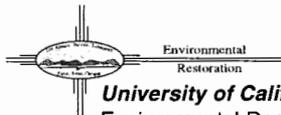


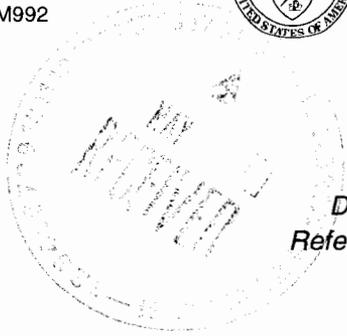
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U. S. Department of Energy
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Date: May 14, 1998
Refer to: EM/ER:98-139

G/m/R

Mr. Benito Garcia
NMED-HRMB
P.O. Box 26110
Santa Fe, NM 87502

**SUBJECT: QUARTERLY TECHNICAL REPORT FOR
JANUARY — MARCH 1998**

Dear Mr. Garcia:

Enclosed are two copies of the Environmental Restoration Project's Quarterly Technical Report, January–March 1998. The Quarterly Technical Report presents information from each focus area on the quarter's activities, including sampling, cleanups, and report writing. Also enclosed is a certification statement signed by the designee owner and operator for the Los Alamos National Laboratory.

If you have questions regarding this report, please contact Tori George at (505) 665-6953 or Joe Mose at (505) 667-5808.

Sincerely,

Julie A. Canepa, Program Manager
LANL/ER Project

Sincerely,

Theodore J. Taylor, Program Manager
DOE/LAO

JC/TT/ss

- Enclosures: (1) Quarterly Technical Report, January–March 1998
(2) Certification



8163

TC

Cy (w/ encs.):

M. Boettner, EM/ER, MS M992 (2 copies)
J. Brown, FSS-16, MS F674
A. Dorries, TSA-11, MS M992
D. Farley, EES-1, MS D462
T. George, EM/ER, MS M992
L. Maassen, EM/ER, MS M992
R. Michelotti, CST-7, MS E525
J. Mose, LAAO, MS A316
D. Neleigh, EPA, R.6, 6PD-N
J. Plum, LAAO, MS A316
A. Pratt, EES-13, MS J521
G. Rael, AL-ERD, MS A906
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T. Taylor, LAAO, MS A316
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S. Dinwiddie, NMED-HRMB
M. Leavitt, NMED-GWQB
J. Parker, NMED-HRMB
G. Saums, NMED-SWQB
S. Yanicak, NMED-AIP, MS J993
RPF, MS M707

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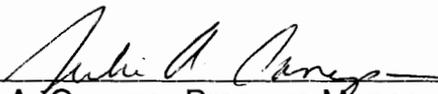
T. Baca, EM, MS J591
D. Bradbury, EM/ER, MS M992
B. Martin, EM/ER, MS M992
J. Vozella, LAAO, MS A316
EM/ER File, MS M992

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 gathered and evaluated 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: Quarterly Technical Report, January-March 1998

Name:


Julie A. Canepa, Program Manager
Environmental Restoration Project
Los Alamos National Laboratory

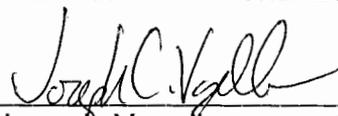
Date:

5/14/98

or

Tom Baca, Division Director
Environmental Management
Los Alamos National Laboratory

Name:


Joseph Vozella,
Acting Assistant Area Manager of
Environmental Projects
Environment, Safety, and Health Branch
DOE-Los Alamos Area Office

Date:

5/14/98

or

Theodore J. Taylor, Program Manager
Environmental Restoration Program
DOE-Los Alamos Area Office

LA-UR-98-2044

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Los Alamos National Laboratory
Environmental Restoration

A Department of Energy Environmental Cleanup Program

QUARTERLY TECHNICAL REPORT
JANUARY–MARCH 1998

May 12, 1998

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ACRONYMS AND ABBREVIATIONS

AP	Administrative procedure
BMP	Best management practice
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CMS	Corrective measures study
DECP	Department of Environment and Cultural Preservation
DOE	US Department of Energy
ER	Environmental restoration
ESH	Environment, Safety, and Health (Division)
ESH-18	Water Quality and Hydrology Group
ESH-19	Hazardous and Solid Waste Group
FY	Fiscal year
GIT	Groundwater Integrating Team
HE	High explosives
HSWA	Hazardous and Solid Waste Amendments
ITRD	Innovative Treatment Remediation Demonstration
LANL	Los Alamos National Laboratory
MDA	Material disposal area
NFA	No Further Action
NMED	New Mexico Environment Department
PCB	Polychlorinated biphenyl
PE	Performance evaluation
PRS	Potential release site
PVC	Polyvinyl chloride
RCRA	Resource Conservation and Recovery Act
RFI	RCRA facility investigation
SAP	Sampling and analysis plan
SOP	Standard operating procedure
TA	Technical area
VCA	Voluntary corrective action
VCM	Voluntary corrective measure

**QUARTERLY TECHNICAL REPORT
JANUARY-MARCH 1998
LOS ALAMOS NATIONAL LABORATORY
ENVIRONMENTAL RESTORATION PROJECT**

ALBUQUERQUE OPERATIONS OFFICE

CONTRACTOR: University of California

PROJECT MANAGER: Julie Canepa

NUMBER OF POTENTIAL RELEASE SITES: Approximately 2,000

POTENTIAL WASTE: Radionuclides, High Explosives, Metals, Organics

1.0 INTRODUCTION

This quarterly report describes the technical status of activities in the Los Alamos National Laboratory (the Laboratory) Environmental Restoration (ER) Project. The activities are reported according to the new focus area structure. Within each focus area, the activities are further divided according to focus area teams performing the work or by technical area (TA) or canyon where specific activities are located. The Hazardous and Solid Waste Amendments (HSWA) portion of the Laboratory's Hazardous Waste Facility Permit (Module VIII, Section P, Task V, C) requires the submission of a technical progress report on a quarterly basis. This report, submitted to fulfill the permit's requirement, summarizes the significant work performed this quarter in the ER Project.

2.0 FOCUS AREAS

2.1 Canyons — Focus Area Leader: Allyn Pratt

The Canyons Focus Area was organized into two teams: one team addresses Canyons activities and the other team addresses activities at the industrialized canyon sites, TAs 2, 18, 27, and 41.

2.1.1 General Information for Canyons Focus Area

General activities for the Canyons Focus Area this quarter included the following:

- Completed the access agreement with San Ildefonso Pueblo and Los Alamos County for field work in Los Alamos Canyon and Pueblo Canyon;
- Assisted in preparing a response to the request for supplemental information for the December 1996 Installation Work Plan;
- Installed a baseline groundwater quality alluvial monitoring well (BG-4) in Threemile Canyon; and
- Provided support for the response to the request for supplemental information on the *Core Document for Canyons Investigations*.

2.1.2 Canyon Activities

2.1.2.1 Cañon de Valle

Focus area personnel visited TA-16 to identify the location for regional well R-25 in Cañon de Valle. Drilling is scheduled to begin during the fourth quarter of FY98.

2.1.2.2 Los Alamos Canyon

Personnel began validating analytical results on all sediment samples collected from the Los Alamos Canyon reaches and completed monthly water-level measurements.

Regional Well R-9 The well was drilled to a depth of 710 ft and a temporary well was constructed. Work will resume in late spring or early summer after core and groundwater data from R-9 and R-12 (in Sandia Canyon) are further evaluated. Personnel evaluated the quality of the water data set for the R-9 intermediate zones and delivered the data and a summary of the evaluation to the New Mexico Environment Department (NMED).

High-resolution maps were prepared for the San Ildefonso asbestos cleanup in Los Alamos Canyon.

2.1.2.3 Mortandad Canyon

In preparation for field work, personnel completed the Environment, Safety, and Health Identification (ESH-ID) process and the draft Site-Specific Health and Safety Plan, which was sent to reviewers in ESH Division.

In preparation for the 1998 field work, focus area personnel performed field reconnaissance in reaches E-1, M-1, M-2, TS-1, and TS-2 in the Mortandad Canyon watershed to define the geographic extent of the investigation.

2.1.2.4 Pajarito Canyon

Personnel continued work on the Pajarito Canyon work plan. The first six chapters are in various draft stages, the preliminary requirements for the sampling and analysis plan (SAP) are being determined, and portions of Chapter 7 have been drafted and were discussed with the peer review team. Comments from the initial peer review of the conceptual model were reviewed and are being incorporated.

Two alluvial characterization wells (PAO-5N and PAO-5S) were drilled and constructed. Water samples were collected from three boreholes during the field activities.

2.1.2.5 Pueblo Canyon

Personnel completed the ESH-ID process in preparation for drilling six alluvial wells in Pueblo Canyon. Four boreholes were drilled in reaches P-2 and P-3 of Pueblo Canyon to collect sediment samples and determine the vertical extent of contamination. Personnel began validating analytical results on all sediment samples collected from the Pueblo Canyon reaches and began writing the first of three reach reports, which covers sediment investigations in reaches P-1, P-2, P-3, and P-4.

Monthly water-level measurements were completed.

2.1.2.6 Sandia Canyon

R-12 Regional Well Activities began in preparation for drilling the R-12 regional well. Personnel completed the field implementation plan, obtained permits, completed all field preparatory work, and held the readiness review. The well was drilled and cased to 430 ft.

2.1.3 Technical Area Activities

2.1.3.1 TA-18

Investigators collected waste characterization samples for the interim action waste streams at the Potential Release Site (PRS) 18-003(a) settling pit and conducted one round of quarterly groundwater sampling at PRS 18-003(d), a septic tank.

2.2 Material Disposal Areas — Acting Focus Area Leader: Allyn Pratt

The Material Disposal Area was organized into three teams. One team addresses TA-21 sites; the second team addresses sites at TAs 49, 51, and 54; the third team addresses TA-50 sites.

2.2.1 General Information for Material Disposal Areas Focus Area

Focus area personnel continued analytical data management, validation, and environmental monitoring as required. They reprioritized tasks within the new management structure, and worked on FY98 performance measures.

2.2.2 Technical Area Activities

2.2.2.1 TA-21

The first phase of the DP Canyon RFI was completed in February 1998.

PRS 21-015 (MDA B) The SAP and field work at Material Disposal Area (MDA) B was delayed awaiting reprioritization.

PRS 21-024(i) The technical team began rewriting the voluntary corrective action (VCA) plan for the outfall and septic system to include the new waste disposal plan. Waste characterization work performed in FY97 assumed disposal at TA-54 because of the radionuclides present; however, subsequent guidance indicates offsite disposal will be required.

2.2.2.2 TA-49

PRS 49-001(b) A stabilization plan was prepared for the BMP at the TA-49 Asphalt Pad; an internal peer review and presentation to NMED was held for the first stage of the work.

2.2.2.3 TA-50

PRS 50-009 (MDA C) Personnel completed the internal review of the Phase 1, Stage 1, report for MDA C.

2.2.2.4 TA-54

PRS 54-006 (MDA L) Technical delay issues were resolved and work has progressed on the MDA L pilot study. Mathematical modeling of the subsurface vapor plume's response to atmospheric pressure changes continues, and planning was initiated for a tracer experiment to check predictions in the fractured deep basalt rocks.

Quarterly pore-gas sampling to monitor the subsurface volatile organic vapor plume at MDA L revealed that the edge of the plume had not moved and that there are no unexpected concentrations or new contaminants.

2.3 Remedial Actions — Focus Area Leader: Roy Michelotti

The Remedial Actions Focus Area has been organized into the following five teams: High Explosives (HE) Production Sites, Firing Sites, Industrial Sites, Town Sites, and MDA-P Closure.

2.3.1 HE Production Sites Team

The HE Production Sites field team submitted LANL-ER-AP-4.5, "Evaluation and Notification of Potential Surface Water Concerns at Environmental Restoration Sites," information to the Laboratory's Water Quality and Hydrology Group (ESH-18).

2.3.1.1 TA-9

The field team maintained the BMP at PRS 9-013 (MDA M) and submitted the associated documentation to ESH-18.

2.3.1.2 TA-16

PRSs 16-021(c) and 16-003(k) Field activities at the TA-16-260 Outfall included checking the monitoring wells and placing a fence around the 260 pond to keep out large animals.

The team met with NMED to provide an update on activities at the TA-16-260 Outfall and to discuss the new RFI report for that site. Based on the discussions, the technical team prepared a draft describing the hydrogeologic conceptual model. The team toured the site with NMED to aid development and discussion of the conceptual model.

Work on other documents continued this quarter. The team completed a response to the NMED Approval with Modifications for the September 1996 RFI Report on the 260 Outfall and continued work on the Field Summary Report and on the corrective measures study (CMS) plan. The response was approved by NMED.

Team members met with NMED risk assessors to continue dialog regarding the RFI/CMS process.

An updated CMS approach and outline was presented to NMED. Team members met with Innovative Treatment Remediation Demonstration (ITRD) participants to screen feasible HE remediation technologies. NMED participated in these ITRD activities.

V-Site In January, the team surveyed the basement of Building 27 for damage to the concrete foundation and conducted HE spot testing around the perimeter of the building. The building was subsequently removed. Seven perimeter locations and the shower area required soil

removal. Verification and bounding samples were collected in accordance with the voluntary corrective measure (VCM) plan. In March, the field team continued to excavate at former building TA-16-27 and removed soil until HE screening results were negative. Verification samples were collected from the excavation.

TA-16 Hydrology Throughout the quarter, springs were sampled daily for bromide tracer; the sampling revealed no bromide above background level.

In January, the field team completed drilling, sampling, and logging activities in borehole (BH) 16-2757. The drilling revealed an increase in soil moisture in the interval between 199 and 200 feet, but no additional indicators of groundwater were observed between 200 and 204 ft. No samples were contaminated with RDX or TNT.

The team also initiated drilling, sampling, and logging activities at BH 16-2668, which is located 75 meters north of TA-16-300. The borehole, which targets a geophysical anomaly identified at this location, was drilled to 165 ft, and screening samples were collected at various depths. Two of the screening samples were contaminated with low levels of TNT. The field team cased and sealed the borehole.

In February, the field team mobilized to BH 16-2669, located east of the 90s Line Pond shoreline. The borehole was drilled to a depth of 165 ft. A distinct surge bed was intersected at 37.5 ft where an analytical sample was collected, and a saturated horizon was intersected at approximately 143 ft. The team installed a 2-in. polyvinyl chloride (PVC) monitoring well. The team will return at a later date to complete the installation of PVC casing in the borehole.

2.3.2 Firing Sites Team

The team presented PRSs 14-002(a), 14-010, 15-009(d, e, and j), and 15-012(b) to the ecological risk assessment group for review of ecological concerns.

2.3.2.1 Technical Area Activities

2.3.2.1.1 TA-14

The field team maintained BMPs at PRSs 14-002(a), 14-003, 14-009, and 14-010 and submitted the associated documentation to ESH-18.

2.3.2.1.2 TA-15

Work continued on the BMPs at TA-15. The field team began BMP activities at PRS 15-009(c) and maintained BMPs at PRSs 15-004(f), 15-006(c), and 15-008(a and b). They submitted the associated documentation to ESH-18.

During the quarter, waste from all firing sites was disposed according to applicable regulations.

The team performed the following document preparation activities this quarter:

- Continued work on the NMED Request for Supplemental Information for the 1995 TA-15 RFI Report;
- Prepared the SAP for PRS C-15-004 and incorporated comments from the peer review;

- Completed the interim action plan for PRS 15-009(c) and scheduled it for peer review the week of April 6, 1998; and
- Conducted a peer review for the SAP for PRSs 15-009(f) and 15-009(k).

2.3.2.1.3 TA-33

The field team submitted LANL-ER-AP 4.5 information to ESH-18 and continued waste management activities at TA-33.

PRS 33-004(a) Demobilization and cleanup at the PRS 33-004(a) septic system was completed.

2.3.2.1.4 TA-36

PRS 36-006 Personnel began planning for the remediation of PRS 36-006, a surface disposal area. They prepared a draft interim action plan and submitted it for peer review.

2.3.2.1.5 TA-39

RFI-related samples from the 1996 sampling of the landfills at TA-39 were processed and shipped for disposal. The team continued work on the NMED Request for Supplemental Information on the TA-39 RFI report and addressed field work requirements for the revision of the RFI report.

2.3.3 Industrial Sites Team

2.3.3.1 Technical Area Activities

2.3.3.1.1 TA-3

PRS 3-014 (m) A draft polychlorinated biphenyl (PCB) notification letter was written for the sludge-drying bed and submitted to ESH-18 for internal approval.

PRS 3-014(n) Confirmatory samples indicated the required soil cleanup levels were not reached at the PRS 3-014(n) oil dumping site; therefore, personnel from Johnson Controls Northern New Mexico are scheduled to return to the site to remove material until cleanup levels are reached.

PRS 3-056(c) Preparation of the VCA plan for PRS 3-056(c), the transformer storage area, began this quarter but is currently on hold until pending contracts have been finalized. The map locating all contaminants of potential concern at this site has been completed.

Upper Sandia Canyon The SAP for Upper Sandia Canyon was completed and sent to NMED on March 31, 1998. The readiness review was held, and all necessary documents were assembled. The Waste Characterization Strategy Form was completed. Geomorphic mapping is scheduled to begin on April 6, 1998, and will continue for approximately two weeks.

The Laboratory awaits clarification from NMED concerning a disapproval notice for the RFI Work Plan for Operable Unit 1114, Addendum 1 (LANL 1995, 57590).

2.3.3.1.2 TA-35

Personnel performed data assessment and evaluation activities for TA-35 PRSs. They worked on base maps to be used at the strategic site team meetings to choose sites to be proposed for no further action (NFA) as part of the performance measures for FY98. PRSs 35-003(a, b, c, n); PRS 35-014(g₁); PRS 35-016(n); and PRS C-35-007 passed the human health screening assessment. PRSs 35-003(d, e, f, g, l, m, o, q, and r) need a more complete data assessment, including transport modeling and a baseline risk assessment.

2.3.3.1.3 TA-42

Personnel addressed the concerns about the TA-42 PRSs located near the site of a proposed TA-55 building. They mapped several contaminants of concern at the site, including americium, lead, and plutonium.

Work continued on the TA-42 SAP. Activities included historical and archival research; completion of the SAP design, including the conceptual model and data quality objectives process; meeting with the TA-55 facility manager to discuss best management practices (BMPs) at TA-42; and preparation of the draft SAP according to latest version of the SAP outline. The SAP preparation was moved to out-year activities because these PRSs will not contribute to FY98 performance measures.

2.3.3.1.4 TA-46

Remaining LANL-ER-AP 4.5 Part A sections and data packages for TA-46 were completed for February submittal.

2.3.3.1.5 TA-53

PRSs 53-002(a and b) Personnel are working on the RFI work plan for these PRSs. The SAP design is complete, and decision peer review is scheduled for mid April.

PRSs 53-006(a-f) In January, a SAP was written for nonintrusive leak testing of the six TA-53 radioactive decay tanks, PRSs 53-006(a-f). This activity has been delayed because of pending decisions regarding the future use of the tanks.

2.3.3.1.6 TA-55

Work continued on the TA-55 RFI Report, which addresses the PRS 55-009 sumps and tanks. Personnel evaluated data quality and prepared a draft summary of quality assurance/quality control activities for Chapters 1 and 2 and revised Appendices B, C, D, and G. They conducted a site tour to document site conditions and photographed the site to support the conclusions presented in the report. Personnel presented the results of the PRS 55-009 investigation at a peer review, addressed peer review comments, and revised the report based on the new RFI report annotated outline.

2.3.3.1.7 TA-60

As of February, all waste oil from the Sigma Mesa oil spill was collected, removed, and sent for recycling.

2.3.4 Town Sites Team

The Laboratory received rejections from NMED of the RFI report for PRSs 0-030(b), 0-004, 0-010(b), and 0-033(b) (the 6th Street Warehouses) and the RFI report for PRSs 1-002, 1-001(t), and 1-007(k) (Aggregates K, L, M, and O). Responses are pending a decision whether SAPs are needed to determine nature and extent.

In January, the team submitted a plan to the US Department of Energy (DOE) presenting possible alternatives for the protection of PRSs in the Research Park Tract.

2.3.4.1 Technical Area Activities

2.3.4.1.1 TA-0

PRS 0-017 A meeting was held with the Los Alamos Medical Center (LAMC) administrator and staff, the Regulatory Compliance Focus Area staff, and Remedial Actions Focus Area staff to discuss LAMC's plans to build on a site that may contain remnant acid waste lines (PRS 0-017). Archival research is ongoing to determine if these remnant acid waste lines are still present underneath LAMC and other town sites.

PRS 0-019 Los Alamos County has signed the access agreement for PRS 0-019, the Central Waste Water Treatment Plant. The peer review for the draft VCA plan for PRS 0-019 raised some concerns that need to be addressed before the Town Sites Team proceeds with the VCA plan. The peer review team will provide direction on developing a new approach for the VCA.

PRS 0-027 The technical team completed a baseline risk assessment inside the Knights of Columbus building, which is associated with the PRS 0-027 DP Road Investigation. They reviewed the data and human health risk assessment.

2.3.4.1.2 TA-1

The NMED Oversight Bureau presented results of sampling sediment in storm water collected in runoff below Hillside 137 (Aggregate G). A site tour was conducted to evaluate the use of BMPs to control the plutonium migration. The ER Surface Water Assessment Team addressed the erosion problem, and an implementation plan was developed to address erosion control for Hillside 137.

As of March, erosion control work at Hillside 137 was put on hold pending a DOE decision on a policy for handling non-DOE property impacts on DOE properties. At this particular site, a private landowner made changes to his/her property that inadvertently affected the storm water patterns. As a result, increased erosion occurred adjacent to a series of PRSs.

2.3.4.1.3 TA-10

In January, the TA-10 technical team began work on the CMS work plan for the central area in Bayo Canyon, which contains surface and subsurface soil contaminated with strontium-90. The field team continues to inspect and maintain storm water controls in the area of the strontium-90-contaminated chamisa plants [PRSs 10-002(a and b), 10-003(a-o), 10-004(a and b), 10-005, and 10-007]. The CMS has been suspended and removed from this fiscal year's activities.

2.3.4.1.4 TA-19

All waste for PRSs 19-001, 19-003, and Area of Concern C-19-001 was disposed at a Colorado disposal facility.

2.3.4.1.5 TA-45

In February, Los Alamos County signed the access agreement for TA-45.

2.3.4.1.6 TA-73

In February, the team began preparation of the SAP for Aggregate 73-2, the PRSs west and south of the Los Alamos Airport terminal.

PRS 73-001(a) Work progressed on the RFI report for the TA-73 landfill, PRS 73-001(a). The team prepared the report and modeled current conditions at the landfill. An initial peer review was held for the RFI report. The reviewers supported the technical team's approach and proposed assumptions that will drive the report. A timeline was developed and report writing has begun.

PRS 73-002 A status report on the RFI of the incinerator ash debris slope (PRS 73-002) was presented to NMED on January 15, 1998. Surface water quality issues appeared to be the primary concern. In February, the status of the PRS was discussed at the Surface Water Assessment Team meeting where remedial alternatives were reviewed in preparation for a VCA plan. A statement of work is currently being developed for the VCA plan.

PRS 73-004(b) The team presented VCA results and risk estimates for PRS 73-004(b), a septic tank that served the Steam Cleaning Plant, to HRMB on January 15, 1998. The HRMB requested further sampling for extent.

2.3.5 MDA P Closure

In February, personnel developed an implementation plan to satisfy the safety concerns raised for handling and disposal of detonable HE.

The team began to replan the Closure Implementation and a Hazard Control Plan, which address excavation, segregation, and disposal of detonable HE and all other waste streams anticipated at MDA P. Treatability studies for HE are planned. Johnson Controls Northern New Mexico completed design work for the replacement burn pad.

The team is drafting a facility tenant agreement that transfers ownership of MDA P to the ER Project until all closure activities are satisfactorily completed.

The Waste Site Studies Team in the Laboratory's Hazardous and Solid Waste Group (ESH-19) collected water samples from each of the three runoff control trenches at MDA P and submitted them for the full suite of analyses as identified in the closure plan. The analytical results will be used in decisions regarding ultimate disposal of effluent in the three trenches. The team submitted to ESH-18 a draft notice of intent to discharge.

2.4 Analysis and Assessments — Focus Area Leader: Alison Dorries

2.4.1 General Information for Analysis and Assessments Focus Area

Personnel from the Analysis and Assessments Focus Area established four teams to accomplish work under the new ER Project structure.

The four teams worked together on the following activities:

- Continued working with NMED to develop the RFI report annotated outline and the model RFI report and participated in a training session to present the outline to ER Project personnel.
- Worked with NMED regarding the format and content of LANL sampling and analysis plans. They also drafted SAP review criteria for use in the peer review process.
- Participated in the peer review process for ER Project documents.
- Provided ongoing support to the three operational focus areas (MDAs, Canyons, and Remedial Actions) to meet performance measures.

2.4.2 Team Activities

2.4.2.1 Data Analysis and Assessment Team

Personnel worked on various documents this quarter. They addressed HRMB comments on the draft background data summary paper, which addresses the use of environmental surveillance data to derive baseline values for fallout radionuclides, and distributed tables of background values to ER Project personnel. They also continued work on the "Implementation Guide for Reporting Analytical Data," which will detail the requirements for the LANL ER electronic data deliverable to be used by the subcontractor analytical laboratories and helped prepare the response to the NMED Request for Supplemental Information for the December 1996 Installation Work Plan.

Other tasks included the following:

- Began reviewing LANL ER data validation standard operating procedures (SOPs); completed draft data validation SOPs for volatile organic compounds, semivolatile organic compounds, and HE; and began revising the SOP for quality control samples.
- Assisted Facility for Information Management, Analysis, and Display personnel with the ongoing efforts to improve the analytic database tables.
- Continued working on the quality control oversight task, which included preparing a draft document that establishes the plan for future quality control activities and assembling field screening data for comparison with fixed laboratory results.
- Began work on the statistical design for the performance evaluation (PE) samples study for tritium analysis. Water PE samples will be sent to all the ER Project subcontractor analytical laboratories that perform tritium analysis. The PE samples are intended to assess the accuracy of tritium measurements, and the results of the PE study will support the Canyons Focus Area hydrological investigations.

2.4.2.2 Physical Modeling and Characterization Team

This quarter the team began compiling an inventory of modeling and characterization needs for each operational focus area.

Members contributed to the Groundwater Integrating Team (GIT) efforts to improve deep drilling activities, siting boreholes, and completing the annual status report for the hydrogeologic workplan. As part of a collaborative effort between the Canyons deep drilling team, the Remedial Actions HE Production Team, and the GIT, members of the Physical Modeling and Characterization Team have worked on siting deep well R-25 at TA-16. The effort included an initial siting tour with NMED representatives present.

The team continued managing "special projects," which address sitewide or multifocus area hydrogeologic issues. Work is continuing on the 3-D stratigraphic model project for the Pajarito Plateau. The 3-D model is being revised based on results from borehole R-9, and pre-Bandelier stratigraphy is being added. An additional round of sampling has been conducted for the background water chemistry project, and the chloride and isotope profile project has begun stable isotope analyses of core from the building 300 and SWSC Cut boreholes at TA-16.

Work is progressing in collaboration with the GIT on the sitewide regional aquifer modeling (establishing Española Basin stratigraphy and hydrologic properties).

2.4.2.3 Risk Assessment Team

Ecological Risk Assessment Team members completed the following tasks:

- Developed an ecological screening approach, which includes a toxic reference dose methodology and a scoping checklist, and field-tested the approach with representatives from NMED present;
- Began ecological risk assessment work in support of the Airport Landfill performance measure;
- Met with NMED personnel to discuss expectations of the ecological risk screening process;
- Continued support to the DOE Risk Assessment Team in development of the collaborative Ecological Risk Assessment Methodology document; and
- Reviewed 100 PRSs for ecological risk concerns in support of the effort to identify PRSs for part of the FY98 performance measures.

The Human Health Risk Assessment Team supported the development of the RFI report and CMS plan for the 260 Outfall performance measures and met with HRMB risk assessment personnel to discuss the risk assessment approach for the RFI report for the 260 Outfall. They also performed human health risk assessment support for the Airport Landfill and the Upper Sandia Canyon SAP.

2.4.2.4 Strategic Interface Team

The team performed the following activities this quarter:

- Initiated an effort to develop an inventory approach to addressing the potential for surface water concerns.

- Conducted more than 30 peer review sessions, followed up on previous reviews, scheduled future reviews, and continued to refine the peer review process.
- Finalized the SAP review criteria.
- Began development of a core document for the MDA Focus Area. The team defined the contents of the document, which will describe a streamlined approach to CMSs for the MDAs.
- Began working with the Canyons Focus Area to develop a decision logic for the canyons.
- Arranged with San Ildefonso's Department of Environment and Cultural Preservation (DECP) to have a DECP staff member work part time for the LANL ER Project to assist in developing parameters for the Native American scenario.

2.5 Regulatory Compliance — Focus Area Leader: Tori George

Personnel from the Regulatory Compliance Focus Area established three teams to accomplish work under the new ER Project structure.

2.5.1 ER Policy and Guidance Team

The ER Policy and Guidance Team is addressing issues regarding the quality of ER deliverables. They began working to incorporate current needs, to increase programmatic efficiency, and to promote successful and quicker regulator review. The following activities occurred as a result of these efforts.

- Prepared a prioritized list of documents for NMED to use to determine the preferred order for review of documents already delivered to them.
- Began reviewing documents already submitted to NMED in order to determine which documents need to be revised to meet current NMED guidance. This effort is intended to eliminate repetitive notices of deficiency and requests for supplemental information.
- Worked with the Analysis and Assessments Focus Area and NMED to develop a workable annotated outline for future RFI reports and began generating a model report.
- Began reviewing the format and content of existing SAPs in order to allow prioritization of FY98 field work. ER Project personnel met with NMED on January 15 to discuss SAPs selected for 1998 field work.
- Established and continued addressing the needs and improvement of the peer review process for deliverables.

2.5.2 Regulatory Integration and Operations Team

Regulatory Integration and Operations personnel continued interaction with NMED regarding the development of fee regulations. They also continued involvement with monthly technical meetings with the NMED Surface Water Bureau, Ground Water Bureau, and the Hazardous and Radioactive Materials Bureau.

The Surface Water Assessment Team evaluated surface water concerns and made recommendations for 65 PRSs—46 high-priority sites and 19 medium-priority sites. The team comprises representatives from the ER Regulatory Compliance Focus Area, ER operational focus areas, ESH-18, the DOE Oversight Bureau, and LANL Facility Management.

Waste minimization efforts continued. Staff attended Pollution Prevention Opportunity Assessment training and attended monthly meetings with Sandia National Laboratories concerning lessons learned and opportunities in the field of waste minimization.

The ER Project continued its involvement with the CERCLA Natural Resource Damage Assessment (NRDA) process to assist in identifying potential injury to natural resources, evaluate environmental restoration alternatives, and minimize adverse impacts to natural resources during remediation. During the quarter, meetings were held at Santa Clara Pueblo, Santa Fe, and Cochiti Pueblo to continue revising a draft memorandum of agreement establishing a Natural Resource Trustee Council to use NRDA as a remedy selection process for restoration of natural resources injured or natural resource services lost. A draft ER/NRDA Integration Plan to achieve an efficient and cost-effective resolution of natural resource liability related to contaminant releases at the Laboratory is in the review process.

2.5.3. Outreach and Involvement Team

The Outreach and Involvement Team participated in several meetings this quarter: the Eight Northern Indian Pueblo Environmental Conference on March 18–19, the ES&H meeting in Santa Fe on February 24, a meeting with San Ildefonso Pueblo on environmental issues, and a meeting with Los Alamos County regarding ER issues. The team also participated in a site tour with the Citizens Advisory Board on March 12 and negotiated 4 access agreements and 10 public inquiries

Other tasks in progress include planning the public meetings regarding DOE's Paths to Closure strategy and the ER Information Forum, preparing the ER Outreach and Involvement Plan, developing the Website Program Development Plan, and preparing for the LANL Green Day, which is scheduled for August 1998.

3.0 REFERENCE

LANL (Los Alamos National Laboratory), July 1995. "RFI Work Plan for Operable Unit 1114, Addendum 1," Los Alamos National Laboratory Report LA-UR-95-731, Los Alamos, New Mexico. (LANL 1995, 57590)