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CERTIFIED MAIL
RETURN RECEIPT REQUESTED

March 27, 1998

Mr. Theodore Taylor, Program Manager
Los Alamos Area Office
Department of Energy
528 35th Street
Los Alamos, New Mexico 87544

Dr. John C. Browne, Director
Los Alamos National Laboratory
P.O. Box 1663, Mail Stop A100
Los Alamos, New Mexico 87545

RE: Approval of 1996 Installation Work Plan (IWP)
Request for Supplemental Information for the New/Revised IWP
Los Alamos National Laboratory
NM0890010515

Dear Mr. Taylor and Dr. Brown:

The RCRA Permits Management Program (RPMP) of the Hazardous and Radioactive Materials Bureau (HRMB) has approved the 1996 IWP for Environmental Restoration Program, Revision 6, dated January 1996, referenced by LA-UR-96-4629, incorporating the Schedule of Compliance (Annual Work Schedule) dated February 20, 1998, referenced by EM/ER:98-050.

The response to NMED Request for Supplemental Information (RSI), dated February 3, 1998, EM/ER: 98-027, on a portion of the IWP adequately addressed HRMB comments with two exceptions, noted in Attachment A. A request for supplemental information on Chapter 3.0 Technical Approach to Environmental Restoration of the IWP is included in Attachment B. The 1998 Schedule of Compliance is to be included with responses to this RPMP RSI. Upon approval of the response to the RPMP comments they shall be



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incorporated into the new/revised IWP. LANL must respond to the RSI within thirty (30) calendar days of the receipt of this letter. If LANL does not submit a complete response to this request within thirty (30) calendar days, LANL should be advised that a Notice of Deficiency will be issued.

Future submittals of the IWP shall be only those sections which are new or revised (e.g. - changes in the current understanding of the hydrogeologic system at the facility) including the annual updated schedule of compliance. Only those sections which are new/revised including the schedule of compliance will require approval from the RPMP.

Should you have any concern regarding this matter please contact me or Mr. John Kieling of my staff at (505) 827-1558.

Sincerely,



Robert S. (Stu) Dinwiddie, Ph.D., Manager
RCRA Permits Management Program
Hazardous and Radioactive Materials Bureau

RSD:jek

attachments

cc w/ attachment:

J. Canepa, LANL EM/ER, MS M992
J. Davis, NMED SWQB
B. Garcia, NMED HRMB
M. Johansen, DOE LAAO, MS A316
J. Kieling, NMED HRMB
M. Leavitt, NMED GWQB
H. LeDoux, DOE LAAO, MS A316
D. McInroy, LANL EM/ER, MS M992
D. Neleigh, EPA 6PD-N
J. Parker, NMED DOE OB
B. Toth, NMED HRMB
S. Yanicak, NMED DOE OB, MS J993
File: Reading and HSWA LANL G/P '98
Track: LANL, 3/27/98, NA, DOE/LANL, RPMP/Dinwiddie, RE, file

Attachment A
Comments on the Response to the Request for Supplemental Information, dated February 3, 1998, referenced by EM/ER: 98-027

1. LANL Response 1, states: "LANL has revised all Chapter 2.0 in order to update current information as well as to ensure consistency with the December 6, 1996, Hydrogeologic Work Plan. See Revision 6.1 of Chapter 2.0, included as an attachment.

Comment: LANL shall remove the second sentence and add the following: "As the understanding of the geology and hydrogeology beneath the Pajarito Plateau improves with the characterization activities, LANL will update, as needed, the appropriate sections of Chapter 2.0 Installation Description."

1. LANL Response 9, states that the wetlands are presented in Figure 2-4 of the revised Chapter 2.0 (the 1996 IWP, Revision 6.1) that distinguishes between palustrine and riverine wetlands and includes the legend defining all symbols used.

Comment: LANL shall

1. review all symbols (codes) to assure they match pertinent locations in Figure 2.4 and all are defined (e.g., Guaje Canyon is labeled R4SBA but this location is not identified in the legend and it is not associated with perennial stream flow);
2. discern between perennial and intermittent streams; and confirm that no perennial reach occurs in Canon de Valle within LANL boundaries (LANL may consider contacting the DOE Oversight Bureau to discuss known perennial reaches within LANL boundaries).

ATTACHMENT B

REQUEST FOR SUPPLEMENTAL INFORMATION Chapter 3.0 Technical Approach to Environmental Restoration of the LANL's IWP, Revision 6, dated December, 1996

- I. Section 3.1 Background, page 3-1, 3rd para, provides a definition of background level.

Comment: The concept of natural background constituent concentration should not be confused with anthropogenic or man-made constituent levels. Background levels shall refer to naturally occurring inorganic chemicals (including naturally occurring radionuclides), only. Concentrations of the man-made chemicals, such as organic and nuclear fallout, shall be defined as the baseline non-site-related concentrations. LANL shall review and revise this definition to assure the consistency with the RCRA Permit Management Program (RPMP) technical policy presented in the position paper entitled "*Application of Background Concentrations in the Risk Assessment Process*".

2. Section 3.1 Background, page 3-1, 6th para defines a chemical of potential concern. The first sentence of this definition states: "A chemical that is potentially a human health risk based on available information and measured concentrations at the site".

Comment: Please revise this sentence to read: "A chemical detected at a site that has a potential to affect human and/or ecological receptors adversely due to its concentration, distribution, and mechanism of toxicity."

3. Section 3.1.1, Potential Release Sites, page 3-2, 2nd paragraph, 2nd sentence: "These units potentially contain hazardous substances, such as radionuclides, that are not regulated under RCRA or HSWA but are being addressed by DOE's ER Project."

Comment: LANL shall revise the sentence to indicate that these units potentially contain contamination (radioactive and/or hazardous). Also clarify that if a site is only radioactively contaminated it's not regulated by the Administrative Authority under HSWA. If a site is contaminated with hazardous waste or constituent it is regulated by the AA.

4. Section 3.1.2, Notification of New Units and Releases, page 3-2, first para, 1st sentence, refers to the LANL's HSWA Module VIII, Section G, Notification Requirements for and Assessment of Newly-Identified Solid Waste Management Unit(s), Part 1, that requires that permittee (LANL) notifies NMED of any newly-identified SWMU(s) within 15 calendar days of its discovery.

Comments: LANL shall rename the Section to: "Notification of New Solid Waste Management Units and Releases" and reference the HSWA Module VIII, Section G., Part 1., page 15 as to the requirement.

5. Section 3.1.2, Notification of New Units and Releases, page 3-2, 2nd para, 2nd sentence: "For the purposes of the ER Project, a release is considered to exist when hazardous wastes are found in concentrations that exceed human-health- or environmental-risk-based screening concentrations."

Comment: LANL shall revise a release definition for consistency with the definition presented in the LANL HSWA Module VIII, Section A, page 3, i.e., "Release means any spilling, leaking, pouring, emitting, emptying, discharging, injecting, pumping, escaping, leaching, dumping, or disposing of hazardous wastes (including hazardous constituents) into the environment (including the abandonment or discarding of barrels, containers, and other closed receptacles containing hazardous wastes or hazardous constituents)."

6. Section 3.1.2, Notification of New Units and Releases, page 3-2, 2nd para, last sentence, cites Section G of the HSWA Module for requirement concerning newly discovered releases at SWMUs.

Comment: The correct citation is Section H, Notification Requirements for Newly-Discovered Releases at SWMUs.

7. Section 3.1.3, Site Prioritization, page 3-3, 1st para, refers to a system for prioritizing sites that provides an efficient method for evaluating the relative risk posed by each of the PRSs at LANL and SNL/NM.

Comment: Please include a reference to the document describing this system and discuss any anticipated results of the potential implementation of the system.

8. Section 3.2, ER Project Assessment Strategy, page 3-3 through 3-10, describes the technical approach to planning, collecting, and evaluating data for environmental restoration at Los Alamos, as it is detailed in the *Risk-Based Corrective Action Process*, Revision 1, dated August 20, 1997.

Comment: LANL shall review and revise Section 3.2 to address HRMB comments to the "*Risk-Based Corrective Action Process*, Revision 1, dated August 20, 1997" that are pertinent to this Section. These comments will be sent under a separate letter.

9. Section 3.2.2.1, Site-Screening Decisions, page 3-7, second to last paragraph, states composite samples may be compared with SALs.

Comment: The RPMP technical policy is that only observation made on discrete soil/sediment samples are used during site characterization and assessment, including comparison to SALs. This technical policy is presented in the HRMB Position Paper entitled "*Compositing of Soil Samples during Site Characterization*".

10. Section 3.3.1, Requirements for the RFI, page 3-10, last paragraph, 2nd sentence states: "The regulator reviews each RFI report, and the proposal may be negotiated with the regulator, depending on the action(s) proposed and the regulator's willingness to accept the proposal."

Comment: Because the regulator's decision on the proposed action will be based upon demonstrated compliance with the applicable regulations and technical policies, LANL shall revise this sentence to read: "The regulator reviews each RFI report and approves the proposed action, if warranted. In the case of a Request for Supplemental Information or Notice of Deficiency (RSI/NOD) determination and if the permittee believes that certain requirements are not applicable, the specific requirements will be identified and the regulator will be provided with the rationale for inapplicability."

11. Section 3.3.1, Requirements for the RFI, page 3-11, identifies and discusses the no further action criteria (NFA).

Comment: LANL shall assure these no further action (NFA) criteria are consistent with the NMED criteria for NFA proposals. In addition, LANL shall identify that a determination of NFA will not preclude the AA from requiring continued or periodic monitoring of environmental media and/or further investigations, studies, or remediation at a later date under circumstances specified in LANL's HSWA Module VIII, Section K, Determination of No Further Action, Parts 2. and 3., page 33.

12. Sections 3.3.3 and 3.3.4, Requirements for Corrective Measures Studies and Requirements for Corrective Measures Implementation, pages 3-12 through 3-19.

Comment: The two sections were compared to the proposed Subpart S of the RCRA 40CFR 264 regulations, as provided in 40 CFR 264.525(b) (page 30824, Federal Register, Vol. 55, No. 1455, Friday, July 27, 1990, Proposed Rules). However, on May 1, 1996, EPA published additional language to the proposed Subpart S. Part III, Section C, Item 4, Evaluation of Remedial Alternatives, page 19447, of the latter Subpart S details a broader and more flexible approach to the corrective measure study (CMS), e.g., through combining an RFI and CMS to reduce time and cost. Part III, Section C, Item 6, Remedy Implementation, page 19542, discusses corrective measures implementations (CMIs).

The results of comparison of the LANL's CMS and CMI framework with Subpart S (FR, 1990) framework are as follows.

LANL Sections 3.3.3. and 3.3.4	Subpart S (Federal Register, 1990)
3.3.3 Requirements for Corrective Measures Studies	VI., E., 3., Scope of Corrective Measures Study
3.3.3.1 Corrective Measures Study Plan	VI., E., 4., Plans for Corrective Measures Study
3.3.3.2 Corrective Measures Study	VI., E., 5., Reports of Corrective Measures Study
3.3.3.2.1 Standards for Remedies	VI., F., 2., General Standards for Remedies
3.3.3.2.2 Media Cleanup Levels	VI., F., 5., Media Cleanup Standards
3.3.3.2.3 Demonstration of Compliance with Media Cleanup Levels	VI., F., 7., Demonstration of Compliance with Media Cleanup Standards
3.3.3.2.4 Conditional Remedies	VI., F., 8., Conditional Remedies
3.3.3.3 Corrective Measures Study Report	VI., F., 3., Remedy Selection Decision Factors
3.3.3.4 Permit Modification for Selection of Remedies	VI., G., Permit Modification for Selection of Remedy
3.3.4 Requirements for Corrective Measures Implementation	VI., H., Implementation of Remedy
3.3.4.1 Remedy Designs	VI., H., 1., Remedy Design
3.3.4.2 Corrective Measures Progress Reports	VI., H., 2., Progress Reports
3.3.4.3 Review of Remedy Implementation	VI., H., 3., Review of Remedy Implementation
3.3.4.4 Completion of Remedies	VI., H., 4., Completion of Remedies

The following items are not located in Sections 3.3.3 or 3.3.4 of the LANL IWP but are listed in Subpart S (Federal Register, 1990):

VI., F., 6., Determination that Remediation of Release to a Media Cleanup Standard is Not Required, and

VI., H., 5., Determination of Technical Impracticability.

13. Section 3.3.3, Requirements for Corrective Measures Studies, page 3-12, 2nd paragraph.

Comment: LANL shall identify these requirements as the HSWA Module VIII requirements of Section M, Corrective Measures Study Implementation, page 34.

14. Section 3.3.3, Requirements for Corrective Measures Studies, page 3-12, 2nd paragraph, lists five bullet items which identify processes to be discussed in a CMS plan.

Comment: This information is repeated in more detail in Section 3.3.3.1, Corrective Measures Study Plan, page 3-13. Section L of HSWA Module for LANL, page 34, lists this information to be provided in a CMS plan and should be referenced.

15. Section 3.3.3, Requirements for Corrective Measures Studies, page 3-12, 3rd paragraph, 1st sentence: "A draft CMS report will be prepared after the CMS has been completed."

Comment: LANL shall review and revise this Section to address LANL's HSWA Module VIII, Section N., Part 1., page 34, that states "Within sixty (60) calendar days after the completion of the CMS, the Permittee shall submit a CMS Final Report", and identify this as the HSWA Module requirement.

16. Section 3.3.3.1, Corrective Measures Study Plan, page 3-12, 1st paragraph, 2nd sentence.

Comment: This sentence shall be corrected as follows: "... Section Q R, Task ~~VI~~, of the HSWA Module ...".

17. Section 3.3.3.1, Corrective Measures Study Plan, page 3-13, 2nd paragraph, 1st sentence, states that after CMS plans have been approved and revised as necessary, LANL will initiate the studies within 15 days.

Comment: LANL shall identify this as the HSWA Module VIII requirement of Section M., page 34.

18. Section 3.3.3.1, Corrective Measures Study Plan, page 3-14, 1st paragraph, 3rd sentence states: "In such cases, DOE/UC may propose that NMED postpone selecting a remedy until these technologies are functional if there is a distinct technical, time, or cost advantage."

Comment: LANL shall assure that the proposal to postpone selecting a remedy will not apply to those sites determined to pose a threat to human health and the environment. Therefore, LANL may consider revising this sentence to read: "In such cases, DOE/UC may propose that NMED postpone selecting a remedy until these technologies are functional if there is a distinct technical, time, or cost advantage, and if a site does not pose a threat to human health and the environment."

19. Section 3.3.3.2.2, Media Cleanup Levels, pages 3-14 and 3-15.

Comment: This section has failed to address ecological risk-based media cleanup levels. Therefore, LANL shall include the discussion of the criteria and process leading to the development of ecological health based media cleanup levels. The development of both ecological and human health risk -based media cleanup levels shall be consistent with the technical approach presented in the revised Section 3.2, ER Project Assessment Strategy.

20. Section 3.3.3.2.2, Media Cleanup Levels, page 3-14, 1st paragraph, last sentence states: "Factors to be considered in determining cleanup levels include multiple contaminants, sensitive receptors, site-specific exposures, the effectiveness of the proposed treatment, and current and future land uses."

Comment: LANL shall revise this sentence to indicate that the factors are not limited to those identified. There may also be other factors in determining cleanup levels.

21. Section 3.3.3.2.2, Media Cleanup Levels, page 3-14, 2nd paragraph, 1st sentence states that risk-based determinations must be consistent with EPA's risk assessment guidance for Superfund.

Comment: LANL shall review and revise this sentence to reflect compliance applicable to the RCRA corrective action process.

22. Section 3.3.3.2.2, Media Cleanup Levels, page 3-14, 3rd paragraph, 2nd sentence states: "... higher concentrations will be permitted because background levels are elevated, or that groundwater is neither a potential source of drinking water nor hydraulically connected to a drinking water source need not meet drinking water standards."

Comment: It is unclear how these high background constituent concentrations may cause increase in established cleanup levels. LANL shall revise this sentence to ensure that established media cleanup levels will remain protective of human health and the environment and that all ground water resources will be protected while implementing those cleanup levels. The cleanup levels shall never exceed the lowest established standards.

23. Section 3.3.3.2.2, Media Cleanup Levels, page 3-15, 2nd paragraph, 1st sentence states: "Some sites at the Laboratory may require cleanup to action levels (e.g., soil excavation or some other method that physically removes the contaminant from the environment."

Comment: LANL shall define the action levels versus cleanup levels and ensure that these action levels will be protective of human health and the environment.

24. Section 3.3.3.2.4, Conditional Remedies, page 3-15, lists criteria for conditional remedies selection. The 2nd bullet (top of page 3-16) states: "achieving media cleanup levels beyond the facility boundary".

Comment: LANL shall ensure that any point of compliance selected is approved by the AA.

25. Section 3.3.3.2.4, Conditional Remedies, page 3-16, lists criteria for conditional remedies selection. The 3rd bullet states: "preventing further significant environmental degradation".

Comment: LANL shall either define the term "significant" or revise this bullet to read: "preventing further environmental degradation".

26. Section 3.3.3.2.4, Conditional Remedies, page 3-16, 2nd paragraph, discusses site stabilization as a conditional remedy for some of the large material disposal areas (MDAs).

Comment: LANL shall revise this paragraph to include the requirement that no environmental transport of contaminants is likely from these MDAs, and a conditional remedy for these sites will protect both human health and the environment.

27. Section 3.3.3.3., Corrective Measures Study Report, page 3-16.

Comment: LANL shall rename this section to read: Corrective Measures Study Final Report to reflect Section N of the LANL HSWA Module.

28. Section 3.3.3.3., Corrective Measures Study Report, page 3-16, 1st paragraph, 1st sentence, states: "Within 60 days of completing a CMS, a CMS report will be prepared and provided to NMED."

Comment: LANL shall revise this sentence to read: "Within sixty (60) calendar days of completing a CMS, a CMS final report will be prepared and provided to NMED." (Section N of the LANL's HSWA Module, Part 1, page 34, states this requirement).

29. Section 3.3.3.3., Corrective Measures Study Report, page 3-17, 1st paragraph, 1st sentence states that NMED will approve or request revision of the CMS report within 120 days. The 3rd sentence states that DOE/UC will finalize the draft CMS report and incorporate comments received from NMED within 30 days of receipt.

Comment: LANL shall revise this paragraph to reflect the HSWA Module Section N. NMED does not review draft documents and is not subject to a 120 review period.

30. Section 3.3.3.4, Permit Modification for Selection of Remedies, page 3-17, states that permit modifications must be conducted according to the procedure established in Section N of the HSWA Module.

Comment: The correct citation of the permit is: Section O. Modification of this Module.

31. Section 3.3.4.1, Remedy Designs, page 3-18, lists items to be included in the remedy design.

Comment: LANL shall include criteria for a performance assessment among those items.

32. Section 3.3.4.4, Completion of Remedies, page 3-19, 1st paragraph, 3rd sentence, states: "The request will contain a certification that DOE/UC have met or exceeded all of the criteria established for this purpose."

Comments: LANL shall revise this sentence to read: "The request will contain a certification that DOE/UC have met all of the criteria established for this purpose."

33. Section 3.3.5.1 Interim Remedial Measures, page 3-19, cites Section I of the HSWA Module for interim remedial measures.

Comment: The correct citation is: Section J. Section J of the HSWA Module VII, Interim Measures, Part 2, lists nine (9) factors that may be considered in determining the need for interim measures. Missing from the LANL IWP are the following factors:

Section J., Part 2., Item d., the potential for further degradation of the medium absent of interim measures

Section J., Part 2., Item i., other situations that may pose threats to human health and the environment.

34. Section 3.3.5.1 Interim Remedial Measures, page 3-19, 2nd paragraph, 4th bullet: "the presence of hazardous waste that may pose a threat of release."

Comment: LANL shall revise this bullet to reflect Section J., Part 2., Item e., of the HSWA Module. The revised sentence shall read: "the presence of hazardous waste in containers that may pose a threat of release".

35. Section 3.4, Waste Minimization and Management, page 3-20.

Comment: This section shall refer to the HSWA Module VIII, Section B, Specific Conditions, Part 1, Waste Minimization, and discuss the requirements contained therein, specifically that the permittee will have a program in place to reduce the volume and toxicity of all hazardous wastes which are generated by the permittee's facility operation to the degree to be economically practicable. In addition, the LANL's waste minimization plan must address items (1) through (10) listed in the HSWA Module VIII, Section B, Part 1.

36. Section 3.4.3.4, Solid Waste Soils, page 3-22, 4th sentence states: "Although the soils may contain some contaminants, that need not be disposed either in a mixed-waste disposal facility or in a landfill for low-level radioactive waste, if alternatives are available."

Comment: LANL shall review and revise this sentence to ensure these contaminants are not radioactive or hazardous constituents.

37. Section 3.4.3.5, Approach to Waste Minimization, Recycling, and Reuse, page 3-22, refers to the ER Project's future waste minimization plan.

Comment: See comment 35.