MINUTES
of the
LOS ALAMOS NATIONAL LABORATORY OVERSIGHT COMMITTEE
and the
RADIOACTIVE AND HAZARDOUS MATERIALS COMMITTEE
August 9, 2006
Conference Room
Los Alamos Research Park

The joint meeting of the Los Alamos National Laboratory (LANL) Oversight Committee and the Radioactive and Hazardous Materials Committee was called to order at 9:12 a.m. on Wednesday, August 9, 2006, by Representative Roberto "Bobby" J. Gonzales, co-chair.

LANL Oversight Committee

Present	**Absent**
Rep. Roberto "Bobby" J. Gonzales, Co-Chair	Sen. William E. Sharer
Sen. Phil A. Griego, Co-Chair	
Rep. Thomas A. Anderson	
Sen. John T.L. Grubesic	
Sen. Richard C. Martinez	
Sen. William H. Payne	
Rep. Jane E. Powdrell-Culbert	
Rep. Debbie A. Rodella	
Rep. Nick L. Salazar	

Advisory Members	
Rep. Ben Lujan	Sen. Ben D. Altamirano
Rep. Jeannette O. Wallace	Sen. Mary Jane M. Garcia
	Sen. Stuart Ingle

Radioactive and Hazardous Materials Committee

Present	**Absent**
Sen. Phil A. Griego, Chair	Sen. Vernon D. Asbill
Rep. John A. Heaton, Vice Chair	Rep. Manuel G. Herrera
Rep. Donald E. Bratton	Sen. Gay G. Kernan
Sen. John T.L. Grubesic	Rep. Antonio Lujan
Sen. Carroll H. Leavell	
Sen. Richard C. Martinez	
Rep. Jim R. Trujillo	
Rep. Jeannette O. Wallace	

Advisory Members	
Rep. Thomas A. Anderson	Sen. Mary Jane M. Garcia
Sen. William H. Payne	Sen. Clinton D. Harden, Jr.
Rep. Nick L. Salazar	Sen. John Pinto

Staff

Evan Blackstone
Gordon Meeks
Liz Holmes

Guests
The guest list is in the meeting file.

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

Wednesday, August 9
Welcome

The committees began by introducing themselves and staff to the audience. Mike Wheeler, chair of the Los Alamos County Council, welcomed the committees.

Overview of the National Nuclear Security Administration's Environmental Impact Statement for LANL

Elizabeth Withers, National Environmental Policy Act compliance officer for the Department of Energy at LANL, told the committee that the first Los Alamos sitewide environmental impact statement (EIS) was issued in 1979, the second in 1999 and now the third is in progress. She said that in 2004, the lab concluded that there was a need for a supplemental statement, and the current EIS is in response to that conclusion. A draft document was issued on July 7 and a public comment period will close 75 days later, on September 20. There will be public hearings in Los Alamos, Espanola and Santa Fe during that period.

The lab has also conducted briefings for the affected pueblos and the congressional delegation. Examples of some of the public comments received on the EIS address the plutonium pit production alternatives and the construction of parking lots at either end of Pajarito Road. Pits are the trigger mechanisms for nuclear bombs and theoretically may lose their viability over time, thus compromising the stockpile of nuclear weapons. Therefore, these pits need to be replaced periodically. She said that all of the public comments will be published with the final EIS and the record of decision.

Questions and comments from the committees addressed:

- additional space required for increased pit production;
- the current number of certified pits and the effect on national security of low production levels;
- why the decision on pit production has been delayed;
- the status of legacy waste and its inclusion in the EIS;
- employment levels at LANL according to the alternatives in the EIS;
- the length of the public comment period; and
- the level of gross receipts taxes LANL is expected to be subject to and their impact on employment at the lab.

Environmental Program Overview

Andy Phelps, associate director for environmental programs at LANL, provided the committees with an overview of LANL's environmental programs. His presentation covered LANL's new organizational structure, its strategic intent, operational successes and sustainable solutions.

Mr. Phelps highlighted one aspect of LANL's new contract: it has brought new people into the lab from around the country and internationally. He stated that the lab's strategic intent includes ensuring public safety, accelerating cleanup and increasing transparency with the public. With regard to accelerating cleanup, Mr. Phelps summarized that LANL is meeting deadlines set by the federal consent order, working to remediate chromium contamination and working to get the public engaged in the cleanup process. He said that LANL is focused on becoming a model environmental steward for the community and the state. The lab strives for transparency, engaging in a mutually supportive relationship with the New Mexico Department of Environment (NMED), accepting and respecting the NMED's regulatory authority and seeking greater public input on LANL's high-level goals and objectives. Mr. Phelps emphasized that LANL is working with the NMED to improve the timeliness of communications with the public so that there is accountability for taxpayer investment in the facility. He went on to state that LANL is improving its effectiveness and efficiency by bringing in new expertise that has a history of performance and innovation.

Mr. Phelps also summarized for the committees the current issues being addressed by LANL that have impacts on its environmental programs. These include dealing with chromium contamination, meeting goals for transuranic (TRU) waste disposal, achieving stability in LANL's funding, conducting effective ground water monitoring and building public confidence. Mr. Phelps concluded his presentation by reviewing various goals for its environmental programs, including waste operations, water stewardship, TRU waste disposition, radioactive liquid waste and corrective actions.

Questions and comments from the committees addressed:

- the presence of the NMED at sites during physical cleanup and LANL's willingness for transparency;
- the cost to the state for remediation activities at LANL and the cost borne by the federal government;
- LANL's notification to local responders and communities through which TRU waste is transported;
- prioritization of sites for cleanup;
- the membership composition of the citizen's advisory board;
- the total cost of cleanup activities;
- the NMED budget and staffing adequacy and its working relationship with LANL;
- appreciation of LANL's work and employment of northern New Mexicans; and
- the amount of hazardous waste remaining at LANL.

Committee Business

Minutes of the previous meetings of both committees were approved without opposition.

Update on Consent Order Compliance

James Bearzi, Hazardous Waste Bureau chief for the NMED, began by briefly reviewing the federal consent order on environmental remediation and cleanup at LANL. He explained that the consent order covers the cleanup of certain types of hazardous waste, including contaminants such as metals and solvents but not radioactive waste. The purpose of the consent order is to prioritize contamination investigation activities, provide minimum investigation requirements and prescribe cleanup levels and schedules for work plan submittals, reporting and remedy completions.

Gordon Dover, LANL program director for corrective actions, provided the committees with an overview and status update of LANL's environmental remediation program. He explained that the program is aimed at ensuring compliance with the consent order and investigating and completing risk-based remediation of historically contaminated sites. Mr. Dover stated LANL is working closely with the federal Department of Energy (DOE) and the NMED to ensure that appropriate priorities and approaches are being addressed. He went on to describe the types of sites and contamination targeted for cleanup by the program. The sites include landfills, wastewater management systems and contamination resulting from past and present LANL operations. The types of contamination include chemical, heavy metals, radioactive constituents, high explosives and degradation products. After 2,124 potential release sites were identified in 1989, today 760 sites remain with work in progress. Mr. Dover informed the committees that he thinks most of those remaining sites will require little or no action. He said that probably 100 sites will require cleanup while 180 sites cannot be remediated until certain laboratory activities are shut down.

Dave McInroy, deputy program director for corrective actions, summarized LANL's progress in implementing the consent order. He stated that LANL has met all regulatory deliverables; two extension requests were made to the NMED as a result of unforeseen field conditions and one enforcement action was issued. Mr. McInroy emphasized that the NMED staffing levels need to be aligned with the workload required by the consent order and that LANL provided $1.4 million in supplemental funding to the NMED to help remedy the problem. Mr. McInroy went on to review LANL's field activity and deliverable accomplishments for 2006. He also reviewed LANL's consent order implementation plan for 2007, which includes characterization activities at five material disposal areas and sediment contamination investigations in four major canyon systems.

Mr. Bearzi described some of the difficulties the NMED faces in meeting deadlines set by the consent order. He said that in a two-month period, the NMED received 66 documents from LANL that required a response from the NMED. Because some of the documents are voluminous and complicated and the NMED has five employees to review them, the NMED has reviewed and responded to only 31 of the documents. Mr. Bearzi went on to state that the NMED's budget expansion for additional employees approved in the last legislative session as well as working to prioritize data may help to alleviate the workload dilemma for the NMED.

Questions and comments from the committees addressed:

- the remediation of sites with high explosives;
- the effect of the state's regulations on effective cleanup and LANL's other responsibilities;
- how LANL deals with flash residue from certain sites;
- the potential dangers that the City of Santa Fe faces from contamination at the lab;
- whether delays at the NMED are causing delays in actual cleanup;
- ground water and surface water monitoring;
- the names of contractors that are doing actual cleanup;
- providing the committees with the performance reports that the NMED gives to the Legislative Finance Committee; and
- looking at contamination at other federal facilities in New Mexico in addition to LANL.

Ground Water Conceptual Model

Dr. Ardyth Simmons, program manager at LANL, described for the committees ground water modeling of the Pajarito Plateau. She explained the differences between the alluvial ground water, the vadose zone and the regional aquifer and the purpose of the modeling effort in relation to each. She went into technical detail regarding the development of the models using deep well drilling, taking hydrologic measurements and analyzing the data and interpreting the results.

She provided graphics that depict the relationship between sources of water, how contamination may flow through a water table, the lateral spreading of contamination, the kind of enhanced infiltration that occurs in certain geologic formations and the speed of water flow in different formations. Empirical data and the model show that ground water flows rapidly in alluvial deposits where some contaminants are rapidly flushed into the vadose zone but other contaminants are slower moving. She explained that contaminants move slowly from dry mesas and canyons, but that they move faster in wet canyons. In canyon bottoms, contaminants move through the formations in a few decades, but the movement takes thousands of years from dry mesa tops. She also gave general estimates of speeds of contaminant transport and infiltration rates through other geologic strata and conditions. Municipal wells have a measurable effect on water levels; hence, the need for continued ground water quality monitoring.

Questions and comments from the committees addressed:

- differences in contaminant levels as a function of elevation;
- recharge factors and speed of lateral transfers;
- the use of isotope tracers;
- colloidal effects;
- wells as pathways of contamination; and
- the influence of wells on ground water flow.

Chromium Interim Measures Plan

Daniel Katzman, program manager at LANL, testified that chromium contamination found in Los Alamos is from a power plant, which used chromium in its cooling water to inhibit corrosion of the plant's cooling towers. There are no impacts associated with the discovery of

the chromium, he said. This contamination is historic and no current operations are releasing chromium. Chromium use was terminated in the 1970s because records indicate operators recognized potential health impacts. Two hundred thousand to 300,000 pounds of chromium were released from Sandia Canyon Technical Area 3. The wetland created by lab operations is probably contaminated, he said, and White Rock Canyon Springs might show some chromium contamination in the future.

The lab is now actively monitoring for chromium and is prepared to take necessary action when and if a water well may be threatened by imminent chromium contamination. A new monitoring well will be installed near the PM 3 production well to detect any imminent threat. Different protocols are being explored for protection of the water quality from production wells. He told the committees that the NMED has approved LANL's work plan to deal with the situation. Drilling of the monitoring well will begin in a week, and a report will be issued in November.

Questions and comments from the committees addressed:

- the threshold for hazardous concentration of chromium;
- regulatory standards for chromium contamination;
- the history of power plant usage of chromium in cooling water;
- the location of the monitoring well; and
- toxic effects of chromium.

NMED Update on LANL Issues

Cindy Padilla, director of the NMED's Water and Waste Management Division, began by explaining the development of the NMED's relationship with LANL and the NMED's role as a regulator. She stated that she welcomes the new management at LANL and its efforts to strengthen the relationship with the NMED. Ms. Padilla then introduced the NMED staff that work on oversight at LANL and highlighted that the relationship is a good one. She also informed the committees that funding for oversight is a challenge every year.

James Bearzi, Hazardous Waste Bureau chief for the NMED, summarized for the committees the NMED's organizational structure and the oversight and regulatory duties of the NMED divisions and bureaus with regard to LANL. Mr. Bearzi reviewed NMED's roles, duties and activities for regulation of safe drinking water, air quality, federal DOE oversight, surface water quality, ground water quality and hazardous waste management. Senator Phil A. Griego, chair of the Radioactive and Hazardous Materials Committee, requested that Mr. Bearzi inform the committee of the specific issues that the legislature can address with regard to the relationship between the NMED and LANL. Mr. Bearzi stated that meeting the requirements of the consent order is difficult due to the complexity and scope of the order and the NMED's limited staff. However, the memorandum of agreement between the NMED and the DOE, he said, in addition to the legislature's approval in 2006 of additional employees for the NMED's Hazardous Waste Bureau will probably help to solve some problems. Mr. Bearzi pointed out that the legislature approved an expansion from five full-time employees to 10, but that the Hazardous Waste Bureau currently has seven employees. Two positions are being advertised and one employee is being transferred to the bureau.

Mr. Bearzi emphasized that it is difficult to make requests of the legislature for assistance for the NMED in 2007 because it remains to be seen how 10 full-time employees for the bureau may increase the NMED's ability to meet the consent order's requirements. He said that the passage of legislation in 2006 endorsed by the Radioactive and Hazardous Materials Committee that allows voluntary fee agreements is helpful, but the legislature needs to keep an eye on how effective the new full-time employees for the Hazardous Waste Bureau will be in the future.

Questions and comments from the committees addressed:

- funding for the NMED's general operations statewide; and
- the specific performance needs of the NMED relative to the compliance order.

Status of Waste Isolation Pilot Plant (WIPP) Shipments

Gerald O'Leary, program director for transuranic waste TRU disposition, informed the committees that LANL's mission for its TRU Waste Disposition Project is to accelerate the retrieval, characterization and shipment of approximately 50,000 drum equivalents of TRU waste from LANL to WIPP by 2010. He explained LANL's TRU waste operations for Technical Area 54 or "Area G", which has been used for disposal of radioactive waste since 1957. Mr. O'Leary also described the TRU waste simplified process flow in which LANL prescreens the TRU waste in order to characterize it before shipping the waste to WIPP.

The current 2006 shipping status for the TRU waste disposition project, Mr. O'Leary stated, is 91 shipments totaling 2,046 containers. He went on to say that the project faces a number of challenges in the future, including an aggressive completion schedule, dealing with aging facilities that do not meet certain safety standards and other resource and technical challenges. Mr. O'Leary concluded by highlighting that the biggest challenge is the sequencing of retrieval, characterization and shipping and environmental restoration activities.

Questions and comments from the committees addressed:

- the recharacterization of LANL TRU waste.

Technical Area 21 Remediation Plan and Schedule Waste Disposal Scenarios

Allan Chaloupka, program director for Technical Area 21 closure, and William Criswell, deputy program director, explained to the committees that LANL's mission regarding Technical Area 21 is to complete the consent order by remediation and corrective actions in a safe and compliant manner, including demolition. They said that Technical Area 21 was one of the original plutonium processing facilities at the laboratory, built shortly after World War II.

The status of the buildings at this location is: the Delta Prime-West buildings have been deactivated and have little current risk; the Delta Prime-East buildings are now completing their mission; and material disposal areas (MDAs) are in various stages of corrective action, material removal or abandonment. The largest volume of waste is assumed to be low-level radioactive waste, according to Mr. Chaloupka and Mr. Criswell. This waste will be disposed of on both on-site and off-site waste facilities. Hazardous and mixed wastes will be shipped to permitted off-site facilities in Utah, Texas and Nevada, and remaining industrial wastes will be disposed of at licensed in-state facilities. Technical Area 21 is expected to be closed and cleanup completed by 2011.

Questions and comments from the committees addressed:

- the status of contamination cleanup in the canyons of Los Alamos; and
- when cleanup planning started (10 years ago), at which time funding constraints delayed the full cleanup schedule.

The committee adjourned at 4:50 p.m.