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Ms. Barbara Driscoll
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Date: MAY 24 1995
Refer to: EM/ER:95-226

SUBJECT: PROPOSED MODIFICATIONS ON THE RESOURCE CONSERVATION AND RECOVERY ACT FACILITY INVESTIGATIONS (RFI) WORK PLAN FOR OPERABLE UNIT (OU) 1082

Dear Ms. Driscoll:

Pursuant to discussion between Tracy Glatzmaier of the Environmental Restoration (ER) Project office and yourself on March 8 and 9, 1995, and between representatives of Field Unit 3 and yourself on May 10, 1995 concerning issues affecting sampling and analysis plans for the ER Project, the Los Alamos National Laboratory (Laboratory) requests several modifications to the approved RFI work plan for OU 1082. Implementation of these modifications would increase efficiency, decrease costs, and increase worker safety during fiscal year (FY) 1995 fieldwork at technical area (TA) 16. High explosives (HE) safety issues that have arisen during planning for FY 1995 sampling at TA 16 necessitate several changes to the approved work plan. The Laboratory requests the following modifications:

(1) Rather than analyzing all HE samples in the laboratory by SW-846 Method 8330 as proposed in the OU 1082 work plan, the Laboratory requests that field HE analyses performed in the mobile chemical van (Chem Van) be used for decision making. This request only applies to highly contaminated HE samples, those that fail the HE spot test (> 100 ppm). Currently, all HE samples that are positive on the HE spot test, are required to be quantitatively analyzed in the Chem Van per Department of Transportation regulations and Laboratory requirements concerning shipping of explosive samples. The Chem Van uses a high performance liquid chromatography (HPLC) method, similar to the SW-846 Method 8330 with similar detection limits, but with less rigorous data confirmation than specified in that method. In order to ensure that Chem Van data are acceptable, a subset (10%) of samples analyzed in the Chem Van will also be analyzed using SW-846 Method 8330. The

Laboratory will ensure that the prescribed number of check standards are analyzed for quality assurance purposes in the Chem Van as described in our site-specific Quality Assurance Project Plan, that standard operating procedures are followed, and that the Chem Van data are expeditiously incorporated into the Facility for Information Management, Analysis, and Display database. This issue is a TA-16 issue, rather than a project-wide issue, because it is likely that only TA-16 will have a significant number of samples that fail the HE spot test. Below are comparisons of detection limits between those reported in SW-846 Method 8330 (Revision 0, November 1990) and those determined in the Chem Van.

	SW 846 8330 det. limit - soil (mg/kg)	Chem Van det. limit - soil (mg/kg)	Chem Van recovery (%)	LANL SAL - soil (mg/kg)
HMX	2.2	1.215	134	4000
RDX	1.0	0.356	98	64
1,3,5-TNB	0.25	0.450	98	4
Tetryl	0.65	0.355	98	800
1, 3-DNB	0.25	0.523	102	8
TNT	0.25	0.436	100	40
Nitrobenzene	0.26	0.471	100	5.3
2-Amino-4,6-DNT		0.541	100	
4-Amino-2,6-DNT		0.570	101	
2, 4-DNT	0.25	0.385	0.385	1
2, 6-DNT	0.26	0.423	0.423	1
2-NT	0.25	1.124	98	800
3-NT	0.25	0.707	99	800
4-NT	0.25	1.124	98	800

(2) The Laboratory proposes to analyze only three HE sumps and two TA-16-260 troughs by drilling during FY 1995 field activities. The notice of deficiency (NOD) response for the OU 1082 work plan specified analysis of all sumps in which contamination is found in associated drainages and five trough cores at TA-16-260. Two of the sumps proposed for analysis are located at TA-16-260 [Solid Waste Management Unit (SWMU) 16-003(k)] and one is located at TA-16-302 [SWMU 16-003(e)]. These three sumps are likely to have the highest levels of HE contamination based on knowledge of TA-16 operations. Specific sumps to be drilled at these SWMUs will be selected based on HE spot-test screening of adjacent samples. These sumps are likely to be contaminated, but it is unlikely that an imminent risk to human health and the environment exists due to contamination at these sumps. It is also unlikely that remediation will occur beneath these active units in the near future. We also propose that for each of these sumps and for burn unit SWMU 16-005 (g),

we drill two vertical cores, one near the sump-drainline joint and one adjacent to and downgradient from the sump, to a depth of three feet into bedrock or a depth of two feet beneath the deepest core segment exhibiting a positive HE spot test. Angle drilling under the sumps and burn unit, as outlined in the September 1994 response to Comment 18 and Comment 71 of the NOD on the OU 1082 work plan was orginally proposed. The number of laboratory samples in each vertical hole will be the same as proposed for the single angled hole. The operating group at the remaining TA-16 has determined that angled drilling at sumps and other units cannot be done without risk of an HE detonation because it is impossible to keep an angled hole wet during drilling. In addition, two vertical core holes should provide more information on the extent of possible subsurface HE contamination than a single angled hole. The proposed sampling will provide an upper bound on the likely extent of contamination at the remaining TA-16 HE sumps. Additional sump drilling would be completed in future fiscal years and would be based on results obtained during FY 1995.

(3) Per Comment 12 on the NOD for the OU 1082 work plan, the Laboratory requests that metals analyzed by SW-846 Method 6010 have extensive quality assurance/quality control (QA/QC), data validation, and data verification only on metals identified as significant potential contaminants of concern at TA-16. These are: barium, chromium, lead, nickel, silver, and mercury. Other metals would have increased levels of QA/QC only at SWMUs where they were likely to be present, such as beryllium at P-Site. The rationale for this request is that only a subset of the SW-846 Method 6010 metals list was extensively used at TA-16. The Laboratory would still receive data and laboratory QA/QC information on all of the metals from contract and internal laboratories. Internal data validation would be reduced on a subset of metals. Increased levels of QA/QC, validation, and verification could be applied to data packages that appeared anomalous for any metal.

(4) Sampling for SWMUs 11-012(a, b), as described in Subsection 5.16 of the OU 1082 work plan and the NOD for that work plan, requires four 18-in. coreholes be submitted for laboratory analysis. Consistent with sampling plans for similar HE magazines approved in Addendum 1 to the OU 1082 work plan, the Laboratory requests that these four cores be screened using the HE spot test kit, with all positive hits being sent to the laboratory for analysis. In the absence of screening hits, one laboratory sample would be selected for analysis at random from one of the four screened cores.

If you have questions concerning these proposed modifications, please contact Brad Martin at (505) 667-6080 or Everett Trollinger at (505) 667-5801. Thank you for considering these requests.

Sincerely,

Jorg Jansen, Project Manager
Environmental Restoration

Sincerely,

Theodore J. Taylor, Program Manager
Los Alamos Area Office

JJ/TT/bp

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CERTIFICATION

I certify under penalty of law that these documents and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violation.

Document Title:

Proposed Modifications On The Resource Conservation And Recovery Act Facility Investigations (RFI) Work Plan For Operable Unit (OU) 1082

Name: _____ Date: 5/24/95

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Environmental Management
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or

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Environmental Restoration Project
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