



**Northern New Mexico Citizens' Advisory Board**  
**1660 Old Pecos Trail, Suite B**  
**Santa Fe, New Mexico 87505**  
**Environmental Monitoring, Surveillance and Remediation Committee**  
**June 9, 2004**

Members in Attendance

Timothy A. Delong, Chair  
 Dr. Fran Berting  
 Dorothy Hoard

Members Excused

Jay Fries  
 Katherine Guidry  
 J.D. Campbell

Members AbsentStaff

Lorelei Novak,  
 Community Outreach Specialist

Ex-Officio Members

Ted Taylor, DDFO

Guests

Christopher Timm, NNMCAB Nominee  
 Tori George, LANL-RRES, EM Services  
 Bob Gilkeson, Citizen  
 Mat Johansen, NNSA  
 Tom Whitacre, NNSA  
 Patrick Longmire LANL  
 Charlie Nylander, LANL  
 David Gregory, DOE-LANL

**Timothy A. Delong, Chair, called the meeting to order at 3:00 PM.**

**I. Introductions and Meeting Agenda**

Mr. Delong suggested a brief introduction of the attending members and guests. Mr. DeLong called for approval of the meeting agenda. The agenda was accepted and approved as written.

**II. No Meeting Minutes for Last EMS&R Committee Meeting**

Members discussed the lack of minutes from the last meeting. The reason for no minutes was determined to be because the position of Community Outreach Specialist was vacant until 5-22-04. The committee agreed to try to reconstruct minutes from the May meeting by using committee member's notes and Ms. Novak, new Community Outreach Specialist, agreed to help.



### III. Executive Committee Report

Mr. DeLong Acting Chair of the Executive Committee, briefly provided an overview of the issues discussed in the last Executive Committee Meeting:

- There are seven open seats on the board. Ted Taylor will write a white paper for Ed Wilmot proposing that the Four Accord Pueblo seats become ex-officio positions, to allow more flexibility for Pueblo members. The advantage in making the seats ex-officio positions is that Pueblo members will be able to participate in board activities as their schedule permits without impunity. For example: as an ex-officio member one can designate a substitute individual to attend meetings for which the member would have had to be otherwise absent.
- New board member recruitment was discussed. All CAB members have been asked to bring a possible nominee to the next full board meeting on July 28<sup>th</sup>. Recruitment ads in area newspapers have become cost prohibitive.
- The Executive Committee would like to make good use of the Opportunities for Improvement (OFI's) that came from the CAB Retreat. EMS&R Members have been asked to list their "top-ten" OFI's and bring them to the next committee meeting for discussion. The revised OFI's will be summarized by the Executive Committee and then placed on the agenda for discussion by the full board at our next meeting.
- The Executive Committee approved a Board Exit Feedback Form. This form will be mailed out to members who have left the board during the past two years. The Executive Committee hopes this will illuminate the reasons why board members resign and possibly offer ways to improve CAB member's tenure.
- The Executive Committee agreed to ask Director Nanos and Ed Wilmot (through Ted Taylor, DDFO) to attend a future meeting to address the CAB regarding LANL priorities.
- Establishment of an Ad Hoc Committee to revise the CAB bylaws. Jim Brannon, Dr. Fran Berting, and Ted Taylor agreed to serve on this committee.
- Newsletter delay was also discussed. The Executive Committee made the production of the Newsletter the exclusive responsibility of the CAB staff. CAB staff is currently finalizing the newsletter for publication with an Estimated Completion Date (ECD) of August 15<sup>th</sup>.
- Mr. DeLong reported that Katherine Guidry has requested a medical leave of Absence from the Board and that Mr. DeLong will serve as acting chair of the NNM CAB.

### IV. Report from Ted Taylor, DDFO

Mr. Taylor informed the committee that he still has no new information regarding when the Consent Order will be issued. He stated that the Consent Order might be locked up in the Legal Council Office of the NMED for an indeterminate amount of time. Mrs. Hoard asked about the letter that was to be drafted to increase the comment period for the Consent Order. Mr. Taylor reported that this letter has been drafted and sent to Ron Curry under Mr. DeLong's signature as Acting Chair.

Mr. Taylor suggested the committee schedule a field trip date for 260 Outfall; this was noted as item #9 on the 6-9-04 EMS&R Committee Agenda.

Mr. Taylor suggested the EMS&R Committee work on their fiscal '05 plan and to have a draft ready to submit to the next full board meeting. Dr. Berting asked Mr. Taylor to send a letter to Mr. Wilmot, Mr. Curry, Dr. Ramsey, and Rich Mayer (EPA) requesting a list of major issues facing the lab, including the Consent Order, the budget, and any other major lab projects that the DOE would

like comment on. This letter was drafted and sent cooperatively by Ms. Manzanares and Mr. Taylor.

#### **V. Feedback from the NNM CAB 2004 Retreat**

The OFI's were briefly discussed at the meeting and Mr. DeLong asked the committee members to pick their "top-ten" OFI's according to significance in regards to the EMS&R Committee. Ms. Novak sent the OFI's out to the committee members via email for review and categorization.

#### **VI. Report by Bob Gilkeson on Possible "Groundwater Contamination in the Regional Aquifer beneath the Los Alamos National Laboratory".**

Mr. DeLong asked Mrs. Hoard why she invited Mr. Gilkeson to speak about his report "Groundwater Contamination in the Regional Aquifer beneath the Los Alamos National Laboratory". (See Mr. Gilkeson's report attached to these minutes.) Mrs. Hoard commented, that in consideration of the Environmental Restoration (ER) Project, accurately retrieving samples from the monitoring wells was of critical importance. Mr. DeLong introduced Mr. Gilkeson to the full group.

##### **A summary of Mr. Gilkeson's report is as follows:**

Mr. Gilkeson explained he has had a long association with Los Alamos National Laboratory's (LANL's) hydro-geological work plan. He stated he has written a report on the performance of the monitoring wells designed to detect chemical and radioactive contaminants in the regional aquifer. He stated he was not paid for this report but wrote it as a concerned citizen of New Mexico. He stated his intention to send a copy of his report to Pat Longmire. The report focused on the effects of using polymer based drilling fluids and bentonite clay muds for drilling wells. It is Mr. Gilkeson's position that the drilling methods currently used by LANL may be responsible for inaccurate test results from samples taken at the monitoring wells. Mr. Gilkeson referenced RCRA documentation on monitoring wells and the problems associated with using bentonite clay muds and other methods to drill wells. He suggested that the additives used in the drilling process mask or absorb certain radioactive chemicals and other chemicals that may be present in the aquifer strata. Additionally, Mr. Gilkeson expressed his concern regarding how LANL collects groundwater samples and how accurate the data retrieved from these samples are in relation to where and when the samples are collected. In Mr. Gilkeson's opinion, many of the LANL monitoring wells do not meet RCRA requirements. Mr. Gilkeson's abstract states his belief that, "the majority of the LANL monitoring wells were drilled using polymer based fluids and/or bentonite clay muds that prevent the detection of contamination and/or introduce false indications of contamination." His abstract further states, "the bentonite clay muds and drilling fluids also reduce the permeability of the aquifer strata near the wells, with the result that the water samples are collected from the stagnant zone that surrounds the wells and do not represent the chemistry of the ground water in the aquifer." Mr. Gilkeson used published documents for his report and took no samples personally. Mr. Gilkeson's report suggested that there has been some inaccuracy in the sampling techniques used and therefore the findings are not 'clean'. His report "presents findings that technetium-99 and chemical contaminants are present in the groundwater beneath the LANL low-level radioactive (material disposal area) MDA G." In summary Mr. Gilkeson's abstract states, "the poor understanding of groundwater contamination beneath MDA G creates concerns for the continued operation of the RCRA disposal facility and for DOE's strategy to leave the large volume of legacy wastes 'buried in place' at many locations at (LANL)." The Semi-

Annual External Advisory Group and RCRA Guidelines form the basis for his report. Mr. Gilkeson's report called for a critical review of the analytical data. The importance of accurate sampling must be a foremost concern with regard to water quality in the regional aquifer.

#### **Comment Period on Mr. Gilkeson's Report:**

LANL officials present at the EMS&R Committee Meeting responded to Mr. Gilkeson's presentation by firmly stating that LANL followed NMED approved plan when drilling the wells in accordance with a RCRA permit and with methods that are consistent with the guidelines set forth in the permit. The RCRA plan called for trying the least invasive drilling strategy first. Bentonite clay muds were only used when considered an appropriate drilling method. LANL's approach has been to let the site determine the process used for drilling the well. With emphasis placed on using situational drilling methods the negative effects of using chemical additives to aid in the expediency of the drilling process is reduced. However, according to Mr. Gilkeson's report, using some or all of these additives to drill wells regardless of circumstance created misleading results on the actual chemical contaminants present in the regional aquifer. The LANL officials stated that the drilling methods are used out of necessity and that the drilling 'lubricants' disperse and after a reasonable amount of time the natural environmental equilibrium returns to the drilled area. The procedural guidelines for drilling wells call for using the least intrusive methods to the most intrusive methods. The approach is called the Phase Approach. In order of environmental impact the drilling methods are as follows: air rotary casing, water, quick foam to stiff mud using "Easy Mud" to the last resort drilling method which is bentonite clay mud and polymer based drilling fluids. In order to use bentonite clay mud the driller must have approval from the NMED, DOE, and LANL. According to Gilkeson's report, most of the drilling methods leave some residues that absorb or mask radionuclide contaminants for some period of time. LANL, and NNSA officials present at the meeting stated their goals to speed up the drilling process and gain efficiency with regards to cost determined their drilling approach. However, only approximately 20% of the wells drilled at LANL have been finished by using bentonite clay muds. LANL negotiated with the regulatory agencies to allow a given amount of time to pass before sampling to allow the monitoring wells to return to a more natural equilibrium. The LANL officials present stated that their testing methods are in compliance with LANL's RCRA permit. The LANL representatives stated that they employ a graduated approach to well drilling and that there are pros and cons to each technique. It is the decision of the driller based on location and how hard the well is to drill that determines the actual method of drilling. Methods commonly used are: air rotary, air casing, 'Easy Mud', and mud rotary is used as a last resort. Mrs. Hoard asked if there are wells available to compare methods by sampling. Mrs. Hoard's primary concern was that the data used for sampling the wells is 'clean' so that the results are accurate. LANL officials were very concerned that the EMS&R Committee was not under the impression that LANL has given out compromised data or data that has been misrepresented.

#### **VIII. Review and Discussion of Recommendation 2004-04, Authored by Donovan Porterfield**

Recommendation 2004-04, authored by Donovan Porterfield was deferred pending further information from Ted Taylor (DDFO) regarding further action of the disposition of the (Quality Assurance Program (QAP) by the DOE. If Recommendation 2004-04 is still timely it will be submitted to the Board for review at the full board meeting on July 28, 2004. Recommendation 2004-04 centers around the DOE maintaining its' QAP. The committee feels it is absolutely

critical for the DOE to have a QAP for the sake of DOE's public credibility.

**IX. Chair called for Wrap-up Discussion.**

Mr. DeLong thanked all the guests and members for attending the meeting. He stated that groundwater issue is not a dead issue and that the EMS&R Committee will spend more time on reviewing Mr. Gilkeson's report and the regulations surrounding the accuracy of LANL's test samples. Mr. Nylander mentioned that the Inspector General (IG) is auditing the LANL due to Gilkeson's report. Mr. Taylor recommended to the LANL officials present that an analysis of the groundwater sampling process be conducted and that a report be made available to the CAB by the August or September meeting. Mr. DeLong pointed out that it is common to have professional disagreements, but of more critical importance to this issue is the accuracy of the test results. Mrs. Hoard recommended an independent review by a technical expert to discover the truth between opinions. The root question to be addressed, according to Mrs. Hoard, is the lab giving reliable data to the public? The CAB wants to know the risk to the regional aquifer now and the risk in 5 years. It was suggested that it would be beneficial for the 'regulator' (EPA, NMED) to be present at the next meeting when this issue will be discussed. A possibility would be to call a special meeting for this particular issue with all the involved parties present. The EMS&R Committee will wait to see what the August or September report will bring. The EMS&R Committee felt strongly that groundwater contamination in the regional aquifer was the *number one* issue at LANL right now. Mr. DeLong stressed civility when discussing sensitive issues in order to be more productive. Mrs. Hoard reiterated that if the data from the aquifer sampling program is compromised that would definitely constitute a big problem for LANL and the surrounding communities.

Mrs. Hoard suggested reviewing the Work Plan for Material Disposal Area T as a topic for a future meeting.

**X. Adjournment**

Mr. DeLong called for a motion to adjourn. As all present were in favor, the meeting was adjourned at 5:30PM.

Respectfully submitted,



Timothy A. DeLong  
EMS&R Committee Chair