

Surface Water Quality Bureau
DOE/AIP Surface Water Section
Quarterly Report
July-September 1994

ENVIRONMENTAL MONITORING/ SAMPLING

Scope/Objectives

General: Surface Water AIP staff continues to sample surface water and storm water and review DOE- generated data per requirements in the AIP Action 16 Deliverable. Staff collects samples according to NMED's Quality Assurance Project Plan for Water Quality Management Programs.

LANL: Surface Water AIP staff continues to regularly monitor LANL's NPDES outfalls per requirements in Action 7 Deliverable. Staff intend to sample at least 30 of LANL's 124 known outfalls during 1994.

Staff continues to study benthic invertebrate communities and has initiated a periphyton community study in perennial and ephemeral reaches below NPDES outfalls. Biological data collection is an essential element in the assessment of the environmental health of aquatic ecosystems. Biological monitoring enables us to detect changes in community structure due to stress from physical, chemical, or biological alterations. Staff collects samples according to EPA's Rapid Bioassessment Protocols.

Sandia/ITRI: Surface Water AIP staff continues to regularly monitor and sample SNL's storm water runoff and sanitary/industrial wastewater per requirements in Action 7 Deliverable.

WIPP: Staff continues to review Westinghouse Electric Corporation (Waste Isolation Division) generated documents.

Accomplishments

LANL - Biological Sampling:

On 7/1/94, periphyton samples (multi-substrate periphyton scrapes), were collected from Pajarito, Water, and Valle canyons. In addition, aquatic invertebrate samples were collected from Pajarito Canyon.

On 7/5/94, Surface Water AIP personnel accompanied LANL's Biological Resource Evaluation Team (ES&H-8) on an invertebrate sampling trip to Guaje Canyon.

On 7/22/94, periphyton and invertebrate samples were collected from Starmer Gulch, the confluence of Starmer and Pajarito canyons, the confluence of an unnamed tributary to Pajarito Canyon, and above the confluence of Pajarito and Two Mile canyons.

LANL-ES

NPDES



ENVIRONMENTAL MONITORING/ SAMPLING cont.

LANL - Biological Sampling: Accomplishments cont.

Periphyton and invertebrate samples were collected from an unnamed tributary to Pajarito Canyon on 8/9/94.

Invertebrate samples were collected from Burning Ground Spring on 8/12/94.

On 8/15/94, NMED provided LANL's Biological Resource Evaluation Team (ESH-8) with an invertebrate species list developed from 1993 sampling of Frijoles Canyon, Los Alamos Canyon, DP Canyon, Pajarito Spring, Ancho Canyon, and Sandia Canyon.

On 9/19/94, LANL's Biological Resource Evaluation Team (ESH-8) provided NMED with an updated invertebrate species list compiled from 1993-1994 sampling. Species were sampled from Los Alamos Canyon, Guaje Canyon, Sandia Canyon, Ancho Canyon, Chaquehui Canyon, Mortandad Canyon, Pajarito wetlands, Pajarito springs, Starmer Gulch, HE wastewater stream, Ice House pond, Otowi fire station pond, and TA-48 pond.

A rafting surveillance trip down White Rock canyon was conducted from 9/27/94 thru 9/30/94. Aquatic invertebrates and multi-substrate periphyton scrapes were collected from the following springs and streams: Pajarito, Ancho, Chaquehui (springs 9A & Doe), Frijoles & the Rio Grande at Chaquehui canyon.

Training: Staff from the Surface Water AIP Section and LANL's Biological Resource Evaluation Team (ESH-8) attended a Rapid Bioassessment Workshop on 9/19/94.

LANL - NPDES, Storm Water, Stream, & Spring Sampling:

Stream sampling, in a perennial reach in Starmer Gulch, above the confluence of Starmer Gulch and Pajarito Canyon was conducted on 7/1/94. Surface water, 300 yards below Outfall 05A054 (TA16), in Valle Canyon was sampled on 7/1/94.

NPDES samples were taken at TA-3 Steam plant, 01A001; TA-21, 02A129; and TA-21, 03A037 outfalls on 7/6/94.

Water samples were collected on 7/22/94 from Starmer Gulch, Pajarito Canyon, and the confluence of Pajarito and Two Mile Canyon.

Water samples were collected on 7/28/94 from La Mesita, Sacred, and Basalt springs located on San Ildefonso Pueblo.

A spring sampling event at TA-9 was conducted on 8/9/94 in coordination with LANL's Biological Resource Evaluation Team (ESH-8), Hazardous and Radioactive Materials Bureau (HRMB), and Ground Water Protection Bureau (GWPB) staff.

A spring sampling event was conducted at TA-16 Area P landfill on 8/12/94.

ENVIRONMENTAL MONITORING/ SAMPLING cont.

LANL - NPDES, Storm Water, Stream, & Spring Sampling: Accomplishments cont.

The NMED storm water sample trailer was relocated to Ten Site Canyon below TA-35. Storm water was collected during one storm event on 8/22/94.

A rafting surveillance trip down White Rock canyon was conducted from 9/27/94 thru 9/30/94. Water samples were collected from the following springs and streams: Spring 3, Spring 3A, Spring 3B, Spring 4A, Spring 5, Spring 5A, Spring 5B, Spring 6A, Ancho Spring, Spring 8A, Spring 9, Spring 9A, Spring 10, DOE Spring, Frijoles Canyon, Pajarito Canyon, Ancho Canyon. Water samples were analyzed for all or some of the following parameters: water chemistry, nutrients, metals, gross-alpha/beta, tritium, Pu 238, and Pu 239.

Training: Surface Water AIP personnel attended a soil geochemistry presentation at the NMED- Hazardous and Radioactive Materials Bureau on 7/25/94.

Significant Changes from Intended Activities

LANL: None.

Sandia/ITRI: One storm water event was sampled from the "bone yard" and one was sampled from Tech Area-4 and sent to SLD for analysis. Samples were split with Sandia National Laboratory.

WIPP: On July 14 - 15, Surface Water AIP personnel went to the WIPP site to tour and discuss DOE/Westinghouse's Surface Water Monitoring plan at and around the WIPP site. A copy of DOE's Environmental Monitoring Plan, developed by Westinghouse Electric Corporation (Waste Isolation Division), was submitted to NMED for review.

Significant Issues

LANL: Construction activities were noted in Los Alamos Canyon on 4/12/94. Staff observed that trees were being cut down. On 4/20/94, during a visit to the Los Alamos Canyon storm water sampling site, staff noted heavy sedimentation of the stream bed and extensive damage to the trees and the existing road in the area. Surface Water Quality AIP staff notified ESH-8 and DOE representatives. On 4/21/94, Surface Water Quality AIP staff toured Los Alamos Canyon with ESH-8 and DOE representatives, at their request, to inspect environmental damage caused by the gas pipeline installation. A DOE representative stopped further work in the area on 4/21/94.

On 8/24/94, Surface Water AIP personnel inspected Los Alamos Canyon after heavy rains from the previous weekend washed out the pipeline below TA-53 facility. Sediment washed out from the pipeline construction area travelled directly into Los Alamos Canyon stream. The Compliance Section of SWQB was notified.

Sandia/ITRI: None.

ENVIRONMENTAL MONITORING/ SAMPLING cont.

Significant Issues cont.

WIPP: None.

Percent of Staff Time

LANL: Approximately 60 percent of staff time is used to coordinate the events, prepare equipment, collect the samples, and transport them to the laboratory for analysis. This includes all NPDES, storm water, and rafting surveillance sampling events. It also includes organization and interpretation of analysis results and review of LANL generated data and reports.

Sandia/ITRI: Approximately 20 percent of staff time is used to coordinate the events, prepare equipment, collect the samples, and transport them to the laboratory for analysis. This includes organization and interpretation of analysis results.

WIPP: Approximately 1 percent of staff time is used to visit the WIPP site and review WIPP generated data and reports.

ENVIRONMENTAL RESTORATION

Scope/Objectives

General: Surface Water staff intends to oversee the remediation of all spills that impact water courses on DOE property. Staff will inspect spill sites, review and approve remediation plans, and monitor cleanup activities.

Accomplishments

LANL: Surface Water staff is currently overseeing remediation efforts at TA-3-30, SWMU 3-010 Mercury spill site, the Los Alamos Canyon pipeline installation construction, and the Guaje Pines lead contamination site.

Beginning 4/14/94 and continuing to the present, Surface Water AIP personnel have observed LANL's remediation efforts at the TA-3-30, SWMU 3-010 Mercury spill site.

On 8/30/94, a meeting was held between NMED, EPA, LANL, and DOE staff concerning activities at TA-3-30, SWMU 3-010 Mercury spill site. Site sampling activities were set to resume on 9/6/94.

On 9/13/94, Surface Water AIP personnel visited TA-3, SWMU 3-010 Mercury spill site. Preparations were underway at site to begin phase 2 soil vapor sampling. Sampling was set to begin on 9/14/94.

ENVIRONMENTAL RESTORATION Accomplishments cont.

LANL cont.

Soil vapor sampling conducted from 9/14/94 to 9/22/94 at TA-3, SWMU 3-010 Mercury spill site revealed VOC contamination is present in the soil surrounding the site. Samples devices included Kevlar bags and activated charcoal sampling tubes. On 9/22/94, the first borehole was advanced above the SWMU next to the building. The borehole filled with water to a level equal to the top of the confining layer at 25 feet. Staff believes the borehole may have encountered a perched aquifer. Water samples from the borehole were taken for analysis and the Ground Water Protection Bureau was notified.

On 7/18/94, Surface Water AIP, HRMB, and GWPB personnel visited the TA-16 site to observe SWMU's located in the area. Personnel were escorted by E.R. and TA-16 staff.

Surface Water AIP personnel inspected construction activities in Los Alamos Canyon on 8/2/94. Staff noted the existence of flow in D.P. Canyon and the diversion of the stream due to construction activities. The Point Source Regulation Section was notified.

On 8/2/94, staff were notified concerning the dumping of sludge from the Guaje Pines soil washing operation at Sigma Mesa. Approximately 226,000 gallons of sludge were dumped before operations were ordered to cease by ESH-8 staff. The sludge mix had flowed off the mesa and into the Sandia Canyon stream.

On 8/3/94, Surface Water AIP and GWPB personnel visited the Sigma Mesa site to make recommendations for Best Management Practices to halt migration of sludge to Sandia Canyon stream. While at the site, personnel observed continued dumping of sludge after LANL E.R. staff ordered dumping to stop on 8/2/94. The Point Source Regulation Section was notified.

On 8/4/94, Surface Water AIP personnel accompanied SWQB staff on an inspection of construction activities in Los Alamos Canyon and Sigma Mesa dump site.

During this quarter, monthly meetings with EM-8 staff and DOE representatives were continued to facilitate communication and coordinate activities.

Sandia/ITRI: None.

WIPP: None.

Significant Issues Changes from Intended Activities

No significant changes from intended activities were made.

Significant Issues

Communication between the NMED staff in the SWQB, DOE office staff, and the laboratories continues to be extremely good.

ENVIRONMENTAL RESTORATION cont.

Percent of Staff Time

Approximately 10 percent of staff time is spent in overseeing environmental restoration activities at DOE facilities. This includes meetings, inspections, and correspondence.

WASTE MANAGEMENT/WASTE CHARACTERIZATION

Scope/Objectives

Surface Water staff intends to continue to monitor and review LANL's Waste Stream Characterization reports that were developed under LANL's Waste Stream Characterization Program pursuant to Administrative Order VI-94-1210 issued by the EPA.

Accomplishments

Surface Water staff continues to review the LANL's Waste Stream Characterization Reports.

Significant Changes from Intended Activities

No significant changes from intended activities were made.

Significant Issues

None.

Percent of Staff Time

Approximately 5 percent of staff time is spent reviewing LANL's Waste Stream Characterization Reports.

EMERGENCY RESPONSE PLANNING

Scope/Objectives

SWQB staff would like to be involved in the Emergency Response Planning and an observer at mock scenarios. We have not been invited to become involved in any Emergency Response Planning activities.

Accomplishments

None.

EMERGENCY RESPONSE PLANNING

Significant Changes from Intended Activities

None.

Significant Issues

Lack of involvement with Surface Water Quality AIP staff.

Percent of Staff Time

0 Percent.

PUBLIC INFORMATION /PUBLIC MEETINGS

Scope/Objectives

Surface Water staff intends to inform DOE and the public of its activities through regular bimonthly and other meetings that take place.

Accomplishments

Surface Water AIP personnel attended the National AIP meeting in Knoxville, TN in August, 1994.

Surface Water AIP staff attended DOE/AIP bimonthly meetings as representatives for SWQB.

Surface Water AIP staff attended a NMED public meeting for Sandia National Laboratory on 9/13/94. SWQB staff demonstrated storm water sampling equipment.

Significant Changes from Intended Activities

No significant changes from intended activities were made.

Significant Issues

None.

Percent of Staff Time

Approximately 4 percent of staff time is spent on public relations work, including attending meetings and making any written reports available to the public.