



Department of Energy

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

NOV 12 PM 1:02

NOV 9 - 1992

2169
Report

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

Dear Mr. Honker:

Enclosed are two hard copies and one electronic copy of the Environmental Restoration Quarterly Management Report for April-June 1992 for the Los Alamos National Laboratory.

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:
K. Sisneros, NMED (2 copies)

cc w/o enclosure:
S. Slaten, ESH, LAO
T. Taylor, ESH, LAO
J. Shipley, EE-AETO, UC-LANL, MS F643
R. Vocke, EM-13, UC-LANL, MS M992



8049

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.

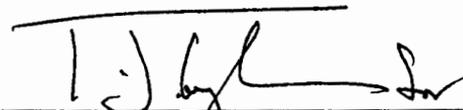
Document Titles:

Quarterly Report for April - June Fiscal Year 1992, Los Alamos National Laboratory, Environmental Restoration Program

Name:


Date 10/29/92
Allen J. Tiedman
Associate Director for Operations
Los Alamos National Laboratory

Name:


Date: 11-9-92
Joseph Vozella, Acting Chief
Environmental Health and Safety Branch
Los Alamos Area Office - DOE

LA-UR-92-3652

Los Alamos National Laboratory
Environmental Restoration

A Department of Energy environmental cleanup program

QUARTERLY REPORT

APRIL - JUNE

FISCAL YEAR 1992

QUARTERLY REPORT
APRIL-JUNE
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: APPROXIMATELY 2,250

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

INTRODUCTION

The technical status of each ongoing activity in the Program is discussed below. These activities are presented in parallel to the five-year plan for environmental restoration (ER), which is currently being drafted for the FY93-FY97 planning window. Each activity is identified by an activity data sheet (ADS) number and a title that describes the activity.

ASSESSMENT

ADS 1066 — NEPA (Project Leader: Doris Garvey)

EM-8 prepared an environmental assessment (EA) concerning the scope, design, location, and function of the Mixed Waste Storage/Disposal Facility (MWSDF). Progress was made in describing the proposed action, alternatives, and the potentially affected environment. Information was gathered on waste characterization and waste acceptance criteria. All surveys for cultural resources were completed during the summer field season, and reveal more than 20 sites that will require excavation or mitigation before construction can begin. Surveys for biological resources were underway during this quarter, but were hampered by administratively limited access to the site. Additional surveys will be performed during FY93 regarding the potential habitat for Goshawk. Plots for pre-operational site appraisals were set up, and will be observed and evaluated during the next two years.

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

Based on the comments of reviews from Argonne National Laboratory, Department of Energy (DOE)-Albuquerque, and DOE Headquarters, the Resource Conservation and Recovery Act (RCRA) facility investigation (RFI) Work Plan for operable unit (OU) 1071 was revised and submitted to EPA in May. An interim action was started on water well sites with possible polychlorinated biphenyl (PCB) contamination to accommodate construction along State Route 502. Soil samples were collected and the data were analyzed: additional analysis and a final report will be completed in early FY93. A site health and safety

plan, waste management plan, and training to standard operating procedures (SOPs) were initiated for the performance of field work during the summer.

ADS 1078 — TA-1 (Project Leader: Ron Conrad)

The RFI Work Plan for OU 1078 was completed and submitted to Environmental Protection Agency (EPA) and the New Mexico Environment Department (NMED) in May. A site-specific health and safety plan for the hillside sampling was drafted and approved, and was implemented when soil sampling began.

ADS 1079 — TAs 10, 31, 32, 45 (Project Leader: Sandy Wagner)

The RFI Work Plan for OU 1079 was completed and sent to EPA and NMED for review in May. DOE and EPA agreed that townsite field work should proceed without formal EPA approval. Mobilization for field work is currently underway for collection of samples from Acid Canyon (TA-45).

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

All OU 1082 solid waste management units (SWMUs) were divided between two subteams. Packages containing OU history, SWMU data compilation, photographs, and maps for technical areas (TAs) 11, 16, and 37 were prepared, and data search efforts continued as uncertainties arose about existing information. A proposal for addressing the active firing sites was drafted. A meeting was held with WX-DO, WX-3, and WX-12 personnel to review the status of the project and to enlist their aid in reviewing the OU 1082 RFI Work Plan as rough drafts begin to materialize. The summer low/no-cost personnel, along with the addition of a contractor who transferred in from EM-13, have accelerated the OU 1082 effort.

ADS 1086 — TA-15 (Project Leader: Allen E. Ogard)

The Technical Approach chapter of the RFI Work Plan for OU 1086 was written and submitted within the Laboratory for comments. Data gathering and analysis pertaining to the SWMUs neared completion. The preparation of the Sampling Plan Chapters was begun. The draft RFI Work Plan, due DOE March 1993, is approximately 20 percent complete.

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

The RFI Work Plan for OU 1093 was approximately three months ahead of schedule, with an estimated savings of \$500,000 below the original baseline estimate. A thorough records search was conducted, reducing the number of SWMUs needing further investigation. Dr. Merlin L. Wheeler, ICF Kaiser Engineers, the team technical coordinator for Work Plan development, provided a dual role through his technical contributions to both the revised Installation Work Plan (IWP) and the annotated RFI outline, providing continuity for both the project team and the overall ER Program.

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

Drafts of chapters 1, 2, 3, and 5 of the RFI Work Plan for OU 1098 were completed. Available data on the SWMUs in TAs 2 and 41 were reviewed. Results from chemical data obtained from shallow alluvial monitor wells in Los Alamos Canyon show elevated concentrations of tritium, strontium, cesium, uranium, and major cations and anions. A fact sheet for OU 1098 was finalized as part of the sampling plan. A detailed hydrology investigation was drafted, detailing a phased approach for determining the potential effects of faulting on recharge to the perched aquifer. The sampling plan chapter is 50% complete. A background soil and sediment study of the Laboratory has been initiated to determine elemental concentrations and hydrological and geochemical parameters for risk assessment.

ADS 1100 — TA-53 (Project Leader: Gene Gould)

The RFI Work Plan for OU 1100 was approximately three months ahead of schedule, with an estimated savings of \$500,000 below the original baseline estimate. A thorough records search was conducted, reducing the number of SWMUs needing further investigation. Dr. Merlin L. Wheeler, ICF Kaiser Engineers, the team technical coordinator for Work Plan development, provided a dual role through his technical contributions to both the revised IWP and the annotated RFI outline, providing continuity for both the project team and the overall ER Program.

ADS 1106 — TA-21 (Project Leader: P. Gary Eller)

The cost estimate and schedule was updated in preparation for change control during the summer. Transition to the new Operable Unit Project Leader (OUPL) was completed. The first round of mesa-wide surface soil grid sampling was completed in early April. Analytical data began to be returned from the laboratories, and the second round of surface grid sampling was started in June. Plans were put in place to continue with outfalls and filter building investigations during the summer field season. Geomorphological field studies continued. Surface water sampling planned for this quarter was not conducted pending resolution of analytical laboratory capabilities.

ADS 1111 — TAs 6, 7, 22, 40, 58, 62 (Project Leader: Cheryl K. Rofer)

Drafts of Chapter 5 of the OU 1111 RFI Work Plan for septic systems, outfalls, and sumps were completed and then data quality objectives (DQOs) and sampling plans for pits and landfills were developed.

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

Team and subteam meetings to characterize OU 1114 SWMUs began in April and continued throughout the quarter, as did data search efforts. Packages containing OU history; SWMU data compilation; and SWMU reports, photographs, and maps for all Technical Areas within OU 1114 were prepared, delivered to the technical teams, and reviewed by the subteams. These technical teams began to write first drafts of the appropriate chapters of the RFI Work Plan for OU 1114. A schedule for the first draft was set with a November 9, 1992 deadline. The summer low/no-cost personnel, along with the addition of a contractor who transferred in from EM-13, have accelerated the OU 1114 effort.

ADS 1122 — TAs 33, 70 (Project Leader: Keith E. Dowler)

Comments received from the DOE formal review of the RFI Work Plan for OU 1122 were discussed with reviewers and addressed by the technical team. Revisions were made, a final draft was prepared, and the Work Plan was submitted to DOE by May 20. Detailed planning, scheduling, and resource identification was started for FY93 field work. This planning assumes timely approval of the Work Plan and adequate funding for the next fiscal year.

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

The RFI Work Plan for OU 1129 was completed and delivered to the NMED and EPA on May 20. Approval was sought and received from the ER Program Office to develop sampling and analysis plans (SAPs) for the additional OU 1129 SWMUs that were identified in the 1990 SWMU report: draft SAPs were completed by June 19, 1992. A draft of the technical approach for the operational implementation of a program to identify No Further Action SWMUs was also completed.

ADS 1130 — TAs 36, 68, 71 (Project Leader: Sharad Kelkar)

Preliminary draft copies of chapters 1, 2, and 3, and Annexes IV and V of the RFI Work Plan for OU 1130 were submitted to the Program Office for comments, and an archival search was completed. A local data base of all relevant documents was prepared. Interviews of current and retired Laboratory employees continued, and the existing data were analyzed. SWMU background information was prepared for the SWMUs that will be addressed in FY92. Decision analysis, risk assessment, and data quality objectives were in preparation for those SWMUs.

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

The RFI Work Plan for OU 1132 was approximately three months ahead of schedule, with an estimated savings of \$500,000 below the original baseline estimate. A thorough records search was conducted, reducing the number of SWMUs needing further investigation. Dr. Merlin L. Wheeler, ICF Kaiser Engineers, the team technical coordinator for Work Plan development, provided a dual role through his technical contributions to both the revised IWP and the annotated RFI outline, providing continuity for both the project team and the overall ER Program.

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

Archival effort and data base entry of OU 1140-related documents constituted a major effort during the quarter. Multiple OU 1140 team meetings were held. Representatives of the Statistics and Decision Analysis, Geology/Hydrology, Risk Assessment, and Drilling technical teams participated in meetings held to review SWMUs for the purpose of preparing RFI Work Plan sections and sampling plans. Field work to investigate and locate SWMUs was conducted extensively, and a summer student was hired to focus on identifying and documenting outfalls. The access road into the Sanitary Wastewater System Consolidation (SWSC) plant, located at the east end of OU 1140, might have impacted a septic system SWMU, so work was stopped and a new road design is being developed for ER review prior to restart of construction. Most of the field work for the Biology and Cultural Resources assessment was completed during this quarter.

ADS 1144 — TA-49 (Project Leader: P. Gary Eller)

The draft RFI Work Plan for OU 1144 was revised according to the second round of review by Argonne National Laboratory, DOE, and several Los Alamos National Laboratory (LANL) organizations. Additional programmatic guidance was also incorporated, and the Work Plan was submitted for EPA and NMED review. Detailed schedule and budget planning for field activities commencing in October 1992 was initiated, including dialogue with the DOE Remote Sensing Laboratory for radiological surveys.

ADS 1147 — TA-1147 (Project Leader: Tom E. Hakonson)

The RFI Work Plan for OU 1147 underwent both informal and formal reviews by DOE, Argonne National Laboratory, and others. Appropriate revisions were made, and a final draft was prepared for EPA and NMED review and submitted on May 22. Records were transferred to the new Project Leader.

ADS 1148 — TAs 51, 54 (Project Leader: John Krueger)

The RFI Work Plan for OU 1148 was completed and submitted to EPA and NMED for formal review in May. Quarterly sampling of pore gas monitor wells in and around material disposal area (MDA) L continues. A report, Analysis of the Pore Gas Monitoring at Area L, TA-54, Los Alamos National Laboratory, which evaluates the vertical and horizontal extent of the pore gas plume using data through December 1990, was submitted by Bruce Trent (EES-5).

ADS 1157 –TAs 8, 9, 23, 69 (Project Leader: Tracy G. Glatzmaier)

Most of the existing data concerning this OU were found, including many sets of aerial photographs from the 1940s through 1991 as well as Engineering drawings for the buildings in TAs 8 and 9. Process diagrams of sanitary and industrial waste lines were drawn to facilitate the investigation of possible contaminants in the lines and outfalls. The RFI Work Plan was drafted as information was gathered. Most of the site history and individual SWMU history for TA-9 was completed, as was much of the boilerplate information for the annexes. A fair amount of time was spent looking into the impact of the new SWSC project and the Los Alamos Information Communication System (LAICS) Project in TA-0. Both of these projects are very close, and in some cases, on top of, SWMUs from the Old Anchor East Area.

ADS 2105— TECHNICAL PROGRAMMATIC SUPPORT

Risk Assessment: The collaboration between the Laboratory risk assessment personnel and those at Argonne National Laboratory who are helping to draft a description of risk assessment for the ER Program resulted in significant progress, consisting of material from Argonne that was discussed, commented upon, met about, and incorporated into a second draft.

Facility for Information Management, Analysis, and Display: Approximately 120 new maps and 147 copies of previously created maps were made by Geographical Information System (GIS) technical staff. A major effort was made to consolidate the potential release site (PRS) coverage and to identify the status of PRS GIS data availability. A technical evaluation was completed for the automated backup and disaster recovery system. Efforts were underway to hire a postdoc to define the technical specifications and requirements for Facility for Information Management, Analysis, and Display (FIMAD) services and to identify and implement the "best" method.

Data Quality Objectives: Team members assisted in the final preparation of three work plans due in May 1992, and continued to work with six OU teams whose work plans are due in May 1993. For the latter, archival data were reviewed, appropriate DQOs were developed, and sampling plans were designed. A course on the EPA DQO process was prepared and presented, and statistical approaches to using field laboratory measurements to supplement analytical laboratory results were evaluated. The DQO Technical Team participated in the DOE Technical Information Exchange Workshop in Albuquerque, a programmatic retreat during June, and a workshop on the Streamlining Approach for ER (SAFER).

Soil Contamination Monitoring with a Long-Range Alpha Detector (LRAD): Joint meetings were held with Eberline to discuss strategies, designs, documents, the Cooperative Research and Development Agreement (CRADA), and licensing agreements. Demonstrations of the LRAD systems, the floor monitor, and an object monitor were held. Papers were presented at a number of meetings and workshops, and were submitted to and accepted by Health Physics, Institute of Electrical and Electronic Engineers (IEEE) Transaction on Nuclear Science, and Nuclear Technology. Proposals were submitted to the Plutonium in Soils Integrated Demonstration; the Uranium in Soils Integrated Demonstration; the Buried Waste Integrated Demonstration; the Characterization, Monitoring, and Sensor Technology Integrated Program; and Arms Control and Verification. Patent applications have been filed for a fan-less LRAD: the original patent applications for the LRAD and the single- and double-grid LRAD were rewritten and defended, and the LRAD patent application was approved. A design for the sample monitor was finalized. Testing was completed on the large ion chamber prototype, and a portable data acquisition system was assembled. Using the LRAD soil surface monitor (SSM), data were taken in the field at TAs 6 and 18. The soil and object monitors were redesigned and rebuilt for lower noise: testing was begun.

Value Engineering: Value Engineering review was completed for eight RFI Work Plans to be sent to EPA in May. Arrangements are being made to provide the same type of review for the Installation Work Plan.

Analytical Chemistry: The analytical chemistry development support projects progressed as planned. Two field prototype instruments will be completed by the end of the fiscal year.

Sample Coordination Facility: The sample coordination facility geared up to handle the expected number of samples during the summer sampling activities.

Records Processing Facility: The Records Processing Facility (RPF) underwent one of the first external audits of a Program activity. The audit team from Los Alamos Technical Associates (LATA) focused on the implementation of the Program's administrative procedures for both records management and document control. One records processing deficiency was corrected during the audit, and four document control deficiencies were also found. Root causes were identified for each of these and preventive modifications were implemented.

Training: An HRD-3 work scope for the ER Program was finalized in April. Surveys to determine what training topics could be applicable to the ER Program were sent out in March and April, and results reflected the highest interests in RCRA regulations (specifically subpart S) and orientation to the ER Program. 1990 and 1991 training records for ER personnel were entered into the Employee Development System (EDS). In May, two classes in DQOs were sponsored by A-1 and facilitated by HRD-3. In June, two workshops (Public Media Interaction/Conflict Resolution, and Geostatistics) were facilitated, evaluated, and documented. Training briefings on Program SOPs 1.01 and 1.03 for field work were facilitated, attended, and videotaped for Program use.

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

Routine programmatic management activities continued.

REMEDIATION

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

Work to meet the regulatory requirements included: coordination of the engineering efforts to meet the December 22, 1992 regulatory deadline for certain tanks; documentation of National Environmental Protection Act (NEPA) reviews; completion of LANL environmental reviews; and preparation of cost estimates for the work. Three underground storage tanks were removed in June.

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

The Construction Project Management Plan for the MWSDF was approved by the Laboratory and distributed. The Conceptual Design Report for the MWSDF was still in the Laboratory approval process, but should be ready to forward to DOE by mid-July. Preliminary investigations and logistical work were done in preparation for the on-site geological investigations of the proposed MWSDF location. The actual start of site work was delayed due to operational activities that prevented access to the site. Safety procedures were issued for all personnel doing field work at the site. Studies were initiated to evaluate the proposed steep-walled disposal pit and liner system. The waste inventory was completely updated, and design criteria were approximately 75% complete. Site investigations were begun.

RCRA CLOSURES

ADS 1127 — TA-35, TSL-125 (Project Leader: Larry Maassen)

Negotiations were held with NMED to finalize a closure plan.

ADS 1135 — TA-40 SCRAP DETONATION SITE CLOSURE (Project Leader: Larry Maassen)

Final sample analyses were in process but were still being awaited by the end of the quarter.