

RADIOACTIVE AND HAZARDOUS MATERIALS COMMITTEE



REPORT to the FIFTIETH LEGISLATURE

December 2010
Legislative Council Service

SUMMARY

SUMMARY OF THE RADIOACTIVE AND HAZARDOUS MATERIALS COMMITTEE INTERIM 2010 WORK

The Radioactive and Hazardous Materials Committee (RHMC) met one day in Los Alamos and two days in Carlsbad. Otherwise, all meetings were in Santa Fe. The committee covered each topic in its scope of work, hearing testimony on:

- 1) government restructuring proposals and programs and the missions of the Department of Environment (NMED) in the context of more efficiency and cost-effectiveness;
- 2) the nuclear fuel cycle relative to energy needs;
- 3) New Mexico's supply of and demand for electricity and the potential role in generation and transmission of electricity;
- 4) the status of the Waste Isolation Pilot Plant (WIPP);
- 5) NMED "energy parks";
- 6) alternative and clean energy initiatives;
- 7) electricity, propane and gas heating cost increases as a result of renewable energy requirements;
- 8) proposed rules on greenhouse gas emissions;
- 9) a status report from Los Alamos National Laboratory on the progress of uranium legacy site cleanup and shipment of waste to WIPP;
- 10) uranium mining and uranium legacy mine contamination cleanup;
- 11) nuclear electric power as a clean energy option; and
- 12) geothermal power options.

The committee discussed whether the legislature's power to intervene in and review the rulemaking process is compatible with the separation of powers constitutional doctrine and the fact that most states have determined that legislative veto of a rule requires the passage of a bill and its signing by the governor. Some states have passed constitutional amendments, but most have enacted measures that provide for the legislature to delay the effective date of a rule until the end of the subsequent legislative session to allow the legislature sufficient time to act on a rule change. This avoids the constitutional issue of separation of powers, the committee was told.

For that reason, the committee authorized opening files to draft bills to:

- provide for review and approval of executive branch rules by the legislature during the next regular legislative session, following adoption of the rules, before the rules can go into effect (similar to House Business and Industry Committee Substitute for HB 310 in the 2008 regular legislative session);
 - require financial impact analysis by the executive branch of all rules proposed by the executive;
 - amend the existing statutory requirements for "renewable energy portfolio standards" to "clean energy portfolio standards", which would include nuclear energy fuel sources; and
 - expand the role of the RHMC to an oversight committee of the NMED and the Energy, Minerals and Natural Resources Department as provided in previous legislation sponsored by Representative John A. Heaton.

The committee also endorsed a letter regarding expansion of the purpose and capacity of WIPP to store radioactive material.

WORK PLAN AND SCHEDULE

**2010 APPROVED
WORK PLAN AND MEETING SCHEDULE
for the
RADIOACTIVE AND HAZARDOUS MATERIALS COMMITTEE**

Members

Sen. Richard C. Martinez, Chair
Rep. John A. Heaton, Vice Chair
Sen. Vernon D. Asbill
Sen. Stephen H. Fischmann
Rep. William J. Gray
Sen. Carroll H. Leavell

Rep. Antonio Lujan
Sen. John Pinto
Rep. Jeff Steinborn
Rep. Jim R. Trujillo
Sen. David Ulibarri
Rep. Jeannette O. Wallace

Advisory Members

Sen. Rod Adair
Rep. Eliseo Lee Alcon
Rep. Thomas A. Anderson
Rep. Donald E. Bratton
Sen. Dianna J. Duran

Sen. Gay G. Kernan
Sen. Lynda M. Lovejoy
Sen. William H. Payne
Rep. Nick L. Salazar

Work Plan

During the 2010 interim, the committee intends to:

1. provide guidance and recommendations to the Government Restructuring Task Force by examining the programs and missions of the Department of Environment with an eye toward making the department more efficient and cost-effective, including ranking programs in terms of criticality to the core functions of the department;
2. examine the back end of the nuclear fuel cycle relative to energy needs and hear testimony on federal initiatives from a representative of the U.S. Department of Energy's Office of Nuclear Energy;
3. explore the Electric Power Research Institute's review of New Mexico's supply and demand and the potential role in generation and transmission of electricity and its potential effect on the environment;
4. receive Waste Isolation Pilot Plant (WIPP) updates and evaluate the management of hazardous waste;
5. review proposals for Department of Energy designation of "energy parks" in areas such as Los Alamos, WIPP and Sandia National Laboratories;
6. examine advantages and liabilities of and potential for more alternative and clean energy initiatives;

7. assess the impacts of electricity, propane and gas heating cost increases as a result of renewable energy requirements under the Renewable Portfolio Standards and other Public Regulation Commission rules (SJM 15 from the 2009 session);

8. receive a report from the Department of Environment on proposed rules on cap and trade and greenhouse gas emission controls;

9. receive a status report from Los Alamos National Laboratory on the progress of uranium legacy site cleanup and shipment of waste to WIPP;

10. review current developments in uranium mining and uranium legacy mine contamination cleanup;

11. hear testimony on the parameters of reviving nuclear electric power as a clean energy option; and

12. explore the geothermal power ("hot rock") option.

RADIOACTIVE AND HAZARDOUS MATERIALS COMMITTEE

2010 Approved Meeting Schedule

<u>Date</u>	<u>Location</u>
May 26	Santa Fe
July 13	Santa Fe
September 8	Los Alamos
October 14-15	Carlsbad/Hobbs
November 23	Santa Fe

AGENDAS

TENTATIVE AGENDA
for the
RADIOACTIVE AND HAZARDOUS MATERIALS COMMITTEE
May 26, 2010
Room 321, State Capitol

Wednesday, May 26

- 10:00 a.m. **Call to Order**
—Senator Richard C. Martinez, Chair
- 10:05 a.m. **Government Restructuring Issues**
—Paula Tackett, Director, Legislative Council Service (LCS)
—Raúl Burciaga, Director-Designate, LCS
- 10:30 a.m. **Department of Environment Mission**
—Ron Curry, Secretary of Environment
- 11:30 a.m. **2010 Interim Work Plan and Meeting Schedule**
- 12:00 noon **Adjourn**

Revised: July 8, 2010

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

**July 13, 2010
Room 321, State Capitol**

Tuesday, July 13

- 9:00 a.m. **Call to Order**
—Senator Richard C. Martinez, Chair
- Department of Environment (NMED): Mission, Resources and Structure**
—Ron Curry, Secretary, NMED
—Jim Perry, Director, Administrative Services Division, NMED
- 10:00 a.m. **Energy Parks**
—Ben Cross, Department of Energy
- 10:30 a.m. **Environmental Position on Uranium Mining**
—Eric Jantz, Environmental Law Center
—Nadine Padilla, Coordinator for the Multicultural Alliance for a
 Safe Environment
- 11:00 a.m. **(Joint Meeting with Indian Affairs Committee — Room 307)**
In Situ Leaching, Uranium Mills and Ground Water
—Jerry Schoeppner, Ground Water Quality Bureau, NMED
- 12:00 noon **Working Lunch**
Uranium Mining Safety Standards
—Rick Van Horn, Uranium Resources, Inc.
—Juan Velasquez, Strathmore Minerals Corp.
- 1:00 p.m. **Uranium Legacy Mine Cleanup — Five-Year Plan**
—Sam Coleman, Director, Superfund Division, Region 6, Environmental
 Protection Agency (EPA)
—John C. Meyer, Superfund Division, EPA
- 2:30 p.m. **Status Update on Uranium Mine Inventory**
—Bill Brancard, General Counsel, Energy, Minerals and Natural Resources
 Department

3:30 p.m. **Hydrogen Production in New Mexico**
—Henry Herman, CEO, Jetstream Wind

4:30 p.m. **Adjourn**

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

September 8, 2010
Fuller Lodge
2132 Central Avenue
Los Alamos

Wednesday, September 8

- 10:00 a.m. **Call to Order**
—Senator Richard C. Martinez, Chair
- Welcome**
—Los Alamos County Council
—Kevin Smith, Los Alamos Site Office Manager, Department of Energy
- 10:15 a.m. **Los Alamos National Laboratory (LANL) Overview, Energy Security and Renewable Energy**
—Duncan McBranch, Deputy Principal Associate Director, Science, Technology and Engineering, LANL
- 12:00 noon **Working Lunch**
- Laboratory Community Outreach**
—Kurt Steinhaus, Office Manager, Community Program Office, LANL
- 1:00 p.m. **Laboratory Construction**
—Tom McKinney, Associate Director, Project Management and Site Services, LANL
- 2:00 p.m. **Laboratory Cleanup Status**
—Michael Graham, Associate Director, Environmental Programs, LANL
—Ron Curry, Secretary, Department of Environment
- 3:00 p.m. **Adjourn**

Revised: September 30, 2010

**TENTATIVE AGENDA
for the
FOURTH MEETING
of the
RADIOACTIVE AND HAZARDOUS MATERIALS COMMITTEE**

**October 14-15, 2010
Pecos River Village Conference Center
Carlsbad**

Thursday, October 14

- 10:00 a.m. **Call to Order**
—Senator Richard C. Martinez, Chair
- Waste Isolation Pilot Plant (WIPP) Federal Resource Conservation and
Recovery Act of 1976 Permits Update**
—Ron Curry, Secretary of Environment
—James Bearzi, Hazardous Waste Bureau Chief, Department of Environment
- 11:00 a.m. **WIPP Route Changes**
—Bill Mackie, Carlsbad Field Office, Department of Energy
- 12:30 p.m. **Lunch**
- 1:30 p.m. **WIPP Update**
—George Basabilvazo, Director of Regulatory Compliance, WIPP
- 2:30 p.m. **International Isotopes, Inc.**
—Steve Laflin, President and CEO
- 4:00 p.m. **Brine Well Update**
—Ned Elkins, Brine Well Technical Committee
—Mark Fesmire, Oil Conservation Division, Energy, Minerals and Natural
Resources Department
- 5:00 p.m. **Recess**

Friday, October 15

- 9:00 a.m. **New Mexico Renewable Energy Transmission Authority Status Report**
—Jeremy Turner, Director

10:30 a.m. **Private Landfills**
—Mark Miller, Chair, New Mexico National Solid Wastes Management
 Association
—Keith Gordon, Gordon Environmental, Inc.

12:00 noon **Adjourn**

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

**November 23, 2010
Room 321, State Capitol**

Tuesday, November 23

- 9:00 a.m. **Call to Order**
—Senator Richard C. Martinez, Chair
- Discussion: Potential Government Restructuring Proposals**
—Committee Discussion
- 10:30 a.m. **Compliance with the Federal Surface Mining Control and
Reclamation Act of 1977**
—Bill Brancard, Energy, Minerals and Natural Resources Department
- 12:00 noon **Lunch**
- 1:30 p.m. **Renewable Energy Costs**
—John Curl, Western Resources
- 2:30 p.m. **New Mexico's Role in Generation and Transmission of Electric Power**
—Jeff Mechenbier, Public Service Company of New Mexico
- 3:30 p.m. **Geothermal "Hot Rock" Energy Options**
—Mark Person, New Mexico Institute of Mining and Technology
- 5:00 p.m. **Adjourn**

MINUTES

MINUTES
of the
FIRST MEETING
of the
RADIOACTIVE AND HAZARDOUS MATERIALS COMMITTEE
May 26, 2010
Room 321, State Capitol

The first meeting of the 2010 interim of the Radioactive and Hazardous Materials Committee was called to order at 10:00 a.m. by Senator Richard C. Martinez, chair, on Wednesday, May 26, 2010, in Room 321 of the State Capitol.

Present

Sen. Richard C. Martinez, Chair
Sen. Stephen H. Fischmann
Rep. William J. Gray
Sen. Carroll H. Leavell
Rep. Antonio Lujan
Rep. Jim R. Trujillo
Rep. Jeannette O. Wallace

Absent

Rep. John A. Heaton, Vice Chair
Sen. Vernon D. Asbill
Sen. John Pinto
Rep. Jeff Steinborn
Sen. David Ulibarri

Advisory Members

Sen. Rod Adair
Rep. Eliseo Lee Alcon
Rep. Thomas A. Anderson
Sen. Lynda M. Lovejoy
Rep. Nick L. Salazar

Rep. Donald E. Bratton
Sen. Dianna J. Duran
Sen. Gay G. Kernan
Rep. Rodolpho "Rudy" S. Martinez
Sen. William H. Payne

Staff

Gordon Meeks
Mark Harben

Guests

The guest list is in the meeting file.

Wednesday, May 26

2010 Interim Work Plan and Meeting Schedule

The committee adjusted the agenda and discussed the work plan and meeting schedule first. Senator Martinez asked if any members had suggestions to add to the work plan.

The committee members asked that the following be added to the draft work plan:

- costs passed on to customers from electric, propane and energy companies or co-ops for energy materials, along with issues facing customers;
- the status of green jobs;
- cap and trade rules before the Environmental Improvement Board (EIB) and the Department of Environment plans;

- regulatory justice;
- status of Los Alamos National Laboratory;
- uranium mining; and
- geothermal and nuclear energy options.

Government Restructuring Issues

Paula Tackett, director, Legislative Council Service (LCS), introduced herself and Raúl E. Burciaga, director-designate, LCS. She discussed the general calendar for interim committee meetings and added that the New Mexico Legislative Council asked to have the total number of meeting days limited. Ms. Tackett added that the council, due to budget constraints, has also requested that meetings should be held in Santa Fe, unless the committee illustrates that traveling is vital. She also discussed the current government restructuring process that is ongoing to help save money during the budget crunch. Ms. Tackett told the committee that the Government Restructuring Task Force needs the help of committees to pinpoint cuts that are appropriate, necessary and not too detrimental to the state.

Discussion and comments were focused on:

- travel to Los Alamos and Carlsbad;
- whether the committee needs to look at revenue enhancements;
- things to make agencies more efficient and effective;
- policies that should drive the budget cuts;
- mitigation of executive orders as budget consequences; and
- opposition to revenue enhancement ideas.

Committee members expressed appreciation to Ms. Tackett and compliments to the staff.

Senator Martinez made a motion to adopt the work plan, which was seconded by Representative Lujan and Representative Trujillo; the work plan was adopted by the committee.

Department of Environment Mission

Ron Curry, secretary, Department of Environment, introduced the members of his department in the audience. Secretary Curry discussed the ways the department is funded, stating that funding comes from many different sources. He mentioned how projects, including ground water protection and monitoring, are funded with the general fund, which has been budgeted to be less than it was under Governor Gary Johnson's administration. Secretary Curry stated that as cuts continue, the important projects that are pivotal in protecting New Mexico's environment are suffering. He said that the department depends exclusively on the general fund for ground water work, which has stayed flat during Governor Bill Richardson's administration. The department's vacancy rate is high, meaning Secretary Curry has inadequate staff for the jobs at hand. He emphasized that the Ground Water Bureau deals with the hard rock mine permits that include large employers such as Phelps Dodge and Freeport MacMoran. The department has an overall vacancy rate of 25% to 30% of its approved full-time employees. He pointed out that the workload of the department includes permitting and inspecting septic tanks, only half of which are permitted. The state has 15,000 to 20,000 cesspools. He said the general fund accounts for only 16% of the department's total budget. To the extent that the budget drives

policy programs, the general fund programs are limited in their effectiveness. The department has more than 100 grants from the federal Environmental Protection Agency (EPA), none of which can be moved from one purpose to another. He said that the Drinking Water Bureau was \$1.2 million in debt to the EPA for failure to fulfill requirements of the EPA, which has tight restrictions like the Legislative Finance Committee. Yet, he said, he is proud of the five consecutive unqualified audits of the department. He said there are three components of the department's mission: policy, financial and legal. Each is critical.

Jim Perry, Administrative Services Division director, Department of Environment, discussed past legislation and what the department is planning for the upcoming legislative session. He thanked the committee for championing the cause of the department. He discussed the nuclear workers' compensations and said that the legislature and executive have to approve funding for that each year. Mr. Perry also went over financial figures for the department.

Questions and topics discussed:

- penalties and revenues for "supplemental environmental project"; ex PNM consent decree;
- fees as revenue;
- the concentration of cesspools in what area (spread throughout the state);
- compliments to the Department of Environment for work in Rio Arriba County;
- the difference between septic tanks and cesspools;
- the Kirtland Air Force Base plume and PCBs near Albuquerque water intake;
- greenhouse gas and cap and trade plans: June 7 New Mexico Supreme Court hearings; California and New Mexico are the only states moving toward cap and trade; and
- environmental issues with the Santa Fe courthouse.

Greenhouse Gas Initiative

Jim Norton, Environmental Protection Division director, Department of Environment, and Sandra Ely, environment and energy policy coordinator, Department of Environment, were introduced and discussed the greenhouse gas initiative with the committee. They referred to the challenge in court for an injunction against the EIB rules on cap and trade. A formal petition had not been filed yet by the department. The existing court case will be considered before the department acts. They said six jurisdictions will be moving forward in 2012 on cap and trade policy with or without the federal government taking action. A 100 million metric ton cap is New Mexico's goal in light of the other jurisdictions not moving forward. The process will involve public meetings. An issues paper has been published, and the department is receiving public comments on that. Since the EIB has been enjoined by a lower court from taking action, the rules are held in abeyance until the state supreme court reviews and acts on the lower court's ruling. A 60-day comment period would follow if the supreme court overrules the injunction. No future public hearings are planned until the supreme court issues its decision. They said the department feels it has the authority to regulate air pollution that contributes to greenhouse gases created in New Mexico. The New Mexico proposed rules are similar to the California initiative on greenhouse gas rules. Both states are members of the Western Climate Initiative. Costs to New Mexico residents of cap and trade rules need to be identified, they said.

The discussion and commentary focused on:

- reasons other states are sitting on the sidelines;
- mechanisms for distributing greenhouse gas allowances;
- potential financial windfall to allowance holders when the market is created and what is the experience elsewhere;
- "cap and dividend" concept compared to cap and trade (it is wise to go with cap and trade without comparing it with cap and dividend);
- Bernalillo County jurisdiction (25,000-ton threshold applies outside Bernalillo County and Indian land);
- implementation schedule; and
- gubernatorial candidates are opposed to cap and trade.

Senator Martinez discussed the dates of future meetings this interim. He said he would like to go to Los Alamos on September 8 and Hobbs/Carlsbad on October 14-15.

Senator Martinez adjourned the meeting at 11:53 a.m.

**MINUTES
of the
SECOND MEETING
of the
RADIOACTIVE AND HAZARDOUS MATERIALS COMMITTEE
July 13, 2010
State Capitol
Santa Fe**

The second meeting of the Radioactive and Hazardous Materials Committee was called to order by Senator Richard C. Martinez, chair, on July 13, 2010 at 9:08 a.m.

Present

Sen. Richard C. Martinez, Chair
Rep. John A. Heaton, Vice Chair
Sen. Vernon D. Asbill
Sen. Stephen H. Fischmann
Rep. William J. Gray
Sen. Carroll H. Leavell
Rep. Antonio Lujan
Sen. John Pinto
Rep. Jim R. Trujillo
Sen. David Ulibarri
Rep. Jeannette O. Wallace

Absent

Rep. Jeff Steinborn

Advisory Members

Sen. Rod Adair
Rep. Eliseo Lee Alcon
Rep. Thomas A. Anderson
Rep. Donald E. Bratton
Sen. Dianna J. Duran
Sen. Lynda M. Lovejoy
Rep. Nick L. Salazar

Sen. Gay G. Kernan
Rep. Rodolpho "Rudy" S. Martinez
Sen. William H. Payne

Staff

Gordon Meeks
Renée Gregorio
Lacy A. Daniel

Guests and Handouts

The guest list is in the meeting file.

Handouts and written testimony are in the meeting file.

Tuesday July 13

The committee members introduced themselves.

Department of Environment (NMED): Mission, Resources and Structure

Ron Curry, secretary, NMED, and Jim Perry, director, Administrative Services Division, NMED, addressed the committee on the structure, mission and resources of the department. The secretary introduced other staff members from the department who were present in the room. The presenters handed out the department operating budget, which was broken down by general fund and other revenue sources. Mr. Perry said that only 16% of the department's budget comes from the general fund. He said that the vast majority of the department's revenues are made up of more than 100 grants from the U.S. Environmental Protection Agency (EPA). He said that the department's revenue stream is very complicated based on multiple funding sources and the purposes of those funds. The general fund appropriation in this fiscal year is less than it was in the last year of the Johnson administration. It has not grown at all over the last eight years in absolute dollars. Mr. Perry went through the budget pages in detail, explaining revenue sources and purposes. The NMED is probably the hardest department to understand because of the federal funds mixed in with state and other funds.

Secretary Curry closed by saying that the NMED has tried to provide ideas for the restructuring and rethinking of environmental policy and water resource management.

Energy Parks

Ben Cross, environmental management, U.S. Department of Energy (DOE), said the DOE is trying to reduce its footprint by cleaning up defense weapons sites. He characterized cleanup and reuse weapons sites as leveraging assets to improve returns to taxpayers on their investments. He explained that in this instance, the liabilities of contaminated weapons complex sites are tantamount to assets. By 2015, the DOE wants to reduce its footprint from 900 square miles to 90 square miles. The American Recovery and Reinvestment Act of 2009 money helped remediate many of these sites. The presence of the DOE is not necessarily going to be eliminated from these sites, it will just be a reduced presence. The Energy Park Initiative is a proposed program; it is not formal yet, although there is pending legislation in Congress to do this. Energy is fundamental. It affects everyone, and the DOE wants potentially to make assets available to private enterprise to create clean energy jobs, close carbon loopholes, reduce atmospheric emissions and enhance the competitiveness of the United States, he testified. He said that New Mexico has Sandia National Laboratories, Los Alamos National Laboratory, the Waste Isolation Pilot Plant and other DOE sites that are energy assets from a production and manufacturing standpoint. These assets constitute more than land; they include personnel, equipment, buildings and a safety culture. He also pointed out that corresponding to DOE sites, New Mexico has other assets, such as solar, geothermal and wind resources. He said that several other locations have expressed interest in the energy park concept, including in Ohio and Texas. Where the transmission grid is available, alternative liquid fuels also represent assets. He said that new transmission capacity takes 15 years to deploy, so the benefit of reusing existing facilities is advantageous. The DOE is holding workshops across the country with stakeholders in the energy community, including the EPA and its Re-Powering America, and it is also looking at former mine sites and other commercial assets as components of potential energy parks. A critical question is how to create a business environment to foster this. An energy park task force is being established to guide this effort, he said, adding that there is a need for pilot projects to demonstrate the idea, and some of those pilot sites might be in New Mexico.

Environmental Position on Uranium Mining

Eric Jantz, New Mexico Environmental Law Center, and Nadine Padilla, Multicultural Alliance for a Safe Environment, testified that from the 1940s to the 1980s, mines in the uranium

belt provided most of the nation's nuclear fuel and bomb materials. In 1979, waste broke through a tailings dam, affecting the drinking water of Navajo communities. The Church Rock spill was a bigger environmental disaster than Three Mile Island, but no one has heard of it, they said. There have been no studies, but locals have reported a higher incidence of disease. The in situ leach mining method involves injection of chemicals in rock to extract uranium. Two proposed mines are near 15,000 Navajos who may be adversely affected. Local communities oppose these mines, Ms. Padilla said.

The State of New Mexico has jurisdiction for permitting mines. Instead of these mines, the community needs investment in clean jobs for economic development as compared to uranium, which is a boom-and-bust market that does not create a reliable long-term sustainable economic base, according to Ms. Padilla. She asked for health studies, environmental justice studies and continued funding of regulatory actions by the NMED and the Energy, Minerals and Natural Resources Department. She asked the committee to consider the unfunded costs from contamination and health effects.

Joint Meeting with the Indian Affairs Committee

Multi-Agency Five-Year Plan for Uranium Legacy Cleanup

John C. Meyer, Superfund Division, Region 6, EPA, informed the committees of the progress and activities underway with respect to the multi-agency five-year plan his agency is spearheading. Mr. Meyer explained that approximately 500 acres have been looked at and characterized according to gamma and radon levels, among other markers. He noted that the instruments used to detect radiation contamination can only read up to five feet, but the entire property is tested. Mr. Meyer also explained that the five-year plan addresses water contamination. He stated that there are treatment solutions and equipment available. If the water in a family well is contaminated, the homeowner can dig the well deeper to avoid the contaminated water. If the contamination has extended beyond that area, more data are necessary to know how to fix the problem.

In order to add a property to the Superfund list, the EPA gathers information and follows the hazard rankings for the site. If a property ranks high enough to be put on the national priority list and the government agrees with the ranking, the property goes through a rulemaking procedure. If it survives the year- to year-and-a-half-long process, it gets on the Superfund list. The five-year plan aims to identify all the contaminated sites before cleaning them up. Working with other agencies ensures that the problems are tackled effectively.

Upon an inquiry from a committee member, Mr. Meyer clarified that his agency cannot commit to do something it is not funded to do. He also clarified that environmental cleanup is a long process. The average time for cleanup is 15 years, and the hardest part of the cleanup is to understand the problem before any action on cleanup is done. According to the EPA, it cannot inject anything into an aquifer without being licensed by the Nuclear Regulatory Commission. Aquifer exemption is granted upon request and after a state underground injection control permit is issued.

In Situ Leaching, Uranium Mills and Ground Water

Bill Olsen, bureau chief, and Jerry Schoeppner, Ground Water Quality Bureau, NMED reported that prior to the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS), screen data of Poison Canyon's 26 mines were screened. The

mines were prioritized based on physical hazards, such as open shafts, vent holes, adits, declines, high walls in pits, environmental hazards and potential contamination of sewers and surface and ground water. Twelve mine sites were proposed for consideration for emergency response due to physical hazards, and nine mine sites were proposed for consideration for removal action due to ongoing radiological releases.

In response to a committee inquiry, Mr. Olsen stated that, pursuant to federal law, the public water utility systems are tested for levels of contamination every three years, including in the Village of Milan. He mentioned that the Department of Environment asked the Village of Milan to test its public water utility system every year. Thus far, the tests of the Milan public water utility system have indicated that the water is safe to drink. Mr. Olsen informed the committees that the public will be alerted if contaminants are found to exceed safe levels. He noted that the state cannot stop individuals from drinking water from their own private wells. While the Homestake Mining Company (Barrick Gold Corp.) will pay people to abandon their wells, individuals cannot be forced to abandon use of well water.

Uranium Mining Safety Standards

Rick Van Horn, Uranium Resources, Inc., and Juan Velasquez, Strathmore Minerals Corp., informed the committees that they own a mine that is not on Indian land, so they need to seek a permit from the State of New Mexico. Mr. Van Horn stated that the company purchased the land more than 20 years ago and has spent \$23 million on the mine, but it has yet to begin mining.

In response to an inquiry regarding previous legislation, Mr. Van Horn affirmed that a surtax on uranium production has been and will remain on the table for consideration and support from the uranium industry. He highlighted that an in situ leaching mine creates approximately 120 jobs, a mill creates 70 to 80 jobs and an underground mine creates about 400 jobs. He concluded that mine safety is much more important and protocols are strictly followed nowadays, which protects the well-being of the mine workers.

Upon an inquiry from a committee member, Mr. Velasquez elaborated on reclaiming water to return it to its original contamination levels. For example, if the water supply was of irrigation quality, it would be irrigation quality after remediation, and if the water was of livestock drinking quality, it would be of livestock drinking quality once again. He explained that salt levels shoot up during the mining process; reverse osmosis is used during remediation to clean it up afterward. It is important to keep in mind that this was not drinking water to begin with, but it will be as good as before.

Uranium Mine Inventory — Status Update

Bill Brancard, general counsel, Energy, Minerals and Natural Resources Department, told the committees that there are many mines for which there is no record of reclamation. He stated that 79 mines were assessed, and they provided a better understanding of the uranium legacy. Mr. Brancard reminded the committees that just a few years ago, no one was addressing the cleanup of abandoned uranium mines, and the legislature decided that his department would initiate a uranium mine inventory project to assess and prioritize reclamation of abandoned uranium mines. He informed the committees that with the involvement of the federal government and the multi-agency five-year plan that the EPA is spearheading, his department is taking a more discreet role in addressing uranium legacy cleanup. The Bureau of Land Management has allocated federal money that his department can use for cleanup of a limited

number of abandoned mines. Of highest priority are the uranium mines near Silver City that are very close to residential areas. The abandoned mine program focuses on public safety, and funds for this program were pulled from different sources in order to accomplish this work.

Hydrogen Production in New Mexico

Henry Herman, chief executive officer of Jetstream Wind, Inc., explained to the committee that Jetstream is in the business of hydrogen renewable energy development technology. He said the public is not very familiar with hydrogen, and there is a misconception about its safety. The Jetstream process to create hydrogen fuel breaks down water into its components of hydrogen and oxygen. Jetstream set up shop in New Mexico to produce hydrogen. Jetstream's patented pyrolysis method uses an electric charge to produce hydrogen at 100 times the volume of conventional methods. The film industry uses a lot of diesel fuel for electric power on location shoots, so Jetstream has built a truck that produces power for remote location filming, which is less expensive than their conventional generators.

Mr. Herman said that one million watts of power can be generated from Jetstream's technology. He said that he is in discussions for a potential joint venture with Cummins Engine for devices that can be dropped anywhere in the world in response to emergencies. The technology lends itself to conversion of natural gas-fired plants and coal-fired plants to generate hydrogen power. Oil refining is a little more complicated, but it uses a lot of energy that could come from his company's hydrogen technology. Jetstream is working with Lawrence Livermore Laboratory's National Ignition Facility on a method for breaking down nuclear waste with lasers to power the system to reduce nuclear waste to its minimum volume. He concluded that by saying that Jetstream is constructing a hydrogen power plant at Spaceport America.

Minutes

The minutes of the May 2010 meeting were approved.

Adjournment

There being no further business before the committee, it adjourned at 5:20 p.m.

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

**September 8, 2010
Fuller Lodge
Los Alamos**

The third meeting of the Radioactive and Hazardous Materials Committee was called to order as a special subcommittee by Representative Jeannette O. Wallace on September 8, 2010 at 10:05 a.m. at the Fuller Lodge in Los Alamos.

Present

Rep. Jeannette O. Wallace, Acting Chair
Sen. Carroll H. Leavell
Rep. Antonio Lujan
Rep. Jim R. Trujillo
Sen. David Ulibarri

Absent

Sen. Richard C. Martinez, Chair
Rep. John A. Heaton, Vice Chair
Sen. Vernon D. Asbill
Sen. Stephen H. Fischmann
Rep. William J. Gray
Sen. John Pinto
Rep. Jeff Steinborn

Advisory Members

Rep. Eliseo Lee Alcon
Rep. Thomas A. Anderson
Sen. William H. Payne

Sen. Rod Adair
Rep. Donald E. Bratton
Sen. Dianna J. Duran
Sen. Gay G. Kernan
Sen. Lynda M. Lovejoy
Rep. Nick L. Salazar

Guest Legislator

Rep. Debbie A. Rodella

Staff

Gordon Meeks
Renée Gregorio
Adan Delval

Guests

The guest list is in the meeting file.

Handouts

Handouts and copies of written testimony are in the meeting file.

Welcome

Los Alamos County Commissioner Mike Wismer welcomed the committee to Los Alamos and the historic Fuller Lodge. He said the city is a community with a population of 18,000 and a worldwide reputation for science, but it also has exceptional cultural and recreation opportunities.

Kevin Smith, the Department of Energy (DOE) site manager, introduced himself to the committee for the first time, saying he is new to Los Alamos, having come from Oak Ridge, Tennessee. He mentioned the importance of partnerships between universities, local institutions and the laboratory. He has experience in managing enriched uranium programs and has managed other sites in the DOE weapons complex that all have cleanup activities, so he is familiar with the issues and technical challenges he will be facing and looks forward to living and working in Los Alamos.

The committee members introduced themselves.

Los Alamos National Laboratory (LANL) — State of the Lab: Overview; Research and Development; and Renewable Energy Highlights

Duncan McBranch, deputy principal associate director, Science, Technology and Engineering, LANL, distributed a handout and summarized LANL's \$2.17 billion budget, of which the majority (53%) is weapons-related. He told the committee that LANL is the oldest, most complex and second-largest DOE weapons site and is working hard to transform into a more efficient site. LANL includes 40 square miles, 1,280 buildings with nine million gross square feet and 11 nuclear facilities. He said that 40% of LANL is more than 40 years old and that 30% of the staff work in poor or failing space. There is \$450 million of deferred-maintenance backlog. There are 268 miles of roads on LANL property, 100 miles of which are paved. He said there has been a footprint reduction of one million square feet of post-World War II production facilities. LANL is a collection of unique facilities that address critical stockpile stewardship challenges, that includes supercomputing capabilities, that allows researchers to study weapons performance, that provides nanotechnology research programs and that draws international scientists to study materials. LANL's core function is to sustain the safety, security and effectiveness of the nation's nuclear deterrent through stockpile stewardship. LANL designs warheads, which constitute more than 60% of the nation's deterrent and the majority of the on-alert deterrent. This stockpile is managed through surveillance and life extension. Confidence without nuclear testing is based on a more fundamental understanding of science and engineering.

Mr. McBranch said that LANL is involved in research and development of energy in three areas: energy demand, nuclear energy and concepts and materials for clean energy. Subsets of these areas include programs in:

- efficient extraction of energy content from fuel;
- nonproliferation;
- energy storage, generation and transmission;
- predictive models for climate;
- infrastructure impact safeguards;
- effective waste management;
- revolutionary alternatives to petroleum;
- clean fossil energy analysis;
- prediction of abrupt change at multiple scales (regional to global); and

- global security and policy implications.

LANL is operated by Los Alamos National Security, LLC, (LANS) for the DOE and the National Nuclear Security Administration (NNSA).

Mr. McBranch summarized the Japanese partnership with Los Alamos County in photovoltaic integration and interconnection testing. The goal is to demonstrate that utility-scale photovoltaic systems can be integrated in a cost-effective manner into small-sized to mid-sized communities with minimal impact on the transmission grid by controlling different mixes of existing and new balancing resources to mitigate fluctuating photovoltaic generation. This project will involve the installation of 150 smart meters on homes and at LANL. It will provide the ability to forecast changes in solar irradiance. Energy storage with a combination of batteries and pumped water will be tested, as will electrical load shedding from LANL facilities, which will provide renewable energy to LANL.

The committee expressed interest in LANL's global climate modeling, reprocessing of spent nuclear fuel and storing renewable energy. There were also questions relating to LANL's annual budget. Most questions, however, related to comparisons between the alternative energy potential of the U.S. and that of other countries, including nuclear reactor designs at the lab and sequestering of carbon emissions as a component in reducing global warming.

Laboratory Community Outreach

Kurt Steinhaus told the subcommittee that, since 2006, LANS employee-giving has increased by more than 230%; student math scores in Española have shown three years of steady improvement; and the northern New Mexico economy is seeing a return of more than \$8.8 million in LANS investments. He said that the lab's outreach program is committed to build on this progress; it will evaluate internal and external impacts and it will continue to increase accountability, reassess LANS programs and make course corrections to ensure mutual benefit. He said that leveraging of LANS and community resources will achieve economic sustainability for the area. Volunteer hours by LANL employees have increased from fewer than 4,000 in 2006 to almost 200,000 hours in 2009, involving fewer than 100 employees in 2006 to more than 1,800 in 2009. The employee-giving program has increased from \$700,000 in 2006 to more than \$2.3 million in 2009. LANS matches employee donations dollar for dollar under this program. LANS' support for math and science teachers has resulted in 58 teachers in northern New Mexico obtaining their master's degrees, and it has improved science and math achievement in Española schools by raising proficiency from 23% to more than 37%.

Mr. Steinhaus described the education outreach program with the University of New Mexico's Los Alamos branch campus, Northern New Mexico College, New Mexico Highlands University and Santa Fe Community College, with which schools the lab is supporting initiation of degree programs in related disciplines of employment at the lab. LANS has also sponsored 55 scholarships, he said, highlighting one recipient from Peñasco.

In terms of business stimulation, Mr. Steinhaus described Northern New Mexico Connect, a program of the Venture Acceleration Fund, Springboard, LINK and Market Intelligence, which returned more than \$8.8 million to the northern New Mexico economy from a \$2.3 million LANS investment between 2006 and 2008. This produced 39 new jobs with an average salary of \$78,500; six jobs were retained with an average salary of \$66,000; and \$5.4 million in business capital funding was leveraged from non-LANS sources. Approximately 20

entrepreneurs were served in 2006, which grew to 80 in 2009. Since 2007, LANL has assisted 233 New Mexico businesses. In combination with Sandia National Laboratories, combined impacts of the tax credit small business assistance program have resulted in 525 jobs created or retained with an average salary of \$39,000; and \$1.30 in tax dollars were returned to New Mexico for every \$1.00 in tax credit to the labs.

Laboratory Construction

Tom McKinney, associate director, Project Management and Site Services, LANL, delineated LANL's planning process, constraints and management issues for construction projects along the Pajarito Road corridor over the next 10 years. The largest of these projects, he said, is the chemistry and metallurgy research replacement facility (CMRR), with the radioactive laboratory, utility and office building being the largest building within the CMRR. Mr. McKinney spoke of the time line for the major projects at hand, with the CMRR holding the latest completion date of 2020. He added that additional personnel will be needed for these projects for engineering and design, support services and construction during peak periods. Mr. McKinney stated that there are qualified local work forces that will be hired by contractors who will be coming in at the national level. He added that this will be a boon to local construction business. He assured the committee that contractors will hire locally because it makes economic sense and that there is a preference in place already for hiring New Mexico contractors, as well. He did caution, however, that he did not want to get too prescriptive in terms of insisting that a specified amount of local hiring take place. He said that the lab will act as its own general contractor and that 35 construction packages will be phased in as funding is made available. Mr. McKinney stressed LANL's commitment to protecting cultural resources, and he said that all construction projects have been extensively surveyed and deemed to be non-impact projects. He added that LANL is attending to its environmental stewardship responsibly, protecting the environment through closure of contaminated areas as well as employing environmentally conscious design on its buildings. Relating to the Los Alamos Study Group's lawsuit in August 2010, Mr. McKinney stated that LANL is providing counsel with the needed documentation. In response to committee concerns about the treatment of radioactive waste, Mr. McKinney responded that the current facility for treatment is old and construction of a new facility is being considered. He added that waste found downstream in the Rio Grande is historical in nature and that LANL has complied with all discharge regulations in place.

Laboratory Cleanup Status

Michael Graham, associate director, Environmental Programs, LANL, updated the committee on LANL's environmental cleanup, which includes remediating hazardous and radioactive waste areas, repacking and shipping legacy transuranic waste and demolishing old buildings. He reported the receipt of \$212 million in American Recovery and Reinvestment Act (ARRA) funds for cleanup, from which 450 jobs were created, 16 buildings demolished and 15 ground water monitoring wells completed. Mr. Graham said that the property at Technical Area (TA) 21 will be turned over to the county for reuse when cleanup is complete. He added that to complete the closure of TA 54, 142 shipments of waste were moved to the Waste Isolation Pilot Plant site, which entailed shipping waste four to five days per week (seven days per week during the summer), output that he stated was "pretty remarkable". Mr. Graham said that there has been a lot of congressional support for the cleanup and that about half of the ARRA funds are still available, although they are fully obligated for projects. He added that LANL subcontracts almost all of this work, creating opportunities for small businesses. He ended by saying that LANL is pushing for completion of cleanup by 2015.

Ron Curry, secretary, Department of Environment (NMED), stated that he has a history with Los Alamos through family employment — his father-in-law worked on the Manhattan Project. Secretary Curry worked as a contractor in the mid-1990s on sitewide environmental impact statements. He said that as the state looks at the 2005 consent order, it is important to engage with those with experience. He lauded the work of Mr. Graham, who he said has delivered to and engaged with the state to build trust and get things done in a timely manner, making him an asset to both LANL and the state. He stressed that, in dealings with the NMED and contractors, the greater the trust that can be developed with individuals, the more productive things become. In April of this year, Secretary Curry reported that he wrote a letter to U.S. Secretary of Energy Steven Chu expressing concerns over the state's contract with the NNSA which stated that, compared to the DOE, the NNSA is not serving LANL at its best. After site visits, the NNSA has conceded that there have been errors in how the cleanup has been conducted. As an auxiliary to the DOE, the NNSA has the responsibility to clean up sites. Because of a problematic decentralized approach where getting answers became impossible, Secretary Curry said that penalties were stipulated at an amount of over \$2.5 million. After frustration, mixed messages from the entities involved and a clear sense that the NNSA had been an obstructionist rather than a resolving influence, Secretary Curry concluded that the DOE has committed to come up with a management scheme that complements Mr. Graham's work. He added that the NNSA has not been in the business of cleanup, but it is in the business of manufacturing, and that the DOE understands the issues involved. He said that this needs to be resolved so that the actual cleanup is not impeded.

James Bearzi, chief of the Hazardous and Radioactive Materials Bureau, NMED, said that the most important component is the push to get completion of TA 21 and TA 54 by 2015. Mainly due to the trust that has been established, the NMED believes that this push is now underway. He stated that some critical elements are in place and that LANL has established a track record of performance and execution against the 2005 consent order.

He delineated sticking points as follows:

- material landfills or dumps;
- TA 54 cleanup;
- ground water contamination potential;
- the NNSA and the DOE are giving different signals to LANS;
- the stipulated penalties for missing deadlines and being out of compliance with the consent order in Area G have to take into account what is happening to the ground water;
- more than 1,000-foot-deep ground water monitoring has resulted in submission of inadequate reports;
- a well penetrated the regional aquifer, and LANL did not plug and fill that well for a long time; and
- "material disposal areas" need remediation.

Adjournment

There being no further business, the committee adjourned at 2:45 p.m.

**MINUTES
of the
FOURTH MEETING
of the
RADIOACTIVE AND HAZARDOUS MATERIALS COMMITTEE**

**October 14-15, 2010
Pecos River Village Conference Center
Carlsbad, New Mexico**

The fourth meeting of the Radioactive and Hazardous Materials Committee (RHMC) was called to order by Representative John A. Heaton, vice chair, at 10:05 a.m. on Thursday, October 14, 2010, at the Pecos River Village Conference Center in Carlsbad, New Mexico.

Present

Rep. John A. Heaton, Vice Chair
Sen. Vernon D. Asbill (Oct. 14)
Rep. William J. Gray
Sen. Carroll H. Leavell (Oct. 14)
Rep. Antonio Lujan
Sen. John Pinto
Rep. Jim R. Trujillo

Absent

Sen. Richard C. Martinez, Chair
Sen. Stephen H. Fischmann
Rep. Jeff Steinborn
Sen. David Ulibarri
Rep. Jeannette O. Wallace

Advisory Members

Rep. Eliseo Lee Alcon
Rep. Thomas A. Anderson
Rep. Donald E. Bratton (Oct. 14)
Sen. Gay G. Kernan (Oct. 14)

Sen. Rod Adair
Sen. Dianna J. Duran
Sen. Lynda M. Lovejoy
Sen. William H. Payne
Rep. Nick L. Salazar

(Attendance dates are noted for those members not present for the entire meeting.)

Guest Legislator

Shirley A. Tyler (Oct. 14)

Staff

Gordon Meeks
Renée Gregorio
Adan DelVal

Guests

The guest list is in the meeting file.

Handouts

Copies of all handouts and written testimony are in the meeting file and on the web site.

Thursday, October 14

Representative Heaton presented background on the Carlsbad area economy, saying it is a little more robust than some of the other parts of the state. He said that 10 multimillion-dollar projects are going on in the area, including potash mine expansion; International Isotopes Inc.; the Waste Isolation Pilot Plant (WIPP), which is hiring 300 additional employees with federal stimulus money; and an enormous new oil and gas find south of Malaga, which is producing 500-800 barrels per day. He said that the southeast area of New Mexico is a net contributor to the state revenues and that the Carlsbad area is a great tourist attraction on the Pecos River.

Members of the committee and staff introduced themselves.

Councilman Nick G. Salcido welcomed the committee to Carlsbad on behalf of the mayor. Mr. Salcido stated that oil wells are producing between 600 to 800 barrels of oil every day. He also stated that rural areas of the state are the main contributors to the state.

WIPP and the Federal Resource Conservation and Recovery Act of 1976 Permits Update

Ron Curry, secretary of environment, introduced James Bearzi, Hazardous Waste Bureau chief, Department of Environment, and staff members Marissa Bardino, Dennis McCullen and Charles Vasalen. He said that his department is regulating other federal facilities in addition to WIPP and Los Alamos National Laboratory (LANL), citing a Kirtland Air Force Base fuel spill involving eight million to 11 million gallons. He said that the department is managing itself as efficiently as possible. In managing federal Department of Energy (DOE) facilities around the state, the department has made an effort to help the DOE understand that the State of New Mexico is its regulator and that the state has to hold the DOE accountable. The DOE has to be accountable for the ways it does business in New Mexico, he said.

Representative Heaton made a comment about LANL being an organization with a \$2.2 billion budget. LANL gets "beaten up" routinely over environmental concerns for past activities. He said that the intellectual horsepower there is phenomenal and what it has to offer to the U.S. in terms of defense programs and technological advances is inestimable, and yet it always gets beat up over environmental issues. He said that the National Nuclear Security Administration controls the facility and that the LANL should not have to put up with politically motivated attacks and criticisms. LANL offers so much to the U.S., the world and New Mexico.

Mr. Bearzi stated that the due date to submit a federal Resource Conservation and Recovery Act of 1976 (RCRA) permit renewal is October 22, 2010. He also stated that there are 30 days to file an appeal, and the permit has 30 days before it becomes effective. He mentioned that WIPP keeps exposure levels down to an acceptable level to protect workers and receptors. He said that the main permit issue has been volatile organic compounds (VOCs). Mr. Bearzi stated that VOCs have to surpass a certain level before a regulatory action is taken. This may mean that shipments of waste may be curtailed because they cannot be cleaned as fast. An application to increase the VOC limit was submitted, but there must be a reasonable basis for that before a permit modification can be approved. The last modification was approved, he said, with some changes from the originally submitted request.

A permit renewal was submitted last summer; the permit application was received in May of 2009 and no action had been taken because there were issues with the application. An amended version of the application was later submitted and the Department of Environment then determined that the application should be completed within two months after it was submitted.

A draft permit was issued in April 2010. There were issues, and a hearing was held in August, which went "swimmingly", he said. In prior years, hearings went on for more than two weeks, and there were comments from hundreds of people. The renewed permit will be issued for a 10-year period and will probably be issued by the end of the year. In addition to issuing permits, the agency makes sure that permittees are doing the characterization the right way. He stated that in the past three months, four permits have been approved, and there is one under review.

The committee discussed:

- "surge" storage (additional storage capacity);
- public participation elements;
- that the standard for VOC levels of concentration of 165 parts per million was requested to be increased to 1,600 parts per million (414 were approved), while the average level is 150 (Occupational Health and Safety Administration standards are five parts per million);
- filtration of VOCs;
- potential problems with the transition of administrations;
- that the VOC issue is related to the Idaho site;
- order of placement of VOCs into the WIPP panel;
- who has oversight of non-mixed waste; it is the DOE; and
- that canisters at Sandia National Laboratories could have been characterized at LANL.

WIPP Route Changes

Bill Mackie, institutional affairs manager of the DOE's Carlsbad Field Office, told the committee that March 26, 1999 was the start of waste shipments to WIPP. He said that no corrosives or aerosols are in the waste stream from the eastern sources, Savannah River or Oak Ridge National Laboratory, which together account for a total of 1,322 shipments. He said that WIPP is proposing to change the southern route across which these shipments have come. The current route through Pecos, Texas, has experienced deterioration and is unsafe for these loads. The State of Texas ordered an emergency route around Andrews, Texas, to take Highway 176 into New Mexico, where the route number changes to NM 234. Then, shipments proceed on NM 18 north to Hobbs. NM 18 is a new two-lane road and meets the standards for WIPP shipments. Using federal American Recovery and Reinvestment Act of 2009 (ARRA) funds, WIPP is now reconstructing the south access road to connect to NM 18. The proposal for a formal permanent change in the designated WIPP route will save 95 miles and \$1,000 in operating costs per trip, i.e., \$5.80 per mile. In addition, the WIPP trucks must avoid certain roads to stay away from the potential sinkhole in Carlsbad. The current emergency route is good for one year, or until box culverts are replaced along U.S. 285. The next step to the formal permanent change-of-route status is to do a risk analysis on all proposals. The only drawback is going through Monahans, Texas, which will put the route through the center of town. WIPP will try to avoid that, he said. WIPP has met the requirement for public meetings, and the last requirement is to make sure that first responders are trained. He told the committee that WIPP will teach more than first responders and has made this training available to all communities. Jal is evaluating its needs now. WIPP will provide whatever training is needed there as well.

The request to the Department of Transportation will be submitted within two weeks. A request for emergency designation for this route will be made when the south access work is completed.

The committee discussed:

- advocating for a new route;
- design weight standards of new route roadways;
- the reason for using NM 128 as opposed to NM 18;
- acceptance of U.S. Navy propulsion reactor fuel rods at WIPP;
- Governor Richardson's Investment Program (GRIP) funding versus ARRA money paying for road improvements;
- that employee travel is mostly on NM 128;
- Nuclear Regulatory Commission review of definitions and gradings of nuclear materials; and
- that definitions of radioactivity need to be based on curie value rather than source or use; science-based definitions are needed relative to heat activity definitions.

The minutes of the August and September meetings were approved.

WIPP Update

George Basabilvazo, director of regulatory compliance at WIPP, presented a status report on WIPP, including the organizational structure, work force numbers (approximately 1,500 people from diverse backgrounds), economic impact (\$235 million) and progress on waste acceptance. He showed the committee a chart of the underground facility, pointing out that Panel 6 is filled and certified for foreclosure. WIPP is starting to mine Panel 7. He said that this is the safest underground facility in the country, with more than four million hours worked without a lost time injury. WIPP was recertified in 2010 at the "star level" in the DOE's program (maintained since 1994). More than 10.7 million safe loaded miles have been traveled to WIPP. It has a low injury rate — 0.20 as of 9/30/10 compared to the 2009 DOE complex average of 1.3. There have been 950 shipments received to date. The key regulatory processes include the compliance recertification application (CRA) and the RCRA permit renewal application. The expected changes to WIPP's RCRA permit are format changes, approval of disposal in Panel 8 and waste stream profile forms. Additional changes may require more specificity, which adds complexity to the permit request. Under the ARRA, the Carlsbad Field Office was allotted \$172 million, which means more than 400 jobs created or saved. By the end of September, the actual count was 546 jobs, 382 of which are in New Mexico. He summarized that Panels 1 through 4 are filled and closed; Panel 5 is now ready for disposal operations; and Panel 6 is undergoing an available-mining technique called "just in time" mining. Panel 6 is now certified, and the Department of Environment has inspected it; approval came from the state recently. Panel 7, conventional mining, is under way, and Panel 8 is to be discussed.

The discussion addressed:

- the time required to fill up mine panels and WIPP's life expectancy;
- an explanation of "just in time" mining;
- safety issues for maintenance and repair of mine roofs;
- the closure rate for Panel 1;
- terms of the federal WIPP Land Withdrawal Act authorization for radioactive waste;
- the status of evaluation of expanding the scope of WIPP;
- the number of mine shafts and points of entry;
- other alternative waste streams that fit the WIPP Land Withdrawal Act parameters;
- the role of the State of New Mexico over alternative waste streams;
- Washington State's position on the buried transuranic wastes at Hanford; and

- if waste can be placed on other layers above or below.

International Isotopes Inc.

Steve Laflin, president and chief executive officer, International Isotopes Inc., told the committee that International Isotopes Inc. is a public company based in Idaho and that is building a facility near Hobbs that will be the first commercial facility for depleted uranium deconversion and fluoride extraction. The manufacturing site selection process has been completed, and the Nuclear Regulatory Commission license application is under review. He placed an emphasis on "green" recycling of radioactive material and the company's keen sense of protecting the environment, saying it will reduce carbon dioxide emissions by six million pounds per year. He said the proprietary process can produce fluoride products using much less energy. It is a commercial facility that has to be licensed through the Nuclear Regulatory Commission. Conventional processing of uranium requires 10 pounds of uranium to make one pound of fuel. Most enriched uranium now comes from decommissioned Soviet nuclear weapons, and the process has taken place in Russia. But there is lots of depleted material stockpiled in the U.S. (1.5 billion pounds). The Energy Solutions site in Clyde, Utah, is the only one to handle these depleted materials in the U.S. now. There are no plans for large capacity storage at the facility in New Mexico.

The discussion focused on:

- the company's status as a publicly owned and traded business;
- transportation methods;
- planned volume production stream;
- byproduct uses;
- throughput paths of resources and products;
- authority, regulation and oversight of the Nuclear Regulatory Commission;
- federal deconversion facilities;
- the volume of processing capacity of the URENCO Group plant;
- the source of most uranium from Canada;
- uranium ore resources in New Mexico;
- URENCO's license capacity restrictions required by Governor Richardson and the process for removing Item 14 on URENCO's license;
- depleted uranium's radioactivity; and
- discussions with other companies to expand the International Isotopes Inc. business and mining capabilities in New Mexico.

Carlsbad Brine Well Update

Mark Fesmire and Jim Griswald, Oil Conservation Division of the Energy, Minerals and Natural Resources Department, and Ned Elkins, Carlsbad Brine Well Technical Committee, summarized the current situation with the potential brine well collapse just south of Carlsbad. Mr. Fesmire told the committee that after a brine well collapsed south of Artesia, the department has become much more vigilant about potential collapses, especially in populated areas and where significant infrastructure may be affected. He said that the Artesia sinkhole had occurred at a trucking operation that had mined salt under a well, and it caved in June 2008. Then a second sinkhole developed elsewhere, and the department started looking at what this could mean for this area of the state, where there are about 40 of these potential brine well situations. Characteristics of those that collapsed were compared. There are multiple wells in Carlsbad that are similar. The site just on the outskirts of Carlsbad involves INW Trucking, the operator, a

church, a store, a trailer park, a main trunk line of the Carlsbad Irrigation District and two major highways. The company was asked to plug the well and cease operations. This incurred some expenses. Jointly with the City of Carlsbad, an early warning system was created and, most importantly, sensitive monitors were put in place. The city created a committee of experts to find a way to prevent a collapse. The state spent all the money available to address this, and the city took over. It was decided to go back into one of the wells in July 2010 to conduct a test to see how serious the problem might be. When pressurized water started to come up, the operation was ceased. Mr. Griswald said the city and state have been monitoring the site, and he described the operation in more detail. The reentry drilled out the cement plug with the objective of drilling it out to the bottom, and an image was taken of the cavern left from the brine operation. The upper part was successfully imaged and showed a cavity that is too small to account for all the material pumped from the site, based on the records of the company. In the first reentry attempt, the well flowed back, and about 4,000 barrels of brine came to the surface. This threatened the integrity of the surface strata, and the whole operation was ceased. Mr. Griswald said the state wants to continue participating fully with the city. A joint effort was undertaken to put together a high quality committee of experts and start the planning for "what if" scenarios.

Mr. Elkins added that the cavern has not grown, but when the well was re-drilled ("pushed through"), an anhydrite ledge could not be located, which raised more questions about what the situation was below ground, especially after hitting debris like copper wire and plastic. The first conclusion was that no large cavern exists immediately below, but it seemed that the void might extend horizontally (enough to equal six million cubic feet of salt having been extracted). Finding the hole is what is hard, he said. Workers could drill again deeper and find the hole, but they decided to back off a bit and look at the geology for safety. This situation is different than the two wells that have collapsed. There is a roof over the upper cavern that leaves many questions about the actual structure of the salt cavern. Putting fresh water into salt water will cause the brine to go to the bottom because brine is heavier and it is fully saturated. Fresh water is buoyant and rises to the top and erodes out. Sonar might not pick up this sort of lateral extension, he said. He reiterated that there is the possibility of a major brine well collapse in the worst place in Carlsbad.

The committee questions addressed:

- how the money gets distributed (an attorney is negotiating it);
- pressurization of the well and requirements for plugging it;
- the amount that had been spent (\$139,000 per month) from the Oil and Gas Reclamation Fund;
- that \$1.3 million has been committed from the city budget, which is over budget now with \$1.7 million having been spent;
- confidence in the early warning system, but there is an immediate threat of one million barrels of salt rising up;
- the geotechnical view, which is that there is a greater void space under the first cavity, allowing a big measurable sag;
- that the former owner is bankrupt, and the land is now owned by bankruptcy estate;
- expectations that there will be another cavity somewhere;
- six million cubic feet of voidage that is unknown now but needs to be categorized;
- that depth of drilling needed to characterize the cavity (525 feet);
- that the need to know whether the cavity is thin and broad or deep and localized;

- that four to eight hours of warning for emergency response planning is needed;
- that the National Cave and Karst Research Institute, located in Carlsbad, is participating with a sonar device to help determine where to drill the core exploration site;
- tomography techniques;
- the expertise on the city's committees that were created to address this;
- how money is distributed to the project in an efficient and effective way based on a sound memorandum of understanding;
- that the City of Carlsbad's attorney is Pete Domenici, Jr.;
- flowback in the other two sinkhole situations;
- the reason why the pressure is based on underground fluid, not on recharge from the surface; and
- variations in pressure.

Friday, October 15

New Mexico Renewable Energy Transmission Authority (RETA) Status Report

Jeremy Turner, director, RETA, gave an overview of RETA by explaining that its mission has been to try to start laying a long-range vision for the state on electric power transmission. High Lonesome Mesa wind farm in Torrance County is being developed by a company named Clipper, which is fairly new to the wind farm arena. The turbines are manufactured in Idaho. A substantial income is promised to landowners, about \$19 million over 30 years. Power gets transmitted to an existing substation. Clipper paid for an upgrade of 32 miles of an existing Public Service Company of New Mexico transmission system from Willard. Power is stepped up and converted and ends up in the substation, with each turbine performing the conversion from direct current to alternating current at the wind turbine. Clipper has not been in existence for more than five years, so the RETA cannot get an underlying bond rating, Mr. Turner said. The New Mexico Finance Authority (NMFA) and the State Board of Finance put together the bond issue, which goes to the public market. Then, an underlying bond rating is given on the credit itself and the bonds are issued, he explained. United Technology bought a minority ownership share in Clipper, and it has indicated that it may want to buy Clipper. In December, the RETA board took action to issue up to \$85 million in bonds, and it started marketing bonds in February. However, this is not a public sale because there is no underlying rating; it is being marketed as private placement. The bonds are sold to large industrial investors that understand the complexity and risk involved. If the RETA can get its bonds raised, it will be the first time bonds have been issued for Clipper turbines, he said.

Another problem came up when Cargill, an agricultural company, found out it can go all over the U.S. and buy positions for interconnections on speculation. For very little money, Cargill figured out how to step in and buy positions and then sell them for a higher price to utility companies. Cargill bought a position for \$10,000 and planned to turn around and sell it for \$5 million to \$6 million. Cargill filed a motion with the Federal Energy Regulatory Commission that could block High Lonesome Mesa. That has been resolved, and the RETA started marketing bonds again in August and talking to serious investors, moving through due diligence, Mr. Turner testified. The RETA's budget will be presented to the Legislative Finance Committee next week for \$560,000.

A LANL study was conducted to evaluate statewide transmission concepts, economic benefits and cost-allocation methodology. The study began on June 24, 2010 and will be completed on October 18, 2010. It is analyzing two potential systems: looped versus radial line

upgrades necessary to export 5,200 megawatts of generation out of New Mexico. The study is analyzing upgrades on five-, 10- and 20-year planning cycles for economic benefits and costs, including cost-recovery options. The study will project total direct and indirect jobs that will be created, the potential tax implications of each plan and the revenue required to support each potential system.

The committee discussed:

- the RETA board membership;
- the nature of the Arizona Public Service contract;
- ownership of High Lonesome Mesa (Edison Mission);
- that phase 2 of the project may take High Lonesome Mesa to 150 or 200 megawatts;
- the gear box guarantee period;
- that Clipper monitors everything remotely;
- projected yields of the bonds;
- the percent of time the wind blows (32%), and the energy production level (a consistent 100 megawatts);
- replacement and maintenance schedules for the wind turbines;
- arrangements for removal of wind turbines and regulatory authority of the Department of Environment;
- the RETA budget and performance;
- that the RETA may not be able to function under the NMFA;
- the primary exit point for New Mexico-generated electricity (the Four Corners region);
- the Chinese company planning to make wind turbines in the U.S.;
- the difficulty for emerging companies to get into the business because of capital obstacles;
- that long-range goals include attracting manufacturing companies;
- tax incentives;
- trying to get federal law to incentivize state RETA bond issuers;
- criteria for determining the location of wind turbines;
- differences between amps, ohms, watts, volts, etc.;
- cost recovery and sale of the bonds;
- the southwest power pool position (regional transmission organization (RTO)); New Mexico is divided into three RTOs (renewable portfolio standards do not exist consistently among the members of the RTOs);
- that the basis of the decision for New Mexico to be a power exporter is based on wind and solar energy potential, which are not reliable, rather than nuclear generators;
- that 100 megawatts of wind at High Lonesome Mesa cost \$220 million (\$7,000 per kilowatt); and
- nuclear plant investments that have been abandoned in northeast and southeast New Mexico.

Private Landfills

Mark Turnbough, consulting engineer, gave a summary and introduced Keith Gordon, who designs solid waste facilities. Mark Miller also appeared with them. They asked the committee to support equal treatment for privately owned solid waste facilities, which are issued 10-year permits, compared to public facilities, which may get 20-year permits. This doubles the cost of permitting and costs to customers. They said that privately operated facilities outperform public facilities and serve the residents of New Mexico just as well as do public facilities. There are 22

permitted landfills in New Mexico, eight of which are private. They asked for legislation to level the playing field for private facilities. Passage of the Solid Waste Act in 1991 was the origin of the double standard. Private facilities do a better job of environmental stewardship than public facilities, they said. There is a looming crisis resulting from closure of 39 unlined landfills in local communities that will result in having to haul solid waste as far as 140 miles to regional facilities. New rules adopted in 2007 require these closures. Costs will increase dramatically, they told the committee. Even increased recycling will not reduce the need for landfills. Population and waste streams continue to grow. The hardest-hit communities will be the smallest ones, which are the least capable of paying the costs. Costs for solid waste can double or increase tenfold. Private waste facilities manage half the waste generated in New Mexico and serve one million residents. Private facilities comply with Subtitle D and are better at complying than public facilities. They said there has been an increase in transfer stations and convenience centers, over and above the number of landfills closed. There were 100 landfills in 1920; in two years, there will only be 20, but the number of transfer stations will exceed the original number of landfills.

Mr. Miller, who is with Daniel B. Stevens Consultants and is a representative of the National Solid Waste Management Association, described the infrastructure and design of solid waste facilities. He testified that permitting costs can be between \$500,000 and \$1 million. Public hearings go from 30 minutes with no attendees to two days with much public opposition. He gave a history of the Solid Waste Act. He said the Department of Environment has developed detailed rules, most recently in 2007, guaranteeing public notice and participation. Issuance of permits typically takes two years. There is also a permit review at the end of five years, and at the seven-year point, renewal of the permit procedures begins. He went through in detail the requirements and environmental assurances required, including 100-foot depth to ground water, no closer than four miles from a poor community; criteria for site selection; standards for liners that cost \$100,000 to \$200,000 per acre and are at least 60-mil plastic; a two-foot protective layer of soil; heat-welded seams; and operating costs of \$10.00 to \$30.00 per ton of waste. He said that rules require all material to be covered by soil each day, leaving only a small amount of material exposed at any time. Four to six ground water monitoring wells are required as well as shallower methane monitoring wells. A final cover is required, to be installed on top and revegetated. Financial assurance is also required.

The committee discussed:

- medical waste management, which is handled by Stericycle in Albuquerque or goes to Arizona or Texas for incineration;
- that medical wastes are not allowed in municipal landfills;
- an alternate route for trucks going to Sunland Park;
- status of the Rhino site in Otero County;
- the record of legacy sites and environmental problems;
- a comparison of New Mexico's waste stream with national figures (four to five pounds per person per day);
- that Lea Land Incorporated takes only industrial waste;
- the definition of "special wastes" (ash, sludge, etc.);
- how operating cost is determined and defined;
- that typical disposal costs are \$40.00 per ton;
- co-generation and recovery of methane gas for power generation;
- suggested legislation to improve the usefulness of landfill methane;

- contract principles;
- flexibility provided by transfer stations;
- property ownership for sites;
- Native American interest in landfill operation and jurisdiction of the federal Environmental Protection Agency;
- liner details;
- alternative costs of liners for algae ponds; and
- potential acquisition of public facilities by private operators.

The committee adjourned at 11:51 a.m.

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

**November 23, 2010
Room 321, State Capitol**

The fifth meeting of the Radioactive and Hazardous Materials Committee (RHMC) was called to order by Senator Richard C. Martinez, chair, at 9:15 a.m. on Tuesday, November 23, 2010, in Room 321 at the State Capitol.

Present

Sen. Richard C. Martinez, Chair
Rep. John A. Heaton, Vice Chair
Sen. Vernon D. Asbill
Sen. Phil A. Griego, appointed
Rep. Jim R. Trujillo
Sen. David Ulibarri
Rep. Jeannette O. Wallace

Absent

Sen. Stephen H. Fischmann
Rep. William J. Gray
Sen. Carroll H. Leavell
Rep. Antonio Lujan
Sen. John Pinto
Rep. Jeff Steinborn

Advisory Members

Rep. Thomas A. Anderson
Rep. Donald E. Bratton
Rep. Nick L. Salazar

Sen. Rod Adair
Rep. Eliseo Lee Alcon
Sen. Dianna J. Duran
Sen. Gay G. Kernan
Sen. Lynda M. Lovejoy
Sen. William H. Payne

Staff

Gordon Meeks
Renée Gregorio

Guests

The guest list is in the meeting file.

Handouts

Copies of all handouts and written testimony are in the meeting file and on the web site.

Tuesday, November 23

Members of the committee and staff introduced themselves, and the committee began discussion of potential government restructuring proposals.

Government Restructuring Task Force Proposals

Mr. Meeks, Legislative Council Service (LCS) drafter, explained that the Government Restructuring Task Force (GRTF) has asked interim committees to consider ideas and make recommendations. He said that the task force meets again on December 20.

Committee members, led by Representatives Wallace and Heaton, agreed that restructuring issues concerning the state's Department of Environment (NMED) are the issues that most concern the RHMC. Because the NMED touches many businesses and people across the state, it needs to foster a business-friendly environment so that business agendas are moved forward in ways that create jobs. Concerns raised included whether the Environmental Improvement Board (EIB) has overstepped its authority. The EIB's authority needs to be made more explicit, and the EIB has to be accountable to the legislature for its decisions. In addition, the NMED's hands are tied by the ways in which the federal Environmental Protection Agency (EPA) guidelines are set. For example, at present there are no standards for carbon dioxide and carbon emissions — so it is an overstepping of the NMED's bounds to advocate for a cap and trade bill. There are significant legal issues related to what the NMED's authority really is, and this authority also needs to be made more explicit in law. The committee also expressed concern over the duties of the Water Quality Control Commission, which need to be reviewed to ensure that the state's water is protected.

Members urged that decisions and executive orders made during this last administration be reviewed and brought back in alignment with what exists in law. A question was raised regarding executive orders, and if they remain in place when the administration changes. (*On that note, John Yaeger of the LCS stated that, generally speaking, an executive order would remain until revoked by the governor. It is the position, not the person, that issues and revokes the orders.*)

Representative Trujillo suggested recommending that the legislature review the statute that created the Clean Water Administrative Fund, as he feels the legislature lost control of the money in this fund and does not approve of the ways the NMED is spending this money. No committee action was taken.

Representative Bratton said that it is disconcerting that the administration pushes legislation, and when the legislation does not pass, the administration pushes its agenda through regulation. He added that the legislature is the voice of the people, with a responsibility to protect the state and create a positive environment to do business here. One of the main issues with regulation and business, he added, is one of consistency. Businesses need to be ensured that the rules they started with will not get abruptly changed; business decisions are made based on these regulations. He said that in oil and gas, dairy, mining and landfill businesses, people are constantly coming back to the legislature seeking relief because of changes that occurred through executive order and regulations, not through legislation. The RHMC needs to send a message to the GRTF to review the regulatory process in New Mexico and put checks and balances in place, Representative Bratton said. He also stated that every agency in the state should be required to do an economic analysis of changes in the regulatory environment and report findings back to the legislature. He said that it is the responsibility of every agency to collect revenues to balance the budget. He ended by saying that the legislature needs to review the process and intent of earmarking money from the budget for specific purposes.

To that point, Senator Ulibarri added that the legislature must review programs in House Bill 2 that receive recurring money, make serious cuts and ensure that the funding that remains is still appropriate.

Several committee members expressed concern over the use of money in funds and whether funds are being used for their intended purposes. All regulations need to be reviewed

with the intent of creating safety and a strong business environment. It was asked how New Mexico compares to surrounding states regarding fees and time lines to obtain permits. The state needs to look at who must bear the fees and taxes and create a fiscal impact review of every regulation developed.

In response to committee member questions about the legislative and executive responsibilities related to regulations and legislation, T.J. Trujillo spoke of the research he has done in this area. He stated that the legislature does have the power to intervene in and review the rulemaking process. Because of separation of powers issues, Mr. Trujillo reported that most states have determined that for the legislature to veto a rule, it would take passage of a bill signed by the governor. He added that some states have passed constitutional amendments instead. However, he said that the most common mechanism is a deferment — the legislature can defer the effective date of a rule until the end of the next legislative session to allow the legislature sufficient time to act on a rule change. This avoids the constitutional issue of separation of powers.

Senator Griego, appointed by Senate President Pro Tempore Timothy Z. Jennings as a voting member for purposes of this meeting, informed the committee of a bill in process that proposes not allowing a rule to be in effect until reviewed by a legislative committee. In addition, a bill is being drafted that would disallow the governor to have cabinet secretaries introduce rules and regulations without legislative approval.

The question of RHMC oversight was brought forward by Senator Asbill, in particular toward the EPA. Mr. Meeks stated that Representative Heaton has introduced legislation that attempts to change the authority of this committee.

After much discussion, the committee narrowed its recommendations to the GRTF to the following legislation:

- provide for review and approval of executive branch rules by the legislature during the next regular legislative session following adoption of the rules before the rules can go into effect (HB 310, see below);
- require financial impact analysis by the executive branch of all rules proposed by the executive;
- amend the existing statutory requirements for "renewable energy portfolio standards" to "clean energy portfolio standards", which would include nuclear energy fuel sources; and
- expand the role of the RHMC to an oversight committee of the NMED and the Energy, Minerals and Natural Resources Department (EMNRD) as provided in previous legislation sponsored by Representative Heaton.

Representative Heaton moved to adopt these four items as bills in concept, which was seconded by Senator Ulibarri; the motion carried. Representative Heaton also asked for committee endorsement of a letter to the blue ribbon commission regarding the Waste Isolation Pilot Plant. Senator Asbill moved to approve the sending of this letter, recommending that it be hand-delivered to the commission at its meeting in Carlsbad in January. Senator Ulibarri seconded the motion, and the motion carried.

The minutes for the October RHMC meeting were unanimously approved.

Regarding the first bulleted item above, the committee later endorsed a bill that amends the State Rules Act to require regulatory impact statements and amends the Small Business Regulatory Relief Act to require that a draft regulatory impact statement be provided prior to the adoption of a proposed rule that may have an adverse effect on small businesses. This bill is significantly the same as the one introduced as HB 310 during the 2008 legislative session. Representative Bratton suggested changes to HB 310 that include removing the appropriation section, removing Subsection C of Section 3 so that judiciary committees could determine needed exception language and deleting Subsection B of Section 4 to remove the hardship exception to completing the regulatory impact statement. The bill was unanimously endorsed with these recommended changes.

Compliance with the Federal Surface Mining Control and Reclamation Act of 1977

Bill Brancard, EMNRD, spoke about New Mexico's 30-year abandoned mine land (AML) program, which is funded by federal dollars, and referred to the federal Surface Mining Control and Reclamation Act of 1977 (SMCRA), which provided for the regulation of coal mines and the reclamation of abandoned mines. In 1980, the legislature enacted the Abandoned Mine Reclamation Act so that New Mexico could accept federal AML funding, which has now grown to more than \$4 million per year.

Mr. Brancard presented proposed legislation that would bring the state's enabling legislation in alignment with federal priorities and amendments made to the SMCRA. Committee members asked questions related to the effect of the changes made to the enabling legislation; in all cases, Mr. Brancard assured the committee that all changes were made to track with the federal law. Details of changes made to the proposed legislation can be found in the handout provided. Committee members asked members of the mining sector as well as lobbyist Della Duran for opinions on the proposed changes, all of whom responded favorably. On motion by Representative Trujillo to endorse the proposed legislation, seconded by Senator Ulibarri, the committee voted unanimously to endorse the bill.

Renewable Energy Costs

John Curl, Western Resources, addressed issues related to the cost of renewable energy and the impact on utility utilization. He spoke of a change in the regulatory paradigm that shifted the historic method of regulators reviewing utilities after decisions had already been made regarding planning, building resources and expansion. Once investments increased and were more permanent, and the social impact grew larger, so did the risk to utilities. He stated that legislation and the general trend moved regulators more into the decision process, and the Renewable Energy Act (REA) resulted, which is very directive and defines and sets the standard for renewable energy resources. Mr. Curl indicated that with the Public Regulation Commission's (PRC) implementation of the REA, a fully diversified portfolio should be achieved by 2011, with at least 20% in wind and solar and at least 10% in other technologies.

He added that because of disputes over the calculation of costs, the PRC set up workshops to develop a standardized methodology. Mr. Curl said that the pricing of renewable energy as it affects utilities is complicated because it is not just the cost of the renewable resources, but who will end up paying for it, that needs to be considered.

Mr. Curl gave committee members a handout that showed graphs of energy costs over time. In response to questions on what "levelized cost" means, he stated that levelized refers to a present value analysis that looks at the cost of operating a system over time and incorporates all

savings and then determines the net impact on the utility based on this. The cost is then levelized across this time frame. Because the cost of owning is high over the first few years, then declines, levelized costs are used.

Committee members had some difficulty with the progressions shown in the U.S. Department of Energy handout, and Mr. Curl said that he also disagreed with some of its methods in producing these charts, especially in the lack of inclusion for various costs.

New Mexico's Role in Generation and Transmission of Electric Power

Jeff Mechenbier and Mike D'Antonio, Public Service Company of New Mexico (PNM), gave an overview and answered questions on PNM's transmission system and development of renewable resources for power generation. Mr. Mechenbier reviewed the locations of primary transmission lines in the state as well as reiterating the function of transmission, which is to deliver power from generating sources to load centers. In addition, lower voltage lines serve as backup to the backbone lines and are a means of distributing power to more remote load areas. He stressed that the majority of the transmission lines were built in the late-1960s through the mid-1970s, and that PNM has not built any backbone transmission lines since 1984. Mr. Mechenbier added that PNM's retail customers represent approximately 60% to 65% of system use, and wholesale transmission customers represent 35% to 40% of system use.

In terms of generation, the primary generation of the system's load is in the Four Corners area at 43.3%. PNM's usage of the transmission system is highest, and 35% to 40% is used by other customers, such as Tri-State Electric Cooperative, Los Alamos County and Kirtland Air Force Base. PNM also provides service for two existing wind farms and will be energizing a third wind farm soon, but these do not serve New Mexico loads. Mr. Mechenbier reported that PNM's load, despite the recession, has been increasing over the past several years. He emphasized that New Mexico is rich in energy resources. Regarding the two existing wind farms, both sell their output to Arizona, and this will also be true for the new wind farm.

Committee members expressed concern over who is benefiting from the power generated by wind farms in New Mexico, as it does not seem that either the state or its residents are benefiting. Mr. Mechenbier stated that there are tax revenues for developer investments. Developers have to buy transmission from PNM to move their product, which is then put back into the transmission rate base, which affects pricing. He urged committee members to think more holistically by considering New Mexico's richness in renewable resources and how much benefit this can be to New Mexico as well as other states, that rural jobs are increased and that the state can be an exporter of clean energy. He also said that although a wind farm may have 50% of its output going outside the state, New Mexico can have the opportunity to buy at a lower rate, and that some projects help with the renewable portfolio benefit.

In response to questions about meeting the state's renewable portfolio standards of 20% by 2020, Mr. Mechenbier said that PNM has to install its renewables to meet these portfolio standards. He added that it is likely this commitment needs to be reduced because of the cost to customers to accomplish this. Currently, PNM has more capacity than customer load, which begs the question of why PNM would add capacity without customer need. PNM also has a diversity requirement through the rulemaking of the PRC, so PNM cannot just add wind generation; it must consider other sources. He said that the renewable portfolio standard is based on the percentage of energy produced, and that of PNM's 9,000 gigawatts of energy produced, 6% of that has been met by renewable sources this year.

Representative Wallace questioned why energy is being sent out of state and agreed with other members that wind farms are not the best alternative because they are noisy and messy, to which Representative Bratton suggested that the state use more creativity in wind farm structures.

In response to a question on tax credits being passed along to consumers once the 20% portfolio is met, Mr. D'Antonio said that the 20% is a target so that developers will build projects, get tax credits and figure these into the capital cost of the project. Then the tax credit is reflected in lower costs to customers.

Mr. Mechenbier spoke of transmission being a small component of the electrical grid, and that less than 10% is associated with distribution. He said that as third-party usage is increased, it costs ratepayers less money in the long run because someone else is using the transmission system. PNM is still adding to the transmission system, spending about \$80 million a year to keep up with infrastructure needs such as new transmission distribution facilities.

Representative Bratton agreed with PNM representatives that no manufacturer would add capacity when there is no market. He said that, ultimately, the objective is to create maximum use to bring down the cost. He added that legislators make political decisions that drive the rate, but that the rate is not being driven in the best interest of the consumer.

In response to a question on whether tax credits are based on building or installing a system, Mr. Mechenbier replied that credit is based on the capital cost of equipment being installed as well as the production credit for kilowatt-hours produced. In terms of producing more than the 20% in renewable energy by 2020, he responded that this is fine as long as a reasonable cost threshold is upheld.

Representative Heaton commented that a big advantage is that the power is distributed, which relieves the pressure to build a complex grid. With the advent of new power-generating systems, Mr. Mechenbier advocated for locating generation in the existing load centers so that new transmission does not have to be built.

Geothermal "Hot Rock" Energy Options

Mark Person, New Mexico Institute of Mining and Technology (New Mexico Tech), gave an overview of geothermal resources in the state, indicating that New Mexico ranks sixth in the nation for deep geothermal potential, yet has no commercial geothermal power plants as yet. He said that the U.S. Department of Energy spent \$400 million last year on geothermal energy development, \$5 million of which went to drill test wells on the Pueblo of Jemez, which could lead to the first power plant in the state. He explained that New Mexico has a high heat flow and higher temperature gradients due to its volcanic activity, so drilling does not have to be done as deeply to generate electricity. He delineated issues associated with geothermal energy production, which include large up-front capitalization costs; water use required; and land issues that arise, including location, infrastructure and ownership of mineral and water rights. He said that there is an enormous capacity for geothermal energy if one drills deep enough, and that 50% of the cost is in drilling and maintaining the wells.

He reviewed geothermal resources, including differing classification systems based on temperature. He said that New Mexico has a lot of young volcanic rocks where the earth is still hot, such as in the Jemez Mountains. In addition, there is active volcanism along the Rio Grande Valley and Jemez Caldera, as well as many areas where the ground water flows deeply and comes to the earth's surface as hot springs.

Mr. Person said that geothermal greenhouses in the state generate \$27 million annually in gross sales, and that there are significant cost savings and both low- and high-level jobs created through geothermal energy production.

He detailed the proposed heating system that New Mexico Tech is putting in place, stating that it decided to drill a well off-campus because this is where the temperature gradients are greatest. He added that if it chooses to drill on campus, it would have to spend \$1 million, and there is no way to tell prior to drilling if it would work. As it is, New Mexico Tech had to drill a 21,100-foot well and expected temperatures of 65 to 100 degrees centigrade, but only got 42 degrees centigrade. With this system, the college could heat the campus for \$3 million and save the state \$500,000 per year.

In response to a question about whether tax credits are available for geothermal energy production, Steve Lucero, EMNRD, stated that a federal tax credit is available.

Adjournment

There being no further business before the committee, it adjourned at 3:40 p.m.

DRAFT LEGISLATION

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BILL

50TH LEGISLATURE - STATE OF NEW MEXICO - FIRST SESSION, 2011

INTRODUCED BY

DISCUSSION DRAFT

AN ACT

RELATING TO MINING; AMENDING SECTIONS OF THE ABANDONED MINE RECLAMATION ACT TO CLARIFY JURISDICTION OF THAT ACT.

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

SECTION 1. Section 69-25B-3 NMSA 1978 (being Laws 1980, Chapter 87, Section 3, as amended) is amended to read:

"69-25B-3. DEFINITIONS.--As used in the Abandoned Mine Reclamation Act:

A. "director" means the director of the mining and minerals division of the energy, minerals and natural resources department;

B. "eligible lands and water" means [~~land or water that was mined or that was affected by mining, wastebanks, processing or other mining processes and abandoned or left in an inadequate reclamation status and for which there is no~~

underscoring material = new
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1 ~~continuing reclamation responsibility under state or federal~~
2 ~~laws]~~ all lands and water eligible for expenditures pursuant to
3 the federal Surface Mining Control and Reclamation Act of 1977,
4 as amended;

5 C. "emergency" means a sudden danger or impairment
6 that presents a high probability of substantial physical harm
7 to health, safety or general welfare of people before the
8 danger can be abated under normal program procedures; and

9 D. "fund" means the abandoned mine reclamation
10 fund."

11 SECTION 2. Section 69-25B-6 NMSA 1978 (being Laws 1980,
12 Chapter 87, Section 6, as amended) is amended to read:

13 "69-25B-6. OBJECTIVES OF THE FUND--DUTIES OF THE
14 DIRECTOR.--

15 A. Pursuant to the state reclamation plan,
16 expenditures from the fund shall be used by the director on
17 eligible lands and water and shall reflect the [following]
18 priorities and objectives in the [~~order stated:~~

19 ~~(1) the protection of public health, safety,~~
20 ~~general welfare and property from extreme danger of adverse~~
21 ~~effects of mining practices;~~

22 ~~(2) the protection of public health, safety~~
23 ~~and general welfare from adverse effects of mining practices;~~

24 ~~(3) the restoration of land and water~~
25 ~~resources and the environment previously degraded by adverse~~

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1 ~~effects of mining practices, including measures for the~~
2 ~~conservation and development of soil, water (excluding~~
3 ~~channelization), woodland, fish and wildlife, recreation~~
4 ~~resources and agricultural productivity;~~

5 ~~(4) research and demonstration projects~~
6 ~~relating to the development of surface mining reclamation and~~
7 ~~water quality control program methods and techniques;~~

8 ~~(5) the protection, repair, replacement,~~
9 ~~construction or enhancement of public facilities such as~~
10 ~~utilities, roads and recreation and conservation facilities~~
11 ~~adversely affected by mining practices; and~~

12 ~~(6) the development of publicly owned land~~
13 ~~adversely affected by mining practices, including land acquired~~
14 ~~as provided in the Abandoned Mine Reclamation Act for~~
15 ~~recreation and historic purposes, conservation and reclamation~~
16 ~~purposes and open space benefits] federal Surface Mining~~
17 Control and Reclamation Act of 1977, as amended.

18 B. The legislature declares that voids and open and
19 abandoned tunnels, shafts and entryways resulting from any
20 previous mining operation constitute a hazard to the public
21 health or safety and that surface impacts of any underground or
22 surface mining operations may degrade the environment.

23 Notwithstanding the provisions of Subsection A of this section,
24 the director, with the prior approval of the governor and the
25 United States secretary of the interior, may use expenditures

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1 from the fund to fill the voids, seal the abandoned tunnels,
2 shafts and entryways and reclaim surface impacts of underground
3 or surface mines ~~[which]~~ that could endanger life and property,
4 constitute a hazard to the public health and safety or degrade
5 the environment. In those instances where mine waste piles are
6 being reworked for conservation purposes, expenditures from the
7 fund may be used to pay the incremental costs of disposing of
8 the wastes from those operations by filling voids and sealing
9 tunnels if the disposal of these wastes meets the purposes of
10 this subsection.

11 ~~[G. In addition to the expenditures authorized in~~
12 ~~Subsections A and B of this section, money in the fund may be~~
13 ~~expended for the purpose of constructing specific public~~
14 ~~facilities in communities impacted by mining development if:~~

15 ~~(1) the objectives of the fund, as set forth~~
16 ~~in Subsections A and B of this section, have been achieved; and~~

17 ~~(2) both the governor and the United States~~
18 ~~secretary of the interior approve of the use of the fund for~~
19 ~~the construction.~~

20 ~~D. All money in the fund shall be expended within~~
21 ~~three years after its allocation to New Mexico by the United~~
22 ~~States secretary of the interior.]"~~

23 SECTION 3. Section 69-25B-8 NMSA 1978 (being Laws 1980,
24 Chapter 87, Section 8, as amended) is amended to read:

25 "69-25B-8. LIENS.--

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1 A. Within six months after the completion of
2 projects to restore, reclaim, abate, control or prevent adverse
3 effects of past mining practices on privately owned land, the
4 director shall itemize the money so expended and may file a
5 statement thereof in the office of the county clerk of the
6 county in which the land lies, together with a notarized
7 appraisal by an independent appraiser of the value of the land
8 before the restoration, reclamation, abatement, control or
9 prevention of adverse effects of past mining practices if the
10 money so expended results in a significant increase in property
11 value. The statement shall constitute a lien upon the land.
12 The lien shall not exceed the amount determined by the
13 appraisal to be the increase in the market value of the land as
14 a result of the restoration, reclamation, abatement, control or
15 prevention of the adverse effects of past mining practices. No
16 lien shall be filed against the property of any person in
17 accordance with this subsection ~~[who owned the surface prior to~~
18 ~~May 2, 1977 and]~~ who neither consented to nor participated in
19 nor exercised control over the mining operation that
20 necessitated the reclamation performed pursuant to the
21 provisions of the Abandoned Mine Reclamation Act.

22 B. The landowner may proceed to petition the
23 district court for the county in which the land lies within
24 sixty days of the filing of the lien to determine the increase
25 in the market value of the land as a result of the restoration,

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underscoring material = new
~~[bracketed material] = delete~~

1 reclamation, abatement, control or prevention of the adverse
2 effects of past mining practices. The amount found by the
3 court to be the increase in value of the premises shall
4 constitute the amount of the lien and be recorded with the
5 statement provided for in this section. Any party aggrieved by
6 the decision of the district court may appeal to the supreme
7 court.

8 C. The lien provided in this section shall be
9 entered in the office of the county clerk of the county in
10 which the land lies. The statement shall constitute a lien
11 upon the land as of the date of the expenditure of the money
12 and have priority as a lien second only to the lien of ad
13 valorem taxes imposed upon the land."