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Guidance for Reviewing and Approving a Waste Stream Profile in the Waste Compliance and Tracking System

By

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Environmental and Resource Management

ERM 593 Applied Project

- Initial step was to identify an Applied Project beneficial for my office, group, or the Los Alamos National Laboratory (LANL).
- Goal was to develop a LANL procedure for reviewing and approving a Waste Stream Profile (WSP) in WCATS.
- Required fields of a procedure include table of contents, purpose, scope, acronyms, definitions, responsibilities, processes, and references.
- Developing the procedure soon transitioned into a guidance document.
- Applied project is titled Guidance for Reviewing and Approving a Waste Stream Profile in the Waste Compliance and Tracking System called WCATS.
- Expected results include development of a procedure, use of the guidance document for processing/activating a WSP in WCATS, and to be published/cataloged at the LANL library.

Guidance Document Applied Project Outline

- Purpose:
 - Identifying state/federal regulations and LANL directives
- Scope:
 - Information covered in the applied project
- Acronyms:
 - Used at LANL
- Definitions:
 - Relevant to the guidance/applied project
- Responsibility:
 - The Waste Stream Profile Reviewer
- General Information:
 - WSP Number
 - Waste Type, generator
 - WMC information
- Site Area:
 - Waste Accumulation

Guidance Document Applied Project Outline- Continued

- Method of Characterization:
 - Chemical/physical analysis
 - Radiological analysis
 - PCB analysis
 - Acceptable Knowledge Documentation (AKD)
 - Safety Data Sheets (SDSs)
- Waste Prevention/Minimization
- Chemical/Physical Information:
 - Waste source type
 - Radiological Control Area (RCA)
 - Special Destination (e.g. on-site TSDFs)
 - waste source/waste matrix
- Waste Category:
 - Inorganic, organic, solvent/degreaser, dioxin, electroplating, treated hazardous waste, No-longer Contained-In, explosive process, infectious/medical, biological, beryllium, empty container, battery, asbestos, Polychlorinated Biphenyl source concentration, hazardous contaminated soil, untreated hazardous debris, and commercial solid waste
- Generator Estimates:
 - Three year estimates
- Annual Generation:
 - Automatic database function
- Process and Waste Description:
 - Concise description

Guidance Document Applied Project Outline- Continued

- I/C/R: ignitability, corrosivity, reactivity
 - Characteristic EPA waste numbers D001, D002 and D003
- Toxicity Characteristics
 - Characteristic/Listed EPA waste numbers (e.g. D, F, K, P or U)
- Composition
 - Additional constituents/contaminants
 - May include regulated characteristic/listed waste (e.g. D, F, K, P or U)
- Additional Information:
 - Any additional information supporting the WSP characterization
- Land Disposal Restrictions
 - LDR Information/LDR Certification/LDR UHCs
- Nuclides:
 - Low-level waste (LLW) destined to National Nevada Security Site (NNSS)
- Mixed Low-Level Waste (MLLW):
 - Disposal path

Guidance Document Applied Project Outline-Continued

- Waste Certification Statement:
 - Does stream meet the LANL Waste Acceptance Criteria (WAC)
 - Need a Waste Acceptance Criteria Exception Form (WEF)
 - Stream has no-disposal path
- Work Path:
 - Generator Requirement
- Signatures:
 - Verify appropriate LANL Reviewer signatures are populated
- Comment Log:
 - Free form text to include any comment (e.g. reason for a specific RCRA classification)
- Edit Log:
 - Automatic database function
- References
- Appendix:
 - LANL Reviewers
 - Copyrighted Permission
 - Waste Stream Profile RCRA Review
 - Waste Type category (examples)
 - Potential EPA Waste Codes (numbers) for Characteristic and/or Listed waste

State and Federal Regulations

- 20.9.2 NMAC Solid Waste Management General Requirements
- 20.9.8 NMAC Special Waste Requirement
- 40 CFR 261.4 Exclusions
- 40 CFR 261.20 Characteristic of Hazardous Waste, Subpart C
- 40 CFR 261.30 Lists of Hazardous Wastes, Subpart D
- 40 CFR 268, Land Disposal Restrictions
- 40 CFR 273, Standard For Universal Waste Management

Selected LANL Directives

- ENV-RCRA-TOOL-101.0: Waste Management Glossary
- Los Alamos National Laboratory Hazardous Waste Facility Permit. New Mexico Environment Department, Santa Fe, New Mexico. Issued November 30, 2010.
- MAN-5004, R2: Waste Compliance and Tracking System User's Manual
- P930-1: LANL Waste Acceptance Criteria
- WM-TOOL-313.1: Acceptable Knowledge Package Guidance for Low-Level Waste

A Waste Stream Profile

- Developed by LANL generators to properly characterize/document the physical, chemical, biological and/or radiological characteristics of their waste.
- Reviewed by a LANL WSP reviewer to ensure all panels are accurate, complete, and up-to-date and consistent with one another.
- Ensure the waste type category is consistent with the WSP characterization
- Ensure all appropriate RCRA hazardous waste numbers, subcategories and the biennial source/form codes are applied to include the ancillary waste types, as required.

Waste Stream Profile Waste Type Category

- Non-Solid Waste
- Solid Waste
- Hazardous Waste (characteristic and/or listed)
- Low-Level Waste (RCRA solid only), MLLW (RCRA hazardous waste contaminated with a LLW radionuclide)
- Transuranic Waste (RCRA solid waste) or Mixed Transuranic waste (RCRA hazardous waste contaminated with TRU radionuclide)
- New Mexico Special Waste
- PCB Waste

Toxicity Characteristics Panel

- The TC panel identifies EPA numbers for characteristic and/or listed waste (e.g. D004-D043 and F001, F002, F004, and F005).
- TC metal/organics/pesticides and herbicides are regulated when identified or detected at or above the regulatory limit (40 CFR 261.24, Table 1).
- Waste streams carrying EPA numbers require a Land Disposal Restrictions Form (LDRs).
- LDRs are determined via 40 CFR 268.40 Treatment Standards and 40 CFR 268.48 Universal Treatment Standards

LDR, LDR Certifications, and Underlying Hazardous Constituents

- Land Disposal Restrictions, Certifications and Underlying Hazardous Waste Constituents = LDRs
- If a waste stream is a RCRA characteristic hazardous waste then LDRs apply.
- If a waste stream is a RCRA characteristic/listed waste then LDRs apply.
- If a waste stream is a RCRA listed waste, the Land Disposal Restrictions form and determination of LDR Certification(s) apply (Note: Identification of Underlying Hazardous Constituents is not required).
- If a waste stream is debris contaminated with a RCRA characteristic and/or listed waste, LDRs apply (Note: Identification of UHCs is a LANL Best Management Practice).

Ancillary or Waste Type

- Beryllium (solid waste = beryllium waste type; RCRA hazardous waste and/or radioactive waste = beryllium ancillary waste)
- PCBs (solid waste = PCB waste type; RCRA hazardous waste and/or radioactive waste = PCB ancillary waste)
- Regulated asbestos (an ancillary waste for NMSW, RCRA hazardous waste and/or radioactive waste)

Biennial Source and Form Codes

- For any RCRA regulated waste streams (e.g. characteristic/listed) a biennial source and form codes are required.
- Source codes are assigned based on the process or activity.
- Form codes are assigned based on the general physical and chemical characteristics of a waste.

(Link: <http://www.epa.gov/waste/inforesources/data/br13/br2013rpt.pdf>).

Questions or Comments?