

Appendix C

Investigation-Derived Waste Management

This appendix describes how investigation-derived waste (IDW) generated during the investigation of Material Disposal Area (MDA) B at Los Alamos National Laboratory (the Laboratory or LANL) will be managed. IDW is solid waste generated by field investigation activities and may include, but is not limited to, drill cuttings; purge water; contaminated personal protective equipment (PPE), sampling supplies, and plastic; fluids from the decontamination of PPE and sampling equipment; and all other wastes potentially contacting contaminants. Certain field investigation activities may also displace environmental media, which is defined as naturally occurring material indigenous to the environment and includes groundwater, surface water, surface and subsurface soils, rocks, bedrock, and gravel. According to the US Environmental Protection Agency (EPA) "area of contamination" policy, environmental media are not considered waste (and, hence, not IDW) if they are returned to their points of origin. IDW generated during the investigation of MDA B will be managed in such a manner as to protect human health and the environment, comply with applicable regulatory requirements, and adhere to the Laboratory's waste-minimization goals.

All IDW generated during the field investigation will be managed in accordance with applicable Risk Reduction and Environmental Stewardship–Remediation Services (RRES-RS) standard operating procedures (SOPs). These SOPs incorporate the requirements of all applicable EPA and New Mexico Environment Department regulations, US Department of Energy (DOE) orders, and Laboratory Implementation Requirements. The RRES-RS SOPs that are applicable to the characterization and management of IDW are

- LANL-ER-SOP-1.06, Management of Environmental Restoration Project Waste; and
- LANL-ER-SOP-1.10, Waste Characterization.

These SOPs are among the SOPs applicable to the investigation at MDA B and are available at the following URL: <http://erproject.lanl.gov/documents/procedures.html>.

Investigation activities will be conducted in a manner that minimizes waste generation by implementing the requirements of the RRES-RS Waste Minimization Awareness Plan, which is updated annually as a requirement of Module VIII of the Laboratory's Hazardous Waste Facility Permit.

The waste streams that will be generated and managed during the work at MDA B include

- exploratory trench and pothole spoils;
- PPE, plastic, and other IDW; and
- decontamination fluids.

All wastes will be managed in accordance with applicable federal, state, DOE, and Laboratory requirements. Waste streams, regulatory classification, amounts, and disposal pathways are shown in Table C-1.

Table C-1
Waste Streams from Solid Waste Management Unit (SWMU) 21-015 Investigation Work Plan

| Waste Stream | Waste Type | Estimated Volume (yd ³) | Shipped To |
|--|--|-------------------------------------|---|
| Exploratory trench and test pit spoils | Solid waste | 400 | Los Alamos County landfill, NM |
| | Industrial or New Mexico special waste | 400 | Waste Management of Rio Rancho, NM |
| | Resource Conservation & Recovery Act hazardous waste | 100 | Envirocare, in Utah, or appropriate treatment/disposal facility via LANL, TA-54 |
| | Low-level radioactive waste | 100 | LANL, TA-54 |
| | High-level radioactive waste | <1 | LANL, TA-54 |
| | Mixed low-level waste | 100 | Envirocare, in Utah, via LANL, TA-54 |
| | Transuranic waste (TRU), mixed TRU waste | 100 | Waste Isolation Pilot Plant via LANL, TA-54 |
| PPE, plastic, and other IDW | Solid, low-level waste | 6 | LANL, TA-54, Area G |
| Decontamination fluids | Liquid, low-level waste | 300 | LANL, TA-50, Radioactive Liquid Waste Treatment Facility |

The total waste volume from eight exploratory trenches and forty test pits is estimated to be 1200 yd³. Breakdown of waste types and volumes is entirely speculative. The waste characterization for the work plan–related waste streams will be based on historical documents, process knowledge, and professional judgement.

Prior to the start of field investigation activities, a Waste Characterization Strategy Form (WCSF) will be prepared and approved per the requirements of LANL-ER-SOP-01.10. The WCSF will provide detailed information about IDW characterization, management, containerization, and potential volume generation. IDW characterization will be achieved through existing data and/or documentation, direct sampling of the IDW, or sampling of the media being investigated (i.e., surface soil, subsurface soil). If sampling is necessary, it will be described in a sampling and analysis plan that is developed in conjunction with the WCSF.

The selection of waste containers will be based on the appropriate Department of Transportation requirements and the type and amount of IDW planned to be generated. Immediately following containerization, each waste container will be individually labeled by waste classification, item identification number, radioactivity (if applicable), and date generated. Waste containers will be managed in clearly marked and appropriately constructed waste accumulation areas. Waste accumulation area postings, regulated storage duration, and inspection requirements will be based on the type of IDW and its classification. Container and storage requirements will be detailed in the WCSF and approved prior to waste generation.