Department of Energy
Field Office, Albuquerque
Los Alamos Area Office
Los Alamos, New Mexico 87544

EPA REGION VI
HAZARDOUS WASTE
RCRA PERMITS BRANCH
1992 MAY 18 PM 4:3

MAY 13 1992

2165 Report

Mr. Allyn M. Davis, Director
Hazardous Waste Management Division
Environmental Protection Agency, Region 6
1445 Ross Avenue
Dallas, TX 75202-2733

Dear Mr. Davis:

This transmits to your office two copies of the Los Alamos National Laboratory Environmental Restoration Report for the period July-September Fiscal Year 1991, as well as a personal computer disk with an electronic copy of the report. The report is also being furnished to the New Mexico Environment Department, Water and Waste Management Division.

If you have comments or questions, please contact Steve Slaten of this office at 665-5050.

Sincerely,

Karl J. Twombly, Chief
Environment, Safety & Health Branch

LESH:1SS-051

Enclosures

cc w/o enclosures:
T. Gunderson, EM-DO, LANL, MS K491

8042

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

DATE: March 4, 1992
IN REPLY REFER TO: EM-DO:92-138
MAIL STOP: K491
TELEPHONE: (505) 665-3778
FTS 855-3778

Mr. Jerry Bellows, Area Manager
US Department of Energy
Los Alamos Area Office, MS A316
Los Alamos, NM 87544

Through: Allen J. Tiedman, Associate Director of Operations, LANL

Dear Mr. Bellows:

Enclosed are five copies each of the ER Program Monthly Management Reports for August and September, and the Quarterly Management Report for July-September, Fiscal Year 1991. Two copies of each report and the electronic copy of the text should be sent to Allyn M. Davis, Director of the Hazardous Waste Management Division, U.S. Environmental Protection Agency, Region IV, 1445 Ross Avenue, Dallas, TX 75202-2733. Two copies of each report should also be sent to Kathleen Sisneros, Director of Water and Waste Management Division, New Mexico Environment Department, Harold Runnels Bldg., 1190 St. Francis, Santa Fe, NM 87503. We have not included an electronic copy of the schedule and budget information. If the EPA would like to receive copies of this information, we can supply it at a later date. The schedule and budget information is generated by the Primavera software packages.

If I can be of further assistance, please do not hesitate to call.

Sincerely,

Thomas C. Gunderson
Environmental Management Division Leader

TG/RV/gc

Enclosures (a/s)

Cy: R. Sena, DOE-AL, MS A906, w/enc.
A. J. Tiedman, ADO, MS A120, w/enc.
J. Shipley, EE-AETO, MS F643, w/enc.
R. Vocke, EM-13, MS M992, w/enc.
L. Soholt, EM-13, MS M992, w/enc.
S. Montoya, EM-13, MS M992, w/enc.
D. Chavez, FIN-12, MS K498, w/enc.
H. Ettinger, EM-DO, MS K491, w/enc.
K. Hargis, EM-8, MS K490, w/enc.
J. White, EM-8, MS K490, w/enc.
S. Brown, LC, MS A187, wo/enc.
R. Coleman, PA-3, MS M314, w/enc.
EM-13 File (EM-13:92-151)
RPF, MS M707, w/enc.
CRM-4, MS A150, wo/enc.

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Los Alamos National Laboratory

Environmental Restoration

A Department of Energy environmental cleanup program

QUARTERLY REPORT

JULY - SEPTEMBER

FISCAL YEAR 1991

QUARTERLY REPORT

JULY-SEPTEMBER

FISCAL YEAR 1991

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 with the five-year plan for environmental restoration (ER). Each activity is identified by an activity data sheet (ADS) number and a title that describes the activity.

ASSESSMENT

ADS 1049--CANYONS ASSESSMENT (Project Leader: Sandy Wagner)

No activity

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

The data quality objectives (DQO) process was completed on all solid waste management units (SWMUs). Certain SWMUs were combined into "SWMU aggregates," SWMUs that have the same conceptual models to include receptors, and "SWMU groups"— one or more SWMUs and/or SWMU aggregates that can be addressed by a single sampling plan.

Eighteen sampling plans address all the SWMUs in the operable unit (OU). Each plan calls for a phased approach and delineates the activities required for Phase I and provides some possible activities if a Phase II is required.

The Los Alamos National Laboratory (LANL) draft of OU 1071 work plan was completed and distributed for internal Laboratory review. All sections are completed except the project management schedule, which will be developed during the first quarter of FY92.

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

During the fourth quarter of FY91, time and effort went into the homeowner notification process. The project leader and technician worked with International Technologies Corp. (IT), community relations, Facility for Information Management, Analysis, and Display (FIMAD), and other entities to come up with a list of homeowners whose property, or common ground if living in a development, intersected a SWMU. The homeowners were notified by letter from the DOE dated August 27, 1991, if they had a property impacted by a SWMU. A public meeting was held on September 10, 1991, following homeowner notification. The Technical Area (TA) 1 work plan outline was modified to bring it into line with the ER-favored outline, involving a considerable amount of narrative rewriting. The annexes to be included in the work plan are being done by a contractor and are 95% complete. The Environmental Protection Agency (EPA) has notified the ER Program that those OUs that contain private property owners should have a baseline risk assessment sampling plan developed as soon as possible, and this is a top priority for these specific work plans. The OU 1078 working team has completed a sampling plan that will allow a risk assessment to be done as soon as the Resource Conservation and Recovery Act (RCRA) facility investigation (RFI) is implemented and the first samples are collected and analyzed. Conceptual sampling plans for hillside SWMU aggregates and mesa top SWMU aggregates have now been written. Specific sampling plans for individual SWMU aggregates are now being worked on. Risk assessment models were investigated, and the working team has selected the models (DOE- and EPA -approved) that will be utilized to calculate risk over all of TA-1.

ADS 1079--TAs-10, -31, -32, AND -45 ASSESSMENT (Project Leader: Sandy Wagner)

The DQO document was finalized; sections of the RFI work plan were written as drafts. Draft RFI work plan was distributed for internal review. The internal draft deliverable date was September 30, 1991.

ADS 1066--NEPA DOCUMENTATION (Project Leader: Paul Aamodt)

During the fourth quarter of FY91, the appropriate scope and content for treatment, storage and disposal (TSD) estimates of schedule, cost, manpower and areas of expertise requirements for the completion of the TSD were developed. We evaluated past efforts of the subcontractor toward producing basic studies needed for TSD, and redirected/refined the areas where the subcontractor needed to concentrate, and the methodology by which studies could be developed.

ADS 1106--TA-21 ASSESSMENT (Project Leader: Micheline Devaurs)

The principal activity this quarter was planning for RFI field work scheduled to begin in FY 92. This activity included refining TA-21 RFI field work cost/schedule estimates, review of required SOPs for this work, and addressing health and safety (H&S) issues that need to be addressed prior to sampling. This quarter TA-21 technical personnel continued to plan data analysis and try to define needed Geographic Information System (GIS) inputs.

We met with EPA Region VI this quarter regarding the schedule for RFI field work at the TA-21 OU. Their principal concern was that in the schedule in the TA-21 work plan we were not sampling SWMUs fast enough. LANL must submit an addendum to the TA-21 work plan proposing an accelerated schedule before EPA will approve the TA-21 work plan.

Monitoring of Material Disposal Area (MDA) B field plots for water balance components continued at level of effort this quarter.

ADS 1122--TAs-33 AND -70 ASSESSMENT (Project Leader: Keith Dowler)

Uncertainties have existed about locations and contents of the landfill at East Site, the contents of waste pits at South Site, explosives-handling techniques in the trim building, and the use of solvents at the radiotelescope operation. These uncertainties have been answered by interviews with personnel directly involved in these activities.

Errors in a lithologic log have been corrected, and the description of area geology has been revised based on the corrected log. Additional surveillance data on the material disposal areas is being sought in order to better identify data needs and possibly reduce sampling requirements.

We have discussed the coordination of future decontamination and decommissioning (D & D) activities at the tritium facility with the personnel responsible for D & D. The earliest the facility will be ready for D & D is about four years. Our sampling plan will support the data needs to accomplish removal of contaminated outside structures.

Draft sampling plans have been developed for each of the four sites at TA-33. The plans still lack tabulated and graphic details. During the preparation of these sampling plans, it was recognized that certain sections in the RFI draft need to be reorganized to provide better continuity between sections in the draft.

A presentation explaining the Laboratory ER program and ER projects being planned for TA-33 was given to the management staff at the Bandelier National Monument. Bandelier Monument is the nearest neighbor to TA-33.

ADS 1129--TAs-5, -35, -42, -48, -52, -55, -63, AND -66 ASSESSMENT (Project Leader: Al Pratt)

Initial sections of RFI work plan are drafted. Draft RFI work plan was distributed for internal review.

ADS 1144--TA-49 ASSESSMENT (Project Leader: Gary Eller)

Specific accomplishments during the final quarter of FY91 included

- completion of preliminary sampling plans for several areas of TA-49 and preliminary drafts of several appendices, annexes and chapters;
- completion, review and acceptance of final report on TA-49 geophysics investigations conducted in June 1991; and
- conclusion of information search and interviews on TA-49 SWMUs.

ADS 1147--TA-50 ASSESSMENT (Project Leader: Tom Hakonson)

The sections on the geological and hydrological setting of OU-1147 were completed and are undergoing initial review. The mapping of subsurface structures at TA-50, to develop a feasible sampling plan for the liquid waste treatment SWMUs, was nearly completed. Publication quality figures are now being prepared for the work plan. NEPA documentation for OU-1147 was begun and is nearing completion.

ADS 1148--TAs-51 AND -54 ASSESSMENT (Project Leader: Bob Gilkeson, acting)

Steve Reneau, Geology and Geochemistry Group (EES-1), delivered a revised draft of existing information as the environmental settings of TAs -51 and -54. John Krueger completed a draft of

Chapter 1, Introduction, which was reviewed and commented on by the ER Program Office. Copies of Chapter 1 were sent to New Mexico Environment Department (NMED) and Region VI of the EPA for information and informal review.

Staff at Benchmark delivered sections of the work plan that are concerned with historical information on disposal activities in Areas J, L, and TA-54 West, and population demographics.

Staff of International Technology Corporation (IT) delivered sections of the work plan that are concerned with conceptual models, potential receptors, environmental pathways, environmental impacts, and historical information on waste disposal practices in Area G.

The ER Program Office reviewed the draft sections from Benchmark and IT and held a series of meetings to provide guidance for revision.

Bruce Trent continued his efforts to develop the computer model of flow and transport of volatile organic contaminants in the vadose zone at Area L. IT delivered a draft of sections concerned with the modeling and design of the vapor extraction system for Area L. The ER Program Office reviewed and commented on the draft sections and returned them to IT for revision.

Kathy Campbell, Statistics Group (A-1), performed a Kriging analysis of contaminant data for the volatile organic plume present in the vadose zone at Area L. The Kriging predicted that the plume was emanating from two different source areas within Area L. The results were provided to Bruce Trent of the Geoanalysis Group (EES-5) for incorporation into the computer model of flow and transportation in Area L.

Steve Reneau reviewed information on lithologic and hydrogeologic properties of the volcanic rocks in the subsurface at Area L to provide physical parameters required by the computer model.

ADS 2105--TECHNICAL SUPPORT FOR ASSESSMENT (Program Managers: Robert Vocke/Lars Soholt)

Decision Analysis The principal effort this quarter focused on developing strategies for institutionalizing decision analysis and defining how this approach would be implemented at all OUs in FY 92.

Benefit-Cost Analysis Tasks undertaken during the fourth quarter of FY91 for Phase I of the Cost-Effectiveness Analysis, Benefit-Cost Analysis to support the remedial investigation/feasibility studies [RFI/Corrective Measures Study (CMS)] process included the following:

- Collected and read pertinent regulations to be considered in the development of the cost effectiveness, benefit/cost framework.
- Collaborated with Dan Brooks, A-1, on decision analysis work and will orient all future work toward a cost-effective analysis within the decision analysis framework for site characterization and remediation activities at LANL. Benefit-cost analysis will play a more prominent role as costs of alternatives are quantified.
- Collected and reviewed literature pertaining to cost-effectiveness analysis as well as benefit-cost analysis as applied to environmental restoration.
- Designed a cost-effectiveness analysis framework.
- Collected unit cost data as well as total cost, by category, for TA-21 site characterization.

ADS 2107--ASSESSMENT MANAGEMENT (Program Managers: Robert Vocke/Lars Soholt)

Routine management activities continued through this quarter.

Health and Safety Work continued this quarter to help get the safety documentation complete for the field investigation that is to be started next quarter at TA -21. Part of the preparation included participation in self-initiated audits of the Environmental Restoration Program's health and safety work. The audits resulted in one finding concerning another group's support of this work and the preliminary identification of five concerns for which the appropriate group to take action had not been identified.

Quality Assurance/Quality Control EPA Region VI formally signed off on the ER Program Quality Program Plan and Generic Quality Assurance Project Plan. In a memo to William Honker (Chief, Region VI RCRA Permits Branch), Alva Smith (Chief, Region VI Office of Quality Assurance) stated, "A review of the Quality Assurance Program Plan of the Los Alamos National Laboratory was found to be excellent and a well focused document that is acceptable as written."

The interim action process was audited under the requirements of the recently approved Quality Program Plan (QPP) during the week of August 12. The audit findings are currently being resolved.

Two training sessions were conducted to the ER Quality Program and Administrative Procedures. Approximately 85 ER Program participants were trained at these sessions.

REMEDIATION

ADS 1067--RCRA MIXED WASTE STORAGE AND DISPOSAL FACILITY (Project Leader: Paul Aamodt)

Major accomplishments this quarter were updating the logic diagram for the Mixed Waste Storage and Disposal Facility (MWSDF) schedule and updating the cost estimate. This shows the MWSDF ready for startup during the third quarter of FY 1996 for a cost of about $19.5M (FY92-96 costs). Several engineering studies being conducted by Merrick/Dames and Moore either were completed or are nearing completion. These included MWSDF studies on Above Ground Storage/Disposal Facility, Project Management Plan, Performance Assessment, Part A & B Permit Applications, Waste Certification Plan and Waste Characterization Profile. The Enhanced Engineering Study is still in preparation and a draft report is due in late October.

ADS 2106--REMEDIATION MANAGEMENT (Program Managers: Robert Vocke/Lars Soholt)

Routine management activities continued through this quarter.

RCRA CLOSURES

ADS 1135--TA-40 SCRAP DETONATION SITE CLOSURE (Project Leader: John Krueger)

The public review and comment period for the TA-40 Scrap Detonation Site Closure Plan ended September 3. The New Mexico Environment Department received no public response. The NMED approved the Closure Plan effective 30 September 1991.