



**University of California**  
 Environmental Restoration Project, MS M992  
 Los Alamos, New Mexico 87545  
 505-667-0808/FAX 505-665-4747



**U. S. Department of Energy**  
 Los Alamos Area Office, MS A316  
 Environmental Restoration Program  
 Los Alamos, New Mexico 87544  
 505-667-7203/FAX 505-665-4504

*HWA FILE  
 Star  
 See my  
 note p. 3*

*ESDA LANL 6/11/97*

Date: November 24, 1997  
 Refer to: EM/ER:97-500

Mr. Benito Garcia  
 NMED-HRMB  
 P.O. Box 26110  
 Santa Fe, NM 87502

**SUBJECT: MINUTES FOR OCTOBER 15 AND NOVEMBER 5, 1997,  
 MEETINGS OF JOINT WORKSHOPS**

Dear Mr. Garcia:

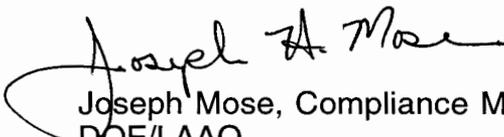
Enclosed please find a copy of the meeting minutes pertaining to the joint workshops held in Santa Fe on October 15 and November 5, 1997, between staff members of the Hazardous and Radioactive Materials Bureau, the Department of Energy, and the Environmental Protection Agency, and Los Alamos National Laboratory's Environmental Restoration Project.

Should you have any questions, please contact Victoria George at (505) 667-0808 or Joe Mose at (505) 667-5808.

Sincerely,

  
 Victoria George, Project Leader  
 for Integrated Regulatory Compliance

Sincerely,

  
 Joseph Mose, Compliance Manager  
 DOE/LAAO

TG/JM/rfr

Enclosure: October 15 and November 5, 1997, Minutes for Joint Workshops with HRMB, DOE, EPA, and the Laboratory



*T2*

Cy (w/ enc.):

J. Canepa, EM/ER, MS M992  
T. Glatzmaier, DDEES/ER, MS M992  
D. Griswold, AL-ERD, MS A906  
J. Jansen, EM/ER, MS M992  
B. Koch, LAAO, MS A316  
D. McInroy, EM/ER, MS M992  
J. Mose, LAAO, MS A316  
J. Plum, LAAO, MS A316  
P. Shanley, ESH-19, MS K498  
T. Taylor, LAAO, MS A316  
T. Todd, LAAO, MS A316  
RPF, MS M707  
EM/ER File, MS M992  
T. Davis, NMED-HRMB  
R. Dinwiddie, NMED-HRMB  
R. Ford-Schmid, NMED-OB  
J. Parker, NMED-HRMB  
J. Rogers, NMED-GWQB  
B. Toth, NMED  
J. Young, NMED  
D. Wilburne, NMED

Cy (w/o enc.):

T. Baca, EM, MS J591  
G. Rael, DOE-AL, MS A906

## LANL/HRMB NMED WORKSHOPS

October 15, 1997  
and  
November 5, 1997

*Sta -  
Please see  
me on this to  
discuss letter of  
response from  
Bentley*

October 15, 1997

### RECURRING NOD ISSUES

#### Agreements:

LANL and HRMB revised the following HRMB/EPA position to each of their satisfaction:

- Variances from approved workplans
- Filtered/Unfiltered ground water samples
- TCLP
- Use of field screening techniques
- Composite sampling

#### Action Items:

HRMB will supply LANL with the final copy of each position paper.

### NATURE AND EXTENT

#### Agreements:

HRMB agreed that NFA can be proposed if no contamination is above background.

HRMB agreed that if contamination is greater than a standard, more information must be gathered.

LANL and HRMB agreed that there are three black and white cases where extent is either defined or not defined:

- 1) Further action required if concentration > background and > SAL.
- 2) Further action required if concentration > standard.
- 3) No further action if concentration < background.

Twelve gray issues were identified:

- 1) Dense non-aqueous phase liquids (DNAPLs).
- 2) Background > contaminant concentration > SAL without obvious concentration gradient and/or concentration approx. equal to background and/or concentration approx. equal to SAL.
- 3) Use of TPH (rather than individual concentrations).
- 4) Bioaccumulators.
- 5) Concentration approx. equal to Detection Limits.
- 6) Background < PQL. (PQL = EQL).
- 7) SAL concerns by media (e.g. water SAL).
- 8) Use of SAL (safety factor of 10, MCEs).
- 9) Site condition uncertainties.
- 10) Bounding extent.
- 11) Regulatory Authority issues (TSCA, UST, etc.).
- 12) Revisiting past issues.

November 13, 1997

**Discussion:**

NMED believes that nature and extent MUST be determined before human health screening to SALs can be done.

EPA believed that Region 6 guidance is nature and extent to background.

NMED saw a logical progression in stopping criteria for determination of nature and extent as 1) background; 2) appropriate standards; 3) most stringent Risk Based Concentration (for human health or eco); 4) Human Health SAL (0.1 SAL for non-carcinogens). Based on further discussion, comparison to risk-based standards may not be appropriate until after extent is determined.

**Action Items:**

LANL to draft a position paper on LANL Definition of Nature and Extent for next workshop.

LANL to draft a position paper on the AA (EPA and NMED) and LANL agreement history of use of SALs and the LANL screening process for human health.

EPA to draft position paper on how it determines extent (at other Region 6 sites).

A next workshop (Nov. 4) would be held to discuss gray issues 2, 5, 6, 7, & 8.

**LANL SOIL BACKGROUND****Agreements:**

LANL and HRMB agreed to combine all soil horizons into one UTL value per analyte.

LANL and HRMB agreed that there is enough background data to calculate a UTL for selenium and thallium.

HRMB agreed with all items within LANL's draft response to the RSI on the LANL Background data set document.

**Action Items:**

LANL to review historical background data sets to determine if it would be appropriate to combine data in order to calculate a UTL for antimony, cadmium, and mercury. If not, NMED suggested LANL try to use 1/2 detection limit from the current background data set.

LANL to revise their response to the RSI and submit to HRMB. They will also revise the Background document and resubmit in December.

November 5, 1997

## **USE OF TOLERANCE INTERVALS**

### **Discussion:**

HRMB drafted a position paper on Use of Tolerance Intervals and expressed need for more information on the 5 constituents (Se, Tl, Cd, Sb, and Hg) for which LANL will be calculating UTLs.

### **Action Item:**

LANL to transmit copy of position paper to Randy Ryti and will submit additional information to NMED in the revised Background document.

## **USE OF SALS**

### **Agreements:**

LANL to begin using Region 6 SALS (Region 6 SALS are essentially the same as Region 9 SALS).

Historical LANL reports may use Region 9 SALS and MCE calculation when done correctly and extent has been determined.

LANL and HRMB agreed wording of the draft position paper on "Human Health Risk-Based Screening Action Levels and Screening-Level Assessment," after minor revision.

LANL to immediately begin using 0.1 SAL for non-carcinogens and no MCE calculation for carcinogens.

LANL may use industrial SALS where appropriate.

### **Discussion:**

EPA restated that extent MUST be determined before human health screening with SALS can be done.

### **Action Items:**

HRMB to revise and distribute position paper on Human Health Screening Process.

## **NATURE AND EXTENT**

### **Agreements:**

LANL may request NFA for human health, eco, and cumulative (surface transport) when all samples are below background UTLs.

When site contamination is between UTLs and SALS, LANL must show trend to bound extent.

Bounding extent is a site-by-site decision. EPA/NMED can provide guidelines.

EPA approved LANL sampling plans for Phase 1 only.

A Record of Communication is the proper method to document decisions.

November 13, 1997

NMED to move towards more site discussions with LANL personnel and more explicit NOD comments.

NMED and LANL agreed to use PQLs and EQLs synonymously.

**Discussion:**

EPA sees a need to NFA LANL sites in pieces--NFA for human health, NFA for eco, and NFA for cumulative (Canyons contribution, or potential for migration). EPA proposed to NMED that they consider making procedural NFA decisions only, not a regulatory or administrative NFA decision until all three criteria are met. Suggests that LANL would receive an "approval for human health NFA."

LANL would address storm water as phased samples, taken after soil was found to be contaminated.

EPA would define extent by going to UTLs (inorganics) and PQLs (organics).

LANL believes it has some sites that are too simple to require bounding extent, some others (more complex) where bounding extent is not necessary for further action, and many sites where extent has not been adequately discussed.

NMED believes the following issues need to be considered to identify nature and extent:

- 1) All relevant environmental media have been sampled
- 2) Sample locations appropriate
- 3) Appropriate regulatory cleanup level identified (TSCA, UST, etc.)
- 4) Sampling procedure (type, depth, etc.)
- 5) Lateral and vertical extent identified for constituent concentrations above background
- 6) Spatial distribution of contamination defined
- 7) Migration potential, topography, proximity to water course
- 8) Site history (source term vs. contaminant concentrations)
- 9) Identify any NPDES discharge exceedances
- 10) Sampling sufficiency
- 11) Flushing (impact of high water flow or head to mobilization or drive contamination)
- 12) PAHs, well researched documentation that PAHs not a COC (Why are PAHs found at some locations next to asphalt and not at others?).  
Project needs a consistent approach
- 13) SAL applicability and application
- 14) Constituent concentration gradient (DNAPLs)
- 15) Detection limits
- 16) Fate and transport considerations
- 17) Site characteristics

**Action Items:**

HRMB (John Young) to draft guidelines on bounding nature and extent.

November 6, 1997

**DOU UPDATE**

DOU development process is suspended. HRMB believes the Workshop/Directive Process will work for documenting HRMB policies. HRMB will finalize HRMB/EPA position papers (mentioned above) and turn them into State-issued Directives for all NM regulated community.

November 13, 1997