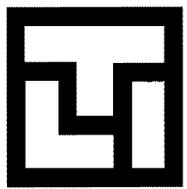


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**TECHLAW INC.**  
August 31, 2001

Mr. Carl Will  
State of New Mexico Environment Department  
Hazardous Waste Bureau  
2905 Rodeo Park Drive East  
Building One  
Santa Fe, New Mexico 87505-6303

**Reference: Work Assignment No. Y513, 06082.600; State of New Mexico Environment Department, Santa Fe, New Mexico; General Permit Support Contracts; NMED-HSW Corrective Action Chapter of the RCRA Permit Renewal for the Los Alamos National Laboratory; Review of Corrective Action Order Sections Investigative Requirements by Specific Area; Task 03 Deliverable**

Dear Mr. Will:

Enclosed please find the deliverable for the above-referenced work assignment. This deliverable consists of review comments for two sections of the Los Alamos National Laboratory (LANL) Corrective Action Order (CAO): the Canyons (CAO Section IV.B) and Material Disposal Area (MDA) C (CAO Section IV.C.4). A draft of the deliverable was e-mailed to you on Friday, August 31, 2001, at [carl\\_will@nmenv.state.nm.us](mailto:carl_will@nmenv.state.nm.us). The deliverable is formatted in Microsoft Word 2000.

In general, TechLaw found both the Canyons and MDA C sections to be very well written, with the necessary level of detail, and had no comments related to the approach that NMED took in developing each section. Comments as outlined in the attached deliverable are mostly minor, and are related more to clarification.

If you have any questions, please feel free to contact Ms. Paige Walton at (801) 582-9329.

Sincerely,

*June K Dreith*  
June K. Dreith  
Project Manager

32386



Mr. Carl Will  
August 31, 2001  
Page 2

Enclosure

cc: Mr. John Young, NMED  
Mr. John Kieling, NMED  
Mr. James Bearzi, NMED  
Ms. Paige Walton, TechLaw  
Mr. B. Jordan, TechLaw Central Files  
D. Romero, Denver TechLaw Files

**TASK 03 DELIVERABLE**

**TECHNICAL REVIEW COMMENTS FOR THE CORRECTIVE ACTION ORDER  
AREA-SPECIFIC REQUIREMENTS FOR THE  
CANYON REQUIREMENTS AND  
MATERIAL DISPOSAL AREA (MDA) C**

**NMED-HSW Corrective Action Chapter of the  
RCRA Permit Renewal for the Los Alamos National Laboratory**

**Submitted by:**

**TechLaw, Inc.  
300 Union Boulevard, Suite 600  
Lakewood, CO 80228**

**Submitted to:**

**Mr. Carl Will  
Mr. James Bearzi  
State of New Mexico Environment Department  
Hazardous Waste Bureau  
2905 Rodeo Park Drive East  
Building One  
Santa Fe, New Mexico 87505**

**In response to:**

**Work Assignment No. Y513, 06082.600**

**August 2001**

**TECHNICAL AREA-SPECIFIC REQUIREMENTS  
TECHNICAL REVIEW COMMENTS FOR THE  
LANL CORRECTIVE ACTION ORDER SECTION FOR  
THE CANYONS**

**IV.B. CANYON REQUIREMENTS**

**Section IV.B.1.a Introduction**

1. The Order states in the first paragraph that Barrancas Canyon is a tributary canyon of Guaje Canyon. It should also be noted that Rendija and Cabra Canyons are also tributary canyons of Guaje Canyon, but these canyons are not mentioned in the Order. NMED may wish to consider whether these canyons should be added to the text. In addition, the last sentence in this paragraph states that Pueblo, Bayo and Guaje Canyons intersect LA Canyon from west to east. It should be noted that this same statement is made two sentences earlier. It is suggested that the last sentence be deleted from the text.
2. The last paragraph in this section discusses the locations of TAs-1, 45, 73, and 72. It is suggested that commas be used to separate the TAs instead of the word “and”. In addition, the last sentence in this paragraph is not clear, particularly with regard to the phrase “Pueblo Canyon from the south opposite former TA-45.” It is suggested that this sentence be reworded for clarity.

**Section IV.B.1.b Background**

3. It is suggested that the word “the” be inserted between the words “resulted in” and “direct” in the second sentence in the first paragraph.

**Section IV.B.2.a General**

4. The second paragraph in this section lists four corrective action requirement items. It is recommended that the first letter of each item be capitalized.
5. In the sixth paragraph in this section (Order requirement number 2), the text is confusing because it appears to request the dates of contaminant releases two different times. In order to alleviate this confusion, it is suggested that the text be changed to read: “The summary shall include the known or suspected dates of waste disposal, discharge and/or release, and the circumstances related to the release of contamination.”
6. The last sentence in this section states “The Facility shall submit modified and new or updated to the Secretary in a timely manner as it becomes available.” It is suggested

that the appropriate word (e.g., information, data, etc.) be inserted between the words “updated” and “to.”

#### **Section IV.B.2.b Pueblo Canyon Corrective Action Requirements**

7. The second sentence in this section states that Acid Canyon received untreated and treated wastewater from outfalls located at former TA-45 between 1943 and 1966. However, Sections 2.5.4 and 3.3.3.3 in the *Task/Site Work Plan for Operable Unit 1049 – Los Alamos Canyon and Pueblo Canyon* document (November 1995) state that wastewater disposal at former TA-45 occurred between 1943 and June 1964. Section 2.5.4 goes on to indicate that decontamination and decommissioning activities at the TA began in October 1966. NMED may wish to verify the date cited (1964 or 1966) for the termination of wastewater disposal practices.

#### **Section IV.B.2.b.1 Pueblo Canyon Source Area Investigations**

8. It is suggested that item number 7 be revised to read “Submit the samples for laboratory analysis of target analyte metals, radionuclides, and any other analytes identified by the Secretary as being appropriate for the sample location and source area.”

#### **Section IV.B.2.b.3 Pueblo Canyon Surface Water Monitoring and Sampling**

9. Item number 2 should be corrected to remove the “a” between the words “at” and “the”.

#### **Section IV.B.2.b.4 Pueblo Canyon Alluvial Groundwater Investigations**

10. It is suggested that the word “have” be inserted between the words “that may” and “occurred” in item number 5.

#### **Section IV.B.2.b.5 Pueblo Canyon Alluvial System Groundwater Monitoring and Sampling**

11. The citation in the last sentence in item number 1 should be corrected to read “Section IV.B.2.b.4 item 3.” In addition, a period should be added to the end of the sentence.

#### **Section IV.B.2.b.6 Pueblo Canyon Intermediate/Perched Groundwater Investigations**

12. The citation in item number 4 should be corrected to read “Section IV.B.2.b.7.”

**Section IV.B.2.c****Los Alamos Canyon Corrective Action Requirements**

13. The end of the first sentence in this section is confusing and should be clarified. It is suggested the sentence be modified to state “. . . and TA-53 located on the mesa top on the south side of LA Canyon and southeast of TA-21.” In addition, the periods at the ends of the sentences should be corrected in the second, fourth, and fifth bullets.

**Section IV.B.2.c.1 LA Canyon Source Area Investigations**

14. It is suggested that the end of item number 1 in this section be corrected to read “and/or discharged effluent water to LA Canyon and its tributary canyons.”

**Section IV.B.2.c.2 LA Canyon Sediment Sampling**

15. It is not clear in item number 1 if the phrase “in each of the canyons” refers to the tributary canyons to LA Canyon, or to other canyon systems (e.g., Pueblo Canyon). It is suggested that the sentence be rephrased (similar to the format used for Pueblo Canyon) to read “Characterize the current surface water hydrology and make a comparison to pre-Cerro Grande Fire conditions in the LA Canyon watershed.”

**Section IV.B.2.c.3 LA Canyon Surface Water Monitoring and Sampling**

16. It is suggested for the sake of clarity that the phrase “the mouth of” be inserted between the words “at the midpoint between” and “DP Canyon” in item number 2 in this section.

**Section IV.B.2.c.4 LA Canyon Alluvial Groundwater Investigations**

17. The sentence immediately following the heading in this section should be corrected to read: “The following are minimum requirements for the installation of monitoring wells in LA Canyon.” In addition, the period should be removed from the beginning of the sentence in item number 4, and item number 10 should be corrected to read “of the analytes listed in Item 8 above.”

**Section IV.B.2.c.5 LA Canyon Alluvial System Groundwater Monitoring and Sampling**

18. The citation in item number 1 should be corrected to read “Section IV.B.2.c.4 above.”

**TECHNICAL AREA-SPECIFIC REQUIREMENTS  
TECHNICAL REVIEW COMMENTS FOR THE  
LANL CORRECTIVE ACTION ORDER SECTION FOR  
MATERIAL DISPOSAL AREA (MDA) C**

**IV.C.4. MATERIAL DISPOSAL AREA (MDA) C**

**Section IV.C.4.1 Introduction**

1. This section of the Order discusses the locations of the Rendija and Guaje faults relative to MDA C. However, it should be noted that the faults are incorrectly labeled in the text. The Order should be corrected to indicate that the Guaje fault zone is located approximately 600 feet east of the TA-50 boundary and the Rendija fault zone is located approximately 1900 feet west of TA-50. In addition, the end of this sentence should be corrected to state that the fault is located either “approximately 1900 feet west of the TA-50 boundary” or “approximately 1900 feet west of TA-50.”

**Section IV.C.4.3 General**

2. It is suggested that the word “activities” (or another appropriate word) be inserted between the words “waste management” and “and releases” in the first sentence in this section.

**Section IV.C.4.4.c Drilling Explorations**

3. Item number 1 lists the locations where borings should be installed during the investigations at MDA C. It appears that the number sequence was inadvertently omitted between sub-item numbers 3 and 4. The text should be corrected to read: “. . . 3) at the corners of each disposal pit, 4) at 100-foot intervals along the sides of disposal pits 1 through 6, 5) at 70 foot intervals . . .”

**Section IV.C.4.4.d Soil and Rock Sampling**

4. The last sentence in item number 4 should be corrected to read: “The selection of the samples shall include those locations outlined in 5 through 9 below.” In addition, the indentation at the beginning of the sentence in item number 6 should be corrected.