

**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.