



Department of Energy

Field Office, Albuquerque
Los Alamos Area Office
Los Alamos, New Mexico 87544

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OFFICE OF THE...

MAR 15 1993

William K. Honker, Chief
RCRA Permits Branch
Hazardous Waste Management Division
U.S. Environmental Protection Agency, Region 6
1445 Ross Avenue
Dallas, Texas 75202-2733

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Dear Mr. Honker:

Enclosed are two copies of the Environmental Restoration Quarterly Report for July-September 1992 for the Los Alamos National Laboratory. Also enclosed is an electronic copy of this document.

If you have questions, please call me at (505) 665-5027, or ask your staff to call Ted Taylor of my staff at (505) 665-7203.

Sincerely,

Joseph C. Vozella, Acting Chief
Environment, Safety and Health Branch

Enclosure

cc w/enclosure:

Kathleen Sisneros, New Mexico Environment Department
Harold Runnels Building
1190 St. Francis Drive
Santa Fe, NM 87502

cc w/o enclosure:

- S. Slaten, ESH, LAAO
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- K. Bitner, ERPO, AL
- R. Harris, EM-452, HQ
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- T. Gunderson, EM-DO, UC-LANL, MS K491
- R. Vocke, EM-13, UC-LANL, MS M992
- D. Sankey, FIN-18, UC-LANL, MS A107



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LANL HSWF 6/6/93/MSK JK

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CERTIFICATION

I certify under penalty of law that this document 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 violations.

Document Titles:

LANL Quarterly Report, July-September, Fiscal Year 1992

Name:



Allen J. Tiedman
Associate Director for Operations
Los Alamos National Laboratory

Date

3-1-93

Name:



Joseph Vozella, Chief
Environment, Safety, and Health Branch
Los Alamos Area Office - DOE

Date:

3-15-93

Los Alamos National Laboratory
Environmental Restoration

A Department of Energy environmental cleanup program

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QUARTERLY REPORT
JULY - SEPTEMBER
FISCAL YEAR 1992

**QUARTERLY REPORT
JULY-SEPTEMBER
FISCAL YEAR 1992
LOS ALAMOS NATIONAL LABORATORY
ENVIRONMENTAL RESTORATION PROGRAM**

ALBUQUERQUE FIELD OFFICE

CONTRACTOR: UNIVERSITY OF CALIFORNIA

DIVISION LEADER: THOMAS GUNDERSON

PROGRAM MANAGER: ROBERT VOCKE

NUMBER OF POTENTIAL RELEASE SITES (sampling sites): APPROXIMATELY 2,250

SUSPECT WASTE: RADIONUCLIDES, HIGH EXPLOSIVES, METALS, SOLVENTS, ORGANICS

INTRODUCTION

This quarterly report describes the technical status of activities in the Los Alamos National Laboratory Environmental Restoration (ER) Program. Each activity is identified by an activity data sheet (ADS) number and a brief title describing the activity. The Hazardous and Solid Waste Amendments (HSWA) portion of the facility operating permit (Section P, Task III, c) requires the submission of a progress report on a quarterly basis. This report must summarize the work performed and the results of sampling and analysis. Three ADS portions of this program have commenced field work, and the three attachments to this report are submitted in fulfillment of this permit requirement.

ASSESSMENT

ADS 1049 — Canyons (Project Leader: Everett Springer)

The transition to the new operable unit project leader (OUPL) proceeded smoothly. Work was level-of-effort.

ADS 1066 — NEPA (Project Leader: David Kraig)

The Environmental Protection Group (EM-8) continued work on an environmental assessment (EA). Plans for surveying an additional site during the 1993 summer field season were formulated. Archaeological surveys revealed more than 20 sites that will require excavation or mitigation before construction on the Mixed Waste Storage/Disposal Facility (MWSDF) can begin. Early surveys indicated potential habitat for goshawk, as well as old-growth piñon woodland, which will require additional survey efforts during FY93.

ADS 1071 — Technical Areas 0, 19, 26, 73, 74 (Project Leader: Jim Aldrich)

See Attachment 1.

ADS 1078 — Technical Area 1 (Project Leader: Carl Newton)

See Attachment 2.

ADS 1079 — Technical Areas 10, 31, 32, 45 (Project Leader: Garry Allen)

Although the Resource Conservation and Recovery Act (RCRA) facility investigation (RFI) work plan for Operable Unit (OU) 1079 had not officially been approved by the Environmental Protection Agency (EPA), the surface soil sampling element was initiated at Technical Area (TA) -45 (Acid Canyon) on an accelerated schedule. The sampling was performed by an experienced team from the Grand Junction Office of the Oak Ridge National Laboratory, and the samples were sent to International Technology (IT) Corporation to be analyzed for a variety of radionuclides and hazardous chemical constituents.

ADS 1082 — Technical Areas 11, 13, 16, 24, 25, 28, 37 (Project Leader: Brad Martin)

The Chemical and Laser Sciences Division (CLS) ER team continued holding meetings with the technical teams supporting the operable unit. The two subteams created to complete the first draft of the work plan remained on schedule. Packages containing OU history, solid waste management unit (SWMU) data compilation, photographs, and maps for TAs 11, 16, and 37 were completed, as were all activities planned for FY92. Funds for the procurement of equipment to support bioremediation work were provided, and Facilities Engineering Division personnel continued to review project status and work plan drafts.

ADS 1086 — TA-15 (Project Leader: Carolyn Mason)

Preparation of the RFI work plan for OU 1086 continued. This included a risk assessment for TA-15, "Calculation of Acceptable Levels of Surface Contamination at TA-15 (PHERMEX)," as well as biological and cultural summaries.

ADS 1093 — TA-18 (Project Leader: Gene Gould)

The work plan for OU 1093 was proceeding an estimated 3 months ahead of schedule. A thorough records search was conducted, resulting in the number of SWMUs proposed as needing further investigation being reduced from 42 to 28. Collection of information was initiated pertaining to field investigation techniques.

ADS 1098 — Technical Areas 2, 41 (Project Leader: Patrick Longmire)

The work plan for OU 1098 was drafted, reviewed by team members, revised, and submitted to the Environmental Restoration Group (EM-13). Comments from EM-13 were then addressed and the work plan was revised again. Alluvial groundwater containing a number of contaminants was characterized within the Laboratory boundary. Collaboration on risk assessment activities was begun with a number of groups within the Laboratory, and the OU 1098 technical team coordinated with the OUP for OU 1049 concerning sampling activities in Los Alamos Canyon.

ADS 1106 — Technical Area 21 (Project Leader: Gary Eller)

See Attachment 3.

ADS 1111 — Technical Areas 6, 7, 22, 40, 58, 62 (Project Leader: Cheryl Rofer)

Archive searches were completed as necessary, and field investigations into geological features, hydrological features, and SWMU configurations continued. Portions of Chapter 5 of the work plan were completed, and Chapters 2 and 4, as well as the remaining portions of Chapter 5, showed progress. A collaboration with the Long-Range Alpha Detector (LRAD) project was sought, and an analysis of excavated pits and disturbed areas around Area F was completed. Data quality objectives (DQOs) were being developed for active firing sites, and both active and inactive sites were looked at in the field, as were several proposed SWMUs.

ADS 1114 — Technical Areas 3, 30, 59, 60, 61, 64 (Project Leader: Ed Griggs)

Team meetings to characterize OU 1114 SWMUs continued, and data search efforts were completed and analyzed. Work continued on the second draft of the OU 1114 RFI Work Plan.

ADS 1122 — Technical Areas 33, 70 (Project Leader: Keith Dowler)

Project scheduling, resource identification, cost estimation, and field work planning activities continued during the reporting period to provide input for an updated baseline. Technical merit evaluations of proposals from ERM Program Management Company and ICF Kaiser Engineers, Inc. were conducted as part of the selection process for a general field services contractor for FY93. Presentations explaining the OU 1122 history of activities, potential wastes of concern, characterization plans, and project status were made during the Quarterly Public Meetings in Los Alamos, Santa Fe, and Española. A tour of Operable Unit 1122 was conducted for EPA Region VI regulators responsible for the review of the RFI work plan.

ADS 1129 — Technical Areas 4, 5, 35, 42, 48, 52, 55, 63, 66 (Project Leader: Allyn Pratt)

Sample and analysis plans for the SWMUs not listed in the HSWA Module (approximately 86) were completed. An Interim Action for the characterization of the SWMUs at former TA-42 was also completed; confirmation that the site contained no hazards that would adversely impact the construction of the Nuclear Safeguards Technology Laboratory (NSTL) was obtained.

ADS 1130 — Technical Areas 36, 68, 71 (Project Leader: Gene Gould)

The technical teams for OU 1130 were defined. Work continued in preparation for the submittal of the draft OU 1130 RFI Work Plan for informal review.

ADS 1132 — TA-39 (Project Leader: Gene Gould)

The technical teams for OU 1132 were defined. Work continued to prepare the RFI work plan for OU 1132 for informal review.

ADS 1140 — TA-46 (Project Leader: Roy Michelotti)

Archival effort and data base entry of OU 1140-related documents was virtually completed. Rough drafts were written for all five SWMU aggregate sections in Chapter 5 of the OU 1140 work plan; drafts of Chapters 2 and 3 were also written. DQOs for the work plan were developed. Field work resulted in discovery of new outfall SWMUs and areas of concern (AOCs). Work on the access road into the sanitary waste water systems consolidation (SWSC) plant continued. Field work for the Biological and Cultural Resources assessment was completed during this quarter.

ADS 1144 — TA-49 (Project Leader: Ines Triay)

A schedule for the activities of OU 1144 was completed. Ines Triay became the new project leader and Greg Bayhurst became the deputy project leader. A contract is in place to write health and safety plans for the surface soil sampling and drilling to be performed by EM-8.

ADS 1147 — TA-50 (Project Leader: Cheryl Rofer)

The new OUPL began her tenure in July. An EPA Region VI representative visited TA-50 in August and reviewed the work plan for OU 1147. A Notice of Deficiency was received from EPA in September. A response is being prepared. A National Environmental Policy Act (NEPA) Categorical Exclusion was received for the characterization phase of environmental remediation work at TA-50. ER public meetings that included presentations on OU 1147 were held in September in Los Alamos, Santa Fe, and Española.

ADS 1148 — Technical Areas 51, 54 (Project Leader: Don Neeper)

A constrained budget was submitted for FY93 activities. A review session was held with EPA Region VI to discuss the OU 1148 RFI Work Plan. Quarterly sampling of the pore gas monitor wells at Material Disposal Area (MDA) L was performed in September. A meeting was held with the Health and Environmental Chemistry Group to discuss changes to the analysis of pore gas samples; these changes will provide for analyses of an expanded suite of volatile organic contaminants.

ADS 1157 — Technical Areas 8, 9, 23, 69 (Project Leader: Tracy Glatzmaier)

The draft version of the OU 1157 RFI Work Plan was virtually completed. The potential release sites (PRSs) were divided into several groups to facilitate the investigation and characterization. The Los Alamos Information Communication System (LAICS) project in the TA-8 and TA-9 area was completed. Several areas of no vegetation were discovered on TA-9 by the EM-8 biological survey crew. They consist of nearly perfect circles approximately 5 ft in diameter, and 12 to 15 of them are in a straight line, spaced at intervals of 5 yards.

ADS 2105— TECHNICAL PROGRAMMATIC SUPPORT

Decision Analysis: Appendix I of the Installation Work Plan (IWP) was drafted, as were sections of Chapter 5 of the RFI Work Plans for OUs 1082 and 1140. Documentation was reviewed on no further action (NFA) and deferred action criteria, septic tank removal, and draft decisions support methodology for future land use selection. A decision model for evaluating remediation alternatives for MDA P was developed, and a draft of the PRS Ranking System Model was being developed. An experimental phased sampling decision model was also developed.

Ecological Risk Assessment: Planning was underway for the "Integrating Human Health and Ecological Risk Assessment" workshop and a joint LANL/CSU ecological risk assessment project at the Laboratory. Ecological assessment strategic planning was also begun.

Facility for Information Management, Analysis, and Display (FIMAD): Approximately 450 new maps and a similar number of copies/updates were created. A thorough review of available GIS data for PRSs was completed, and all PRS and facilities/engineering data were placed in a master library for read-only access by Program personnel. Large amounts of orthophoto and contour data were received and made available to Program participants. A two-day retreat to define programmatic data needs and computer system requirements was held in September. Orders were placed for most major components of the FIMAD facilities upgrade.

Framework Studies: Geologic mapping, stratigraphic studies, and fracture analyses proceeded in support of OUs 1106 and 1148 and in support of the proposed site for the MWSDF. Sampling for pilot studies was nearly completed, and samples were submitted for analyses. Preliminary activities toward sampling ground water were initiated. The Framework Studies team provided rewrites, updates, and reviews of portions of the IWP. A unification of the geosciences in the ER Program resulted in the Earth Sciences Technical Team comprised of the former framework, geology/geophysics, hydrology, and geochemistry teams.

Human Risk Assessment: Revisions for Chapter 4 of the IWP were drafted, as was Appendix J. A table that includes screening action levels (SALs) for chemical analytes in various matrices was developed, and meetings were held with Argonne National Laboratory toward the development of SALs for radionuclides. Ten OUs were helped to develop Chapters 4 and 5 of their work plans; team members also provided extensive reviews of sampling plans. Development of a document on the migration and toxicity properties of high explosives was begun.

Records Processing Facility: As of the end of the quarter, the RPF had received and reviewed approximately 56,000 record pages and had filmed approximately 36,000 of them. Records retrievals, interaction, and support to OUPs, technical team leaders (TTLs), and contractors was ongoing.

Sample Coordination Facility: A total of 1430 analyses was completed for OUs 1078, 1106, 1129, and 1079. In addition, the Radiological Screening Van and the Organic Analysis Van were both active during the quarter.

Statistics/Data Quality Objectives: Subsections 4.1, 4.2, 4.5, and 4.6 and Appendix H of the IWP were drafted, and Appendix G was revised. OTD was briefed on the DQO approach for Bayo Canyon (OU 1079). Presentations were given at the FIMAD workshop. Work was continued on drafting, revising, and reviewing several sections of chapters 4, 5, and 6 for the RFI work plans for OUs 1082, 1106, 1111, 1114, 1130, 1140, and 1157. This included developing DQOs, conceptual models, and sampling plans for several SWMU aggregates. An overview of DQO-related activities and trends in EPA and the DOE complex was drafted.

Training: HRD-3 (Employee/Organization Development Group) participated in an internal ER communications committee to improve the flow of information in the Program. A proposal was made to include future training notices in a Program newsletter.

ADS 2107 — MANAGEMENT (Program Leader: Robert Vocke/Lars Sohlt)

Routine programmatic management activities continued.

REMEDIATION

ADS 1063 — UNDERGROUND STORAGE TANK REMOVAL (Project Leader: Edward Norris)

One underground storage tank (UST), located at TA-35, was removed this quarter. This ADS will not be funded in the future because funding for UST removals will be provided as part of the funding for the operable units in which the tanks are located, beginning with FY93.

ADS 1067 — RCRA MIXED WASTE STORAGE/DISPOSAL FACILITY (Project Leader: Dean Nelson)

Both the MWSDF Conceptual Design Report and Design Criteria Document were completed and forwarded to DOE for review and approval. Preliminary investigations at the proposed MWSDF site, including stratigraphic fracture analysis and geomorphic characterization, neared completion. Follow-up and response to the Laboratory Environment, Safety, and Health (ES&H) review of the project continued. The waste inventory was updated, and literature research and vendor contacts were made regarding a choice of pit liner system for the Title I design. The request for proposal process for architect-engineering services was initiated.

RCRA CLOSURES

ADS 1127 — TA-35, TSL-125 (Project Leader: Dave McInroy)

An additional sampling phase to the Closure Plan has been developed and submitted to the New Mexico Environment Department (NMED). This phase covers identification of potential contamination in Tensite Canyon. The Laboratory is awaiting approval from NMED prior to starting this activity.

ADS 1135 — TA-40 SCRAP DETONATION SITE CLOSURE (Project Leader: Dave McInroy)

Preliminary sample results indicate isolated areas at the site are above screening action levels of lead. A final cleanup and sampling strategy will be developed after receipt of final analytical results.