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John K

Date: November 14, 1997
 Refer to: EM/ER:97-441

HSWA LANL 6/11/97

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

**SUBJECT: QUARTERLY TECHNICAL REPORT FOR
 JULY-SEPTEMBER 1997**

Dear Mr. Garcia:

Enclosed are two copies of the Environmental Restoration Project's Quarterly Technical Report, July-September 1997. The Quarterly Technical Report presents information from each field unit 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 Dave McInroy at (505) 667-0819 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/rfr

- Enclosures: (1) Quarterly Technical Report, July-September 1997
 (2) Certification

T2



Cy (w/ encs):

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J. Brown, FSS-16, MS F674
G. Gould, EES-15, MS J495
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CERTIFICATION

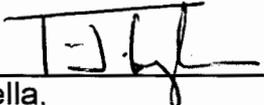
I certify under penalty of law that these documents and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage 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, July-September 1997

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Los Alamos National Laboratory

or

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Los Alamos National Laboratory
Environmental Restoration

A Department of Energy Environmental Cleanup Program

QUARTERLY TECHNICAL REPORT
JULY-SEPTEMBER 1997

November 14, 1997

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LIST OF ACRONYMS AND ABBREVIATIONS

BMP	Best management practice
D & D	Decontamination and decommissioning
DOE	US Department of Energy
ER	Environmental restoration
ESH	Environment, Safety, and Health (Division)
ESH-18	Water Quality and Hydrology Group
FY	Fiscal year
HE	High explosives
HSWA	Hazardous and Solid Waste Amendments
LANL	Los Alamos National Laboratory
MDA	Material disposal area
NFA	No Further Action
NMED	New Mexico Environment Department
NOD	Notice of deficiency
NPDES	National pollutant discharge elimination system
OU	Operable unit
PCB	polychlorinated biphenyl
PRS	Potential release site
RCRA	Resource Conservation and Recovery Act
RFI	RCRA facility investigation
SAP	Sampling and analysis plan
TA	Technical area
TCA	Trichlorethane
VCA	Voluntary corrective action
VCM	Voluntary corrective measure

**QUARTERLY TECHNICAL REPORT
JULY—SEPTEMBER 1997
LOS ALAMOS NATIONAL LABORATORY
ENVIRONMENTAL RESTORATION PROJECT**

ALBUQUERQUE OPERATIONS OFFICE

CONTRACTOR: University of California

PROJECT MANAGER: Jorg Jansen

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 divided according to field units and then by the technical area (TA) where the specific activity is 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 much of the field work performed this quarter in the ER Project.

2.0 FIELD UNITS

2.1 Field Unit 1 — Technical Areas 0, 1, 3, 10, 19, 21, 26, 30, 31, 32, 43, 45, 59, 60, 61, 64, 73, and 74 (Field Project Leader: Garry Allen)

2.1.1 General Information for Field Unit 1

In the fourth quarter of 1997, Resource Conservation and Recovery Act (RCRA) facility investigation (RFI) planning, notice of deficiency (NOD) response preparation, drilling activities, and sampling continued at Technical Areas (TAs) -0, -1, -10, -19, -21, and -73.

RFI reports completed this quarter include

- the RFI report for TA-0, Western Steam Plant [Potential Release Sites (PRSs) 0-003 and 0-012];
- the RFI report for TA-0, Pueblo Waste Water Treatment Plant [PRS 0-018(a)] and Bayo Canyon Waste Water Treatment Plant [PRS 0-018(b)];
- the RFI/VCA report for TA-0, PRSs 0-030(d,k) and C-0-043;
- the RFI report for PRSs 0-034(a,b), 73-001(b), and 73-004(c,d);

- the RFI report for TA-1, Aggregates N and P [PRSs 1-001(s,u) and 1-007(l)];
- the RFI report for TA-3, NPDES permitted outfall in Mortandad Canyon [PRSs 3-054(e) and C-3-006];
- the RFI report for TA-3, PRSs 3-004(c,d), 3-007, 3-014(k,l,o), 3-021, 3-049(a), 3-052(b), 3-056(k), and C-3-0-014);
- the RFI report for TA-3, exhaust stains [PRS 3-049(b)];
- the RFI report for TA-10, Bayo Canyon Renegade Firing Site (PRS 10-008);
- the RFI report for TA-19, PRSs 19-001, 19-003, and 19-C-001;
- the RFI report for TA-21, aboveground tanks [PRSs 21-004(a-c)];
- the RFI report for TA-21, PRSs 21-013(a) and 21-026(a-c); and
- the RFI report for TA-21, active container storage areas [PRSs 21-028(d,e)].

RFI and voluntary corrective action (VCA) reports in preparation this quarter include

- the RFI report for TA-0, Central Waste Water Treatment Plant (PRS 0-019);
- the RFI report for TA-21, surface disposal areas [PRSs 21-013(b,f,g)];
- the RFI report for TA-21, Material Disposal Area (MDA) T [PRSs 21-016(a-c), 21-028(a), 21-011(c), C-21-009, and C-21-012]; and
- the VCA report for the inactive firing range (PRS 0-016).

NOD responses in preparation or completed this quarter include

- the response to the NOD for the RFI report for DP Tank Farm (PRS 21-029), completed;
- the response to the Request for Supplemental Information for the RFI Report for the Community Center Solvent Tanks (PRS 0-039), in preparation;
- the response to the disapproval of the RFI Work Plan for Operable Unit (OU) 1114, Addendum 1, in preparation;
- the response to the NOD for 33 PRSs in TA-3, in preparation; and
- the response to the NOD for the RFI Report for TA-21, 1B and 1C, and the related addendum, in preparation.

Sampling and analysis plans (SAPs), and VCA plans in preparation this quarter include

- the SAP for the DP Canyon Investigation;
- the SAP for the Upper Sandia Canyon Investigation;
- the VCA plan for PRS 10-009;

- the SAP for PRSs 21-011(a,b,d-j), 21-001, C-21-005, C-21-007, and C-21-033 Phase I;
- the VCA plan for PRS 21-024(i);
- the SAP for PRS 21-029, drainage channel area;
- the SAP for TA-21 D&D-related PRSs, Phase I; and
- the SAP for PRS 73-002, Phase II.

Other reports in preparation this quarter include

- the MDA U surface sampling report [PRSs 21-017(a-c)], delayed, and
- the MDA A surface sampling report [PRSs 21-014], delayed.

2.1.2 Technical Area Activities

2.1.2.1 TA-0

PRS 0-016 The VCA report for PRS 0-016 was prepared and submitted for review to the US Department of Energy (DOE) and the New Mexico Environment Department (NMED). The US Forest Service has been notified that the VCA report requests a no further action (NFA) determination from the NMED.

PRS 0-027 Though planning continues for the DP Road investigation (PRS 0-027), work on the RFI report has been suspended while remediation alternatives are explored. VCA and voluntary corrective measures (VCM) options are also being explored.

PRS 0-030(i) The property holder has not granted access to the land encompassing PRS 0-030(j), the Sombrillo Nursing Facility septic tank; therefore, field work cannot begin.

2.1.2.2 TA-1

PRS 1-001(d) All areas disturbed by cleanup activities at Hillside 138 [PRS 1-001(d)], including the remediated area, the constructed berm, and the access road, were reseeded and covered with erosion control matting during the last quarter. Monitoring activities continue to ensure storm water controls and the revegetation efforts are performing as expected.

2.1.2.3 TA-3

Upper Sandia Canyon The technical team for the Upper Sandia Canyon RFI continued preparing a sampling and analysis plan. The NMED has responded in part to requests for information regarding the determination of cleanup levels; however, they have not provided a definite position on the use of risk-based or prescriptive cleanup levels.

Although the slope stabilization design for PRS 3-056(c) is complete, implementation of the design has been delayed while other temporary best management practices (BMPs) are being investigated.

The Laboratory received a notice of determination regarding the Request for Permit Modification for Units Proposed for NFA, September 1996. The Request for Permit Modification contained proposals for NFA for 42 PRSs. Of these, 33 PRSs are within TA-3, and NMED requested further

information for 32 of the 33 PRSs. The additional information was prepared for 13 of the 32 PRSs within TA-3, and information for the remaining 19 is in preparation.

2.1.2.4 TA-10

PRSs 10-002(a,b), 10-003(a-o), 10-004(a,b), 10-005, and 10-007 As a BMP, the snow fencing surrounding the contaminated plants and soil was expanded, and additional postings were placed around the fence last quarter. The field team continues to inspect and maintain the surface water runoff controls, fences, and postings.

2.1.2.5 TA-19

PRSs 19-001, 19-003, and C-19-001 In addition to the report preparation activities for TA-19, the field team conducted waste management and storm water control inspection activities.

2.1.2.6 TA-21

DP Canyon The DP Canyon RFI and bench pilot study were completed. The field team studied the long-term desorption of cesium from the clays at PRS 21-011(k) (ongoing process), and located and placed erosion barriers in test areas. A report will be prepared to document the results of these studies.

PRS 21-024(i) The field team continues preparations for a VCA at this outfall and septic system in early FY98.

PRSs 21-016(a-c), 21-011(c), 21-028(a), C-21-009, and C-21-012 The field team continued to perform weekly waste storage and site waste pollution prevention plan inspections. The small volume of TRU waste generated during the investigation was shipped to TA-54 as part of another shipment from other TA-21 operations.

PRSs 21-010(a-h), C-21-034 through 037 Work continues on the integration of plans for TA-21 Building 35 (decommissioned industrial wastewater treatment plant) and MDA T.

D&D-Related PRSs New PRS designation forms were prepared for sites associated with decontamination and decommissioning (D&D) activities at TA-21. These are sites resulting from potential leaks from the utility tunnels, troughs, and acid pits under buildings 2, 3, 4, and 5 as noted in Chapter 18.6 of the TA-21 RFI work plan (LANL 1991, 0689). Identifying specific PRSs will allow the technical team to focus the necessary characterization and/or verification sampling required to adequately address the historical activities that occurred in the buildings.

The Laboratory continues to wait for clarification from NMED concerning a disapproval notice for the RFI Work Plan for OU 1114, Addendum 1 (LANL 1995, 1291); therefore, preparation of sampling and analysis plans as called out in the FY97 baseline has not commenced.

2.1.2.7 TA-32

PRS 32-002(a,b) The field team continues to inspect and maintain storm water controls at the PRS 32-002 septic tanks and outfalls.

2.1.2.8 TA-73

PRS 73-001(a) The TA-73 drilling was completed. The field team continues the sampling and analysis of monitoring wells and leachate collection devices.

2.2 Field Unit 2 — Technical Areas 12, 14, 15, 18, 20, 27, 36, 39, 53, 65, 67, 68, 71, and 72 (Field Project Leader: Gene Gould)

2.2.1 Technical Area Activities

2.2.1.1 TA-14 and TA-15

The field team inspected the existing BMPs and conducted new BMPs at several sites in TA-14 and TA-15. They inspected the BMPs at PRSs 14-002(a), 14-003, 14-009, and 14-010 and replaced the straw bales. The team installed 115 sand bags on the southwest side of the EF Firing Site mounds [PRS 15-004(f)] and 50 sandbags on the east side of the mounds to mitigate surface water runoff from the site. They also installed 472 ft of silt fencing within drainages at PRSs 15-004(f) and 15-008(a). BMPs were conducted at PRSs 15-006(c) and 15-008(b), where the team installed 1,125 ft of silt fencing, 24 straw bales, and 189 sand bags.

The following activities were completed at TA-15 this quarter.

- The VCA for PRS 15-009(e) was conducted. The field team collected water samples from the septic tank, sampled the outfall, removed the contents of the septic tank (1,500 gals.), drilled beneath the septic tank inlet and outlet, and filled the tank with Flowcrete. A VCA completion report was written and submitted to DOE.
- The VCA for PRS 15-009(j) was conducted. The field team pressure-washed the interior of the septic tank, removed the tank, sampled the underlying soil, drilled 60 ft, and sampled in the two seepage pits. A VCA completion report was written and submitted to DOE.
- The VCA for PRS 15-012(b) was conducted. The field team removed 128 cu yd of soil, collected 80 x-ray fluorescence samples to guide the VCA process and minimize waste, collected 80 high explosive (HE) spot tests, and collected 6 confirmatory samples. A VCA completion report was written and submitted to DOE.
- Interim actions were completed at PRSs 15-004(f) and 15-008(a). The team cleaned up an area of 28,886 sq ft of depleted uranium and shrapnel and 890 sq ft of lead shot.
- Interim actions were completed at PRSs 15-006(c) and 15-008(b). The team cleaned up an area of 136,050 sq ft of depleted uranium and shrapnel.
- A second NOD response for TA-15 was completed and submitted to NMED.
- Phase II samples were collected from PRS 15-010(a). Nineteen Phase II samples were collected from PRS C-15-010 using a drill rig. Three holes were drilled to a maximum depth of 54 ft.
- Phase I sampling was conducted at PRSs C-15-001 and C-15-007. An RFI addendum was written and submitted to NMED.

2.2.1.2 TA-18

The field team successfully completed a VCA at PRS 18-006, the uranium solution pipe.

A VCA was conducted at PRSs 18-003(a,b,c), septic tanks. PRS 18-003(a) was successfully remediated and backfilled with Flowcrete. However, PRSs 18-003(b,c) were not remediated because the sampling data failed the remediation goals. A completion report was written and submitted to DOE for PRS 18-003(a).

Quarterly monitoring of the monitoring wells at PRS 18-003(d) was conducted. This represents the fourth sampling effort of these wells. An RFI report for the effort was written and submitted to NMED.

2.2.1.3 TA-36

The RFI Phase I addendum report for PRS 36-005, the boneyard, was written and submitted to NMED. The report included analytical results and data interpretation from the April 1997 sampling effort.

2.2.1.4 TA-53

Additional sampling was conducted at the PRS 53-001(a) storage area to determine the extent of polychlorinated biphenyl (PCB) contamination at the site. A VCA plan was written for the cleanup of this PRS. The PRS was remediated by removing the PCB-contaminated soil from the site. A VCA completion report was written and submitted to DOE.

The VCA completion report was written and submitted to DOE for the PRS 53-014 soil contamination.

2.3 Field Unit 3 — Technical Areas 11, 13, 16, 24, 25, 28, 33, 37, 46, and 70 (Field Project Leader: Roy Michelotti)

2.3.1 General Information for Field Unit 3

Field Unit 3 submitted reports that proposed 56 PRSs for NFA. The reports were provided to DOE and the regulators.

2.3.2 Technical Area Activities

2.3.2.1 TA-16

The TA-16 field team continued drilling to support investigations at PRSs 16-021(c) and 16-003(k) (the TA-16-260 outfall), during the fourth quarter. The team drilled six intermediate-depth (less than 120 ft) boreholes near the outfall and five shallow (less than 15 ft) alluvial boreholes in Cañon de Valle. All of the intermediate-depth boreholes were contaminated with HE. The HE contamination was widely dispersed and did not always correlate with subsurface structural features such as surge beds. Alluvial boreholes did not contain any HE contamination in soils. Monitoring wells were completed in each alluvial borehole.

In August, the TA-16 hydrology team observed breakthrough of the potassium bromide (KBr) tracer in the spring nearest to the TA-16-260 outfall. The TA-16 field team had deployed this tracer in the outfall during April 1997. The breakthrough profile was extremely irregular. These

observations suggest rapid transport along fractures in the vadose zone near the TA-16-260 outfall.

A second TA-16 field team completed field work in July 1997 for 29 NFA PRSs. These PRSs represented potentially contaminated soil associated with World-War-II-era structures that were destroyed by intentional burning during the 1960s.

The Field Unit 3 report team completed and submitted to the regulators 3 TA-16 reports during the fourth quarter: (1) a VCM report for 5 PRSs at V Site; (2) an RFI report for 12 TA-16 PRSs that were sampled during fiscal year 1995; and (3) an RFI report for the 29 TA-16 PRSs that were sampled during July 1997.

2.3.2.2 TA-33

The TA-33 field team initiated two institutional interim measures at septic tanks at TA-33. In each case, the operating group worked on the septic tank, and Field Unit 3 personnel removed contaminated waters in the tank as an institutional interim measure.

The Field Unit 3 report team completed and submitted to the regulators an RFI report for 10 PRSs at TA-33. These PRS represented both Phase I and Phase II sampling.

2.4 Field Unit 4 — Technical Areas 2, 4, 5, 35, 41, 42, 48, 52, 55, 63, and 66 and Canyons (Field Project Leader: Allyn Pratt)

2.4.1 General Information for Field Unit 4

The field team completed LANL-ER-AP-4.05 Part B field inspections for approximately 138 Field Unit 4 PRSs identified by the Water Quality and Hydrology Group (ESH-18) at TAs-2, -4, -5, -35, -41, -42, -48, -55, and -63. They also completed the 1997 Storm Water Pollution Prevention Plan annual site compliance evaluations for all Field Unit 4 PRSs identified by ESH-18. Personnel provided technical support to ESH-18 for the development of the Watershed Management Plan for Mortandad Canyon. They also made a presentation to NMED regarding Mortandad Canyon. Baseline activities for FY98 continued.

2.4.2 Technical Area Activities

2.4.2.1 Canyons

Field Unit 4 received an NOD on the Core Document for Canyons Investigations (LANL 1997, 55622); personnel reviewed the NOD for applicability to the Mortandad Canyon work plan. The work plan for Mortandad Canyon was completed and submitted to NMED on September 29, 1997, during a canyons field trip. Technical support personnel began compiling source term data to support the Pajarito Canyon work plan.

The field team manager completed the readiness review for drilling regional characterization well R-9. The drilling contractor was mobilized, and drilling began on September 24. Contractors were hired to provide geophysical support for testing the well. On September 26, intermediate-depth perched groundwater was encountered at 180 ft below ground surface within Cerros del Rio basalt. Within one and one-half hours, water in the hole had risen to 112 ft below ground surface, which suggests confining conditions. Testing within the perched zone will be done, and characterization of the regional aquifer will continue.

The field team completed the readiness review for drilling the alluvial wells. The team and the drilling contractor completed drilling of alluvial wells PAO-1 and LLAO-3 and the redrilling of alluvial well LLAO-1.

A field technician completed monthly water level measurements for wells in Los Alamos Canyon and Pueblo Canyon that are identified in the RFI work plan for OU 1098 (LANL 1993, 1086).

The geomorphology project investigator and the field team completed the sediment sampling activities in the four 1996 pilot study reaches of Los Alamos Canyon and Pueblo Canyon (LA-2, LA-5, P-1, and P-4). Supplemental geomorphic field work and a limited number of additional samples may be scheduled in the future if data analysis and interpretation indicate the need. The field team conducted sediment sampling in non-pilot-study reaches P-3, LA-1, LA-3, and LA-4; analytical data are pending. The field team completed geodetic surveys at reaches P-1, P-3, LA-3, and LA-5. Highlights of findings of sediment investigations in Los Alamos Canyon and Pueblo Canyon include the following.

- Contaminants have been dispersed widely over the floodplains of Los Alamos Canyon and Pueblo Canyon during the more than 50 years since initial releases; the area of post-1942 sediment deposition reached up to 190 m wide in lower Pueblo Canyon.
- The highest concentrations of contaminants are found in fine-grained overbank sediment deposits, which represent sediment carried in suspension during floods.
- The highest concentrations of contaminants are found in sediments at least 30 years old, and contaminant concentrations within floods have decreased significantly over time.
- The largest inventory of contaminants in different parts of the canyons is usually within the fine-grained overbank sediment deposits, although in some areas the largest inventory is within extensive, thick, coarse sand deposits.
- Sediment leaving the Laboratory from Los Alamos Canyon and Pueblo Canyon becomes highly diluted with sediment from other sources before reaching the Rio Grande (particularly from Bayo Canyon and Guaje Canyon), and contaminant concentrations on San Ildefonso Pueblo land near the Rio Grande are very low (all below mesa-top screening action levels).

2.4.2.2 TA-35

The RFI report for PRSs 35-004(a, b, g and h; 35-009(e); 35-014(e2); and 35-016(e, f, and l) was completed and submitted to NMED on September 29.

The field team completed the sampling activities identified in the June 1997 sampling and analysis plan for TA-35 and expedited the characterization and disposal of investigation-derived wastes. Analytical data are pending. The field team also completed geomorphic mapping and radiological surveys of Pratt Canyon, PRS 35-003(r), and coordinated the remaining sampling activities at that PRS.

2.4.2.3 TA-48

The RFI report for PRSs 48-002(e) and 48-007(b, c, and f) was completed and submitted to NMED on September 24.

2.5 Field Unit 5 — Technical Areas 6, 7, 8, 9, 22, 23, 40, 49, 54, 57, 58, 62, and 69 (Field Project Leader: Don Krier)

2.5.1 General Information for Field Unit 5

Field Unit 5 personnel completed final data evaluation and preparation of RFI reports and status reports for ongoing RFI work. A total of 34 PRSs were proposed for NFA in 3 RFI reports submitted to DOE and NMED: 20 were proposed in the RFI Report for TAs-6, -7, -8, -22, and -40; 5 in the RFI Report for TA-22; and 9 in the RFI report for TA-49. Three more PRSs were documented for NFA from the submittal and approval of the original RFI work plan for OU 1144 (LANL 1992, 0786).

2.5.2 Technical Area Activities

2.5.2.1 TA-49

PRSs 49-001(b,c,d), MDA AB Area 2, 2a, and 2b The field unit made two site visits in preparation for the asphalt pad remediation work. A detailed elevation survey was planned, and the approximate location of an surface-water interceptor trench was determined.

2.5.2.2 TA-50

PRSs 50-006(a) The interim action report for the hummock cleanup at Ten-Site Canyon [PRS 50-006(a)] was completed and submitted to DOE/Los Alamos Area Office. The letter requesting transfer of the remainder of Ten Site Canyon to Field Unit 4 (Canyons) was delayed because of time constraints.

PRS 50-009 (MDA C) The Phase 1, Stage 1 status report for PRS 50-009, MDA C, was completed and reviewed this quarter. Work on the report will continue during the first quarter FY98. The report proposes that no further Phase 1 investigation be done at MDA C and recommends proceeding to a corrective measures study.

2.5.2.3 TA-54

PRS 54-006 (MDA L) Reviewer comments have been incorporated into the RFI status report on subsurface investigations at MDA L, but some questions remain on fate and transport in the vadose zone. The report is scheduled to be updated and submitted to the DOE during the first quarter of FY98.

The psychrometer instrument string was recalibrated and reassembled and is almost ready for insertion in borehole 49-12-700-1 at TA-49. This is scheduled for first quarter FY98 after the removable casing is retrieved from that hole and interval permeability measurements are made with a refurbished dual-packer assembly. Data acquisition is continuing for the passive extraction test in borehole 54-1006.

Draft reports detailing results from monitoring of the MDA L vapor plume were developed for review. Those reports include Pore Gas Sampling Field Data Report: 1st Quarter FY97; Pore Gas Sampling Field Data Report: 2nd Quarter FY97; and Pore Gas Sampling Field Data Report: 3rd Quarter FY97. A draft report on several previous extraction tests in the plume was developed for review (First Report on Previous Tests Related to MDA L PESP: Monitoring of Pore Gas Pressures and Chemical Constituents at Wells 54-1015 and 54-1016 during 1995 and 1996).

A draft sampling and analysis plan for tritium air sampling at MDA H, TA-54, was developed for review.

The field team completed fourth-quarter monitoring of the MDA L organic vapor plume during the month of August. Photoacoustic radiometer data from both the third and fourth quarters indicate that the edge of the plume has not moved. Summa canister sample analyses have not yet been evaluated for new constituents in the vapor. There are 21 detected compounds from previous gas chromatography-mass spectrometry analysis; trichloroethane (TCA) makes up about 50% by volume of the vapor.

3.0 CLOSURES AND REGULATORY COMPLIANCE — (Project Leader: David McInroy)

3.1 TA-16 — MDA P Landfill

Roy F. Weston, Inc., was awarded the contract to perform the remediation of MDA P. The stormwater collection trench for the east lobe of the landfill was completed as part of the premobilization activities

3.2 TA-35 — TSL 85 Surface Impoundment

No response has been received from the NMED on the closure report submitted to them at the end of September 1996.

3.3 TA-53 — Surface Impoundments

The NMED informed DOE and the Laboratory in writing on July 21, 1997, that the change in status of the three surface impoundments at TA-53 from treatment, storage, and disposal status to corrective action status under the HSWA had been approved. A closure plan for the impoundments is no longer necessary. An RFI work plan for the impoundments is to be submitted within 180 days from the time DOE and the Laboratory were notified.

4.0 REFERENCE

LANL (Los Alamos National Laboratory), May 1991. "TA-21 Operable Unit RFI Work Plan for Environmental Restoration," Volumes I-III, Los Alamos National Laboratory Report LA-UR-91-962, Los Alamos, New Mexico. (LANL 1991, 0689)

LANL (Los Alamos National Laboratory), May 1992. "RFI Work Plan for Operable Unit 1144," Los Alamos National Laboratory Report LA-UR-92-900, ER ID Number 8013, Los Alamos, New Mexico. (LANL 1992, 0786)

LANL (Los Alamos National Laboratory), June 1993. "RFI Work Plan for Operable Unit 1098," Los Alamos National Laboratory Report LA-UR-92-3825, ER ID 15314, Los Alamos, New Mexico. (LANL 1993, 1086)

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, 1291)

LANL (Los Alamos National Laboratory), April 1997. "Core Document for Canyons Investigations," Los Alamos National Laboratory Report LA-UR-96-2083, Los Alamos, New Mexico. (LANL 1997, ER ID Number 55622)