

ENV Division Performance Highlights November 24, 2004

From ENV Division

- Quality New Mexico (QNM) announced last week that ENV Division will receive roadrunner-level recognition in the 2004 QNM Awards Program. The recognition signifies that the division is demonstrating a solid approach to quality management and is implementing appropriate systems, processes, and plans. The recognition is based on a 43-page quality self-assessment submitted in July by a team from the former Risk Reduction and Environmental Stewardship (RRES) Division, ENV Division's predecessor. (The document is posted on the web at http://em.lanl.gov/Downloads/2004_ap0704.pdf.) A QNM team of organizational experts reviewed the self-assessment using well established criteria for business performance excellence. A team of QNM judges then determined the level of recognition. ENV Division will receive the formal recognition for its quality accomplishments at the QNM annual conference scheduled for Bernalillo on March 31 and April 1, 2005. Last year the former RRES Division earned pinon-level recognition from QNM, signifying that the division has made a significant commitment to using quality concepts and principles. For 2004, the division applied at QNM's roadrunner level, which required more extensive documentation. POC: Brian Thompson @ 7-9308.
- David Janecky (ENV-DO) participated in the Grey Hills Academy High School Student Visit sponsored by the LANL Tribal Relations Team on November 16 & 17. In a set of presentations and discussions focused on energy security and impacts (Tom Baker C-ACS, Fred Begay TRT, David Janecky ENV-DO), Janecky presented an overview of uranium leaching and mobility, including specifics of environmental management development and demonstration projects on bicarbonate leaching of uranium contamination. POC: David Janecky @ 665-0253.

From Environmental Services

- The ECO Historic Buildings Team, Ellen McGehee Project Leader, coordinated a meeting between representatives of the Los Alamos Historical Society (LAHS) and LANL's IM-9. At this meeting, held earlier this month, LAHS members presented a proposal to IM-9 staff regarding the society's recent historic preservation grant from the Atomic Heritage Foundation. The proposed project would involve scanning and inventory work related to publicly-releasable historic LANL photographs. POC: Ellen McGehee @ 5-1722.
- Researchers with ENV Division's Water Quality and Hydrology Group (ENV-WQH) recently released the Cerro Grande Fire report on water quality and stream flow. The 200-page technical report, "Cerro Grande Fire Impacts to Water Quality and Stream Flow near Los Alamos National Laboratory: Results of Four Years of Monitoring" by Bruce M. Gallaher and Richard J. Koch, has been released as LANL report LA-14177. The report authors tracked chemical and hydrological changes below the burned areas over a four-year period.

Researchers found that the streams draining the burned areas contained heightened concentrations of more than two dozen different chemicals or fallout radionuclides. In the first rainy season after the fire, water quality across the Los Alamos area was dominated by

the fire-created contaminants. By the end of the third rainy season, most concentrations and streamflow fell to near pre-fire levels. A main LANL contamination issue that developed following the fire is increased erosion of plutonium-contaminated sediments from Pueblo Canyon by large storm runoff events. Several of these runoff events carried the plutonium directly into the Rio Grande. Yearly movement of plutonium-239,240 beyond the Laboratory's downstream boundary increased by as much as 50 to 80 times over that seen in the late 1990s. The plutonium-239,240 concentrations in sediments deposited downstream, however, are not large enough to pose significant health threats.

Despite the increased contaminant load carried by the Los Alamos area streams, the team found dissolved concentrations of radionuclides and metals in the Rio Grande lower than federal drinking water standards and comparable to pre-fire concentrations. Moderate increases in radionuclide and metals concentrations were seen in the bed sediments of Cochiti Reservoir. However, none of these sediment concentrations exceeded reference values for protection of aquatic life or residential activities. The studies concluded that the risks were within EPA acceptable risk levels and not greatly different from the risks present before the fire. POC: Bruce Gallaher @ 667-3040.

- As part of the latest Triennial Review of Water Quality, the New Mexico Water Quality Control Commission (WQCC) has recently passed several rulings affecting how the Laboratory deals with ephemeral streams on DOE property. At its November 9-10 session, the Commission decided not to apply chronic standards (lower levels of contaminants that could affect organisms exposed for 20 or 30 days or longer) to unclassified ephemeral streams. The Commission decided to apply only acute standards to those streams; it will apply both the acute and chronic standards to intermittent waters and ephemeral waters that are not streams (such as playa lakes). This is basically the position that both the University of California and DOE advocated. Other issues will be discussed in WQCC meetings scheduled for December 14-15. The WQCC triennial meetings are required by the federal Clean Water Act. POC: Mike Saladen @ 5-6085.
- The Los Alamos Historical Society has asked Ellen McGehee to support their efforts regarding the restoration of the Romero Cabin (mostly by providing historical background information about the cabin and about homesteading in general). Ellen worked on the project that relocated the cabin from TA-55 to downtown Los Alamos in the mid-1980s, and is currently working on a history of Pajarito Plateau homesteading. POC: Ellen McGehee @ 5-1722.
- On November 17, 2004, Steve Veenis of ENV-WQH briefed the Northern New Mexico Citizen's Advisory Board (NNCAB) on the status of the Federal Facility Compliance Agreement (FFCA). The briefing was requested by the NNCAB due to the recent Clean Water Act NPDES Public Notice and request for comment on the FFCA from EPA Region 6 Water Enforcement Branch. The briefing, "Transitioning from Regulating Storm Water Discharges from SWMUs Under the Multi-Sector General Permit to an Individual Permit at LANL through a Federal Facility Compliance Agreement (FFCA)," was presented to the NNCAB and other members of the public at Cities of Gold Hotel in Pojoaque. A poster board was also available and handouts of the presentation were provided to all in attendance. The NNCAB intends to issue comments to the EPA regarding the proposed FFCA on behalf of the citizens of Northern New Mexico. POC: Steve Veenis @ 7-0013.

- Lisa Henne (RRES-ECO) was an invited speaker at the University of Illinois at Urbana-Champaign Joint Area Studies Symposium, "Troubled Waters in a Globalizing World: Community, Property and Conflict Over a Vital Resource". She presented a paper titled "The Strategic Use of Science for Water Resource Protection in Rural Mexico", which was based on her dissertation research. Information about the conference and presenters is available at <http://www.clacs.uiuc.edu/jacweb/index.html>. POC: Lisa Henne @ 7-1710.

From Remediation Services

- LANL submitted a response to the New Mexico Environment Department's (NMED) Notice of Disapproval for the Corrective Measures Study (CMS) Report for Material Disposal Area (MDA) H at TA-54. Classified waste was disposed at MDA H in 9 shafts from the 1960s through 1985. Once NMED approves the response, LANL will reissue the CMS report as final, NMED will select a final remedy for the site, and will schedule a public comment period on the remedy selection. POC: John K. Hopkins @ 7-9551.
- Results were received from the September 2004 resampling effort at Solid Waste Management Unit (SWMU) 21-013(d)-99, a surface-debris disposal site. The resampling was required by the New Mexico Environment Department (NMED) to further investigate elevated levels of chromium (up to 600 mg/kg) and, to a lesser extent, nickel and copper detected in 2003 samples from the SWMU. These metals were not historical contaminants of potential concern at the site, nor were they expected based on operational history. It was hypothesized that the presence of these metals in the 2003 samples was an artifact of the sampling method, which involved using a reinforced auger to collect samples up to 7 feet below ground surface in tuff. The MSDS for the reinforced auger documented high levels (several weight percent) of chromium, copper, and nickel in the various components of the auger. The results of the 2004 resampling, which was conducted using a back-hoe to reach the target depth, do not indicate elevated levels of chromium, copper, and nickel in tuff at SWMU 21-013(d)-99. The 2004 data further support the hypothesis that these metals were introduced to the samples through abrasion of the auger. A supplemental Notice of Deficiency (NOD) response will be written and submitted to NMED to document the resampling approach and results. POC: Becky Coel-Roback @ 5-5011.