

General

**A Review of Environmental Compliance Issues Affecting
Los Alamos National Laboratory, Environmental Management Division**

prepared by

Neil S. Weber
Enviro Web Consulting
under
Contract No. G2286SML9-8C

August 11, 1999



13281

INTRODUCTION and BACKGROUND

At the request of Tom Baca, Los Alamos National Laboratory (LANL), Environmental Management Division Director, Envir O Web Consulting initiated a LANL/regulator interaction review. Envir O Web Consulting is owned and operated by Neil Weber, who provided the direct support to LANL under contract. Mr. Weber retired from the State of New Mexico after more than 28 years of experience in a wide range of programs with the New Mexico Environmental Department and its predecessor agencies. His last assignment was Chief of the DOE Oversight Bureau.

The objective of this study and consultation was to provide LANL's Environment Management Division with a third party's perspective relative to environmental compliance interaction issues, and provide recommendations in order to expedite compliance in a cost-effective manner. A review of issues was conducted from the perspective of a manager/administrator and not as an individual with technical expertise or extensive regulatory knowledge. Recommendations provided are intended to assist both the regulated community (LANL) and the regulatory agencies with a basis for management to initiate administrative changes which will facilitate environmental compliance.

The review of environmental compliance issues was limited to programs in which LANL's Environmental Management Division has direct responsibility. The limited scope of this review concentrated on Waste Management, Resource Conservation and Recovery Act (RCRA) Corrective Action (Environmental Restoration), Ground Water and Surface Water issues.

ACTIVITIES

Activities under this contract included:

1. Meetings with LANL technical staff to determine the status of and impediments to achieving compliance with state, federal and local environmental regulations.
2. Meetings with New Mexico Environmental Department (NMED) Regulatory and Administrative staff to determine their concerns relative to LANL's environmental compliance.
3. Meetings with other state, local government and tribal officials to ascertain their concerns relative to LANL's management of environmental issues.
4. Attendance at public meetings in which LANL environmental issues are discussed.

Meetings and interviews were conducted with the following individuals and groups:

Tom Baca, Director, Environmental Management Division, LANL

Julie Canepa, Program Manager, Environmental Restoration, Environmental Management Division,
LANL

Steven Hanson, Group Leader, Rad Liquid Waste, Environmental Management Division, LANL

Anthony Stanford, Group Leader, Solid Waste Operations, Environmental Management Division,
LANL

Ware Hartwell, Chief of Staff, Environmental Management Division, LANL

David McInroy, Environmental Restoration Program, Environmental Management Division, LANL

Valerie Rhoades, Environmental Restoration Program, Environmental Management Division,
LANL

Tori George, Environmental Restoration Program, Environmental Management Division, LANL

Carmen Rodriguez, Environmental Restoration Program, Environmental Management Division, LANL
Peter Maggiore, Secretary, NMED
Greg Lewis, Director, Water and Waste Management Division, NMED
Jim Najima, Director, Environmental Protection Division, NMED
John Parker, Chief, DOE Oversight Bureau, NMED
Steve Yanicak, HPMI, DOE Oversight Bureau, NMED
Marcy Leavitt, Chief, Ground Water Quality Bureau, NMED
Jim Davis, Chief, Surface Water Quality Bureau, NMED
Glenn Saums, Program Manager, Surface Water Quality Bureau, NMED
Barbara Hoditschek, Environmental Specialist, Surface Water Quality Bureau, NMED
James Bearzi, Chief, Hazardous and Radioactive Materials Bureau, NMED
John Kieling, Geologist 3, Hazardous and Radioactive Materials Bureau, NMED
John Young, Environmental Specialist, Hazardous and Radioactive Materials Bureau, NMED
David Neleigh, U.S. Environmental Protection Agency (EPA), Region 6, Dallas, TX
David Sarracino, Assistant Director, Department of Environmental and Cultural Preservation, San Ildefonso Pueblo
Jacob Pecos, Coordinator, Environmental Protection Office, Cochiti Pueblo
Gary Valdo, Deputy Coordinator, Environmental Protection Office, Cochiti Pueblo
Don Diego Gonzalez, Environmental Consultant to Cochiti Pueblo
Anthony Armijo, Manager, Department of Environment and Natural Resources, Nambe Pueblo
New Mexico Citizens Advisory Board
NMED/DOE/LANL Environmental Monitoring Community Meeting

OBSERVATIONS and FINDINGS

Interviews and meetings were held with the aforementioned individuals and organizations in order to elicit responses regarding their perspective of LANL's Environmental Management Division environmental compliance issues. Following is a summary of comments, opinions and the author's interpretation. These comments will provide the basis for developing recommendations to enhance communication and compliance. Comments listed are not attributed to any individual or organizational unit in order to preserve anonymity.

There is a history of an acrimonious and strained relationship between LANL and NMED. Distrust existed between LANL's environmental staff and the State regulators. NMED staff believed LANL was concealing waste sites and were secretive in providing information. State regulators felt LANL had a cavalier, conceited and arrogant attitude. Adequate communication was lacking between LANL and regulatory staff.

NMED staff tended to bring forth personal agendas rather than addressing regulatory issues, particularly in RCRA Corrective Action. Personalities came into play rather than technical and regulatory issues. A lack of trust and accountability developed with the State. NMED staff has not been proactive in dealing with environmental problems at LANL. They exhibited a knee jerk or reactive posture. There has been a desire among some NMED staff to portray LANL as being defiant and incompetent, perhaps as a result of jealousy.

Poor management in the past allowed both LANL and NMED technical staff to let personal agendas enter into decision making, thus subverting management desires. Some believe NMED

staff were creating barriers to LANL's Environmental Restoration (ER) program, rather than attempting to work together as a team. There was a tendency of NMED disbelieving LANL's confirmatory sampling results.

NMED has not provided the regulated community with clear direction regarding regulatory expectations. Frustration exists in that not enough cleanup has occurred with the amount of money expended in ER. The State needs to improve their attitude – "what they do is not bad, it is how they do it." At times the State regulators do not execute their job professionally. State inspectors seem to find violations and then issue compliance orders only to justify their jobs.

The poor relationship between LANL and NMED may be a result of a disparity of resources. LANL has more, NMED has less. Many former NMED personnel are now employed by LANL. They ended employment with the State in order to receive higher compensation at LANL. This situation has created jealousy and problems with compliance. LANL staff are paid at a higher rate than State staff, and thus there is an incentive for well-qualified and trained NMED staff to accept employment at LANL. NMED has a high personnel turnover due to low salaries and a high workload. Staff often leave the agency for employment with the regulated community which offers competitive salaries and improved working conditions.

In the past LANL assigned scientists rather than environmental professionals to lead their environmental programs.

Previously no incentive existed for LANL to self-report environmental regulatory violations and perform voluntary compliance. When LANL elucidated problems, NMED responded with compliance orders and fines. When LANL was candid with the State they got penalized. The State had a "gotcha" mentality. Voluntary compliance self-audits and self-reporting of problems resulted in enforcement actions and not an opportunity to resolve the problem without penalties. This resulted in an impediment to LANL being open and candid.

It has been said that LANL's management inattention is a major obstacle to environmental compliance. Also the outside world is confused over who is the responsible party – LANL or the Department of Energy (DOE). LANL's organizational structure is confusing. The responsibility for environmental compliance rests in many different groups with different leadership. LANL is a big and complex organization, and this structure causes a problem with the State's perspective of LANL's environmental compliance. They feel they cannot get a handle on the problem. The regulators at times see turf battles between LANL organizational units.

Environmental Management and Waste Management responsibility are scattered among numerous organizations in LANL. Environmental staff are fragmented and spread throughout LANL's structure. There is not ONE central authority for environmental issues, and thus the regulators at times do not know with whom to deal.

In the past an arrogant attitude among LANL staff members was prevalent. Environmental compliance was not a top priority. The main mission of LANL management has been science, and not environmental compliance. LANL staff want to be excellent in their fields of expertise and environmental compliance was not a top priority.

DOE's attitude toward environmental compliance issues has caused some NMED officials concern. They are viewed as being more confrontational than LANL. NMED views DOE and LANL as separate entities with different priorities and visions.

In previous years Operational Units (OUs) in the ER program competed with each other. Fiefdoms existed.

The academic culture at LANL has impeded environmental protection. In the past LANL staff studied environmental problems to an excessive degree rather than focusing on solutions and remediation.

Today the relationship between LANL and NMED has improved drastically. However, there exists two large bureaucracies trying to work together – it is very dynamic and complex. Still the situation is much better than it was two to ten years ago. There is a less adversarial role with NMED.

Personnel changes both at LANL and NMED have resulted in this improved relationship. There is now a team approach in dealing with ER projects. Periodic meetings with the State and LANL have increased an improved flow of ideas, information and concurrence on solutions to environmental problems. Frequent communication at all levels has improved the relationship. Basic trust and accountability are building between NMED and LANL. The regulators believe that today LANL is making a concerted effort to comply with environmental regulations and are willing to accept NMED staff suggestions. The State is now more open to having LANL self-report violations. This improved relationship is a direct result of new senior management (Secretary and Division Directors) at NMED.

Today LANL environmental programs are now being managed and staffed with personnel who have extensive experience in environmental issues.

The Mid Level Managers Group is an example of a success story. This Group which meets at regularly scheduled intervals freely shares information and criticisms. Resolutions to complex environmental and regulatory issues result. It is a team effort exhibited by professionalism and mutual trust.

NMED tends to be more receptive to LANL's findings and proposed cleanup strategy on complex sites than on relatively inane sites. NMED questions LANL when no contamination is found. They request additional sampling without reason. In some cases the cleanup of inane sites has been more costly than complex sites, due to NMED's unreasonable requests. In some cases the State is not pragmatic in their approval of solving environmental problems. At times they would rather see complete removal of a contaminant than stabilization in place. This option is more costly and may create other environmental insults. The State sees no obstacle to forcing LANL to spend money. One needs to question "How clean is clean?"

The State regulators are noticing a change in LANL management's attitude – environmental compliance is now receiving more attention than in the past. The culture at LANL is different today. Environmental issues are viewed as important, e.g. waste minimization and pollution prevention are receiving attention. Some current LANL Division Directors are developing Environmental Plans and Visions. LANL has a huge challenge – there are many facilities and resources are limited.

NMED has made personnel changes to facilitate regulatory compliance. Currently staff are more professional than in the past when personal vendettas clouded decision making. NMED's senior management do not have the baggage and a poor history in dealing with LANL that previous administrations exhibited. NMED management has removed and will continue to remove personalities involved in blocking compliance issues. A desire exists to treat all entities fairly and equitably. The philosophy of NMED senior management is a pragmatic approach in that staff should be technically accurate and reasonable and interpret and apply regulations in a fair and professional manner. There is a desire to work with LANL as partners in a team effort.

Currently, insufficient daily interaction between LANL and NMED regulatory staff occurs. The State only inspects waste disposal sites once per year. Four or five NMED staff members perform an onsite inspection during a two-month time frame. There is a need for more often onsite visits.

Compliance with RCRA is difficult. The law and regulations are written in an illogical fashion. This provides the regulators with an upper hand in interpretation. The regulations are ambiguous and leave considerable discretion to regulatory interpretation by NMED.

NMED has not provided adequate policy and guidance, particularly relating to Risk Based Corrective Action and PCB cleanup. State decision making takes an inordinately long time, especially at the lower staff level. This in turn has cost LANL considerable time and money. NMED staff seem to be reluctant to make decisions regarding RCRA cleanup in fear that they might be chastised by senior management and the public. NMED may be too conservative with risk assessment and subsequent decision making.

NMED at times feels intimidated by LANL during decision making meetings and discussions. LANL will have 10-15 staff members present and NMED only 2-3. NMED believes LANL is over-involved in technical and administrative decisions. Additionally, the State is suspicious of documentation submitted by LANL due to the submission of voluminous documents which cannot be reviewed in a timely manner by regulatory staff.

The cleanup process of ER sites needs to be expedited. LANL is often forced to implement prescriptive remedies involving volumes of paperwork. LANL questions the State's authority under RCRA to dictate what technologies and methods should be applied to achieve a certain cleanup level, rather than dictating only the final cleanup level or standard. The regulated community should only be held accountable for obtaining a cleanup level or standard and not the process by which it is achieved.

There has been some conflicting opinions between EPA and NMED over what constitutes a site cleanup level in order that a site can be classified as No Further Action (NFA). Both conflicting technical and regulatory views exist. In some cases it has taken more than ten years to receive NMED approval of a closure plan and NFA status for ER sites.

Contributing to this problem is internal conflict among NMED bureaus, particularly between the Hazardous and Radioactive Materials Bureau (HRMB) and the Surface Water Quality Bureau (SWQB). Overlapping environmental regulatory authority affecting a regulated facility creates problems. The facility is uncertain as to which NMED bureau has the final overriding authority. Both HRMB and SWQB staff need to be provided with clear leadership and direction.

Many LANL ER sites should be regulated under the Clean Water Act (CWA), the National Pollution Discharge Elimination System (NPDES), the Toxic Substances Control Act (TSCA) or other regulations and NOT under the Hazardous and Solid Waste Amendments (HSWA) module. Some ER sites should be regulated under other permitting programs and not HSWA Corrective Action, e.g. RCRA, Solid Waste, NPDES, UST, CWA or Ground Water.

Conflicting regulatory cleanup levels for PCBs exist under RCRA and TSCA. EPA is indecisive over which Act has overriding authority. Additionally, NMED and EPA cannot agree upon an acceptable PCB cleanup level.

The role of NMED's DOE Oversight Bureau, also known as the Agreement-in-Principle (AIP) staff is in question. AIP staff offer an additional NMED opinion on environmental issues, often clouding the issues. The White Rock office AIP staff have not found their niche relative to

LANL's ER program. At present, staff spend a majority of their time performing document reviews and verification sampling.

NMED staff have found "investigational derived wastes" being generated by contractors hired under LANL's ER program. Little is known regarding the ultimate disposal of these wastes. Questions have been raised regarding the accountability of ER contractors. They may be causing costly delays in the cleanup process. An adequate Quality Assurance (QA) program is not in place.

Today a more holistic view of ER at LANL is in place. The "Watershed Approach" to ER projects has been well received. It is a vast improvement over the highly compartmental approach used in the past.

LANL is uncertain whether NMED will accept "Real Time Remediation" as a practical cleanup of ER sites. LANL needs to know if NMED will accept a methodology and results without an inordinate amount of study and testing of the procedure.

Project specific discussions are sometimes held at the senior management level without involving mid management or line staff. Lower level staff need to be involved or at least apprised of any decisions made by senior management.

LANL experiences an inflexibility in transferring funds between Defense Programs (DP) and Environmental Management (EM). This contributes to the delay in resolving environmental issues.

A clear vision of where LANL environmental programs should be in five years is lacking. Both the State and LANL need to develop such a vision with priorities established.

The RCRA program is controlled by the attitude and the relationship between the regulator and the regulated community. The recently appointed management in NMED's HRMB has a desire for staff to expedite cleanup at RCRA regulated facilities. In the past both LANL and NMED were at fault in studying a problem to death rather than focusing on actual remediation. The State is now willing to make regulatory decisions in a timely manner. State regulators are maturing as exhibited by a cooperative attitude shown by both the State and the regulated community.

Tribal governments feel disenfranchised in that they have not been able to tap into LANL's resources. They feel that LANL does not adequately share their resources with surrounding communities. Native Americans account for a small percentage of employment at LANL. The tribal concerns with LANL are more an economic issue than an environmental issue. Their desire is to build an environmental infrastructure.

Tribes view themselves as the original stewards of the environment and consider environmental issues as cultural issues. They are concerned that their lands are adversely impacted by LANL activities – both past and present. Tribes want LANL to clean contamination of the environment to a pristine level rather than to an acceptable level of risk. Any detectable level of a contaminant is unacceptable since they consider it as a desecration of their cultural and natural resources. Thus tribal governments want to develop their own environmental standards.

The tribes think LANL does not fully understand tribal protocol and are at times impatient. They believe LANL needs to understand that it may take a considerable period of time for decisions to be made at the Tribal Council level.

Very few members of the general public attend LANL environmentally related public meetings and forums. The vast majority of those who attend are the individuals opposed to WIPP. There is little interest in ER and Waste Management at LANL.

The Northern New Mexico Citizens Advisory Board (NMCAB) is vastly different today than it was three years ago. It is a professional group which focuses on the task at hand and not thwart

with members having personal agendas. There is a genuine interest in ER, Environmental Management and Waste Management.

RECOMMENDATIONS

Based upon the information and impressions gathered by the author during interviews, the following recommendations are made in order to assist both LANL and the regulatory agencies with a basis to facilitate environmental compliance:

1. There is a need for increased and improved communication between LANL and the regulatory agencies so that mutual trust can continue to be developed. In this vein the mid level and senior management meetings should continue to occur at regularly scheduled intervals. NMED and LANL should be partners in the regulatory decision making process. The State should become part of the solution rather than the problem.
2. Establish a team of senior management and technical staff advisors to develop a common sense approach rather than an unreasonable costly approach to RCRA Corrective Action. A "Red Team" similar to the one established for Air Issues should be established to address issues affecting HRMB.
3. Increase NMED onsite inspections. Perhaps placing NMED staff onsite at LANL is a solution. NMED should assign staff mainly dedicated to LANL.
4. LANL should recognize that NMED is attempting to improve their relationship. A "team" approach should be implemented in order to develop mutual trust.
5. Prioritize environmental problems and apply resources appropriately. Both NMED and LANL need to come to consensus on this issue. LANL and NMED need to jointly develop a VISION of where LANL should be in five years. NMED needs to give clear guidelines to LANL on the prioritization of environmental problems. NMED needs to take a more proactive role.
6. The salary and number of State environmental staff should be increased. NMED should further explore their organizational structure so that they can better serve the regulated community. NMED needs to efficiently utilize limited resources to render regulatory authorizations. State resources should be increased. Additional personnel provided with competitive salaries should be assigned to the RCRA program. NMED should use its RCRA permit fee system to hire and compensate additional staff.
7. LANL should place all environmental programs in one distinct organizational unit rather than scattered throughout many units as is currently the case.
8. LANL scientific staff should shift its attitude from achieving excellence as their top priority to being compliant then achieving excellence.
9. The entire RCRA regulations need to be written in a manner that they can be easily understood and interpreted.
10. NMED needs to develop a pragmatic approach in enforcing regulations. They should establish a clear set of criteria for cleanup and then hold LANL to that standard. NMED should not write prescriptive guidance documents, but focus on regulatory compliance. They should allow LANL to develop its own implementation guidance with concurrent NMED agreement. NMED should set cleanup standards the regulated community should meet and not dictate the process or technology used to achieve those standards. NMED should consider RCRA guidance as guidance and not regulatory demands. The goal of

- RCRA is to obtain an acceptable level of clean and not dictate the process by which it is achieved.
11. Reduce the amount of paperwork and documentation involved in RCRA Corrective Action.
 12. Expend a greater proportion of resources on actual remediation rather than study and research of environmental problems. Focus on the implementation of solutions.
 13. NMED should accept "Real Time Remediation" as a practical resolution to the cleanup of ER sites.
 14. Expedite the process by which insignificant and inane ER sites can be classified "NFA."
 15. NMED should accept Voluntary Corrective Action (VCA) and Voluntary Corrective Measures (VCM) as the preferred alternatives to ER cleanup in order to expedite the RCRA Corrective Action process.
 16. Encourage lower level NMED technical staff to make decisions. Management should provide line staff with the direction and authority to make regulatory and technical decisions.
 17. Evaluate which environmental regulations should dictate cleanup and remediation at ER sites. Conflicting opinions between NMED bureaus should be resolved, particularly between SWQB and HRMB. In cases of overlapping environmental regulatory authority the NMED bureau with overarching authority should take the lead and have the final decision making authority. NMED should establish a single point of contact. There needs to be one final decision making authority on NMED bureau cross cutting issues.
 18. Determine a PCB cleanup level consistent with both TSCA and RCRA. EPA should provide guidance and direction to NMED. A determination needs to be made as to which group in NMED or EPA has authority over PCBs.
 19. Consolidate as many individual SWMUs as possible into single units in order to expedite compliance, e.g. the aggregation and "Watershed Approach." Risk assessment should be performed on a Watershed basis and a holistic approach to ER established.
 20. A definitive role for the AIP staff needs to be established. Language in the NMED/DOE Agreement-in-Principle should be examined and modified to permit NMED AIP staff more flexibility in their roles. They should be able to assist NMED regulatory staff, working closely with HRMB. AIP staff should complement and verify LANL data and not look for disputes. AIP staff need to develop a current Work Plan for LANL related activities. Sampling activities need to be coordinated with LANL ER staff. AIP staff need to develop a better working relationship and role definition with both NMED and LANL staff. AIP should become more involved in Waste Management issues. The White Rock AIP staff needs to play a more active role in LANL ER activities.
 21. Develop career opportunities at LANL for Native Americans.
 22. Establish a system at LANL in which the ER contractors are totally accountable for their work. Establish a QA system.
 23. Investigate the possibility of allowing LANL the flexibility to transfer funds between DP and EM in an attempt to effectively resolve environmental issues.
 24. Develop and establish an overriding philosophy to achieve the goal of compliance and removing sites from the RCRA permit. This goal should address an acceptable level of risk and not seek cleanup to a pristine level.