

General

**Risk-Based Corrective Action
And Collaboration with Regulatory Authorities
At
Los Alamos National Laboratory
1993-2001**

Public Comment to the
Northern New Mexico Citizens' Advisory Board
January 26, 2004

By Theodore J. Taylor
2515 35th St.
Los Alamos, New Mexico 87544



Introduction

Comments submitted by me as an individual and not as a representative of the U.S. Department of Energy.

Comments based on my experiences during service as the Los Alamos Site Office's Environmental Restoration (ER) Project Manager from August 1992 to May 2001.

Comments relate directly to use of risk-based approaches in ER at Los Alamos National Laboratory, and indirectly to the recently-submitted Risk Based End States Vision document.

Comments also relate to the draft recommendation on High Performance Teams, to be considered at this meeting.

Conclusions

The ER Project at LANL has consistently used a risk-based approach in its work. ER Project managers at the University of California (UC) and DOE have been in the forefront regarding technical and regulatory innovations to improve effectiveness.

The ER Project at LANL has consistently complied with work schedules approved by regulatory agencies, and these work schedules have been reflected in the ER Project Baseline.

The ER Project at LANL has consistently sought to engage the regulatory community in collaborative dialogue. ER managers and technical staff have long understood the benefits associated with a collaborative approach, and have approached such collaboration with integrity, high energy, and good spirit.

General Observations

LANL ER Project has always been conducted on the basis of evaluation of human health and environmental risks.

LANL ER Project has been conducted under and consistent with regulations and other requirements promulgated by the project's Administrative Authorities (AA).

U.S. Environmental Protection Agency (EPA)
New Mexico Environment Department (NMED)
U.S. Department of Energy

Primary "regulatory drivers" for the ER Project are

(1) Hazardous and Solid Waste Amendments (HSWA) Module (Module VIII or "HSWA" Module) of the LANL Resource Conservation and Recovery Act (RCRA) permit, issued by EPA Region 6 in April 1990

(2) Applicable Department of Energy (DOE) Orders

Potential Release Sites (PRS)

2,100 PRSs at LANL

1,100 regulated by NMED

Solid Waste Management Units (SWMU)

1,000 regulated by DOE

Areas of Concerns (AOC)

Few regulated by EPA

Risk-Based Approach

Module VIII: Requires annual Installation Work Plan (IWP), containing the ER Project's technical and regulatory approach. Approach, known as the Integrated Technical Strategy (ITS), is risk-based.

Risk-Based Corrective Action Process (RBCAP) formally and completely documented in IWP as part of the ITS (June 1996).

Departures from the risk-based approach: due to

- (1) DOE's commitment to cleaning up PRSs in the Los Alamos Town Site
- (2) Abrupt budgetary changes
- (3) DOE Headquarters priorities

Site Ranking System and Prioritization of Work

Established in early 1993 as Site Ranking System (SRS).

SRS helped prioritize investigation and remediation of PRSs to supplement schedules in EPA's Module VIII.

Site Ranking System (SRS):

- (1)** Co-developed by and approved by DOE, the University of California (UC) at LANL, EPA Region 6, and NMED.
- (2)** Based on concepts in August 1990 report prepared by LANL for the U.S. Army Toxic and Hazardous Materials Agency. (USATHAMA).
- (3)** Consists of a set of questions with weighted alternative responses regarding the potential contaminants (known as chemicals of potential concern [COPC]) at a PRS or set of PRSs.
 - (a)** Questions relate to the chemical present; concentration and toxicity; extent of containment; potential to be exposed to and migrate in soil, water or air; proximity to human populations and water supplies; etc.
 - (b)** Range of SRS ranking scores is 0 to 100. Higher scores indicate a higher potential risk of exposure to humans.
- (4)** EPA and NMED determined that a PRS would receive a "high" priority if it received an SRS score of 50 or more.
 - (a)** Ranking of PRSs completed and approved in November 1993 and published in January 1994.
 - (b)** Ranking was consistent with the ER Project's Technical Approach Assumptions, previously published in June 1993.
- (5)** SRS ranking contained in ER Life Cycle Baseline
 - (a)** Priority Review Team (PRT) established with EPA and NMED.
 - (b)** Rankings updated with new information
 - © Rankings reviewed by PRT on an annual basis

Risk-Based Implementation and Improvements

1994: ER Project, EPA, and NMED agreed to set of risk-based No Further Action (NFA) criteria.

Early 1995: ER Project, EPA, and NMED discussed prioritization of activities.

Sept/Oct 1995: ER Project, EPA, and NMED agreed to decision logic, risk evaluation process, draft ecological risk approach, and scenarios for exposure to contaminants (following six days of meetings).

1996: Addition of ecological risk and ARARs--approved by NMED.

1997: Addition of surface water impacts (potential for migration from PRSs in surface water)--approved by NMED. Used to install controls at PRSs, known as Best Management Practices (BMP), and to prioritize investigations and cleanups. Used after Cerro Grande Fire.

1998: Addition of Watershed Aggregate approach (35 aggregates in 8 watershed)--approved by NMED in 1999

Collaboration: the Document of Understanding

Proposal by senior manager at LANL to DOE, EPA, and NMED that both the risk-based processes contained in the ER Project Baseline and the interaction processes be codified in a formal document.

Core Team established to negotiate the text of the document, which became the Document of Understanding (DOU).

Core Team consisted of:

DOE (Albuquerque Operations Office and Los Alamos and Kirtland Area Offices)

Management and operating contractors for LANL and Sandia National Laboratories--New Mexico (SNL)

EPA

NMED

Document of Understanding (DOU): signed on November 16, 1995.

Document of Understanding Annexes

Core Team met monthly through October 1997 to discuss and develop Annexes to DOU. Annexes describe technical approaches and interaction processes to be followed.

Annexes (sample):

- "Sampling and Analysis Guidelines"
- "Remedy Selection Process"
- "No Further Action Process and Criteria"
- "Voluntary Corrective Action Process and Criteria"
- "Land Use"
- "Public Involvement"
- "Cleanup Levels"
- "Groundwater and Vadose Zone Monitoring"

Document of Understanding Training

Training: All parties conducted two day-long training sessions for management and staff on the DOU and its Annexes.

Training session leaders:

Barbara Driscoll, EPA
Nancy Morelock, EPA
Barbara Hoditschek, NMED
Ron Kern, NMED
Tim Michael, NMED

Deborah Griswold, DOE
Mark Jackson, DOE
Ted Taylor, DOE
Warren Cox, SNL
Tracy Glatzmaier, LANL

High Performance Teams

January 1997: Three-day workshop on Streamlined Approach for Environmental Restoration (SAFER) held.

- (1) Co-developed by EPA and DOE.
- (2) Managers at all levels and technical staff from DOE, UC, and NMED attended the workshop.
- (3) Concept of "High Performance Team" (HPT) discussed and supported by all parties.
- (4) Training programs begun by DOE and DOE/EPA, beginning in the spring of 1998.

SAFER key principles:

- Build an effective Core Team (High Performance Team)
- Clearly, concisely and accurately identify and define problems
- Identify prudently and early the likely response actions (including cleanup, monitoring, etc.) and select an action
- Monitor the action and manage the uncertainties that are inherent in response actions

SAFER key assertions:

- The SAFER principles are implicit in federal (i.e., EPA) corrective action policies
- Adherence to the principles saves time and reduces costs
- Traditional "barriers" to streamlining can be overcome through teamwork and early consensus-building
- The proper focus of environmental restoration is implementing response actions
- All stakeholders want to achieve acceptable levels of risk

High Performance Teams for LANL

January 2000: All-day workshop, held by DOE, UC, and NMED.

January 2000: HPT concept adopted by the ER Project and NMED.

Spring 2000: HPTs appointed:

- Material Disposal Areas (MDA)
- 260 Outfall in Technical Area (TA) 16
- TA-35 Sampling and Analysis Plan
- Ecological Risk
- Regulatory/Permit Issues
- Los Alamos Airport Landfill

Conclusion: When sufficiently staffed and supported by the management of all organizations, the HPTs have been effective in defining problems and addressing technical issues.

Current Status: HPT for 260 Outfall is active.

Other Collaborations

Monthly Regulatory Meetings. Monthly meetings held between Regulatory Compliance managers of the ER Project and NMED managers. Discussion topics include technical issues regarding planned cleanups, upcoming permit modification requests, and regulatory comments on documents previously submitted for review.

Senior Management and Mid-level Management Coordination.

Post-DOU "summit" meetings by senior managers: Nov/Dec 1996.

Senior Management Steering Committee (SMSC): Jan 1998.

VISION Statement (April 1998): Cleanup work will be

"cost effective, approved, comply with applicable regulations, ensure acceptable risk, and...implemented in a trust and partnering manner with the regulatory agencies and with public participation from the communities of New Mexico."

VISION concepts incorporated into ER Project Roadmap: April 1999

Mid-level managers: Management Implementation Group (MIG)

25 meetings from February 1998 until mid-2001.

Discussion of programmatic and policy issues, and to some extent technical issues, relating to both the Sandia and Los Alamos ER Projects.