TA-21
SWMU 21-024(i)

ENVIRONMENTAL RESTORATION PROJECT
COMMUNICATION RECORD

Date: 08/19/02	**Time:** 2:00 p.m.	**Recorded By:** P. Bertino
To: Vickie Maranville 8-19-02	**From:** P. Bertino	**Telephone No.:** 665-2198
Affiliation: NMED-HWB		
Other Parties: John Young and Kirby Olson, NMED-HWB Rich Mirenda, John Hopkins and Becky Coel-Roback, LANL RRES-ER and Woody Woodworth OLASO		

Discussion This communication record (including all referenced information previously provided to NMED-HWB) documents discussion topics and agreements reached during the June 25, 2002 meeting between LANL ER Project and NMED-HWB staff regarding the status of the corrective action at SWMU 21-024(i). During the meeting, the following information was presented and/or discussed:

Introduction/Background/Previous Investigations
LANL ER Project representatives summarized the site history, previous and current investigations and removal actions, and waste disposal issues for SWMU 21-024(i). LANL provided photographs of the septic tank interior following removal of the sludge and cleaning, and additional photos of the outside of the tank upon excavation to demonstrate that the reinforced concrete tank was in good condition with no evidence of leaks at the time of removal in August 2001. LANL provided an information packet to meeting attendees containing: the Fact Sheet for the site; photographs of Areas 1, 2, and 3 at SWMU 21-024(i) during various stages of investigation and cleanup; a table describing characterization and confirmation samples collected to date and a corresponding sample location map; a SAL exceedance map with all COPCs detected above SALs included; tables comparing worst case (maximum detects) analytical results to background and/or fall out values and SALs; RESRAD graphs and tables for residential and worker exposure to tritium in the subsurface; tables comparing detects to ESLs; and data and maps from the Canyons Focus Area Upper Los Alamos Canyon Reach Report (LA-UR-98-3974) for sample locations upgradient and downgradient of SWMU 21-024(i). The meeting attendees then reviewed the information as a group.

Nature and Extent /Human Health Screening Assessment
Based on review of all analytical data collected to date, LANL believes that the nature and extent of contamination at SWMU 21-024(i) has been defined and after reviewing the analytical data and maps, NMED generally concurred. John Young, NMED inquired about the need to collect samples at the toe of the colluvium in Los Alamos Canyon below SWMU 21-024(i), but after reviewing numerous photographs of the site with respect to Los Alamos Canyon (the canyon bottom is approximately 400 to 500 feet below the outfall separated by a steep canyon wall and there is no toe available to sample), reviewing data presented in the Canyons Focus Area Upper Los Alamos Canyon Reach Report (LA-UR-98-3974), and considering concentrations of contaminants remaining at the site, and the fact that the source term has been removed, it was agreed that based on the information provided, additional sampling would not be required at this time for SWMU 21-024(i).

The SWMU is located at the east end of TA-21 on DOE property that will remain under DOE control for the foreseeable future. Human health screening results indicate that there is no present day risk to site workers under the industrial land use scenario and effectively no present day risk under the residential land use scenario. Only one organic chemical [benzo(a)pyrene, a polycyclic aromatic hydrocarbon(PAH)] was detected at a concentration greater than its screening action level (SAL) in a single sample. Arsenic was the only inorganic chemical detected at a concentration greater than its SAL in a single sample. Thorium-228 and –230 were each detected in a single sample above their respective background/fallout values, cesium-134 was detected in six samples at a maximum concentration of 0.122 pCi/g, plutonium-239 was detected in three samples at a maximum concentration of 0.059 pCi/g, and tritium was detected in 31 of 34 samples at a maximum concentration of 4,066 pCi/g. All of the radionuclides were detected at depths greater than 3 feet below ground surface (bgs), with the highest tritium value detected at a depth of approximately 9 feet bgs. The RESRAD run conducted for tritium for all pathways for a residential scenario indicates a current dose of 0.22 mrem/year.

Based on the data provided, Kirby Olson, (NMED) inquired as to why LANL is not planning to propose the SWMU for no further action (NFA). LANL indicated that since NMED will only approve a request for NFA for a site if residential risk criteria are met, LANL would not propose this site for NFA because SWMU 21-024(i) is an industrial site. If LANL were to propose SWMU 21-024(i) for NFA at this time in accordance with residential risk criteria, the residual subsurface tritium at depth could prevent the site from meeting the criteria if the land use scenario assumes that a basement for a residence would be excavated at this location. Due to the half-life of tritium (approximately 12.3 years), LANL proposed that SWMU 21-024(i) be considered "administratively complete" meaning that no further corrective action is required. The SWMU would remain on Module VIII of LANL's Hazardous Waste Facility Permit until one of the following occurs: 1) tritium decays to levels that meet residential risk criteria; or 2) the State of New Mexico passes legislation that would allow NMED to approve recommendations for NFA based on institutional control. NMED indicated that future changes in land use or ownership may require additional investigation and possible remediation at the site.

John Young, (NMED) asked for clarification on what "administratively complete" means. LANL explained that for lack of another term, SWMU 21-024(i) and many others will fall into a category where corrective action is complete with some acceptable level of contamination remaining at the site based on appropriate land use scenarios other than residential (e.g., industrial). These SWMUs are located on DOE property that will remain under institutional control for the foreseeable future.

Kirby Olson, (NMED) stated that when the data from SWMU 21-024(i) is formally reported to NMED, 95% upper confidence limits (UCLs) should be used for the human health and ecological risk screening assessments in lieu of the maximum detected concentrations, which are overly conservative. LANL agreed.

Ecological Risk Screening Assessment

John Young inquired as to why the maximum background levels were used for ESL comparisons in the ecological screening assessment. As stated above, 95% UCLs will be used for the ecological risk screening assessment when the data from SWMU 21-024(i) is formally reported to NMED. Kirby Olson requested that LANL provide hazard quotients (HQs) and hazard indicators (HIs) based on the 95% UCLs to determine if there may be the potential for ecological risk at Area 3 of SWMU 21-024(i). This information was provided to NMED to review via e-mail on July 30, 2002 and will be included when the data and corresponding evaluation results from SWMU 21-024(i) are formally reported to NMED in the IA completion report.

Reporting

1. NMED and LANL have agreed that since the corrective action and confirmation sampling at SWMU 21-024(i) were completed in accordance with an approved interim action (IA) plan (LA-UR-98-1896), LANL could document the field activities, analytical results, screening assessment results, and conclusions/recommendations in an IA completion report.

2. NMED requested that LANL provide information regarding the septic system that replaced the system designated as SWMU 21-024(i) (septic tank structure 21-181) when it was abandoned in place in 1964. The septic system designated SWMU 21-024(k) (septic tank structure 21-219) was constructed in 1964 just prior to the construction of Building 21-209. Because the drainline from Building 21-152 to the septic tank at SWMU 21-024(i) was located in the middle of the construction area for Building 21-209, the construction of the new septic tank (SWMU 21-024(k)) and connection of the drainlines from Buildings 21-152, -166 and -167 was accomplished before construction of the new building began. The construction of Building 21-209 took 14 months to complete and the building's wastewater drainlines were tied directly into the new TA-21 wastewater treatment plant (WWTP), Building 21–257. In 1966, the drainline from the septic tank at SWMU 21-024(k) was tied into the collector drainline for the new TA-21 wastewater treatment plant (Building 21–257) and the septic tank was abandoned in place after being pumped out and filled with soil.

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During the 1993 Phase I RFI, three 20-ft. boreholes were advanced at SWMU 21-024(k), one adjacent to and downgradient of the former septic tank, and two in the leach field. Core samples were collected at 5-ft. intervals for a total of 12 samples. Results showed no detected organic chemicals, no radionuclides above SALs and no inorganics above SALs; however, this data will be evaluated against current SALs and background/fallout values. LANL will provide this information and supporting documentation regarding SWMU 21-024(k) in the IA completion report for SWMU 21-024(i).

3. NMED and LANL concurred that for the ecological screening assessment, the characterization and/or confirmation data be evaluated together for the two mesa top areas of SWMU 21-024(i): Area 1 – mesa top, subsurface, former septic tank location and Area 2 – mesa top, surface and near surface in outfall area near canyon rim; and evaluated separately for Area 3 of SWMU 21-024(i) – the bench on the canyon side located approximately 50 feet below the outfall and canyon rim. For the human health screening assessment, NMED and LANL concurred that the characterization and/or confirmation data for the entire SWMU (Areas 1, 2 and 3) be evaluated together.

4. NMED and LANL agreed to a submittal date of March 30, 2003 for the IA completion report for SWMU 21-024(i).

Action Items:
Deliver communication record for Vickie Maranville to initial and distribute the record. Thoroughly document all deviations from the approved IA Plan and the implementation of decisions agreed to herein in the IA completion report for SWMU 21-024(i) to be submitted to NMED-HWB by March 30, 2003.

Distribution: WM
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