



December 11, 2006

Mr. David Cobrain
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. 06280.150.0002; State of New Mexico Environment Department, Santa Fe, New Mexico; Risk Assessments for Other Facilities (Non-LANL); Review of the Response to Comments on the Supplemental RCRA Facility Investigation (RFI) Report SWMU #19 McGregor Range Camp Oxidation Pond, Task 2 Deliverable.

Dear Mr. Cobrain:

Enclosed please find the deliverable for the above-referenced work assignment. The deliverable consists of an evaluation of review comments on the "Supplemental RCRA Facility Investigation (RFI) Report SWMU #19 McGregor Range Camp Oxidation Pond" dated February 2005.

Many of responses indicated that modifications will be made to the document. Thus, complete evaluation of the response could not be conducted and is pending the revisions made in the final document. In addition, several comments were drafted concerning what trophic levels were or were not included in the risk assessment. It should be noted that the response to General Comment No. 4 specifically states that the risk assessment was conducted to assess risk to aquatic bird species. As such, the only conclusions on risk can be made with regards to the aquatic bird alone. It appears that additional analyses would be required to assess total ecological risks, including lower trophic levels and plants.

The document is formatted in Word. The deliverable was emailed to you on December 11, 2006 at Dave.Cobrain@state.nm.us and to Ms. Kathryn Chamberlain at Kathryn.Chamberlain@state.nm.us. A formalized hard (paper) copy of this deliverable will be sent via mail. If you have any questions, please call me at (303) 464-6525 or Ms. Paige Walton at (801) 451-2978.

Mr. David Cobrain
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Sincerely,

June K. Dreith
Program Manager

Enclosure

cc: Ms. Kathryn Chamberlain, NMED
Ms. Paige Walton, TechLaw

TASK 2 DELIVERABLE

**EVALUATION OF THE RESPONSE TO
REVIEW COMMENTS ON THE
SUPPLEMENTAL RCRA FACILITY INVESTIGATION (RFI) REPORT
SWMU #19 MCGREGOR RANGE CAMP OXIDATION POND
FEBRUARY 2005**

Risk Assessments, Other Facilities (Non-LANL)

Submitted by:

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Submitted to:

**Mr. David Cobrain
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. 06280.150

December 11, 2006

**HUMAN HEALTH AND ECOLOGICAL RISK ASSESSMENT
REVIEW COMMENTS ON THE
SUPPLEMENTAL RCRA FACILITY INVESTIGATION (RFI) REPORT
SWMU #19 MCGREGOR RANGE CAMP OXIDATION POND
FEBRUARY 2005**

Unless specifically addressed below, the response to the comments are adequate as presented.

General Comments

1. The response to this comment appears adequate pending New Mexico Environment Department's (NMED) review of approval of the data and modeling provided in the "Groundwater Monitoring Suspension Request." Since the integrity of the liner has been compromised in several locations, the above document should be reviewed to confirm that the vertical extent of contamination has been adequately delineated and that subsurface concentrations do not appear to be migrating into groundwater.

3. The response indicates that the human health risk assessment is provided for informational purposes only and to establish the need for land use controls. Please note that since the risk assessment was considered inadequate, no final risk-based decisions should be made using this assessment.

5. The response indicates that a risk analysis to lower trophic levels was not the intent of the risk assessment, and thus was not included in the report. However, without the inclusion of such an analysis (i.e., comparison to no adverse effect levels (NOELs) and low adverse effect levels (LOELs)) the risk assessment is incomplete. The plant, invertebrate, and amphibian (i.e., salamander) communities are a critical link to upper trophic species that may inhabit or use the pond as a food source and therefore represent an important value to be protected. Thus, the assessment endpoint that should be identified with respect to the lower trophic level organisms is the maintenance of a productive plant, invertebrate, and amphibian communities in the pond. Aquatic invertebrates also perform an important function in the degradation of organic matter in sediment through their bioturbative activities. If the health of the lower trophic levels are deemed at risk from exposure to contaminants in surface water and sediment, then contaminants at the site have impacted the ecosystem because a primary food source to upper trophic levels is impaired. The risk assessment should be revised to address the risks to lower trophic receptors unless this analysis was performed as part of the VEGA study, which had indicated the presence of elevated hazard quotients.

6. The response to the comment is inadequate because the exposure of upper trophic organisms to surface water is not addressed. In order to support corrective action decisions at this solid waste management unit (SWMU), all relevant exposure media must be addressed. There is no basis for eliminating surface water as an exposure medium as birds may use the pond as a drinking water source as well as ingesting

surface water incidentally during foraging activities in the pond. To support corrective active decisions for this waste unit, all relevant exposure medium, surface water, sediment, and food chain exposure must be evaluated.

7. The response to the comment is inadequate. Lower trophic levels need to be evaluated in the ecological risk assessment to support corrective action decisions. Please refer to response to General Comment No 5.
8. The response to the comment is inadequate. Lower trophic levels need to be evaluated in the ecological risk assessment to support corrective action decisions. Please refer to response to General Comment No 5.
9. The response indicates that the risk assessment differed from the VEGA study in that more refined and site-specific data were applied. It is not uncommon for a screening assessment, like the VEGA study, to show elevated risk, while more refined and site-specific assessment results in lower risk. This response to this comment appears adequate as presented.
10. The intent of the response to this comment may be adequate; however, final revisions were not provided, so a complete evaluation could not be made.
11. The response indicates that there is no available background information for the McGregor Pond, therefore, only screening benchmarks were applied. The document should address this uncertainty in the uncertainty section and describe how the absence of background data may impact the risk conclusions.
12. The intent of the response to this comment may be adequate; however, it is not clear whether including pH data will demonstrate that the soil pH is within the range where aluminum can be considered bioavailable or if the inclusion of pH is to demonstrate the conservativeness of the risk assessment. Final evaluation of this response is pending the finalized document.

Specific Comments

3. The response to the comment is inadequate. The report had utilized a maximum contaminant level (MCL) as a scalar criterion to provide a qualitative evaluation of the relative significance of surface water contamination. However, the comment indicated that a more relevant value is the New Mexico Administrative Code (NMAC) standards. It is agreed that the pond is not an interstate surface water, however, the pond is also not a potable drinking water supply and yet an MCL had been used as the scalar criteria. To conduct a screening level evaluation of contaminants in surface water, the NMAC while not applicable, are relevant and appropriate and should be used as the criteria.
4. The response to this comment concerning ambient levels of lead in groundwater may be adequate. The respondent indicated that information on lead levels could be

obtained from the referenced remedial investigation reports. While this may be true, the response should provide a brief summary of the natural levels for lead that have been detected in groundwater associated with the site.

5. The response indicates that the NMED Soil Screening Levels do not contain sediment benchmarks. As such, the use of the Region 6 sediment screening level is appropriate.
6. The report should include surface water as an exposure medium in the ecological risk assessment and address the uncertainties associated with the fluctuations in concentrations. Please refer to General Comment 6.
11. The response to the comment indicates that future human risk scenarios were not included because the Army intends to maintain the current use of the pond as a waste water pond indefinitely. To ensure protection of human health, the report must describe the controls in place to ensure that the current use does not change; in addition, the report must state that if future use is to change, the risk evaluation must be re-visited.
15. The response indicates that MCLs will be removed from the ecological risk assessment however, it does not indicate what screening levels will be used in place of MCLs. Please refer to specific comment 3.
16. The response indicates that a evaluation of LOAEL-based TRVs for the raccoon will be included; however, the response does indicate how the first half of the comment will be addressed. The first part of the comment indicated that the report states that LOAEL-based hazard quotients (HQs) for all chemicals are below one when Table 9-1 of Appendix 2 indicates a number of LOAEL-based HQs greater than one. The report must be revised to address the discrepancies between the text and the tabular results in the Appendices.
18. The response to the comment indicates that evaluating non-parametric upper confidence level (UCLs) is “not anticipated to alter the resulting risk analysis. This statement is without basis. Currently there are a number of LOAEL-based HQ exceedances, and it may be possible use of the appropriate UCL could alter these conclusions, possibly reducing the UCL. Without using the appropriate UCL a conclusion that the results are not anticipated to change is without basis. The report should use ProUCL to demonstrate if nonparametric-based UCLs will alter the conclusions.