

TL-001, Revision 0 Effective Date: 6-3-2008

LA-UR-09-04682

Waste Generator Instruction for Completing the Waste Profile Form (WPF)

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	Signature on file	6-3-2008
Document Owner	Signature	Date



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1.0 ACRONYMS AND DEFINITIONS

1.1 DEFINITIONS

See the glossary associated with P409, Waste Management.

1.2 ACRONYMS

See the acronym associated with P409, Waste Management.

2.0 WASTE PROFILE FORM INSTRUCTIONS

2.1 COMPLETING THE WASTE PROFILE FORM

For assistance in completing the form, contact your Waste Management Coordinator (WMC).

When completing the WPF, the generator should consider following the recommendations of this guidance document to prevent any delays in processing the WPF. This guidance is written in action form to indicate the action recommended.

Waste generators who sign WPFs must be current with required training (see <u>Waste Management</u>[®] P409, Section 6.0).

NOTE: Waste Document Forms training (#8504) should be taken before completing a profile.

YOU MAY OBTAIN A FILLABLE COPY OF THE WPF ONLINE OR AT HTTP://ENTERPRISE.LANL.GOV/FORMS/1346.PDF.

2.2 CATEGORIZING WASTE

In this document, guidance is provided for completing a WPF for waste(s) generated at the Laboratory.

This section provides examples for the following types of waste that are exempt from the requirement to characterize waste using the WPF:

- Industrial wastewater discharges that are point source discharges currently subject to regulation under Section 402 of the Clean Water Act and are discharged from an active outfall included in the Laboratory's National Pollution Discharge Elimination System (NPDES) permit.
 - **NOTE:** If you have a question as to whether a waste stream is exempt due to its regulation under Section 402 of the Clean Water Act and discharge under an active outfall included in the Laboratory's NPDES permit, please contact water quality at 665-0453 for further information.
- Wastewater from restrooms, drinking water fountains, showers and office-type kitchens (Wastes discharged via pipeline originating outside of a Radiological Control Area (RCA) controlled for contamination), but not including washing of laboratory glassware.
- Regular office trash; food waste; recyclable paper, cardboard, binders, surplus chemicals, plastic bottles, aluminum cans and foil, transparencies, toner cartridges sent for refill, and wood products; landscape debris; scrap metal; and excess furniture, equipment, or other materials sent for salvage.

NOTE: This is not a complete list of materials/items that do not require a WPF. If you have questions as to whether a WPF is required, please contact the ENV-RCRA group office at 667-0666.

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• Lab-wide profiles. The Laboratory has generated lab-wide profiles for various waste streams. (See <u>Waste Management Coordinator Program Page</u>) Lab-wide profiles are available for use by any generator or WMC so long as the waste meets the associated description.

2.3 WPF IDENTIFICATION INFORMATION

1. Contact (optional)

Name and phone number of person, other than Generator or WMC listed below, who is knowledgeable of and may be contacted for information on the waste stream.

2. Reference number

For WES-WA group use only.

3. Provide Generator/WMC Information

	Generator		WMC		Waste Stream*
•	Z Number	•	Z Number	•	Technical Area
•	Name	•	Name	•	Building
•	Mail stop	•	Telephone number	•	Room number
•	Telephone number Waste Generation Group	NO.	TE: If you don't have a WMC, contact <u>Generator Support</u> <u>Services</u> or <u>Waste</u> <u>Management Coordinator</u> group for assistance.		
* 1	* NOTE: Provide the technical area, building, and room number where the waste is generated, NOT where the waste is accumulated.				

4. Waste Accumulation

A. Identify the type of area where the waste is being accumulated or stored, include site identification number (check only one).

Satellite accumulation area	Less-than-90-day storage area
TSDF	Universal Waste Storage Area
PCBs Storage Area*	NM Special Waste
Rad Staging Area	Rad Storage Area
None of the above*	Used Oil for Recycle

* These areas may not have site identification number.

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B. If waste is generated from environmental restoration program, include the Solid Waste Management Unit (SWMU)/Area of Concern (AOC) number.

5. Method of Characterization

NOTE: Analysis is required when:

- The waste has an unknown origin,
- A chemical reaction has occurred that may have created an unknown chemical compound,
- The waste requires a radiochemical analysis for determining if contaminated,
- The waste contains unknown chemical or radiological contamination, OR
- <u>AK documentation</u> does not provide sufficient information to characterize the waste. (See P409 Waste Management or click on the link above).

Choose all that apply:

Chemical/Physical Analysis	Radiological Analysis
PCB Analysis	Acceptable Knowledge Documentation

MSDS

Indicate if associated analysis/documentation is attached to WPF by checking the attached box. Only attach MSDS if chemical is not common, (i.e. methanol, acetone, toluene, water are common chemicals).

Attached

- **NOTE:** Certain hazardous waste types will need analytical attached to WPF for storage at Area L.
- **NOTE:** If more than one document or sample number is to be entered for the associated method of characterization enter "see section 5" and enter the document/sample numbers in the "Additional Information" section.
- NOTE: Request an analysis by contacting solid waste and regulatory compliance group.

2.4 SECTION 1, WASTE PREVENTION/MINIMIZATION

As required by the LANL Waste Certification Program (WCP) in P930-2 "Waste Certification Program," Module VIII, Section B.1, of the Laboratory's Hazardous Waste Facility Permit and P409 – "Waste Management", waste generators must evaluate their processes prior to generating waste to ensure that waste minimization opportunities have been identified and implemented. By answering the questions listed below, the generator is identifying the extent to which waste minimization efforts have been or are being considered.

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Contact the Pollution Prevention Program for pollution prevention and waste minimization assistance: 667-4348. Guidance on waste minimization for typical waste streams and chemical alternatives is available at this link: <u>http://int.lanl.gov/environment/waste/</u>

Answer yes, no, or not applicable to the following questions and provide comments, as appropriate, in Section 5, Additional Information.

NOTE: WES-WA group will not refuse or reject WPFs that include comments but rather will use the comments to assist generators and WMCs with waste minimization and prevention efforts.

1. Can hazard segregation, elimination, or material substitution be used?

If "yes" explain waste minimization efforts that will take place.

2. Can any of the materials in the waste stream be recycled or reused?

If "yes" explain how materials in this waste stream will be recycled or reused.

3. Has waste minimization been incorporated into procedures or other process controls?

If "no" explain why waste minimization has not been incorporated into procedures or other process controls and when it will be incorporated.

4. Can this waste be generated outside a RCA?

If "yes" explain how waste-generating process will be moved outside an RCA.

2.5 SECTION 2, CHEMICAL AND PHYSICAL INFORMATION

1. Waste Type

To properly characterize waste, indicate waste type (Choose only one):

lf	Then	
Unused / Unspent Chemical	 Note: Fill out a WPF when unable to use the lab-wide profile for new/unused chemicals; 1. Complete all sections 2. Describe in "Waste/Process Description," top of Page 2 3. Submit MSDS for each chemical to accompany CWDR 	
Process Waste/Spent Chemical	Complete all sections	

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2. Radiological Information

- A. Determine radiological information
 - Indicate if the waste was generated in a Radiological Controlled Area (RCA), by selecting "Yes" or "No."
 - Indicate if the waste is Non-radioactive, Radioactive Low Level, or Radioactive Transuranic (TRU)

lf	Then
Waste generated is in a RCA	Follow all the requirements of <u>ISD 121-1</u> , "Radiation Protection," regarding
AND	"Contamination Control."
Waste is "Nonradioactive"	

NOTE: When generating Naturally Occurring Radioactive Material (NORM) waste, contact WES-WA group for guidance.

3. Waste Destination: If the waste is destined for one of the following listed below, additional attachment will be needed for acceptance. Complete the appropriate attachment. Contact your WMC to determine proper disposal path.

If waste is destined for the following	Then
Sanitary Wastewater System (SWWS) Plant	Complete WPF and Attachment 1
Radioactive Liquid Waste Treatment Facility (RLWTF) at TA-50	Complete WPF and Attachment 2
Radioactive Liquid Waste Treatment Plant (RLWTP) at TA-53	Complete WPF and Attachment 3
HE Wastewater Treatment Facility (TA-16).	Complete WPF and identify all potential UHCs on Attachment 4 (even for non-hazardous waste).
Nevada Test Site (NTS)	Complete WPF and Attachment 5

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4. Determine classification information:

Unclassified, or

Classified/Sensitive

- **NOTE:** Do not provide any <u>classified/sensitive</u> information on the profile. However check this box if the waste itself is classified/sensitive.
- NOTE: Ensure that there is a disposal path forward for Classified/Sensitive Waste.

5. Waste Category (Check all that apply):

Select the appropriate categories, according to these descriptions:

Category	Description	
Inorganic	Pertaining to, or composed of, chemical compounds that do not contain carbon as the principal element (except carbonates and cyanides).	
Organic	Composed of chemical compounds based on carbon chains/rings and containing hydrogen with/without oxygen, nitrogen, or other elements.	
Solvent	Substances that dissolve or mobilize other constituents (examples: degreasing, cleaning, fabric scouring, diluents, extraction, reaction, and synthesis media). Still bottoms from the recovery or recycle of listed spent solvents are also listed spent solvents. For waste characterization purposes, generally a volatile or semi volatile organic compound specified for its toxic or ignitable characteristics.	
	NOTE: This box is checked if the solvent meets the listing under 40 CFR 261.31 either F002, F003, F004, or F005. These solvents have a certain definition criteria and that criteria is detailed in the following. For solvent(s), (i.e. the listing for F002, F004, or F005), or solvent mixtures, (i.e. the listing for F001, F002, F004, and/or F005), with the concentration of 10% or greater by volume before use and/or any F003 constituent(s). List each constituent and its concentration, in Section 5. (See ENV-RCRA "Generator Support Guidance Information for the solvent listing).	

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Category	Description		
Degreaser	A liquid used to clean or dissolve organic contamination from an object. Often volatile organic solvents or commercial cleaning products for mechanical or electrical components.		
	 NOTE: This box is checked if the degreaser meets the listing under 40 CFR 261.31 for F001. These degreasers have a certain definition criteria and that criteria is detailed in the following. For degreaser(s), (i.e. the listing for F001), or solvent mixtures, (i.e. the listing for F001, F002, F004, and/or F005), with the concentration of 10% or greater by volume before use or F001 (10% before use) and F003 constituents. List each constituent and its concentration, in Section 3. (See ENV-RCRA"Generator Support Guidance Information" for the solvent listing). 		
Dioxin	A member of a family of highly toxic chlorinated aromatic hydrocarbons found in a number of chemical mixtures. Dioxin is also known as polychlorinated dibenzo-para-dioxin.		
Electroplating	A material processing operation to cover or coat an object with a thin layer of metal by electrolysis. The process can generate corrosive and toxic metal- containing wastewater, treatment sludges and rinsates. Regulated electroplating operations <u>do</u> not include the following processes: (1) sulfuric acid anodizing of aluminum; (2) tin plating on carbon steel; (3) zinc plating (segregated basis) on carbon steel; (4) aluminum or zinc-aluminum plating on carbon steel; (5) cleaning/stripping associated with tin, zinc and aluminum plating on carbon steel; (6) chemical etching and milling of aluminum; (7) chemical conversion coating (wastewater); (8) electrolyses plating; and (9) printed circuit board manufacturing (unless etching or milling).		
	Describe in Waste/Process Description box the detail of the electroplating process.		
	NOTE: Treatment of wastewater may result in the classification of an F006 RCRA-regulated sludge after treatment.		
	NOTE: Treatment of wastewater from the chemical conversion coating of aluminum may result in the classification of an F019 RCRA regulated waste sludge.		
	NOTE: The electroplating meets the listing under 40 CFR 261.31 for F007, F008, or F009.		

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Category	Description
Treated Hazardous Waste or Residue	Waste or residue generated from the treatment of listed or characteristic hazardous waste. This treatment includes waste from generator treatment under 40 CFR 262 and waste from RCRA permitted or interim status facilities under 40 CFR 264 or 265. Also included are wastes from treated hazardous debris under 40 CFR 261.3(f)(1). For treated hazardous debris describe the following in the process description [40 CFR 261.3(f)(1)]:
	How the hazardous debris was originally generated
	The technology from 40 CFR 268.45 Table 1 used to treat the debris
	(See <u>P409</u> Nonradioactive Waste Tool and click on treated formerly characteristic waste).
	 If checked, provide WPF numbers in the Waste/Process Description field or in Section 3, "Additional Information" for all wastes prior to treatment. EPA codes and UHCs associated with these WPFs are needed to certify the treatment for the waste(s).
	2) See additional instructions under the Notification and Certification - "TSDF or Generator Treatment" subsection on Attachment 4, the LDR form. The LDR form will need to be completed to inform the receiving treatment storage disposal facility (TSDF) that the waste either does or does not meet the treatment standards and that a certification will be required.
No-Longer Contained-In	This applies only to hazardous debris and/or hazardous environmental media for which the generator has received a no-longer contained-in determination from the State. The following is needed to meet the requirement under 40 CFR 261.3(f)(2) and 268.7(d) for hazardous debris and 40 CFR 268.7(e) for hazardous waste contaminated soil.
	 The documentation of the no-longer contained-in determination will need to be provided with the WPF.
Explosive Process	 High explosive (HE) or HE-contaminated waste. NOTE: Treated explosive waste does not fall under this category but falls under the "Treated Hazardous Waste or Residue" category.

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Category	Description
Infectious / Medical	Waste materials that carry a probable risk of transmitting disease to humans or animals. Examples include, but are not limited to:
	Regulated medical waste
	Infectious substances (etiologic agents)
	Other potentially infectious materials (OPIM)
	See LANL Waste Acceptance Criteria Attachment 10.
Biological	A waste that cannot be classified as an infectious substance or as a regulated medical waste and is not subject to federal or state regulations of infectious waste.
Beryllium	Includes beryllium metal, beryllium oxide, alloys containing 0.1% or more beryllium, and beryllium compounds, such as beryllium sulfate. See <u>ISD101-21</u> , Chronic Beryllium Disease Prevention Program for more information.
Empty Container	Check if the item meets the definition of a " <u>RCRA empty container</u> "
Batten	Alkaline and carbon batteries may be discarded as municipal refuse.
Duttery	Hazardous waste batteries (e.g. mercury, lithium, and nickel-cadmium) are to be managed as universal waste. (See Lab-wide profile).
	NOTE: See the P409, the " <u>Waste Identification Toolset</u> "; click on the appropriate button in the battery section) or the <u>Battery Recycling</u> Program for guidance.
	Other non-hazardous batteries will need to be profiled.
	NOTE: Non-radioactive wet lead acid and gel cell batteries should be recycled through salvage or as universal waste.
Asbestos	 Contains any of the following naturally occurring crystalline minerals: chrysotile, amosite, crocidolite, tremolite, actinolite, and anthrophyllite. Comes in two forms: <i>Friable:</i> brittle or readily crumbled, pulverized, or reduced to powder by hand pressure when dry. <i>Non-friable:</i> not brittle or readily crumbled when dry and is completely encapsulated in a manufactured article such as an undamaged safe or file cabinet.
	NOTE: Refractory ceramic fiber does not meet the definition of asbestos and is not a New Mexico Special Waste. Check with your WMCs for safe handling.

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Category	Description
Polychlorinated Biphenyls	Regulated by the source concentration of <u>Polychlorinated Biphenyls (PCBs)</u> in the material. Check the box that indicates your source concentration.
Hazardous Waste Contaminated Soil	Soil that contains a hazardous waste listed in subpart D of part 261 or that exhibits a characteristic of hazardous waste identified in subpart C of part 261. "Soil" means unconsolidated earth material composing the superficial geologic strata (material overlying bedrock). Soil consists of clay, silt, sand, or gravel size particles as classified by the U.S. Natural Resources Conservation Service, or a mixture of such materials with liquids, sludges or solids which is inseparable by simple mechanical removal processes and which is made up primarily of soil by volume based on visual inspection. Any deliberate mixing of prohibited hazardous waste with soil that changes its treatment classification (i.e., from waste to contaminated soil) is not allowed under the dilution prohibition in §268.3 [40 CFR 268.2(k)].
	Hazardous waste contaminated soil is the only environmental media that has specific certification requirements under the LDR regulations, 40 CFR 268.
	See additional instructions for completing the LDR for hazardous waste contaminated soil that meets or does not meet treatment standards under the Notification and Certification – "Generator Requirements" subsection.
	For non-hazardous soil (environmental media) do not mark this box.
Untreated Hazardous Debris	Debris that contains a hazardous waste listed in subpart D of part 261, or that exhibits a characteristic of hazardous waste identified in subpart C of part 261 (e.g., PPE). Any deliberate mixing of prohibited hazardous waste with debris that changes its treatment classification (i.e., from waste to hazardous debris) is not allowed under the dilution prohibitions in §268.3 [40 CFR 268.2(h)].
	See additional instructions for completing the LDR for untreated hazardous debris under the "Notification and Certification – Generator Requirements" subsection.
	For non-hazardous debris (e.g.,: construction debris, concrete, dirt, and/or rebar) do not mark this box for untreated hazardous debris under this section.
Commercial Solid Wastes	Solid waste does not include wastes that are hazardous, mixed, TSCA, NM Special, wastes in a liquid form; or concrete or asphalt wastes destined for use, reuse, or recycle, or any waste destined for an industrial waste landfill.
	Check this box for profiling a waste to be accepted at the Los Alamos County Landfill other than routine sanitary solid waste such as office trash, loads with a waste ticket obtained from MRF (for government-plated vehicles), or waste with approved acceptable knowledge documentation and signed certification for concrete, asphalt, or soil (for off-site release, not for disposal).
	NOTE: For wastes that are regulated as Solid Waste follow P409, "Waste Management" requirements. Contact Water Quality & RCRA (ENV-RCRA) for

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Category	Description
	assistance with waste destined for the sanitary solid waste landfill.
Other	If the waste does not belong in one of the above waste categories, check "other" and describe your waste in detail under <i>Waste Description</i> at the top of Page 2.

6. Waste Sources

Choose the source of the waste from this list. (Check only one)

Waste Source A is:

- Produced from any production operation, analytical, and/or R&D laboratory operations; treatment, storage, disposal operations; "work for others;" or any other periodic and recurring work that is considered on-going in nature.
- Generated at the Laboratory from regular activities, a waste stream of a predictable quantity and characterization, and is not part of Environmental Restoration activities.

Source	Description	
Decon (decontamination)	Results from routine removal of unwanted material (especially radioactive material) from the surface of, or from within another material.	
Materials Processing/ Production	Generated from mission-oriented materials processing and/or production.	
Research/Development/ Testing	Generated from mission-oriented research, development, and/or testing.	
Scheduled Maintenance	Generated from planned/routine maintenance activities.	
Housekeeping-Routine	Generated from routine/ongoing housekeeping activities.	
Spill cleanup-Routine	Generated from routine wiping/mopping/cleaning of routine day-to- day spills resulting from routine activities.	
Sampling-Routine Monitoring	Generated from routine ongoing sampling/monitoring activities necessary as a part of mission-oriented project activity.	
Other	If the routine waste does not fit one of the above categories, check "other" and describe in the <i>Process Description</i> space at the top of page 2.	

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Waste Source B is: Generated or occurs on an unscheduled basis, or is of unpredictable quantity and/or . characterization. Because of unpredictability, cannot be trended over extended period of time. ٠ Description Source Abatement Removal of material such as asbestos or contaminated items that is not a routine generated waste. Construction/Upgrades Debris or waste from construction or remodeling, including removal of equipment or building components. Demolition Generated from tearing down/removal of a building, or portion thereof. Decon/Decom (D&D) Decontamination (Decon): removal of unwanted material (especially radioactive material) from the surface of, or from within another material. and Decommissioning (Decom): permanent removal from service of surface facilities and components necessary for pre-closure activities only, after facility closure, in accordance with regulatory requirements and environmental policies. Investigation-Derived Waste (IDW) is debris or waste from Investigation-Derived collecting environmental samples at a solid waste management unit and other areas of concern (e.g., soil contaminated with a listed waste or that exhibits a characteristic, personal protective equipment; or sampling equipment). NOTE: Remediation/Restoration waste is not considered IDW. Orphan/Legacy Any material or waste with an unknown origin, history, generator, constituent, or process; or any material or waste that does not have a defined owner. Remediation/Restoration Debris or waste from environmental restoration activities, or other activities conducted under RCRA corrective action. Repackaging (secondary) Generated from the required overpacking (repacking) of leaking or damaged waste containers. Unscheduled Maintenance Generated from emergency, unplanned, non-routine maintenance activities.

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Source	Description	
Housekeeping-Non-routine	Generated from lab, building, storage area, or outdoor area cleanup (housekeeping) activities. Includes clean-outs of excess or unwanted items and materials, and chemical inventory reduction projects.	
Spill cleanup-Non-routine	Generated from cleanup of accidental releases or spills.	
Non-petroleumTanks	Generated from removal and/or cleanup of storage tanks containing material other than petroleum products.	
Petroleum Tanks	Generated from the removal and/or cleanup of storage tanks containing petroleum products.	
Other Waste	If the waste does not fit into one of the above categories, check <i>other</i> and describe in the <i>Waste/Process Description</i> at the top of Page 2.	

7. Waste Matrix

Identify the single matrix (physical state) that best describes your waste.

NOTE: Profile different waste streams separately (e.g., liquid acetone and kimwipes contaminated with acetone are both from the same process but are separate waste streams to be profiled separately).

Category	Description
Gan	Gas at a pressure less than or equal to 1.5 atmospheres.
983	Gas at a pressure greater than 1.5 atmospheres.
	• Gas, liquefied compressed. A gas which in a packaging under the charged pressure, is partially liquid at a temperature of 20 °C (68 °F).
Liquid	 Aqueous - waste that is amenable to pH measurement; an aqueous solution contains at least 20% free water by volume.
	• Non-aqueous - waste is liquid(s) that contains less than 20% water.
	 Suspended solids/aqueous - an aqueous liquid with a suspension of finely divided particles from which the particles do not settle out readily and cannot be readily filtered (a colloid).
	 Suspended solids/non-aqueous - a non-aqueous liquid with a suspension of finely divided particles from which the particles do not settle out readily and cannot be readily filtered (a colloid).
Solid	• Powder, ash or dust - a loose grouping or aggregation of solid particles.
	 Solid - a substance that has a definite volume and shape and resists forces that tend to alter its volume or shape.

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Category	Description
	 Sludge - any thick, viscous mass, usually a sediment or filtered waste product.
	 Absorbed/adsorbed liquid – a liquid substance that has penetrated into a solid.
	• <i>Debris</i> – defined in Section 4.2 of this guidance document.

8. Matrix Type

Identify the single matrix type that best describes your waste.

HomogeneousWaste contains only one material or substance or the waste has its components
adequately mixed so that identical samples can be drawn throughout.HeterogeneousWaste contains multiple components that are separate because of density or specific
gravity and are located in different places within the mixture.

If waste is heterogeneous, provide a description in the Waste Description section at the top of Page 2.

9. Estimated Annual Volume

Provide the waste stream's estimated annual volume in m3.

(Click here for Online Conversions)

This information will assist WES-WA group in projecting waste volumes for each year, as WPFs are reviewed, and extended if necessary, on an annual basis. In accordance with the Laboratory Director's instructions, generators must budget for waste generation activities.

2.6 SECTION 3, PROCESS AND WASTE DESCRIPTIONS

- 1. Process Description: Provide a complete and concise description of the waste-generating process.
- 2. Waste Description: Provide a complete and concise description of the waste. Do *not* include the number of containers, the volume and weight of waste, or property numbers; these are specific to a waste load, not a waste stream.

2.7 SECTION 4, CHARACTERISTICS

Ignitability

Select the one box that best describes the ignitability of your waste.

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EPA ignitable is defined in 40 CFR 261.21(a). A solid waste exhibits the characteristic of ignitability if a representative sample of the waste has any of the following properties described in the first four categories below.

Category	Description
Flash Point Temperature Ranges	40 CFR 261.21(a)(1): It is a liquid, other than an aqueous solution containing less than 24 percent alcohol by volume and has flash point less than 60° C (140° F), as determined by a Pensky-Martens Closed Cup Tester, using the test method specified in ASTM Standard D-93-79 or D-93-80 (incorporated by reference, see 40 CFR 260.11), or a Setaflash Closed Cup Tester, using the test methods specified in ASTM Standard D-3278-78 (incorporated by reference, see 40 CFR 260.11), or as determined by an equivalent method approved by the Administrator under procedures set forth in 40 CFR 260.20 and 260.21. Select the temperature range between which a material flashes as measured by the Pensky-Martens Closed Cup tester method or equivalent.
EPA Ignitable – Non-liquid	40 CFR 261.21(a)(2): It is not a liquid and is capable, under standard temperature and pressure, of causing fire through friction, absorption of moisture or spontaneous chemical changes and, when ignited, burns so vigorously and persistently that it creates a hazard.
DOT Flammable Gas	40 CFR 261.21(a)(3): It is an ignitable compressed gas as defined in 49 CFR 173.300 and as determined by the test methods described in that regulation or equivalent test methods approved by the Administrator under 40 CFR 260.20 and 260.21.
	The Department of Transportation (DOT) regulations define flammable gas in 49 CFR 173.115(a):
	Division 2.1 (Flammable gas). For the purpose of the subchapter, a "flammable gas" means any material which is a gas at 20° C (68° F) or less at 101.3 kPa (14.7 psi) of pressure (a material which has a boiling point of 20° C (68° F) or less and 101.3 kPa (14.7 psi)) which:
	 Is ignitable at 101.3 kPa (14.7 psi) when in a mixture of 13 percent or less by volume with air; or
-	(2) Has a flammable range at 101.3 kPa (14.7 psi) with air of at least 12 percent regardless of the lower limit. Except for aerosols, the limits specified in paragraphs of this section shall be determined at 101.3 kPa (14.7 psi) and a temperature of 20°C (68°F) in accordance with ASTM E681-85, Standard Test Methods for Concentration Limits of Flammability of Chemicals or other equivalent method approved by the Associate Administrator for Hazardous Materials Safety. The flammability of aerosols is determined by the tests specified in 40 CFR 173.306(i) of this part.

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Category	Description
DOT Oxidizer	 40 CFR 261.21(a)(4) It is an oxidizer as defined in 49 CFR 173.151. DOT Oxidizer is actually defined in 49 CFR 173.127(a). For the purpose of this subchapter, "oxidizer" (Division 5.1) means a material that may, generally by yielding oxygen, cause or enhance the combustion of other materials. A solid material is classified a Division 5.1 material if the mean burning time of the test mixture, is equal to or less than that of the average of the three tests with ammonium persulfate mixture. A liquid is classed as a Division 5.1 material by analogy to existing entries in the 49 CFR 172.101 Table. This applies to both primary and secondary hazard classification by 49 CFR. Solutions are evaluated on case-by-case basis; may or may not have the oxidizer properties
Not Ignitable	Check this only if the waste does not meet any of the above criteria.

If waste is ignitable by one of these criteria, identify the component(s) causing this condition under *Additional Chemical Constituents and Contaminants* at the top of Page 3.

Corrosivity

1. Check the one box that best describes the corrosivity of your waste.

EPA corrosivity is defined in 40 CFR 261.22(a). A solid waste exhibits the characteristic of corrosivity if a representative sample of the waste has either of the following properties:

Category	Description
pH Ranges	40 CFR 261.22(a)(1) It is aqueous and has a pH less than or equal to 2 or greater than or equal to 12.5, as determined by a pH meter using Method 9040 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in 40 CFR 260.11 of this chapter. Liquids that do not contain water (hydrogen ions) cannot be measured for pH.
Liquid Corrosive to Steel	40 CFR 261.22(a)(2) It is a liquid and corrodes steel (SAE 1020) at a rate greater than 6.35 millimeters (0.250 inch) per year at a test temperature of 55° C (130° F) as determined by the test method specified in NACE (National Association of Corrosion Engineers) Standard TM-01-69 as standardized in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods." EPA Publication SW-846, as incorporated by

	reference in 40 CFR 260.11 of this chapter.
Non-aqueous	Check this if the waste does not meet any of the above criteria.

2. If waste is corrosive by one of these criteria, identify the component(s) causing this condition under *Additional Chemical Constituents and Contaminants* at the top of page 3.

Reactivity

1. Select as many items as apply to your waste.

EPA reactivity is defined in 40 CFR 261.23(a) A solid waste exhibits the characteristic of reactivity if a representative sample of the waste fits any of the following category descriptions:

Category	Description
RCRA Unstable	40 CFR 261.23(a)(1) It is normally unstable and readily undergoes violent changes without detonating.
Water Reactive	 40 CFR 261.23(a)(2) It reacts violently with water. OR 40 CFR 261.23(a)(3) It forms potentially explosive mixtures with water. OR 40 CFR 261.23(a)(4) When mixed with water, it generates toxic gases, vanors, or fumes in sufficient quantity to present a danger to human health
Cyanide Bearing	40 CFR 261.23(a)(5) It is a cyanide or sulfide bearing waste which, when exposed to pH conditions between 2 and 12.5, can generate toxic gases, vapors, or fumes in a quantity sufficient to present a danger to human health or the environment.
Sulfide Bearing	40 CFR 261.23(a)(5) It is a cyanide or sulfide bearing waste which, when exposed to pH conditions between 2 and 12.5, can generate toxic gases, vapors, or fumes in a quantity sufficient to present a danger to human health or the environment.

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Category	Description
Pyrophoric	Under normal conditions may cause fire through friction or retained heat from manufacturing or processing, or can be ignited readily and when ignited burns so vigorously and persistently as to create a serious transportation, handling, or disposal hazard.
	40 CFR 261.23(a)(1) It is normally unstable and readily undergoes violent changes without detonating.
	40 CFR 261.23(a)(6) It is readily capable of detonation or explosive reaction if it is subjected to a strong initiating source or if heated under confinement.
	40 CFR 261.23(a)(7) It is readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure.
Shock Sensitive	40 CFR 261.23(a)(7) It is readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure.
Explosive	40 CFR 261.23(a)(8) It is a forbidden explosive as defined in 49 CFR 173.51, or Class A explosive as defined in 49 CFR 173.53, or a Class B explosive as defined in 49 CFR 173.88.
	DOT Forbidden explosives are defined in 49 CFR 173.54.
	Former DOT Class A and B explosives have been reclassified to the following Divisions: [49 CFR 173.53]
	Current Division Classification Former Class
	Division 1.1 Class A
	Division 1.2 Class A & B
	Division 1.3 Class B
	49 CFR 173.52 provides classification codes and compatibility of explosives.
Non-reactive	Check this if the waste does not meet any of the above criteria.

2. If waste is reactive by one of these criteria, identify the component(s) causing this condition under *Additional Chemical Constituents and Contaminants* at the top of Page 3.

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Boiling Point

Boiling point is the temperature at which the transition from the liquid-to-gaseous phase occurs at atmospheric pressure. The boiling point identifies the DOT packing group for Hazard Class 3.

Select the temperature range that describes the boiling point of your liquid waste.

If it is other than a liquid, check not applicable.

Toxicity Characteristic Contaminants

- Eight metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver) and
- Twenty-four toxicity characteristic organics (VOCs/SVOCs)
- Eight herbicides and pesticides
- 1. For each contaminant listed, indicate the method of characterization.
 - If acceptable knowledge (AK) documentation was used as the characterization method, check the "AK" box.

- If analysis was performed either for the entire waste or only for certain constituents, the type of analysis performed is to be indicated. Either toxicity characteristic leaching procedure (TCLP) or "Total." If the waste was analyzed by "Total" and is in solid form, do not divide by 20; enter the total results as-is.
- 2. Indicate the concentration of the identified contaminants by checking/completing ONE of the following:
 - None or Non-Detect
 - Enter the minimum-to-maximum range of the specific contaminant, in parts per million (ppm).
 - **NOTE:** Specifying a min to max range of 0 to 10,000 ppm, for example, is not acceptable since there is a regulatory limit on these contaminants.

2.8 SECTION 5, ADDITIONAL CONSTITUENTS AND INFORMATION

Additional Constituents

List all other constituents in the waste. This includes any hazardous constituents not already described (see P409, "<u>Nonradioactive Waste toolset</u>", click on radio button for "Hazardous Waste not otherwise listed") and all other constituents, including inert constituents (water, paper, wood, metal, plastic, etc.).

- 1. Identify Chemical Abstract Service (CAS) numbers for all constituents. For non-chemical items, enter "No CAS #."
- 2. Enter name of constituent. The constituents from page 2 (metal/organics/pesticides/herbicides) do not need to be entered again in this section.
- 3. Enter accurate minimum-to-maximum in %. Guidelines for the ranges are:
 - Constituent between 0.1 and 5.0% of total Report to the nearest 1%
 - Constituent between 5.0 and 25.0% of total Report to the nearest 2.5%

NOTE: The WPF by itself is not adequate documentation for AK. Acceptable knowledge documentation is described in P409.

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- Constituent between 25.0 and 50.0% of total Report to the nearest 5%
- Constituent between 50.0 and 100.0% of total Report to the nearest 10%

As a general principal to convert from % to ppm: take the percentage and multiply by 10,000 (e.g., $2\% \times 10,000 = 20,000$ ppm).

To convert from ppm to %: take the ppm and divide by 10,000 (e.g. $20,000 \div 10,000 = 2\%$).

- 4. Total the "Maximum" ppm and percent from page 2-3 and provide the answer in percent.
 - **NOTE:** Accounting for 100% of the waste ensures proper classification, storage, transportation and disposal, but due to the errors inherent in chemical analysis and physical measurements, your maximum value may exceed 100%. Good characterization practices–including keeping to the range limits specified above–should result in a maximum value no greater than 130%, which is acceptable.

Additional Information

Provide any additional information about the waste that has not been addressed in other parts of the WPF.

NOTE: This information would include any chemical, physical, or radiological characteristics of the waste that could pose a threat to human health and the environment.

2.9 SECTION 6, WORK CONTROL DOCUMENTATION

As required in P930-2 "<u>Waste Certification Program</u>," waste generators must ensure that their procedures address how waste is managed and controlled. By answering the questions listed below, the generator is confirming that the applicable procedures adequately address how waste is managed and how changes to waste constituents are prevented.

Answer "yes" or "no" to the following questions and provide comments, as appropriate, in Section 5, Additional Information.

1. Do the procedures for this process cover how to manage this waste?

If "no" explain when procedures will be revised to include waste management.

2. Do the procedures for this process address controls to prevent changes to waste constituents and concentrations, or addition/removal of waste to/from the containers?

If 'no" explain when procedures will be revised to include process controls.

2.10 SECTION 7, PACKAGING AND STORAGE CONTROL

As required by P409, waste generators must ensure that waste is packaged in accordance with the applicable WAC. Additionally, they must identify the controls that will be implemented to prevent contents from being added to waste containers while in storage.

- 1. Describe how the waste will be packaged according to the applicable WAC.
- 2. Identify the storage management controls that will be used for this waste stream:
 - Tamper indication devices
 - Limited use locks with log-in for waste
 - □ Locked cabinet or building

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□ Other (describe)

2.11 SECTION 8, WASTE CERTIFICATION

NOTE: Complete this section with assistance from your WMC.

1. Select one of the following:

- Waste appears to meet P930-1 for: (indicate on-site TSDF)
- Waste stream needs exception/exemption for treatment, storage, or disposal at: (indicate TSDF WAC requirement not being met)
- Waste does not meet the criteria for any known TSDF. DOE approval is required. Contact the Waste Management Program Office for assistance.

3.0 WASTE CERTIFICATION

The waste generator needs to read, sign, and date the Waste Generator Certification statement.

The WMCs needs to sign and date the *Waste Certifying Official* statement, after the reviewed of the WPF for completeness and accuracy.

NOTE: Once a WPF has been classified/activated, only Waste Services personnel may make modifications to the form. Any modification needs to be initialed and dated by Waste Services personnel and include a justification. Modifications that will affect classification must be approved by the Waste Services personnel. Modifications made by any other Laboratory organization voids the WPF and will be rejected by the Waste Services team.

3.1 ATTACHMENT 1, WASTEWATER FOR SWWS (TA-46)

This attachment is to be completed only if "Wastewater for SWWS" is selected in the "Waste Destination" part of Section 1 of WPF.

1. General

Complete Attachment 1 for wastewater destined for Sanitary Waste Water System (SWWS) facility at TA-46 if the wastewater is sent via pipeline, collected in a tank or containers.

- A. Use of AK in lieu of analytical data for wastewater characterization must be approved by SWWS. For guidance, contact the Waste Water Systems Specialist at 667-0998, 665-7884, or 665-8507.
- B. Analytical methods need to conform to 40 CFR 136, unless an alternative method has been approved by ENV-RCRA.

2. Microtox Analysis

- To request samples, use "Microtox Sample Request" form from the KSL/ENV web page, OR
- Contact the SWWS Pre-treatment Representative at 665-7884 or 665-8507 to propose an alternate sampler.

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- If an approved alternate sampler was used, contact KSL/ENV (7-0104) to schedule analysis.
- KSL/ENV provides the Microtox Sample Number for the WPF, Attachment 1.

3. Radioactivity Detectable Levels

- A. Check either "yes" or "no" for detectable levels.
- B. If "yes," list the radionuclide and the activity level in pCi//.

NOTE: If there are additional radionuclides, list these in the Additional Information section in the WPF.

4. Wastewater Parameters

Indicate the status of analytical results for each wastewater parameter by checking one of the following:

- Not analyzed for
- Non-Detect
- Within regulatory limit for flow rates less than 100 gal/day
- Within regulatory limit for flow rates greater than 100 gal/day
- Above limit

3.2 ATTACHMENT 2, WASTEWATER FOR THE RLWTF (TA-50)

This attachment is to be completed only if "Wastewater for RLWTF" is selected in the "Waste Destination" part of Section 1 of WPF.

1. General

Complete Attachment 2 if wastewater is destined for the Radioactive Liquid Waste Treatment Facility (RLWTF) at TA-50, including waste poured down drains connected to RLWTF. If you need assistance in completing this section, contact RLW (TA50) at 7-4301.

2. Waste Production

- A. Indicate if the waste was accelerator produced, reactor produced, or other.
- B. If other, describe in WPF Section 1 "Waste/Process Description."

3. Radionuclide Contaminants

- A. Check the box for those radionuclides that are present at or below the Level of Concern (LOC).
- B. Provide the minimum and maximum range in Ci/l for those radionuclides that are present above the LOC.
- C. List any other radionuclides present in the waste, and provide the minimum and maximum range.

4. Metal Contaminants

- A. Check the box for any of the six metals that are present below the LOC.
- B. Provide the minimum and maximum range, in ppm, for those metals that are present above the LOC.

5. Additional Contaminants

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- A. Provide minimum and maximum ranges, in mg/l, for each of the following:
 - 1) Chemical Oxygen Demand (COD)
 - 2) Total Suspended Solids (TSS)
 - 3) Total Dissolved Solids (TDS)
 - 4) Perchlorates
 - 5) Total Toxic Organics (TTO)
 - 6) Either Total Nitrogen or Total Nitrates
- B. If none is present, enter "0" or NA into the "Min" space.

6. Radioactive Contaminant Totals

Provide totals, in Ci//, for:

- A. Total Alpha
- B. Total Beta
- C. Total Gamma

7. TA-55 Use Only: Liquid Waste

If the wastewater is generated at TA-55, check the appropriate box for the discharge line to be used to transfer the water. The pH of waste discharged to the RLWTF via the "caustic line" must have a pH greater than 8.0.

8. Chemical Treatment for Boilers/Water Chillers

Select YES, if the wastewater is from chemical treatment of boilers or water chillers. If not, select NO.

9. Industrial Cleaner

This includes all industrial and janitorial cleaning solutions.

Select YES if the wastewater contains an industrial cleaner. If not, select NO.

If yes, provide the specific:

- Type and
- Volume and unit.

10. Average Daily Volume

Provide the Average Daily Volume (when discharge occurs) of the wastewater in gallons/day or liters/day. Include the waste volume plus the rinse water volume.

11. Maximum Daily Volume

Provide the Maximum Daily Volume (when discharge occurs) of the wastewater in gallons/day or liters/day. Include the waste volume plus the rinse water volume.

12. Estimated Days per Year

Provide the Estimated Number of Days per year that discharge will occur.

13. Estimated Total Volume

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Provide the Estimated Total Volume that will be discharged per year to the RLWTF in gallons or liters.

3.3 ATTACHMENT 3, WASTEWATER FOR THE RLWTP (TA-53)

This attachment is to be completed only if "Wastewater for TA-53 RLWTP" is selected in the "Waste Destination" part of Section 1 of WPF.

1. General

Complete Attachment 3 if wastewater is destined for the Radioactive Liquid Waste Treatment Plant (RLWTP) at TA-53. If you need assistance in completing this section, contact Radioactive Liquid Waste at 7-4301.

2. Total Activity Range

Provide the minimum and maximum range in Ci// for the total activity.

3. Radionuclide Contaminants

- A. Check the box for those radionuclides that are present at or below the Concentration Limit.
- B. Check the box for those radionuclides that are greater than or equal to 1% of Total Activity.
- C. Provide the minimum and maximum range in Ci/l for those radionuclides that are present above Concentration Limit or greater than or equal to 1% of Total Activity.
- D. List any other radionuclides present in the waste, and provide the minimum and maximum range.

4. Other Contaminates

- A. Check the box for those additional contaminants that are present at or below Concentration Level for
 - 1) Total Dissolved Solids (TDS)
 - 2) Total Suspended Solids (TSS)
 - 3) Oils/Grease
 - 4) Surfactants/Detergents
- B. Provide the minimum and maximum range in mg/l for those additional contaminants that are present above the Concentration Level.

5. Radioactive Contaminant Totals

Check the box for those discharge locations that are present at or below Activity Level in Ci// for:

- A. Collection System
- B. Tanker Truck
- C. Tuff Tank
- D. 55-gal. drum
- E. Other

6. Temperature

Provide the discharge temperature of the waste in degrees Fahrenheit or Celsius.

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7. Surfactant/Detergent

- A. Select YES if the wastewater contains surfactant/detergent. If not, select NO.
- B. If yes, provide the specific:
 - Brand Name
 - Volume and unit

8. Industrial Cleaner

This includes all industrial and janitorial cleaning solutions.

- A. Select YES if the wastewater contains an industrial cleaner. If not, select NO.
- B. If yes, provide the specific:
 - Type
 - Volume and unit

9. Average Daily Volume

• Provide the Average Daily volume (when discharge occurs) of the wastewater in gallons/day or liters/day.

10. Maximum Daily Volume

• Provide the Maximum Daily volume (when discharge occurs) of the wastewater in gallons/day or liters/day.

11. Estimated Days per Year

• Provide the Estimated Number of Days per year that discharge will occur.

12. Estimated Total Volume

 Provide the Estimated Total Volume that will be discharged per year to the RLWTP in gallons or liters.

3.4 ATTACHMENT 4, LDR AND UHC INFORMATION

The composition of a waste at the point of generation determines whether it is subject to the Land Disposal Restriction (LDR). The objective of the "Treatment Standards for Hazardous Wastes" in 40 CFR 268.40 is to develop concentration based levels or technology based treatment for treated wastes so that they may be safely land disposed. The land disposal treatment standards should "minimize threats" to human health and the environment, including any threat posed by "underlying hazardous constituents (UHCs) in characteristic wastes "Universal Treatment Standards" [40 CFR 268.48]. (See attachment 4 of the profile).

1. General

This section describes the appropriate LDR notification or certification as identified in 40 CFR 268.7 or 268.9(d). This guideline is to meet the most restrictive requirements from both the federal regulations and New Mexico State regulations.

2. Treatability Group – Check Only One.

A. Determine if the waste stream meets the Non-Wastewater, Wastewater treatability group, or the alternative treatment, 40 CFR 268.42(c), "Lab Pack".

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- Criteria for meeting the treatability group definition for wastewater is as follows: "Wastewaters are wastes that contain less than 1% by weight total organic carbon (TOC) and less than 1% by weight total suspended solids (TSS)" [40 CFR 268.2(f)]. If checked proceed to step 3, "Notification and Certification".
- 2) If the waste stream does not meet the definition for wastewater then the treatability group is non-wastewater. If checked proceed to step 3, "Notification and Certification".
- 3) Criteria for meeting the alternative lab pack treatment standard is as follows:
 - **NOTE:** EPA hazardous waste numbers and certification will be added on the form to meet the requirement for the alternative treatment under 40 CFR.

Wastes that use the alternative lab pack treatment standard must be destined for incineration. The EPA defines lab packs [40 CFR 264.316 or 265.316] as small containers of hazardous waste in overpacked drums (lab packs). The waste contains NONE of the waste specified in Appendix IV of Part 268 (D009, F019, K003, K004, K005, K006, K062, K071, K100, K106, P010, P011, P012, P076, P078, U134, U151). The waste contains NONE of the reactive waste specified in 40 CFR:

- 261.23(a)(1) normally unstable and readily undergoes violent change without detonating;
- 261.23(a)(2) reacts violently with water;
- 261.23(a)(3) forms potentially explosive mixtures with water;
- 261.23(a)(4) mixed with water it generates toxic gases, vapors or fumes...to present danger...;
- 261.23(a)(6) ...capable of detonation...if subjected to a strong initiating source or heated under confinement;
- 261.23(a)(7) ... readily capable of detonation... at standard temperature and pressure; and
- 261.23(a)(8) is a forbidden explosive. [40 CFR 264.316(e)].

If checked, the LDR form is completed; no other steps are required for Attachment 4. WES-WA group will include the appropriate EPA codes.

A certification for lab packs containing hazardous waste to use the alternative treatment standard for lab packs will be included on the LDR form for signature.

- B. Check only one box for non-wastewater (NWW), wastewater (WW), or Lab Pack.
- Notification and Certifications: For waste characterized at the point of generation, follow the subsection for "Generator requirements." For treated waste, follow the subsection for "TSDF or Generator Treatment."

"Generator requirements:" The receiving TSDF needs to be informed that the waste either does or does not meet the applicable treatment standards with the required certification(s). If applicable, check only one of the boxes on Attachment 4 that pertains to the waste under generator requirements, described by the following:

A. This shipment contains hazardous waste contaminated soil that does not meet treatment standards

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Check this box if you have hazardous soil that does not meet the treatment standards.

- 1) Check the treatability group box for NWW (since this is not WW).
- 2) Identify the UHCs in the waste stream that exceed the Universal Treatment Standards (UTS) limits by 10 times in order to meet the alternative 40 CFR 268.49 treatment standards.
- 3) Two certifications for contaminated soil will be included on the LDR form for signature.
 - **NOTE:** If the hazardous waste soil meets the treatment standards (268.40 and/or 268.49) at the original point of generation, check box for "Hazardous Wastes contaminated soil meeting treatment standards at point of generations" under the "Generator requirements" subsection.

WES-WA group will include the appropriate EPA codes and subcategories on the LDR form.

B. This shipment contains untreated hazardous debris to be treated to 40 CFR 268.45 treatment standards.

- 1) Check this box if you have untreated debris and would like it to be treated to the alternative 40 CFR 268.45 standard.
- 2) Check the treatability group box for NWW (since this is not WW).
- 3) Identify all potential UHCs on the LDR form.
 - **NOTE:** In order for the treatment facility to determine the best treatment technology for the waste, all potential UHCs need to be identified. The contaminants subject to treatment in this hazardous debris are being treated to comply with 40 CFR 268.45.

WES-WA group will include the appropriate EPA codes and subcategories on the LDR form.

4) This is just a notification; there is no certification required under 40 CFR 268.7(a)(2).

C. Hazardous wastes (except soil) meeting treatment standards at point of generation .

For example, this box is checked if all constituents in an F-listed waste are below the concentration based treatment standards under 40 CFR 268.40 at the point of generation. 40 CFR 268.7(a)(1) allows the determination of whether the hazardous waste meets the treatment standards either by testing the waste or by using acceptable knowledge of the waste.

- 1) Check this box if the waste at the point of generation meets the treatment standards.
- 2) Check the appropriate treatability group box.
- 3) A certification will be included on the LDR for signature.

WES-WA group will include the appropriate EPA codes and subcategories on the LDR form.

D. Hazardous wastes contaminated soil meeting treatment standards at point of generation:

For example, this box is checked if all constituents in an F-listed waste are below the concentration based treatment standards under 40 CFR 268.40 or 40 CFR 268.49 at the point of generation. 40 CFR 268.7(a)(1) allows the determination of whether the hazardous waste contaminated soil meets the treatment standards either by testing the waste or by using acceptable knowledge of the waste.

1) Check this box if the contaminated soil at the point of generation meets the treatment standards.

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- 2) Check the appropriate treatability group box.
- 3) Two certifications will be included on the LDR for signature.
 - **NOTE:** If this is hazardous waste contaminated soil meeting treatment standards at the point of generation, the table under 40 CFR 268.7(a)(4) requires two certifications. There will be two certifications provided on the LDR form for signature.

WES-WA group will include the appropriate EPA codes and subcategories on the LDR form.

E. If the hazardous waste does not fit into the descriptions listed above complete the LDR form with the following:

- 1) Check the appropriate treatability group box.
- 2) Identify all potential UHCs if applicable.
- 3) This is just a notification; there is no certification required to meet 40 CFR 268.40 treatment standards.

WES-WA group will include the appropriate EPA codes and subcategories on the LDR form.

4. "TSDF or Generator Treatment": Check the appropriate box(s) that pertains to the waste under subsection "TSDF or Generator Treatment" and/or "Generator requirements." This section pertains to treated waste from a TSDF, or less than 90-day generator treatment. Generator treatment requires different certifications than TSDF treatment so the treatment facility/generator must check the appropriate TSDF or generator treatment box.

A. TSDF Treated hazardous debris meeting the alternative treatment standards of 40 CFR 268.45.

Mark this box for TSDF treatment if the hazardous debris has been treated to meet the alternative 40 CFR 268.45 treatment standards.

- 1) Check the treatability group NWW (since this is not WW).
- 2) List the untreated waste (original) WPF number(s) in the process description of this WPF.
- 3) List the description of treatment technology from 40 CFR 268.45 Table 1 in the process description section of the WPF.
- 4) The description of how the hazardous debris was originally generated will be provided by the original profiles (prior to treatment).
- 5) A certification is required to indicate these contaminants are compliant with 40 CFR 268.45.

B. Generator Treated hazardous debris meeting the alternative treatment standards of 40 CFR 268.45

Mark this box for generator treatment if the hazardous debris has been treated to meet the alternative 40 CFR 268.45 treatment standards.

- 1) Follow steps 1 through 4 as listed above under the TSDF treated hazardous debris.
- Two certifications is required to indicate these contaminants are compliant with 40 CFR 268.45.
 - **NOTE:** If the waste is disposed in a subtitle D facility, the required notification will be sent to the State by ENV-RCRA with the information listed above plus the name and

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address of the subtitle D facility. If the waste is disposed in a subtitle C facility, then the notification would be provided to the Subtitle C.

C. Hazardous Waste Contaminated Soil treated to 40 CFR 268.49

Check this box if the hazardous waste contaminated soil has been generator treated or TSDF treated to meet the alternative 268.49 standards. The UHC must be treated to below 10 times UTS or a 90% reduction in the original concentration of the UHCs to meet this certification. The waste will be land disposed without further treatment. (See <u>Guidance on Demonstrating compliance with Land Disposal Restrictions {LDR} Alternative Soil Treatment Standards</u>)

- 1) Two certifications is required to indicate that the soil has been treated to meet the alternative 268.49 standards.
- 2) See additional certifications for soil treated to remove all characteristics by checking one of the following boxes listed in this subsection: "Waste or residue from characteristic hazardous waste meeting treatment standards and UTS" or "Waste or residue from characteristic hazardous waste treatment not meeting UTS."
 - **NOTE:** Since the ultimate disposition of the waste is unknown at the time the waste profile form is completed (Subtitle C or Subtitle D landfill), the information listed below is required.
- 3) Check treatability group box NWW (since this is not WW), and
- WES-WA group will include the appropriate EPA codes (applied to waste after treatment) and subcategories on the LDR form.

D. Waste or Residue from characteristics hazardous waste treatment meeting treatment standards and UTS

Check this box if the waste has been treated to remove all characteristics (268.40, or 268.49) and meets UTS for all UHCs after on-site treatment. The waste will be land disposed without further treatment.

- 1) The information from the original WPF, the WPF for the residue, and the certification constitute the notification required to meet 40 CFR 268.7(e) requirements.
- 2) Check the treatability group.
- 3) Identify all potential UHCs.
- Two treatment certifications for waste or residue from characteristics hazardous waste treatment meeting treatment standards and UTS will be included on the LDR form for signature.

WES-WA group will include the appropriate EPA codes for the treated waste, and subcategories on the LDR form.

E. Waste or Residue from characteristic hazardous waste treatment not meeting UTS

- Check this box if the waste is no longer hazardous, but does not meet UTS for all UHC(s). The waste will be shipped to another facility for further treatment.
- 2) Check the treatability group box.
- 3) Identify all potential UHCs.
- 4) Two certifications will be provided on the LDR form for signature.

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 Complete the subsection under "Generator Requirement" for additional notification(s)/certification(s) so the waste can be shipped to another facility for further treatment.

F. Other TSDF wastes meeting the more stringent 40 CFR 268.40 treatment standards to be land disposed.

- 1) Mark this box if the treated waste meets 40 CFR 268.40 treatment standards.
- 2) Check the treatability group, and
- 3) A certification will be included on the LDR form for signature.

G. Other Generator wastes meeting the more stringent 40 CFR 268.40 treatment standards to be land disposed.

Follow steps 1 through 3 as listed above under Other TSDF wastes meeting the more stringent 40 CFR 268.40 treatment standards to be land disposed.

H. Other wastes could not be treated to meet treatment standards 268.40, 268.45, or 268.49.

Other wastes to be further managed at a different treatment or storage facility in order to meet treatment standards and UTS not achieved on-site (e.g. non-characteristic wastes treated in an accumulation area).

- Complete the applicable subsection under "Generator Requirement" for notification(s)/certification(s) so the waste can be shipped to another facility for further treatment.
- 2) Follow the appropriate subsection in completing the LDR form.
- **NOTE:** TSDF requirement under 40 CFR 268.7(b)(1) and (2) requires the TSDF to test the residue of the treated waste. It is up to the facility to ensure that the required analysis follows their permitted waste analysis plan (WAP).

5. Notification Of Underlying Hazardous Constituents - Check All That Apply.

The Underlying Hazardous Constituents are listed in the Universal Treatment Standards (see in 40 CFR 268.48).

Certain characteristic wastes (D001-D043) subject to 40 CFR 268.40, "Treatment Standards for Hazardous Wastes," will also have to meet the treatment standards described in 40 CFR 268.48, "Universal Treatment Standards;" (e.g., a non-wastewater D001 HI TOC—waste with a flash point less than 140°F and TOC of greater than or equal to 10%—is excluded from the 40 CFR 268.48 treatment standards).

- A. Identify all potential underlying hazardous constituents (UHCs) (except fluoride, selenium, sulfide, vanadium and zinc; which are not underlying hazardous constituents as defined at 40 CFR 268.2(i)) in the waste which, at the point of generation, are above the treatment standard for the applicable treatability group in the third or the fourth column (e.g. wastewater or nonwastewater).
- B. Check "No Underlying Hazardous Constituents in this waste stream" if no UHCs exist in the waste stream.
 - **NOTE:** 40 CFR 268.7(a)(6): If the generator determines that the waste is restricted based solely on knowledge of the waste, all data used to make the determination must be retained onsite in the generator's files. If the generator determines that the waste is restricted based on testing this waste or an extract developed using the Test Method 1311 in test Methods for evaluating "Solid Waste Physical/Chemical Methods, " EPA Publication SW-

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846, as referenced in 40 CFR 260.11 of this chapter, all waste analysis data must be retained on-site in the generator's files.

3.5 ATTACHMENT 5, NTS

In addition to the waste characterization information provided on the WPF, Attachment 5 must be completed for all waste destined for disposal at NTS. The information contained in Attachment 5, along with the WPF, satisfies the minimum waste characterization requirements set forth by NTS.

If you are unsure about whether you need to complete this attachment, please contact the Waste Certification Official (for NTS-destined waste) at wco@lanl.gov for further assistance. Contact wco@lanl.gov for NTS Waste Profile Number and include the number on Attachment 5.

General Waste Stream Information

1. Waste Category (check box if applicable)

Contains accountable nuclear material

2. Identify estimated frequency of shipments per fiscal year.

Physical/Chemical Characterization

- Check the box that describes the process knowledge information used for physical/chemical characterization of this waste. If process knowledge is a major source of the chemical characterization of the waste stream, it is important to thoroughly describe that knowledge. If characterization is being conducted at the item level, then characterization data *shall* be traceable at that level (e.g., individual sealed sources, bags, or components characterized on an individual basis but packaged together).
 - Mass balance from process inputs. (Describe how the process inputs are controlled and recorded.)
 - Inert debris characterized by inventory control. (Check this box when the waste stream consists largely of inert debris items that are characterized by inventory control procedures and recorded on inventory sheets. Briefly list or describe inventory procedures.)
 - Physical/chemical characterization varies. (Check this box when the characterization strategy varies from container to container. Describe the strategy used to meet the acceptable knowledge requirements of <u>P930-1</u>, "LANL Waste Acceptance Criteria," Attachment 17 "Low-Level Waste for Disposal at the Nevada Test Site")

Other. (Describe.)

- 2. Describe the type of sampling and analysis performed to characterize this waste stream. If field screening or laboratory analysis data is used, describe in detail the sampling and analytical methods used and attach a copy of the analytical results from a representative sample or sample set. Data validation for waste characterized using sampling and analysis must be performed by WES-EDA personnel in accordance with approved procedures.
- 3. Check all boxes that apply, as defined by the referenced regulations.
- 4. If the waste stream contains liquid, check all that apply and list the procedures followed.
- 5. Check all boxes that define components of the waste stream and describe how <u>P930-1, "LANL Waste</u> <u>Acceptance Criteria,"</u> Attachment 17 "Low-Level Waste for Disposal at the Nevada Test Site" is met.
- 6. Identify whether the chemical composition varies greatly from container to container and provide bounding values or ranges in section 5 of the WPF. Further evaluation will occur on the specific package paperwork as it is provided for highly variable streams.

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Radiological Characterization

Check all boxes that describe the analysis and characterization methods used to determine the radionuclides in the waste. For each box checked, provide a brief but specific description of the methods used.

Where multiple characterization methods are checked (e.g., nondestructive assay and scaling factors), briefly describe how these methods are used together to establish the radiological inventory of the waste.

For complex or highly variable waste streams, explain the strategy used to meet the acceptable knowledge requirements of <u>P930-1, "LANL Waste Acceptance Criteria,"</u> Attachment 17 "Low-Level Waste for Disposal at the Nevada Test Site."

Data validation for waste characterized using sampling and analysis must be performed by WES-EDA personnel in accordance with approved procedures.

If characterization is being conducted at the item level, then characterization data *shall* be traceable at that level (e.g., individual sealed sources, bags, or components characterized on an individual basis but packaged together).

- 1. Provide estimated radiation dose of disposal package in mSv/hr at surface, 30-cm and 1-meter.
- Identify whether the waste contains enriched uranium (²³⁵U wt% ∃ 0.90), ²³³U, ²³⁹Pu, ²⁴¹Pu, ^{242m}Am, ²⁴³Cm, ²⁴⁵Cm, ²⁴⁷Cm, ²⁴⁹Cf, ²⁵¹Cf. If yes, check applicable boxes and answer questions for compliance with the criticality safety criteria of <u>P930-1, "LANL Waste Acceptance Criteria,"</u> Attachment 17 "Low-Level Waste for Disposal at the Nevada Test Site" and provide the requested information.
- 3. Report the major radionuclides expected to be in the waste stream and the concentration (in Bq/m³) of each reportable radionuclide in the packaged waste. In cases where the radionuclide concentration is variable, report the anticipated range of concentration. If the concentration is highly variable, check the box indicating that the isotopic composition is highly variable.
- 4. List any alpha-emitting transuranic radionuclides (nCi/g) with a half-life greater than 5 years, ²⁴¹Pu, or ²⁴²Cm, and the range and activity representative of the final waste form.
- Identify if there are any packages in this waste stream that exceed the PGE limits specified in <u>P930-1</u>, <u>"LANL Waste Acceptance Criteria,"</u> Attachment 17 "Low-Level Waste for Disposal at the Nevada Test Site." Provide container type(s), quantity, and supporting PGE calculations.

Packaging

- Check all boxes that describe the packaging used (size, type, and weight range). Use external
 dimensions when identifying the container size. Provide detail on venting and sorbent use.
 Provide detail on waste radiologically stabilized by the generator to meet the requirements of
 <u>P930-1, "LANL Waste Acceptance Criteria,"</u> Attachment 17 "Low-Level Waste for Disposal at
 the Nevada Test Site."
- 2. Enter the maximum container size (external dimensions of the container in meters). For rectangular packages, enter length, width, and height of the waste package in that order. For cylindrical packages (e.g. drums) enter diameter and length in that order.
- Enter the maximum anticipated container gross weight in kilograms. For bulk waste, mark this section "N/A".
- 4. Describe the liners and/or protective coatings used for contamination control and for compatibility of the container with the waste. Mark this section N/A for bulk waste.

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- 5. Identify if each container meets each of the package criteria defined in <u>P930-1, "LANL Waste</u> <u>Acceptance Criteria,"</u> Attachment 17 "Low-Level Waste for Disposal at the Nevada Test Site."
- List documentation that demonstrates compliance with <u>P930-1, "LANL Waste Acceptance Criteria,"</u> Attachment 17 "Low-Level Waste for Disposal at the Nevada Test Site."
- 7. Reference any special handling procedures and ALARA documentation, if applicable.

Additional Information

- 1. Provide any additional comments about the waste stream, as appropriate.
- 2. If the waste stream requires an exception to any of the requirements contained in P930-1, "LANL Waste Acceptance Criteria," complete the "Waste Acceptance Criteria Exception Form (Form # 1973)"
- 3. List and number any attachments provided with the WPF.
- 4. Handling procedures and ALARA documentation must be referenced in this section for wastes requiring remote handling. Packages exceeding 1 mSv/hr (100 mR/hr) dose rate at 30 cm shall be considered for remote handling.

NTSWAC Table B-1: Analytical Results

This table requires the statistical mean and upper confidence level for TCLP Metals, TCLP Volatiles, TCLP Semivolatiles, and TCLP Pesticides and Herbicides. This table must be completed and attached to the WPF if laboratory or radiochemical analysis was performed.

NTSWAC Table E-3: Calculation of ²³⁵U Fissile Gram Equivalence and Effective ²³⁵U Enrichment for LLW Packages

This table must be completed if the waste contains enriched uranium (235 U wt% \exists 0.90), 233 U, 239 Pu, 241 Pu, 242m Am, 243 Cm, 245 Cm, 247 Cm, 249 Cf, or 251 Cf.

3.6 ACTIVATION AND EXTENSION

When the WPF has been activated, it is active for one year. The WPF is activated when the RCRA and/or PCB review and any applicable waste acceptance(s) has been completed. Waste acceptance(s), for example, are TA-50 RLWTF, municipal refuse, SWWS, and TA-16. These review(s) and waste acceptance(s) will be noted at the end of the hardcopy of the activated WPF and should be checked to verify disposition of the waste. At the end of that year, a Waste Profile Extension Questionnaire will be obtainable for the generator to renew or void the profile. Only the generator can sign for the extension. The WMC or Generator can void a profile.

The following, for example, can be changed without redoing the profile:

- If there is an active WPF for a waste stream and the waste stream classification will not change as a result of being turned over to someone else, the WPF can be revised to identify the "new" generator.
- If the generator moves from building "a" to building "b" and the waste stream stays the same, the WPF can be revised to identify the "new" location.
 - NOTE: A "History of Revisions" table has been incorporated into the Waste Profile (Oracle) database. This feature will allow Waste Services personnel to change the name of a waste generator, as needed, for any given waste stream. This feature will be used primarily for routine waste streams that are generated by one person and then turned over to another. As long as the waste stream has not changed, a new WPF does not need to be created for the new generator.

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NOTE: Before you request that a generator name be changed on a WPF, all waste created by the first generator must be in the disposal process. If the WPF has been changed to identify the "new" generator and a problem arises, this new generator would be assuming responsibility for any discrepancies.

4.0 DOCUMENTATION

The original WPF is considered a record and should be maintained in accordance with:

P409, "Waste Management"

4.1 REFERRALS

Radioactive Liquid Waste Treatment Facility (RLW), 7-4301.

Environmental & Waste Management Facility Operations-Area G, (EMWO-AG) 5-6158.

Environmental Protection - Water Quality & RCRA (ENV-RCRA), 5-0677.

4.2 DOCUMENTS

15 U.S.C. Sec. 2601-2671, Toxic Substances Control Act, as amended.

20 NMAC 4.1, New Mexico Hazardous Waste Regulations.

20 NMAC 9.1, New Mexico Hazardous Waste Regulations.

40 CFR Parts 260, 261, 262, 263, 264, 265, 268, 273, and 279.

42 U.S.C. Sec. 6901-6992k, Resource Conservation and Recovery Act of 1976, as amended.

42 U.S.C. Sec. 7401-7642, Clean Air Act, as amended.

49 CFR Parts 171 through 173.

"Authorization to Discharge Under the National Pollutant Discharge Elimination System," Environmental Protection Agency, Permit Number NM28355, effective January 31, 1990.

DOE Order 435.1, "Radioactive Waste Management."

DOE Order 5400.5, "Radiation Protection of the Public and the Environment."

P 409, "Waste Management."

ISD101-21, "Chronic Beryllium Disease Prevention Program."

ISD 121-1, "Radiation Protection."

P930-1, "LANL Waste Acceptance Critera."

P930-2, "Waste Certification Program."

Los Alamos National Laboratory. 1989/1995 Hazardous Waste Facility Permit, Attachment A.

New Mexico Hazardous Waste Act, N.M. Statutes Annotated 74-4-1 to 13.

New Mexico Solid Waste Act, N.M. Statutes Annotated 74-9-1 to 42.

"Test Methods for Evaluating Solid Wastes," Environmental Protection Agency Report SW 846 (November 1986).