

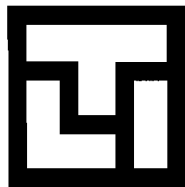
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September 14, 2001

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 facility-wide groundwater requirements of the Los Alamos National Laboratory (LANL) Corrective Action Order (CAO). A draft of the deliverable was e-mailed to you on Friday, September 14, 2001, at carl_will@nmenv.state.nm.us. The deliverable is formatted in Microsoft Word 2000.

In general, TechLaw found the groundwater section to be well written, with the necessary level of detail. However, several inconsistencies were noted both within the groundwater section and between other parts of the CAO as reviewed by TechLaw. The deliverable consists of a discussion of these inconsistencies, followed by some minor editorial and typographical errors noted during the review.

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

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Mr. Carl Will
September 14, 2001
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Enclosure

cc: Mr. John Young, NMED
Mr. John Kieling, NMED
Mr. James Bearzi, NMED
Ms. Paige Walton, TechLaw
Mr. B. Jordan, TechLaw Central Files
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**TECHNICAL AREA-SPECIFIC REQUIREMENTS
TECHNICAL REVIEW COMMENTS FOR THE
LANL CORRECTIVE ACTION ORDER SECTION (IV.A) FOR
FACILITY-WIDE GROUNDWATER**

Section IV.A.3.a General

1. The third paragraph in this section of the Corrective Action Order (Order) states: "In addition to routine groundwater monitoring reporting requirements, the Facility shall prepare and update the following hydrologic maps on an annual basis for submittal to NMED." It is not clear which "routine groundwater monitoring reporting requirements" are being referred to in the text (e.g., the reporting requirements discussed in Section IV.A.5, or requirements specified in other sections of the Order). It is suggested that the text be revised to clarify the specific requirements discussed in this paragraph.
2. The first three items in the list following the third paragraph indicate that LANL must prepare a facility-wide topographic map, facility-wide geologic maps, and Technical Area (TA) maps on an annual basis for submittal to NMED. It is not clear why these items must be updated on an annual basis since the information contained within them (e.g., topography, geologic outcrops, and SWMU/AOC locations) is not likely to change annually. NMED may wish to consider whether these items should be updated on a less frequent basis (e.g., every two or five years).

In addition, item number 12 in this list indicates that water level elevations will be collected on a monthly or bimonthly basis from the monitoring wells. Since most of the monitoring wells will be sampled on a quarterly or annual basis as directed in Table 1 in Section IV.A.6, NMED may wish to consider whether the frequency of water level measurements be changed to conform with the frequency of sample collection specified in the Table.

Section IV.A.3.b Characterization Wells and Piezometers

3. Item number 8 in the list of items for alluvial wells states that "groundwater samples shall be submitted for the analyses required in this section and VI of this Order." It is not clear where "in this section" of the Order it is referring to. Since this item discusses the analysis of groundwater samples instead of soil, rock and sediment samples, it apparently does not refer back to previous item number 6. NMED should revise the text to specify the section of the Order where the groundwater analytical requirements are presented.
4. Item number 7 in the list of items for intermediate zone wells states that "groundwater samples shall be submitted for the analyses required under Sections IV.A.4 and VI of this Order." However, it should be noted that Section IV.A.4 does not specify any groundwater analyses, but instead, only provides a listing of some of the contaminants

that have been detected in the various watersheds. NMED should verify the reference location specified in this item.

5. Item number 9 in the list of items for regional aquifer wells states that “groundwater samples shall be submitted for the analyses required under Sections IV.A.4 and VI of this Order.” As discussed in comment number 4 above, Section IV.A.4 does not specify any required groundwater analyses. NMED should verify the reference location specified in this item.

Section IV.A.4.a Los Alamos Canyon Watershed

6. The first paragraph in this section lists the technical areas that contributed contaminated runoff to the Los Alamos Canyon watershed. TAs 41 and 61 are both located adjacent to Los Alamos Canyon, however, these TAs are not included in the list. It is not clear whether these TAs were inadvertently omitted, or whether they were not included because they did not contribute contaminated runoff to the canyon. NMED may wish to confirm whether the omission of these TAs from the list was intended.

Section IV.A.4.b Mortandad Canyon Watershed

7. The first paragraph in this section lists the TAs located within the Mortandad Canyon watershed. It should be noted that TA 60 is located adjacent to Mortandad Canyon but was not included in the list. It is not clear whether this TA was inadvertently omitted, or whether it has not contributed contaminated runoff to the canyon. NMED may wish to confirm whether the omission of this TA from the list was intended

In addition, the Order includes TA 18 in this list. However, the facility drainage maps indicate that runoff from TA 18 more likely drains to Pajarito Canyon instead of Mortandad Canyon. NMED may wish to confirm whether TA 18 should be included in this list.

Section IV.A.4.d Pajarito Canyon Watershed

8. The first paragraph in this section lists the TAs located within the Pajarito Canyon watershed. TAs 51 and 63 are located adjacent to Pajarito Canyon but are not included in the list. It is not clear whether these TAs were inadvertently omitted, or whether they were not included because the process operations at the units did not result in the generation of contaminated runoff. NMED may wish to confirm whether the omission of these TAs from the list was intended.

Typographical and/or Editorial Comments

Several typographical and/or editorial mistakes were observed during the review of this section of the Order. A listing of these items follows.

- Section IV.A.3.a, fifth paragraph, item number 10: NMED should verify whether the Order will require absorption coefficients, or adsorption coefficients.
- Section IV.A.3.a, eighth paragraph, second sentence: The word “affective” should be replaced with “effective.”
- Section IV.A.4.b, item number 7, second sentence: The sentence should be corrected to read “In addition, the Facility shall install one well intersecting . . .”
- Section IV.A.4.c, item number 6: The sentence should be corrected to read “. . . in the middle portion of Water Canyon at a location . . .”
- Section IV.A.4.f, first sentence: The text should be changed to read “Ancho Canyon is located in the southern portion of the Facility and comprises an area ...”
- Section IV.A.5, second paragraph, second sentence: It is suggested the text be changed to read “The sampling locations are listed in Table 1 in Section IV.A.6, and Section X below.”
- Section IV.A.5, third paragraph, fourth sentence: It is recommended that the words “or visually estimated” be deleted from the end of the fourth sentence.
- Section IV.A.5, fifth paragraph, second sentence: It is suggested the sentence be changed to read “Samples shall be collected for organic analyses that includes 40 CFR Part 261 Appendix VIII VOCs and SVOCs, HE compounds . . .”