



GARY E. JOHNSON
GOVERNOR

State of New Mexico
ENVIRONMENT DEPARTMENT
DOE OVERSIGHT BUREAU

2044 A Galisteo Street
P.O. Box 26110
Santa Fe, New Mexico 87502

*Steve -
Please share
w/ appropriate
staff/Burto*

MARK E. WEIDLER
SECRETARY

October 10, 1997

Tracy Loughead, Generalist Team Leader
Office of Public Affairs
Albuquerque Operations Office
U.S. Department of Energy
P.O. Box 5400
Albuquerque, New Mexico 87185-5400

RECEIVED
OCT 1997

*John R
Stephanie
Action and
Concert if
needed*

Dear Ms. Loughead:

The attached Quarterly Implementation Report is submitted in accordance with Section J of the Scope of Work to the "Agreement-In-Principle Between the United States Department of Energy and the State of New Mexico for Environmental Oversight, Monitoring and Emergency Response" (DOE Grant No. DE-FG04-91AL65779, Modification No. A007). The report covers the period from July - September 1997. Please provide copies of this report to DOE/HQ, DOE/AL and DOE Area Offices as you deem appropriate.

If you have any questions regarding the report please contact me at (505) 827-1541.

Sincerely,

John W. Parker, Chief
DOE Oversight Bureau

Enclosure

- cc: Diana Eddy, DOE/AL
- Roger Scott, Lamb Assoc.
- Ed Kelley, NMED
- Steve Yanicak, NMED
- Roger Kennett, NMED



15644

NEW MEXICO AIP IMPLEMENTATION REPORT

July - September, 1997

SUMMARY

Scope of Work/Objectives

To ensure that past and present activities at Los Alamos National Laboratory (LANL), Sandia National Laboratories (SNL), the Inhalation Toxicology Research Institute (ITRI), and the Waste Isolation Pilot Plant (WIPP) pose minimal health, safety, and environmental impacts to the citizens of New Mexico. This will be accomplished by:

- 1) assuring that public health, safety, and the environment are protected with existing programs,
- 2) assuring DOE's compliance with applicable laws, regulations and standards,
- 3) ensuring substantial new commitments are made by DOE to achieve compliance,
- 4) ensuring that DOE establishes prioritization of cleanup and compliance activities and,
- 5) establishing a vigorous program of independent monitoring and oversight by the State of New Mexico.

Total Projected Expenditures - \$ 561,000

Approximate Actual Expenditures - \$ 369,600 *

* This figure does not include costs for analytical services for which billings are still pending.

ENVIRONMENTAL MONITORING/SAMPLING

Scope of Work/Objectives

- Perform quality assurance activities related to air radionuclide emissions at DOE facilities.
- Evaluate air monitoring programs and their ability to detect releases from the facilities.
- Conduct surface water and well monitoring activities and

review of DOE-generated data.

- Inspect the facilities' drinking water, wastewater treatment, land application systems, and injection, monitoring and production wells to identify any modifications or improvements needed.
- Conduct periodic sampling of on-site discharges and emissions.
- Review DOE ground water monitoring systems and identify any modifications or improvements needed to meet applicable laws and regulations.
- Analyze public drinking water sources which may be potentially affected by facilities' operations.
- Conduct environmental monitoring to verify results reported by DOE facilities and evaluate any effects the facilities' operations may be having on the local environment.
- Verify measurements made by the environmental programs at the DOE facilities and assess compliance with applicable regulations, DOE orders, and guidelines.
- Observe and evaluate procedures employed in the field and laboratory.
- Review and provide comments on monitoring plans for conformance with regulations and DOE orders and guidance.

Accomplishments

LANL Oversight

- Third quarter 1997 observation and/or sampling was performed at eight test wells, twelve alluvium shallow aquifer wells, five springs, and sixteen surface-water sites, in addition to the annual soil and sediment sampling. All surface-water, wells, and springs were sampled for field parameters, radionuclides, and water quality. All soil and sediment sites were sampled for metals and radionuclides.
- AIP staff participated in LANL's annual White Rock Canyon water sampling trip to assess potential impacts to water from historical laboratory releases. LANL, Cochiti Pueblo and AIP staff collected water from five springs which drain to tributaries of the Rio Grande, one surface water sample at

Frijoles canyon, and five sediment samples along the upper, middle and lower reaches of White Rock Canyon. All surface-water, wells and springs were sampled for field parameters, radionuclides, and water quality. All soil and sediment sites were sampled for metals and radionuclides.

SWQB ?

- In response to a request from LANL and the NMED regulators, AIP staff evaluated the Connector Road Site at TA-15 near the access control building. Extensive erosion controls including silt fences, jute matting, riprap, and reseeding had been installed by LANL. NMED staff members had been concerned that fill soil which may have contained depleted uranium was eroding and being transported down-canyon during storms. AIP staff concurred with LANL that the erosion controls were effective.
- Regular collection and analysis was conducted of NMED's thermoluminescent dosimeter (TLD) chips at eleven monitoring stations at LANL.
- Regular maintenance and collection of air particulate filters from five monitoring stations was conducted at LANL.
- AIP staff observed and participated in inspections of 13 NPDES outfalls which are scheduled to be deleted from LANL's Permit. Preliminary observations and reports were submitted to the DOE and NMED regulators at quarter's end.
- AIP staff submitted comments on the *Predecisional Draft Environmental Assessment for Parallel Project Fuel Manufacture and Shipment*. This document addressed the DOE's proposal to manufacture plutonium/uranium mixed oxide fuels at LANL and transport the fuel rods to Canada for use in special reactors. The assessment concluded that there would be minimal or no adverse human health or environmental impacts resulting from the proposed action. AIP staff recommended that the DOE reconsider the type of containerization and method of shipment for mixed oxide fuels because they do not appear to qualify as "relatively low level radioactive materials."
- AIP staff submitted comments on the *Predecisional Draft Environmental Assessment for Lease of Land for the Development of a Research Park at Los Alamos National Laboratory, July 23, 1997*. This document addressed the DOE's proposal to build a research park near the present TA-3. The assessment concluded

that there would be minimal or no adverse human health or environmental impacts from the proposed action. AIP comments focused on land development at or near environmental restoration sites before the NMED regulators approve "no further action" for the sites. Additionally, staff were concerned that the document did not fully address erosion control measures and the potential for generating hazardous, mixed or radioactive wastes at some of the areas proposed for this DOE action. *why?*

- Staff submitted comments on the *Hydrogeologic Workplan, Los Alamos National Laboratory, December 6, 1997*. This report describes plans to construct a ground-water monitoring and characterization system to better understand the hydrogeologic setting beneath the laboratory. Comments were that the workplan addressed many concerns included in an AIP program technical report, *"Initial Assessment of the Ground Water Monitoring Program at Los Alamos National Laboratory, New Mexico"* and that there were deficiencies in the workplan relating to the description of the hydrogeologic systems, and their relationship to sources of contamination.

SNL/ITRI Oversight

- NMED's Low-Volume air monitoring stations on the perimeter of Kirtland Air Force Base were calibrated at the start of the quarter and filters were exchanged on a bi-weekly basis. On two occasions filter housings had to be removed and repaired. All filters and silica gel tritium samplers collected during the quarter were packaged and submitted for radiological analysis. Analytical results were received on filter samples and tritium samples collected during the second quarter of 1997. There were no radionuclides detected above background levels.
- AIP staff members accompanied SNL environmental monitoring personnel during routine sampling at wastewater monitoring locations. A sample was split with SNL at monitoring location WW011. NMED's sample was submitted to an independent laboratory for analysis for radionuclides. Analytical data was received on the wastewater sample collected during the previous quarter. The data were reviewed and a summary was submitted to the DOE Kirtland Area Office with copies sent to SNL and the City of Albuquerque. There were no radionuclides detected above background levels.

- Regular collection and analysis of NMED's thermoluminescent dosimeter (TLD) chips at 14 monitoring stations at SNL was conducted.
- AIP personnel accompanied SNL environmental monitoring personnel during the annual terrestrial surveillance sampling. Soil, water, and vegetation samples were collected at various sites on KAFB, around the perimeter of KAFB and in the surrounding community. Samples were split with SNL at several locations and submitted to an independent laboratory for radiological analysis. The data will be reviewed and submitted to the DOE Kirtland Area Office and SNL.
- A surface water monitoring system (ISCO) was implemented to monitor storm water events at various locations on KAFB related to DOE operations. Initially the ISCO was located near the upstream KAFB boundary in Tijeras Arroyo to detect and sample storm water run-on to the base. No samples were collected by the end of the quarter.
- Following a release of contaminants into Tijeras Arroyo from environmental restoration site 228 during a rain storm, AIP personnel accompanied SNL personnel to consult on the corrective actions which would be taken. AIP personnel conducted return visits to the site to verify that the corrective actions which were implemented complied with best management practices (BMPs) to prevent further migration of contamination. Staff provided input on sampling locations for determining the extent of release.
- Results from second quarter sampling of NMED's four monitor wells at ITRI indicate an increase in nitrate concentration since the beginning of sampling in 1995, but no significant increase over the first quarter 1997.
- Samples were collected from Deer Spring and Ellen's Spring. Field measurements were made of pH, temperature, specific conductance and nitrate. Samples were submitted for laboratory analysis of volatile organic compounds, nitrate/nitrite, major ions, gross α , gross β , and gamma spectrum. Results from the second quarter sampling of 14 springs yielded a detection of carbon disulfide from Deer Spring, which prompted the collection of verification samples from Deer and Ellen's Springs this quarter. A map of *Springs in the Central Arroyo-del-Coyote area* was completed.

WIPP Oversight

- Regular collection and analysis was conducted of NMED's thermoluminescent dosimeter (TLD) chips at six monitoring stations at WIPP.

Significant Changes from Intended Activities

None

Significant Issues

None

Approximate Actual Expenditures - \$ 147,840

ENVIRONMENTAL RESTORATION

Scope of Work/Objectives

- Review of documents relating to environmental assessment and corrective action for technical accuracy.
- Oversee the remediation of contaminant spills on DOE property.
- Evaluate environmental restoration site assessment proposals at LANL and SNL RCRA Facility Investigation Workplans.
- Observe sampling procedures at environmental restoration sites to determine if State/EPA - approved sampling plans are being followed.

Accomplishments

LANL Oversight

- AIP staff attended meetings and participated in discussions with Field Units 1, 2, 3, 4 and 5. Comments and recommendations from AIP staff members are used by LANL to help assess and prioritize potential release sites at LANL by risk and environmental concerns as determined by DOE, LANL,

EPA, NMED, and stakeholder participation.

- AIP staff visited Santa Clara Canyon to locate surface and ground water sampling sites that would be useful in the evaluation of background water parameters. These efforts were coordinated through the Santa Clara Pueblo Office of Environmental Affairs.
- Staff submitted three proposals to sample surface-water runoff during the rain season to determine if contaminants are migrating off-site via stormwater into the canyons surrounding Los Alamos. The proposed sample locations include Potential Release Site 73-002 (Incinerator Ash Pile) which is located near the Los Alamos County Airport; locations where surface water runs into Sandia, Pratt, Pajarito and Canada del Buey Canyons; and at Potential Release Site 9-013 (MDA M), located in TA-9. Sampling was performed during one storm event in July.
- AIP staff submitted recommendations for the FU-1, Sandia Canyon Wetlands, Sampling and Analysis Plan development. These recommendations focused on the question of whether LANL staff should design their plan to determine the extent of PCB contaminated sediments greater than 1 ppm, or alternatively to determine the extent of contamination which exceeds a still undetermined ecological risk-based concentration. AIP staff concluded that a phased approach would be more cost effective and valid than a sampling effort to delineate the extent of 1 ppm PCB contamination of Sandia wetlands sediments.
- AIP staff submitted draft review recommendations for the TA-50 Discharge Plan to the NMED regulators, DOE and LANL. The comments were intended to help provide an accurate description of the hydrogeologic setting of Mortandad Canyon, since the canyon is of a high priority status due to continued releases of treated radioactive effluent from TA-50 for the past 35 years.
- AIP staff submitted draft review recommendations for the FU-3 Potential Release Sites 33-002 (a,b,c,d,e); MDA K, RFI Report dated September 29, 1995. The comments predominantly concurred with LANL's findings but additional comments were also provided to assure that the data requirements of human health and ecological risk assessors were addressed.
- Staff submitted NMED's State-wide (1978 through 1997) mercury data to the DOE and LANL. The requested data represents all positive mercury results, detected in surface water from 1978

through 1997, currently available from the STORET data base.

- AIP staff visited the Mixed Waste Container Storage Area at TA-55 Plutonium Facility 41, ~~the vault~~, along with LANL staff. AIP staff concluded that the vault showed no evidence of ever storing any solid or mixed waste, and that it appeared to be appropriate to remove the site from LANL's RCRA Part A permit.
- AIP staff submitted comments on the RFI Report ~~Core Document~~ for Canyons Investigations ~~dated April 1997~~. Since the Canyons Core Document provides the framework for the preparation of canyon-specific work plans, the review included recommendations intended to help provide accurate descriptions of the hydrogeologic settings of the canyons. These comments were also intended to help assure that canyons investigations address the data requirements of human health and ecological risk assessors.
- Staff continued participation in the development of the Mortandad Canyon model.

SNL/ITRI Oversight

- Conceptual agreement was reached between AIP staff and SNL regarding the location and construction design for two monitor wells at the "narrows," which is intended to monitor possible impacts to ground water resulting from activities at the Burn Site. Bullets of Understanding were signed as a vehicle to document the conceptual agreement.
- AIP staff observed sampling of sediments from well BW3 at the Chemical Waste Landfill, and obtained a split sample. Sampling techniques were noted to be the same as in previous events. The SNL sample will undergo microprobe analysis related to the chromium-source issue.
- Received a report from SNL on the microprobe analysis of chromium in soil samples taken from beneath the unlined chromic acid pit.
- Staff conducted several site visits of Site 12B to observe the progress of the Voluntary Corrective Measure, culminating in a tour of the site with NMED regulators to observe and discuss the results of the completed Voluntary Corrective Measure.

who?

- Staff visited Site 27 to observe activities and discuss preliminary results of the Voluntary Corrective Measure in progress.
- Attended various meetings with SNL to discuss the status of environmental restoration activities at the Mixed Waste Landfill, Chemical Waste Landfill, OU 1332, OU 1333, OU 1334, and OU 1335. Specific meetings regarding proposed activities at Environmental Restoration Sites 14, 85, 91 and 108 were held.
- Reviewed site-specific sampling plans for sites 59, 63A&B, and 64.
- Reviewed SNL's plan for abandonment of three monitor wells at the Chemical Waste Landfill.

WIPP Oversight

None

Significant Changes from Intended Activities

None

Significant Issues

None

Approximate Actual Expenditures - \$ 166,320

WASTE MANAGEMENT/WASTE CHARACTERIZATION

Scope of Work/Objectives

- Review and comment upon source reduction and waste stream identification and characterization of air emissions at DOE facilities.
- Monitor and review Waste Stream Characterization Reports concerning surface water discharges.

- Review periodic waste management reports from the facilities.
- Visit waste management facilities to determine if waste management practices are protective of public health and the environment.

Accomplishments

LANL Oversight

- AIP staff participated in the 1997 RCRA audit of LANL. One staff member served as an observer during portions of the audit.

SNL/ITRI Oversight

- Coordinated AIP staff comments on the permit modification request for Treatment Units at the CAMU.

WIPP Oversight

- As part of the process of monitoring the management of radioactive waste destined for WIPP, AIP staff observed portions of the Quality Assurance audit of LANL's transuranic waste management program.

Approximate Actual Expenditures - \$ 18,480

EMERGENCY RESPONSE PLANNING

Scope of Work/Objectives

- Observe and critique emergency response exercises.
- Work with local, state and federal agencies in the development and execution of emergency response preparedness activities related to off-site response to an on-site incident at a DOE facility.

Accomplishments

None

Approximate Actual Expenditures - \$ (0%)

PUBLIC INFORMATION/PUBLIC RELATIONS

Scope of Work/Objectives

- Maintain an open line of communication with all citizens of New Mexico so that they are adequately informed of the environmental, health and safety concerns at the facilities.

Accomplishments

General

- AIP staff organized and facilitated two meetings of the Community Radiation Monitoring Group at San Ildefonso Pueblo. This group includes citizen volunteers and staff members from NMED, DOE, LANL, various Pueblos, and community groups who meet periodically to discuss issues related to the northern New Mexico Neighborhood Environmental Watch Network (NEWNET) system. This group includes participants from Carlsbad and Albuquerque as well as the northern New Mexican communities.

LANL Oversight

- A press release to publicize the July 29 public meeting was generated and widely distributed. Staff met separately with reporters from the Albuquerque Journal North and the Santa Fe New Mexican for interviews related to a public meeting.
- A public meeting focused on off-site contamination in surface water and sediments was held on July 29 at San Ildefonso Pueblo. An overflow crowd participated in a poster session, presentation and panel discussion. The minutes of the meeting were mailed to all participants along with meeting evaluation forms.
- Surveys designed to solicit community opinion on the relative importance of the various programs contained in the developing site-specific workplan were distributed at program-sponsored public meetings, and mailed to all participants at the July 29 meeting.

- AIP staff participated on a panel for a LANL public outreach meeting in Los Alamos concerning water issues and off-site transportation of contaminants. The meeting focused chiefly on, sediment and water borne pathways and the possible receptors that might be impacted by past, present and future hazardous and radioactive releases from LANL.
- In August, AIP staff conducted a seminar on the use of instruments for radiation detection and field measurement of water quality parameters. Participants included representatives from San Ildefonso and Cochiti Pueblos.

SNL/ITRI Oversight

- Staff attended the monthly meetings of the Citizens' Advisory Board.
- Staff attended the CAMU Working Group meetings.
- Staff attended the Accelerated Cleanup Focus on 2006 discussion and draft workshop presented by DOE.

WIPP Oversight

- Staff attended the WIPP Quarterly Meeting in Santa Fe.

Approximate Actual Expenditures - \$ 36,960