



Environmental Programs

P.O. Box 1663, MS M991

Los Alamos, New Mexico 87545

(505) 606-2337/Fax (505) 665-1812

Date: AUG 10 2011

Refer To: EP2011-0265

George J. Rael, Assistant Manager
Environmental Projects Office
Los Alamos Site Office
National Nuclear Security Administration
3747 West Jemez Road, MS A316
Los Alamos, NM 87544

**Subject: Request for Extension for the Radioactive Waste Streams Generated by the
Environmental Programs Corrective Actions Program Groundwater Monitoring Project**

Dear Mr. Rael:

The Los Alamos National Laboratory (the Laboratory) is requesting an extension for waste exceeding the July 29, 2011, 1-year disposal requirement in accordance with U.S. Department of Energy (DOE) O/M 435.1. The Laboratory requests permission to store the waste described in the enclosed attachment for an additional 10 months, which would extend the expiration date to dispose of the waste to April 30, 2012.

Currently, the waste is managed in a registered radioactive waste-staging area pending its disposition. The media consist of purge water, decontamination water, and associated contact wastes generated by the groundwater monitoring project, and hopefully, most of the waste will be recharacterized as nonradioactive.

The Laboratory had intended to ship this waste for disposal before the 1-year storage requirement was exceeded; however, development of environmental liquid radioactive characterization procedures is taking longer than anticipated. The Laboratory is working with DOE-Los Alamos Site Office to establish new guidance on radioactive determinations for groundwater. Nonradioactive determinations resulting from this new guidance should result in significant cost savings in waste disposition.

If you have any questions, please contact me at (505) 667-0819 (mcinroy@lanl.gov) or Victor Garde at (505) 665-5645 (vgarde@lanl.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Dave McInroy", followed by the word "for" in a cursive script.

Dave McInroy, Program Director
Environmental Programs – Corrective Actions Programs
Los Alamos National Laboratory

MG/DM:sm

Attachment: Form 2107, Radioactive Waste Management Basis Report Form for Radioactive Waste Streams Generated by the Environmental Programs Corrective Actions Program Groundwater Monitoring Project (LA-UR-11-11274)

Cy: (w/att.)

Annette Russell, DOE-LASO (date-stamped letter emailed)
George Henckel, DOE-LASO, MS A316 (date-stamped letter emailed)
Lee Bishop, DOE-LASO, MS A316 (date-stamped letter emailed)
Andrew Worker, DOE-LASO, MS A316 (date-stamped letter emailed)
Chris Cantwell, ADESHQ, MS K491 (date-stamped letter emailed)
Alison Dorries, WES-DO, MS K491 (date-stamped letter emailed)
Scotty Jones, WES-DO, MS K491 (date-stamped letter emailed)
Steve Singledecker, WES-WGS, MS K491 (date-stamped letter emailed)
Michelle Coriz, WES-WGS, MS E522 (date-stamped letter emailed)
Victor Garde, WS, MS M881 (date-stamped letter emailed)
Ron DeSotel, WS, MS M997 (date-stamped letter emailed)
Dave McInroy, EP-CAP, MS M992 (date-stamped letter emailed)
William Alexander, EP-BPS, MS M992 (date-stamped letter emailed)
RPF, MS M707 (electronic copy)



Radioactive Waste Management Basis Report Form

☒ Extension Requested (Detailed letter must be attached.)

ADEP/CAP 2011-Aug., Rev. 0

Reporting Organization ADEP- Corrective Actions	Report Date 8/2/2011	Facility Hazard: <input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low
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Purpose

The purpose of this report form is to document the radioactive activities at Technical Area(s) (multiple), which are operated by the ADEP-CAP organization at Los Alamos National Laboratory (LANL or the Laboratory). This Radioactive Waste Management Basis (RWMB) Report Form constitutes compliance with the applicable requirements of Department of Energy (DOE) Order 435.1, *Radioactive Waste Management*, and in DOE Manual 435.1, Chapter IV, *Low-Level Waste Requirements*, and Chapter III, *Transuranic Waste Requirements*. The organization must submit an RWMB Report Form to the Waste and Environmental Services-Waste Generator Services Group (WES-WGS), Waste Certification Program (WCP) by July 30 upon expiration or when a significant waste stream change has occurred. WCP must compile the LANL Organization RWMB Reports and submit this package for DOE reporting before August 30 in order to maintain approval.

Time Requested for RWMB Approval 2 years (year(s))**Report Authorization****Facility Operations Director (FOD)/Division Leader:**

David McInroy

Name

Signature

Date

Report Preparer:

Name

Signature

Date

Waste Certification Specialist:

Michelle Coriz

Name

Signature

Date

Waste Certification Program (WCP) Annual Review**Waste Certification Specialist:**

Name

Signature

Date

Waste Authorization Basis

List all facility/operations authorization basis documents and include specific facility waste management documents.

☒ Nuclear-Facility ☒ Non-Nuclear Facility ☐ TDSF ☐ Accelerator ☐ An attached list is provided

Safety or Facility Document Name	Document Number	Last Rev. Date	Document Owner
<input type="checkbox"/> Waste Management Plan			
<input type="checkbox"/> Facility Waste Certification Plan (FWCP). Do not complete pg. 3			
<input type="checkbox"/> Operation Record			
<input type="checkbox"/> Documented Safety Analysis (DSA)			
<input type="checkbox"/> Technical Safety Requirement (TSR)			
<input type="checkbox"/> Safety Evaluation Report (SER)			
<input type="checkbox"/> Health & Safety Plan/Job Hazard Analysis			
<input type="checkbox"/> Site Treatment Plan			
<input checked="" type="checkbox"/> DOE O 435.1 Exemption for Disposal at a Non-DOE Facility	DOE O 435.1	8-28-01	Department of Energy
<input type="checkbox"/> Closure Plan			
<input type="checkbox"/> Monitoring			
<input checked="" type="checkbox"/> Characterization & Mgt. of Environmental Program Waste	SOP-5238	09/10/2009	ADEP
<input checked="" type="checkbox"/> DSA for S&M of Nuclear Env. Sites at LANL	NES-ABD-0101 R-4	02/08/2011	TA-21 FOD
Institutional Document	Document Number	Institutional Document	Document Number
<input checked="" type="checkbox"/> Waste Management	P409	<input checked="" type="checkbox"/> LANL Waste Acceptance Criteria	P930-1
<input checked="" type="checkbox"/> Radioactive Waste Certification Program	P930-2	<input checked="" type="checkbox"/> Off-Site Shipment of Chemical, Hazardous, or Radioactive Waste	P930-3
<input checked="" type="checkbox"/> NMED LANL Hazardous Waste Facility Permit	NM0890010515-1	<input checked="" type="checkbox"/> LANL Packaging and Transportation Program Procedure	P151-1
<input checked="" type="checkbox"/> Environmental Management System	SD400	<input checked="" type="checkbox"/> National Environmental Policy Act (NEPA)	42 U.S.C. 4321

Waste and Activity by Building and Destination

For any building/location managing radiological materials, enter the TA-Bldg No. (e.g., 55-0078 or 55-outside) then click on waste activity and destination box and select the appropriate descriptors for the management activity type (see key below) and waste destination. Identify total organization estimated annual volume above destination box.

TA-Bldg. No.	LLW Activity	Estimated Annual Volume 13,000 yd3 Destination	Waste Matrix	MLLW Activity	Estimated Annual Volume 100 yd3 Destination	Waste Matrix	TRU Activity	Estimated Annual Volume Destination	Waste Matrix	Mixed TRU Activity	Estimated Annual Volume Destination	Waste Matrix
All	SS	TA-50 RLWTF	Liquid	SS	Off-site Disposal	Liquid	None	N/A	N/A	None	N/A	N/A
Comment: <i>Locations are identified by WCSFs. MLC 8/8/11</i>												
All	SS	Off-site Disposal	Solid	SS	Off-site Disposal	Solid	None	N/A	N/A	None	N/A	N/A
Comment: <i>Same as above. MLC 8/8/11</i>												
	None	N/A	N/A	None	N/A	N/A	None	N/A	N/A	None	N/A	N/A
Comment:												
	None	N/A	N/A	None	N/A	N/A	None	N/A	N/A	None	N/A	N/A
Comment:												
	None	N/A	N/A	None	N/A	N/A	None	N/A	N/A	None	N/A	N/A
Comment:												
	None	N/A	N/A	None	N/A	N/A	None	N/A	N/A	None	N/A	N/A
Comment:												
	None	N/A	N/A	None	N/A	N/A	None	N/A	N/A	None	N/A	N/A
Comment:												
	SS	N/A	N/A	None	N/A	N/A	None	N/A	N/A	None	N/A	N/A
Comment:												
	None	N/A	N/A	None	N/A	N/A	None	N/A	N/A	None	N/A	N/A
Comment:												
	None	N/A	N/A	None	N/A	N/A	None	N/A	N/A	None	N/A	N/A
Comment:												

Activity: Recyc = Recycling. Stage = Staging. Store = Storage. SS = Stage & Store. Treat = Waste Treatment. SR = Stage & Repack. All = All Activities.

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DOE O/M 435.1 Facility/Organization Specific Summaries ADEP/CAP 2011-Aug., Rev. 0

Facility Scope

Provide a brief description of organization activities and operations including waste generation, management, tracking, reporting and preliminary disposal characterization.

ADEP-Corrective Actions Projects is responsible for performing environmental investigations and remediation within all LANL technical areas in accordance with the New Mexico Order on Consent. Investigation work activities typically include collecting surface soil and sediment samples, drilling boreholes, installing monitoring wells, and performing long term monitoring to establish contaminant trends. Remediation work often includes the excavation and removal of waste from former disposal facilities, installation of passive treatment systems such as permeable reactive barriers, installation of soil vapor extraction systems, and installation of engineered cover systems. Typical waste streams include soil, debris, drill cuttings, drilling fluids, development water, purge water, PPE, and decontamination water. Each project incorporates waste minimization and pollution prevention into the project specific Waste Characterization Strategy Form (WCSF). Waste generated from ADEP-CAP activities is tracked by the responsible waste management coordinator to ensure proper and timely disposition.

Life-Cycle Waste Management

Describe the waste management process at the organization, security of waste funding and the cradle to grave management. Specify how applicable procedures address waste management and controls. Utilize Environmental Management System (EMS) support.

Response:

SOP-5238 "Characterization and Management of Environmental Program Waste" delineates the process for characterizing and managing waste generated during Consent Order, or decontamination and/or demolition activities conducted by the Environmental Programs Directorate (ADEP or Project) at the Los Alamos National Laboratory (LANL or Laboratory). In accordance with SOP-5238, a Waste Characterization Strategy Form (WCSF) is developed. The WCSF is a planning and implementation document that is required to be prepared before any waste-generating activity is undertaken. The WCSF documents site history, planned field activities, characterization approach for each waste stream expected to be managed, and disposal path. For Consent Order driven work, the WCSF is used to implement the IDW requirements of the NMED-approved work plan. The Laboratory's waste operations group also uses the information provided on this form to support regulatory classifications of ADEP-generated wastes. Returned waste manifests confirm final waste disposition at the receiving facility. NMED Consent Order requirements are the basis for the project activities, waste generation locations, and project schedules. Project funding is obtained prior to initiating field activities.

Characterization

Provide a description of how the organization implements the radioactive waste characterization process at the organization and the document support. Detail the routine method of waste characterization for the organization.

Response:

The WCSF is a planning and implementation document that is required to be prepared before any waste-generating activity is undertaken. The WCSF requires all wastes to be managed in accordance with P-409, Waste Management; EP-SOP-5238, *Radioactive Waste* Characterization and Management of Environmental Program Waste; P-930-1, LANL Waste Acceptance Criteria; P-930-2, Waste Certification Program, and approved work plans. The Project Manager, Waste Generator, Waste Management Coordinator, ENV-RCRA Representative, Waste Acceptance Representative, and Waste Certification Representative are required to review and approve the WCSF prior to generating wastes. *use 8/8/11*

Packaging and Transportation

Specify organization specific procedures for packaging operations and preparations for transportation. Laboratory personnel are required to meet P151-1, "Hazardous Material (HAZMAT) Packaging and Transportation" to ensure compliance with DOT. Identify the controls that will be implemented to prevent contents from being added to waste containers or tampered with while in a registered waste area.

Response:

The WCSF incorporates P-151-1, LANL Packaging and Transportation Program Procedure, P-930-3, Off-Site Shipment of Chemical, Hazardous, or Radioactive Waste, and P-930-1, LANL Waste Acceptance Criteria. Containers and waste management staging/storage areas are inspected to ensure containers are properly sealed, labeled, dated, etc.

Staging/Storage

Describe the accumulation and holding of radioactive waste that is treated, or transported to or from the organization. The organization generation process and management trail into a registered waste area.

Response:

The WCSF identifies the requirements for generating and storing waste, including radioactive waste streams. Radioactive waste is

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managed in accordance with P-930-2 Radioactive Waste Certification Program and ENV-RCRA-TOOL-303.1, Low Level Waste Staging Areas and 304.1, Low-Level Waste and Transuranic waste Storage Areas

Quality Assurance Program

Describe the organization procedures that ensure the traceability of waste characterization records, container procurement, and the document control process.

Response:

EP--SOP-5238 describes the process for the development and control of waste management documents and records including submittal of final records to the Records Processing Facility.

Training and Qualification

All waste management personnel (WMCs, ESH&Q, Environmental Tech, etc.) are required to maintain qualification standards. Describe how the organization implements any other radioactive waste management specific training required by the organization.

Response:

ADEP develops and maintains waste generation specific training matrices for waste management personnel and subcontractors. Training status of waste generators and workers is maintained in the LANL training database. The waste management coordinators are assigned appropriate training plans by their responsible manager.

Waste Minimization and Pollution Prevention

Document the implementation of waste minimization and pollution prevention programs for radioactive waste management facilities, operations, and activities. Provide assurance of waste stream evaluation prior to generation of waste. Refer to WPF Guidelines in Appendix A, "Waste Profile Form Completion Instructions."

Response:

Project specific waste minimization and pollution prevention goals are documented in the approved WCSFs. In support of waste minimization/pollution prevention efforts, ADEP-CAP has used analytical data to support land application of drill cuttings, ENV-RCRA-QP-011.2, Land Application of Drill Cuttings. This has resulted in a significant reduction in waste volume for projects.

DOE Extension Request for Rad Waste Streams

List waste to exceed one year and provide reason. (Detailed memo from FOD to DOE FEM must be attached.)

Radioactive Waste Streams Generated by the CAP Groundwater Monitoring Project which consists of purge water, decontamination water, and associated contact waste generated by the groundwater monitoring project. Development of environmental liquid radioactive characterization procedures has taken longer than anticipated. ADEP is currently working with DOE/LASO to establish new guidance on making radioactive determinations on groundwater.

Report Authorization

ADEP/CAP 2011-Aug., Rev. 0

Report Preparer:

RON DESJARDIS
Name

[Signature]
Signature

8-2-11
Date

FOD/Division Leader:

DAVE MCINROY
Name

[Signature] for
Signature

8/4/11
Date

Waste Certification Specialist:

MICHELLE CORIZ
Name

[Signature]
Signature

8/6/11
Date