



TA-50

Date: September 17, 2003
Refer to: ER2003-0590

Ms. Sandra Martin, Corrective Action Project Leader
Permits Management Program
NMED – Hazardous Waste Bureau
2905 Rodeo Park Drive East
Building 1
Santa Fe, NM 87505-6303



**SUBJECT: RESPONSE TO SEPTEMBER 4, 2003 LETTER "AGREEMENT ON THE
CONSENT ORDER SCHEDULE FOR THE INVESTIGATION WORK PLAN (IWP)
FOR MATERIAL DISPOSAL AREA C (MDA C) AT LOS ALAMOS NATIONAL
LABORATORY EPA ID#NM0890010505**

Dear Ms. Martin:

The University of California (UC) and the US Department of Energy (DOE) have reviewed your September 4, 2003 letter regarding MDA C, Solid Waste Management Unit 50-009 at Technical Area 50 and appreciate your input.

UC and DOE worked closely with your staff to complete this first Work Plan (WP) and historical investigation report (HIR) for mesa top material disposal areas in order to facilitate the review and approval of the work plans (WPs). We provided a copy of the draft WP to the Hazardous Waste Bureau (HWB) staff and incorporated HWB's comments (see attachments). As stated in the two sets of attached comments on the draft WP received from HWB, "the table of contents generally follows the outline for the requirements for IWP in section XI.B of the New Mexico Environment Department (NMED) Order." These comments appear to contradict those in your September 4, 2003 letter, which states, "The MDA C IWP does not follow the format nor the specific requirements of the Order."

UC and DOE believe that the WP follows the format required in the order. We are concerned that, even with increased communication between our staffs, the requirements and content of this newly defined document remain elusive.

We request a meeting with your staff the week of September 22, 2003 to review the MDA C WP chapter by chapter to reach agreement on content of such WPs, as we believe we have followed the format specified in the Order. Subsequent to submittal of the MDA C WPs, we have submitted the work plan for MDA L and are currently working on other WP for MDAs and want to ensure that we do have an agreed upon template for these WPs.



Sincerely,



David McInroy, Deputy Project Director
Remediation Services
Los Alamos National Laboratory

Sincerely,



David Gregory, Project Manager
Department of Energy
Los Alamos Site Operations

DM/DG/JH/am

Enclosure: May, 2003 NMED Comments on draft MDA C IWP (2)

Cy:(w/enc)

N. Quintana, RRES-RS, MS M992
D. Gregory, LASO, MS A316
J. Kieling, NMED-HWB
M. Leavitt, NMED-SWQB
S. Yanicak, NMED-OB
L. King, EPA Region 6
RRES-RS File, MS M992
IM-5, MS A150
RPF MS M707

Cy:(w/o enclosure)

J. Hopkins, RRES-ECR, MS M992
D. McInroy, RRES-RS, MS M992
B. Ramsey, RRES-DO, MS J591
S. Martin, NMED-HWB
C. Voorhees, NMED-OB
L. Woodworth, LASO, MS A316

May 15, 2003

NMED's Draft Comments on the Table of Contents, Section 1, and Section 2 of the Draft MDA C Investigation Work Plan:

1. General: The Table of Contents generally follows the outline for the requirements for Investigation Work Plans in Section XI.B of the NMED Order. Refer to the NMED Order Section XI.B for the general information to be included in each section of the investigation work plan and the sequence in which information should be included in the work plan.

Refer to the NMED Order Section IV.C.3.b for the specific requirements for the contents of the Historical Investigation. Refer to the NMED Order Section IV.C.3.c for the specific requirements for the contents of each section and the requirements for all tables and figures.

2. Section 1.0: Introduction: This section should be divided into two subsections, general site information and investigation objectives. Refer to the NMED Order Section XI.B.4 for a brief description of the information to be included in the Introduction Section.

3. Section 1.1: Background: Change the title of this section to General Site Information. Delete paragraphs 2-4. NMED does not agree with the need to include the disclaimer regarding radioactive waste data. NMED maintains that it has the authority to regulate radioactive wastes, other than source, special nuclear and byproduct material as narrowly defined in the Atomic Energy Act of 1954, and to require the monitoring and reporting of radionuclides as necessary to properly regulate non-exempt wastes. If DOE/LANL management requires that the work plan include this disclaimer, it should be located at the end of the document.

Delete the first two sentences of the fifth paragraph. The MDA C Investigation Work Plan is being prepared to satisfy the requirements of the NMED Order. Change "RFI" in the third sentence of the fifth paragraph to "investigation".

Modify the third and fourth bulleted items in the fifth paragraph. Change the third item to state, "identify potential human and ecological receptors, including groundwater." Add the words "which may include..." to the end of the fourth item and include a list of the future actions that may be recommended for the site.

4. Section 1.2: Material Disposal Area C: Include the information in this section as part of the previous section (General Site Information), not as its own subsection. Update the maximum depth of the pits to 30 feet, to agree with the new geophysical survey data. Modify the sentence that refers to regional groundwater to state, "The regional aquifer is *believed to be* at a depth of approximately 1,300 feet, *based on data from other wells at the Facility and the predictions of the conceptual model.*" (NMED's suggested changes in italics)

5. Figure 1.1-1: Location of MDA C with respect to Laboratory TAs and surrounding land holdings: Include site topography on this figure.

6. Section 1.3: Objectives and Scope: Delete “and Scope” from the title of this section. Clarify the first paragraph to indicate that the MDA C Investigation Work Plan is being prepared to satisfy the requirements of the NMED Order.

Move the last paragraph of this section to the Scope of Activities Section (4.0), since this paragraph provides information regarding the scope of work to be performed. Follow the outline in Section XI.B of the NMED Order for the sequence in which information should be included in the work plan. Change “RFT” in the last paragraph of this section to “investigation”. Include a reference to the planned Mortandad Canyon Groundwater Investigation Work Plan regarding further evaluation of contaminants in Ten Site Canyon.

7. Section 1.4: Technical Approach: Delete this section. NMED does not believe that the formal DQO process is appropriate for the MDA C investigation. A considerable amount of work has already been completed at MDA C, the data needs are known, and the methods to obtain the data are clear. The lengthy DQO process is redundant and unnecessary for this site.

8. Section 2.1: Site Description: Delete this section. Move the first and third [the updated paragraph that was sent in the 2nd email] paragraphs to the Introduction Section (1.0). Integrate the information in the first and third paragraphs with the information currently in Section 1.2 (Material Disposal Area C), which will also be moved to Section 1.0.

Clarify the last sentence of the third paragraph by replacing the words *mentioned above* with the words *as previously believed*, because the information will already be corrected in the Introduction Section (currently the Material Disposal Area C Section, 1.2) to reflect the new geophysical data regarding maximum pit depths.

Move the second paragraph of this section to the Surface Conditions Section (3.1). Clarify the description of the location of MDA C in the first sentence of the second paragraph. The way the sentence is currently written implies that the site is not located within TA-50. Correct the second sentence to reflect the new geophysical data that indicates that the amount of fill placed on the site ranges in thickness from approximately 0 to 9 feet.

9. Figure 2.2-1: Locations of Pits and Shafts at MDA C: Include any underground utilities on this figure.

10. Section 2.4 and Figure 2.2-2: Relationship to Other SWMUs: Consistency is needed in the description of the source of the two releases in 1974 so that the reader can identify the source location and the fact that the releases are from only one location. The

source is described in the first paragraph as SWMU 50-006(a) and in the fourth paragraph as drain line 67 from TA-50.

Include only the SWMUs at TA-50 (and TA-35, if appropriate) that may have added contamination to MDA C, may affect MDA C, or are otherwise relevant to the MDA C investigation. Delete the second paragraph in this section.

11. Section 2.5: Potential Receptors: NMED considers groundwater to be a potential receptor. Include a discussion of the potential impacts to groundwater from MDA C. Modify the last sentence of the first paragraph to state, "Subsurface contamination is unlikely to reach the regional aquifer, which *is believed to be* at a depth of 1,300 feet below MDA C, *based on data from other wells at the Facility and the predictions of the conceptual model.*" (NMED's suggested changes in italics)

Update the second paragraph with information from the burrow, mound, and pine needle sampling that was performed in 2003. If roots or burrowing animals or ants have accessed subsurface contamination, state that fact in this section.

12. Section 2.6: MDA C Waste Inventory: Correct the discrepancies between the materials listed in the pit and shaft inventories in this section and those listed in the OU-1147 RFI Work Plan, as appropriate. NMED notes that the following items are missing from the inventories listed in this section: Pit 3: tritium. Pit 5: mercury. Chemical Pit: cyanide. Shaft Group 2: Strontium-90. Correct the starting date of accumulation for Shaft Group 1 to February 1958, as listed in the RFI Work Plan (if that is the correct date).

13. Section 2.7: Historical Releases: Correct the second paragraph to reflect the new geophysical data that indicates that the amount of fill placed on the site ranges in thickness from approximately 0 to 9 feet.

Clarify how the releases from SWMU 50-006(a) affect the MDA C investigation. Include information about vapor releases to the tuff and subsurface soil from the buried contamination.

14. Section 2.8: Summary of Historical Investigations: Summarize the contaminant data that was collected during these investigations. Each section should describe important findings and provide information about maximum concentrations of contaminants, locations of samples, extent of contamination determined in the investigation activities, etc. These sections may refer to the Historical Investigation Report in Appendix B for more details, but must also provide general summary information here.

Include a section describing the recent Geophysics Investigation. Provide details regarding the survey activities performed, data collected, and interpretations. Include any geophysical results, figures, maps, and tables in the Figures and Tables sections of the work plan.

15. Section 3.1: Surface Conditions: Include a discussion of the topography of the site. Describe the erosion that is occurring on the site and the concerns related to this problem. Provide information about storm water run-off in the section on surface water. Include information about the potential influence on or impacts to Ten Site Canyon from erosion, run-off, or migration of contaminants.

Delete the Climate section. Move the Geology section to the Subsurface Conditions section (Include geologic information in the Stratigraphy Section, 3.2.1). Delete the Cultural Resources section, unless there are concerns or impacts to such resources caused by MDA C.

16. Section 3.2.1: Stratigraphy: Include very brief descriptions of the subsurface geology encountered at MDA C. Detailed petrographic analyses are not appropriate for this work plan.

17. Section 3.2.3: Seismology: Include this section only if it provides information that is relevant to the MDA C investigation.

18. Section 3.2.4: Hydrology: Include this section only if it provides information that is relevant to the MDA C investigation and is not covered in either the Surface Water or Groundwater sections.

19. Section 3.2.5.1: Alluvial waters: This section is not needed, as there is no evidence of alluvial water at MDA C.

20. Section 4.0: Scope of Activities: Include a section describing the proposed sediment sampling activities for Ten Site Canyon, if this work will be performed under the MDA C Investigation. If additional fill placement or erosion control is proposed, include section(s) describing these activities. Include a section on the proposed fracture investigation.

Include rationale for any omissions or deletions from the scope of activities required in the NMED Order. This information may be included in the proposed Tables 4.2-2 and 4.3-1.

21. Section 4.4: Proposed Sampling Activities to Address Compliance Order Requests: Delete this section. The MDA C Investigation Work Plan is being prepared to satisfy the requirements of the NMED Order. Incorporate the activities required in the NMED Order (Section IV.C.3.c) into the Scope of Activities sections.

22. Section 5.3: Methods for Sampling to Address Compliance Order Requests: Delete this section. The MDA C Investigation Work Plan is being prepared to satisfy the requirements of the NMED Order. Incorporate the methods (Sections IX and X of the NMED Order) to achieve the NMED Order requirements into the Investigation Methods sections. Include methods for installing vapor and groundwater monitoring wells.

23. Tables: When reporting pore gas data, include a conversion from ppmv to $\mu\text{g/L}$ or $\mu\text{g/m}^3$ (i.e. something that can be compared to a screening level) and a description of how to make the conversion. Include appropriate screening level(s) with the data.

24. Figures: Include a figure with all of the proposed locations of boreholes and wells, vapor monitoring locations, pits/excavations, and surface sampling locations. Delete the following proposed figures from the work plan: Figures 3.1-1 and 3.1-2 (wind roses), Figure 3.1-4 (surface water occurrences at the laboratory), Figure 3.2-3 (major faults across the laboratory), and Figure 4.2-1 (borehole siting and sampling flowchart). A figure showing faults at and adjacent to MDA C is appropriate for inclusion in the work plan.

May 16, 2003

NMED's Draft Comments on the Administrative Completeness of Appendix B (Historical Investigation Report) and Section 4 (Scope of Activities) of the Draft MDA C Investigation Work Plan:

Appendix B - Historical Investigation Report:

1. The Historical Investigation Report should include the Waste Inventory, currently located in Section 2.6. The Historical Report should also include the disposal history of the site, a description of the location, construction details, operational history and present status of each pit, shaft, and other structure at MDA C. Include a map showing the precise locations of the pits and shafts based on the historical and newly acquired information. The map should be of sufficient size to show all site details.

2. Details of Historical Releases (Section 2.7) should be included in the Historical Report as well. Refer to Section IV.C.3.b of the NMED Order for the specific requirements for the content of the Historical Investigation Report.

3. Include dates for all work performed. For example, dates are not mentioned in the section describing the surface radiation survey (B-3.1.1) or the biota screening section (B-3.1.2).

4. Delete Sections B-4.0 and B-4.1 (Conceptual Site Model and Summary of the CSM for MDA C) from the Historical Investigation Report. Section B-4.2 (Nature and Extent of Contamination) should include summaries of the results and conclusions from all of the historical investigations at MDA C and should tie this information together to summarize the current knowledge of the nature and extent of contamination at the site. Include the relevant results and conclusions from Section B-4.3 with B-4.2. Delete the remaining general information parts of Section B-4.3.

5. Include a list of the general chemistry, metals, and radionuclide background values in the Laboratory Analyses sections (B-3.2.1 through B-3.2.3) as well as documentation of the methods used for establishing the background values.

6. Include references throughout the Historical Investigation Report to Appendix C for the location of borehole logs and well construction diagrams. Locations (including figures), history, and the present status of each boring, well, and excavation should be included in the Historical Investigation Report.

7. References to historical documents should include the document title, the page number, and, if applicable, the table or figure number.

8. Results and conclusions should be included for each historical investigation performed. The methods used for every type of sample collection, field analysis, and laboratory analysis performed on every type of media should be included.

Section 4 – Scope of Activities:

1. The fate of boreholes (i.e. grouting, setting vapor monitoring wells, backfilling, etc.) should be noted in the scope of activities. If the Investigation-Derived Waste Management Plan (planned Appendix E) contains this information, include a reference to that appendix in this section.

2. Use consistent units when reporting contaminant detections. In Section 4.1.3, for example, tritium concentrations are reported in pCi/ml in the first paragraph and in pCi/L in the second paragraph.

3. Include the rationale throughout this section for deviating from the requirements in the NMED Order (for example, the number and locations of borings and the frequency of sampling). Refer to Section IV.C.3.c of the NMED Order for the specific requirements for the MDA C Investigation.

4. Section 4.2 (Proposed Sampling and Analysis Activities) should include any contingency plans for extending borings to deeper depths than planned if field screening indicates that there are contaminants present at the bottom of any of the borings.

5. Table 4.2-1 (Summary of Proposed Drilling and Sampling Activities at MDA C) should include the information regarding the 3 additional borings planned to be drilled and completed as vapor monitoring wells for long-term monitoring as described in Section 4.2.2.2. Field screening for tritium should also be included in the list of analytical suites in Table 4.2-1.

6. Section 4.2.2.2 (Collecting Additional Rounds of VOC and Tritium Pore-Gas Data) should include the rationale/criteria for selection of the locations of the three additional borings planned for completion as vapor monitoring wells.