waterways to develop baselines for water quality;
- ongoing danger in the area of the Gold King Mine because of other abandoned mine sites;
- the need to fully understand the nature of the contamination before resolving it; and
- New Mexico's technical know-how in dealing with its river systems and the need for funding with which to do that.

LANL Overview

Charles McMillan, director of LANL, began by speaking of LANL's goals, stating its mission of solving national security challenges through excellence in science. He highlighted the goal of "attracting, inspiring and developing world-class talent to ensure a vital future work force", with the intention of hiring 1,500 workers over the next five years. He stressed that the laboratory is known for ensuring an effective nuclear deterrent and the health of the nation's nuclear stockpile. LANL is very engaged in reducing threats to national security and has been supportive of national negotiations.

Mr. McMillan described LANL's science pillars as the four areas in which the laboratory is investing technically. He spoke of the ways in which LANL's expertise addresses environmental challenges such as climate change. He then spoke about LANL's handling of nuclear waste and that it has developed a path forward for storage and treatment through working with the state.

He said that LANL's budget is $2.1 billion (see handout for a breakdown by program). He then delineated the current work force by discipline, education, gender and geography. Mr. McMillan stressed LANL's dependence on New Mexico's education system for its future work force. He reviewed the economic impact of LANL on New Mexico's small businesses, stating that LANL has spent $300 million in the state through the month of August in procurement. He added that the venture acceleration funds assist regional businesses, that LANL provides technical assistance to small businesses in the state and that LANL is both a beneficiary of education in the state and contributes back to teachers and students through its programming and resources, especially providing science, technology, engineering and mathematics (STEM) opportunities for students and ongoing teacher education in the sciences.

Committee members' questions and subsequent discussion included the following points:

- concern over whether LANL is engaged in recruitment of students at the secondary level;
- LANL's programs for college students and also elementary level students, its STEM education programs, its math and science academy and supercomputing challenges;
- LANL's employee scholarship fund, which ensures funding for at least 20 students to find a place at the laboratory; and
- how the laboratory could get more involved in internet superhighway expansion into rural areas.

Adjournment

There being no further business, the committee adjourned at 4:18 p.m.

Revised: November 6, 2015

TENTATIVE AGENDA
for the
FIFTH MEETING
of the
RADIOACTIVE AND HAZARDOUS MATERIALS COMMITTEE

November 12, 2015
Room 317, State Capitol
Santa Fe

Thursday, November 12

10:00 a.m.		**Introductions** —Representative Cathrynn N. Brown, Chair
10:15 a.m.	(1)	**Terrero Mine Remediation Orientation** —Dennis McQuillan, Senior Scientist, Department of Environment
11:00 a.m.	(2)	**Waste Isolation Pilot Plant/U.S. Department of Energy Settlement Status** —Jeffrey M. Kendall, General Counsel, Department of Environment
12:00 noon		**Lunch**
1:30 p.m.	(3)	**Electric Grid Status** —Ron Darnell, Senior Vice President for Public Policy, Public Service Company of New Mexico (PNM) —Carlos Lucero, State Government Affairs Manager, PNM
2:30 p.m.	(4)	**Proposed Legislation** —Carlsbad Brine Well Remediation Authority
3:00 p.m.		**Adjourn**

MINUTES
of the
FIFTH MEETING
of the
RADIOACTIVE AND HAZARDOUS MATERIALS COMMITTEE

November 12, 2015
Room 317, State Capitol
Santa Fe

The fifth meeting of the Radioactive and Hazardous Materials Committee (RHMC) was called to order by Representative Cathrynn N. Brown, chair, on Thursday, November 12, 2015, at 10:05 a.m. in Room 317 of the State Capitol.

Present
Rep. Cathrynn N. Brown, Chair
Rep. Eliseo Lee Alcon
Sen. Ted Barela
Sen. Carlos R. Cisneros
Rep. Stephanie Garcia Richard
Sen. Richard C. Martinez
Rep. G. Andrés Romero

Absent
Sen. Daniel A. Ivey-Soto, Vice Chair
Sen. Gay G. Kernan
Sen. Carroll H. Leavell
Rep. Larry R. Scott
Rep. James G. Townsend

Advisory Members
Rep. David M. Gallegos
Rep. Rod Montoya
Sen. John Pinto
Sen. Nancy Rodriguez
Rep. Nick L. Salazar
Rep. Jim R. Trujillo

Sen. William F. Burt
Sen. Ron Griggs
Sen. Stuart Ingle
Sen. William H. Payne
Sen. Clemente Sanchez

Staff
Gordon Meeks, Drafter, Legislative Council Service (LCS)
Renée Gregorio, LCS

Minutes Approval

Because the committee will not meet again this year, the minutes for this meeting have not been officially approved by the committee.

Guests

The guest list is in the meeting file.

Handouts

Handouts and other written testimony are in the meeting file.

Thursday, November 12

Terrero Mine Remediation Orientation

Dennis McQuillan, senior scientist, Department of Environment (NMED), briefed the RHMC on cleanup at the Terrero Mine and El Molino Mill sites, which are legacy mining and milling sites where acid rock drainage (ARD) occurred, with suspended solids going into the surface water. He spoke of the subsequent "fish kills" downstream and the concentration of metals in the food web. Mr. McQuillan said that the state took over ownership of these sites after the operations ended, that the cleanup efforts have been successful and that the legislature is part of this success because of the appropriations it made to this effort. He described ARD in detail, noting that when oxidation occurs, it then releases sulfuric acid and metals into the water. Mr. McQuillan then described several other causes of ARD.

Mr. McQuillan described the Terrero Mine as the largest volcanogenic sulfide-ore body in the state. It was discovered near the confluence of Willow Creek and the Pecos River in 1881, and subsequently, ore was extracted and crushed at the site, then transferred downstream. He described the results of this process being that waste rock was deposited into Willow Creek and that runoff from the mine contained ARD, which flowed into the wetlands, then emptied into the Pecos River. Usually, beaver wetlands serve to lessen the impact of mine runoff, but during high runoff times, higher levels of metals enter the river, he explained. Although high levels of zinc and aluminum contributed to the killing of fish, Mr. McQuillan clarified that not all kills are associated with mine sites, but they can be attributed to other events, such as fires.

He then reviewed the history of El Molino Mill, which processed a lot of ore and produced zinc, lead, copper, silver and gold. The mine and mill provided 600 jobs in the 1930s, he added. Contamination occurred, however, because mill tailings were deposited directly into the creek and contained high levels of lead. This became a problem when the tailings dams breached, causing heavy metals to enter the watershed, he explained.

Up until the 1970s, mine waste had been used as fill for recreational areas and roads, Mr. McQuillan said. In 1991, there was a severe fish kill, which brought a lot of attention to these sites and precipitated a series of studies on the area. Tourism and its economy were hurt by the findings, and agencies and community stakeholders decided that corrective actions were needed. At that time, Paul Robinson of the Southwest Research and Information Center was instrumental in helping to establish the community position that a "Superfund level of cleanup" was needed, but without the same cost and delay of that process. In 1992, an administrative order of consent (AOC) was signed, after being negotiated by the mining company and the state. The AOC included a cost-sharing agreement, with AMAX Minerals Company, as the successor to the mining company, paying 80% and the state 20%. Mr. McQuillan added that it was written into this agreement that the state would ask the legislature for appropriations. He also said that although the U.S. Forest Service was not a party to the AOC, it put up $1.2 million to remediate mine waste used as fill in the campgrounds and roads.

Mr. McQuillan reviewed the elements of the statement of work and corrective actions to be taken. He described the work as an example of impressive engineering and science, adding that, although much of the work has been completed, there is still ongoing corrective action needed at the site. Looking back, Mr. McQuillan said, within a decade there was improvement at these sites, the fish kills stopped in the 1990s and, to this day, there are improvements in water and sediment quality as well as no public safety hazards or fish kills. He ended by saying that the sediment and water quality have improved substantially as a result of remediation. Directing the RHMC to issues around the more recent Animas River spill, Mr. McQuillan indicated that the U.S. Environmental Protection Agency (EPA) is proposing cleanup of lead levels to 20,000 parts per million, whereas the NMED recommends 500 parts per million. He opined that the Animas River is in "people's backyards" and that the EPA is not taking this into consideration.

Committee members asked several questions of Mr. McQuillan, and the following points arose:

- natural issues around metals entering the watershed;
- the cost-effective solution of chip-sealing roads where waste had been used as fill;
- the Terrero Mine site's value as a recreational area and ongoing cleanup needed for developing it;
- the NMED's opinion around the EPA's shift of the allowed contaminant levels on the Animas River and legislators' opinions that the EPA is being reckless;
- the cause of the event in 1991, which was a strong snowmelt, not a spill;
- the time line for completion of the improvements in the consent order;
- the NMED's position on the EPA's standard for the Gold King Mine spill and subsequent concerns and actions taken;
- New Mexico's long-term monitoring plan and its comprehensiveness;
- the EPA's statement that crops in the Gold King Mine spill area are safe to eat because irrigation gates were closed;
- involvement of the congressional delegation in facilitating conversations between the EPA and the state;
- attempts by the NMED to sort out what treatment system the EPA has in place and up to what levels the system treats;
- the many "events" in the Animas over time;
- that mine sites are being referred to as "mine features" now; and
- the need for precautionary thinking related to mines and cleanup.

Representative Brown opened up discussion related to the RHMC supporting the drafting of a joint resolution that would communicate with the EPA about the inappropriateness of its developed standard for lead and the RHMC's support of the NMED's standard of 500 parts per million or less. Because the RHMC did not yet have a voting quorum, the chair asked staff to draft a letter.

Waste Isolation Pilot Plant/U.S. Department of Energy Settlement Status

Jeffrey M. Kendall, general counsel, NMED, gave a brief background of the vehicle fire and radiological release that occurred at the Waste Isolation Pilot Plant (WIPP) in February 2014. He pointed out a graphic of the WIPP facility showing locations of the truck fire and the alarm outside of panel 7. Mr. Kendall reviewed compliance actions taken against the U.S. Department of Energy (DOE) at both WIPP and Los Alamos National Laboratory (LANL). At WIPP, the 13 permit violations amounted to $17.7 million. LANL's 18 permit violations, which included treatment of hazardous waste without a permit, mixing incompatible waste and not properly managing or characterizing waste, amounted to $36.6 million. He supplied the committee with a copy of the principles of agreement, which were reached in late April 2015 to resolve the compliance orders. Mr. Kendall gave details of dollar amounts for environmental projects and corrective actions at both facilities and a settlement of $73 million in lieu of paying fines. In response to a question, Mr. Kendall clarified that of the $73 million, $34 million is coming to the state for road improvements in Carlsbad and the remaining amount will be expended by the federal government at both facilities.

Mr. Kendall pointed out that the NMED must be satisfied with the addressing of violations before reopening these facilities, and the NMED has not executed settlement agreements to this point, although these are close to being finalized. He also said that the funds used by the DOE for these supplemental projects will not be diverted from the environmental cleanup budget. He mentioned that the NMED is taking a hard line on timing for the completion of these projects and that anything over two years is unacceptable. He next spoke of the community input and how influential it was in coming to the settlement agreement.

In delineating the path forward for WIPP and LANL, Mr. Kendall asserted that all issues at WIPP and LANL were preventable and that the NMED took unprecedented action and achieved the principles of agreement. The NMED still believes that WIPP is the ideal location and most viable facility for the disposal of transuranic (TRU) and radiological waste and that the community around WIPP fully supports its mission. He added that it is good for the state to be mindful that the disposal of mixed TRU and radiological waste has a razor-thin margin of error. He assured the RHMC that tremendous scientific work is being done at LANL and that what is needed is increased attention to detail.

Mr. Kendall reiterated that the state will move forward in implementing corrective actions, yet another blow might not be sustainable. He highlighted the errors that occurred and said that these facilities must go above and beyond to ensure safety. He spoke of the compliance assistance model, of which one component is a triennial review process, which involves an audit done by an independent third party, that will occur in addition to the NMED's regular oversight. He said that the schedule for reopening the WIPP facility depends on the DOE and the U.S. Congress and that the DOE is accomplishing corrective actions at the facility, but the DOE needs appropriations from Congress to continue the work. Some appropriations have already been made for WIPP's recovery, he added, but the NMED has been meeting with a U.S. House of Representatives subcommittee to ensure future appropriations. He concluded by stating that

WIPP and LANL are a huge part of New Mexico's identity and that resuming WIPP operations is a top priority with the governor.

Committee members engaged in questioning Mr. Kendall, and the following points were discussed:

- compliance orders for analyzing, treating and moving material now stored at the Waste Control Specialists (WCS) facility in Texas;
- timely disposition of the waste stored at WCS and the dependence on WIPP's reopening;
- commending the NMED for its aggressive and professional action;
- what the legislature could do to assist in intervening with the EPA regarding its stated standard for lead contaminant levels on the Animas River and related timing for either a letter or a joint memorial;
- LANL's preparation of corrective action plans in response to the accident investigation board findings;
- the "silo-ing effect" and how to communicate information better among agencies, communities and stakeholders;
- the work that has been completed in Carlsbad before having any signed settlement agreement, which was agreed upon by the state and federal governments as being essential; and
- LANL's timing for making changes and permit modifications, how this might not work in exact accord with the timing of changes at WIPP and that one facility could be reopened while the other remains closed.

The RHMC reached a voting quorum, with Senator Martinez joining the meeting, and on a motion by Senator Cisneros, seconded by Representative Alcon, to which there was no objection, the RHMC endorsed a memorial for the house and senate that would hold the EPA to a standard for lead content in the Animas River to equal to or less than 500 parts per million.

The RHMC, on a motion and a second, adopted the minutes for the September 25 meeting with no objection.

Electric Grid Status

Ron Darnell, senior vice president for public policy, Public Service Company of New Mexico (PNM), and Carlos Lucero, state government affairs manager, PNM, briefed the RHMC on PNM's status as a company and its focus in the state. Mr. Lucero emphasized that PNM is a "true New Mexico" company, in operation since 1917, with a focus on providing reliable, affordable and environmentally conscious utility services. He added that PNM is the only New York Stock Exchange-traded company in the state. Referring committee members to a map of service areas, he indicated that PNM has nearly 15,000 transmission lines and a diverse portfolio that includes coal, nuclear, natural gas, wind, solar and geothermal generation.

Regarding PNM's investment in the state, Mr. Lucero said that PNM is a top taxpayer that provides $137 million in taxable wages and, in 2014, paid $22.8 million in property taxes and $57.7 million in gross receipts taxes. As well, the company purchased $203 million in goods and services, and it contributes $3.5 million annually to support communities and nonprofits. Through its Good Neighbor Fund, PNM contributed over $300,000 to low-income families to help them offset their electric bills.

Mr. Lucero outlined PNM's renewable investments, which include: $270 million on 15 large-scale solar facilities; a solar program in place for customers that have their own systems, under which $27 million was paid in renewable energy credits; and a prosperity energy storage project at $5.3 million that consists of solar and battery, with the help of a DOE grant of $2.3 million. In completing extensive market research, PNM concludes that its customers expect reliability and affordability and are willing to support rate increases that ensure these attributes.

Mr. Darnell next focused on PNM's portfolio. He said that PNM has done its best to find a solution regarding the San Juan Generating Station that is fair to its customers. He added that PNM does not serve customers in the Farmington or the Four Corners areas. He provided statistics for the San Juan Generating Station that include the number of employees, payroll, property taxes paid and vendor payments. He stressed that the new coal agreement goes into effect once a settlement is approved and that this will provide savings to customers of $340 million over six years.

Mr. Darnell said that the future of the plant will be based on economics and that the company is under pressure due to low gas prices. A new coal contract will be crucial, he added. Also, he stated, when PNM announced that it was in accord with the EPA and the NMED to retire two units, PNM committed to community enhancements of $150 million, as well as $1 million going toward a training program for Navajo students.

The shutdown of these two units will cut emissions, as well as coal and water usage, in half, he said. He also spoke about PNM's ownership in the Palo Verde Nuclear Generating Station, which is 10.2% of those units. He added that PNM will need to replace what it is retiring with base load power and that nuclear power is affordable. He spoke highly of the Palo Verde facility, saying it is a well-performing, safe plant and one of the best operating nuclear facilities in the world. He also said that on-site storage of spent nuclear fuel can expand for the full life of the plant. He mentioned the importance of smart meter use, which allows for two-way communication and has both price and operational benefits.

Committee members engaged in questioning, and the following points arose:

- PNM's ownership of utility-scale solar sites;
- the lowering of solar panel prices, costs for private systems, how these interconnect to the grid and what solar tax credits are available;
- committee members' request for information numbers at PNM for constituent use;

- the San Juan Coal Mine's portion of the workforce, providing about 2,000 jobs in the county;
- the larger economic effect of shutting down two units at the generating station, including the effect on jobs, wages and severance taxes for coal extraction;
- higher integration costs associated with the percentage of renewable energy sources in a system;
- PNM carrying extra capacity, especially with wind and solar energy, to ensure service 24/7;
- the cost of integrating solar into the grid not being included in solar costs at present;
- the crisis situation with global climate change and the need for reduction of coal generating stations;
- the state's economic dependence on oil and gas;
- that the San Juan Generating Station meets federal standards for ozone levels;
- the Navajo Nation's reliance on coal sales; and
- utilities charging owners to connect to the grid.

Proposed Legislation

David Martin, secretary, Energy, Minerals and Natural Resources Department (EMNRD), and Jim Griswold, bureau chief, Environmental Bureau, EMNRD, briefly discussed the status of the brine well property in Carlsbad as background for the proposed piece of legislation before the committee to create the Carlsbad Brine Well Remediation Authority. Secretary Martin spoke of the potential for collapse and resultant damage that would affect highways, rail lines and properties catastrophically. He added that the time line for potential collapse is very hard to predict and could be earlier than what is projected, which is in the next 10 to 25 years. Secretary Martin spoke of the intent of the legislation, which is to form an authority composed of major stakeholders so that the process of reclamation can begin. Mr. Griswold stated that the EMNRD has decided to do the bid as a design-build process. Secretary Martin added that the idea would be to generate a request for proposals by year's end and that, although the bill would set up the authority, it would not identify funding to accomplish the work. He said that the EMNRD has funding for the study. In conclusion, he said that it may take $20 million for this reclamation project.

Senator Cisneros moved that the RHMC endorse this legislation, and Senator Barela seconded the motion. The committee engaged in discussion, and the following points were made:

- the amount of money spent to date on the brine well project, which is over $5 million, on monitoring, feasibility studies and a microseismic system;
- that to date, the money has been well spent on gathering data and understanding the problem; and
- the needed structure of the authority to deal with this issue.

The RHMC then voted on the endorsement of this bill, which was adopted with one vote of opposition from Representative Alcon.

Adjournment

There being no further business, the committee adjourned at 3:34 p.m.

ENDORSED LEGISLATION

HOUSE BILL

52ND LEGISLATURE - STATE OF NEW MEXICO - SECOND SESSION, 2016

INTRODUCED BY

FOR THE RADIOACTIVE AND HAZARDOUS MATERIALS COMMITTEE

AN ACT

RELATING TO PUBLIC SAFETY; PROVIDING FOR REMEDIATION OF THE DANGER POSED BY THE CARLSBAD BRINE WELL; CREATING THE CARLSBAD BRINE WELL REMEDIATION AUTHORITY; CREATING THE CARLSBAD BRINE WELL REMEDIATION FUND; MAKING AN APPROPRIATION.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF NEW MEXICO:

SECTION 1. [NEW MATERIAL] CARLSBAD BRINE WELL REMEDIATION AUTHORITY--CREATED--MEMBERSHIP--ADMINISTRATION OF THE CARLSBAD BRINE WELL REMEDIATION.--

A. The "Carlsbad brine well remediation authority" is created. The membership of the board of directors of the authority shall consist of the following five members:

(1) the mayor of the city of Carlsbad, who shall serve as chair of the board, or the mayor's designee;

(2) the chair of the Eddy county board of

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county commissioners or the chair's designee;

(3) the secretary of energy, minerals and natural resources or the secretary's designee;

(4) the secretary of transportation or the secretary's designee; and

(5) the manager of the Carlsbad irrigation district or the manager's designee.

B. The authority is subject to the provisions of the Procurement Code and other applicable state laws. The authority is a public body politic and corporate, separate and apart from the city of Carlsbad and Eddy county. The authority is a political subdivision of the state.

C. The authority:

(1) shall set policy and regulate, supervise and administer the remediation of the Carlsbad brine well;

(2) is granted all powers necessary and appropriate to carry out and effectuate its public and corporate purposes, including the authority to adopt procedural rules;

(3) may use city or county procurement processes or contract with the city or county to further its public and corporate purposes;

(4) may acquire, maintain, contract for or condemn property; and

(5) may adopt resolutions and rules necessary

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to exert the power conferred by this section.

D. The authority is subject to the provisions of the Eminent Domain Code.

SECTION 2. [NEW MATERIAL] CARLSBAD BRINE WELL REMEDIATION FUND--CREATED--PURPOSE--MONEY IN THE FUND--APPROPRIATION--CONDITIONS.--

A. There is created the "Carlsbad brine well remediation fund". The fund shall be used by the Carlsbad brine well remediation authority to the extent that revenues are available to remediate the Carlsbad brine well.

B. Money in the fund may consist of appropriations, donations, earnings from investment of the fund and other revenue that from time to time may accrue to the fund from other sources, such as the federal government, for remediation of the Carlsbad brine well.

SECTION 3. APPROPRIATION.--One hundred fifty thousand dollars ($150,000) is appropriated from the general fund to the Carlsbad brine well remediation fund for expenditure in fiscal year 2017 and subsequent fiscal years to support the activities of the Carlsbad brine well remediation authority. Any unexpended or unencumbered balance remaining at the end of a fiscal year shall not revert to the general fund.

SECTION 4. EFFECTIVE DATE.--The effective date of the provisions of this act is July 1, 2016.

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