

# **Mixed Waste Acceptance Guidelines**

**Revision 3** 

AUTHOR						
DEPARTMENT	PRINTED NAME	SIGNATURE	DATE			
Environmental Compliance	Erin Sims-Taylor	Signature on File	11/17/15			

REVIEWERS							
DEPARTMENT	PRINTED NAME SIGNATURE DATE						
Radiation Protection	Duane Quayle	Signature on File	11/09/15				
Operations	Donna Webb	Signature on File	11/24/15				
Safety and Health	David Joyce	Signature on File	11/18/15				
Project Management	Brian Parsons	Signature on File	11/18/15				

AUTHORIZED USER						
DEPARTMENT	PRINTED NAME	SIGNATURE	DATE			
Logistics/Shipping	Brad Melton	Signature on File	11/19/15			

OWNER/APPROVER						
DEPARTMENT	PRINTED NAME	SIGNATURE	DATE			
Technical Services	Bruce Stephenson	Signature on File	11/30/15			

X Non-Proprietary	New
Proprietary	Title Change
Restricted Information	X Revision
Safeguards Information	Rewrite
Sensitive Security Information	Cancellation
	Reason for Cancellation:

### **Table of Contents**

Section	Page
1.	PURPOSE AND SCOPE
2.	COMMITMENTS
3.	REFERENCES AND FORMS 3   3.1. References   3.2. Forms   3 3
4. RE(	SHIPPING, PACKAGING, MARKING AND DOCUMENTATION QUIREMENTS
5.	PRE-ACCEPTANCE PROCEDURES4
6.	WASTE ACCEPTANCE CRITERIA
7.	MIXED WASTE ACCEPTANCE REQUIREMENTS6
8.	REQUIRED SAMPLING ANALYSIS7
9.	FREQUENCY OF ANALYSIS9
10.	SAMPLING METHODS [1200-01-1106(2)(d)(2)(iii)]9
11.	ATTACHMENTS

#### 1. **PURPOSE AND SCOPE**

This document provides the waste acceptance criteria for mixed waste as set by Bear Creek's RCRA Permit, TNHW-129 (Commitment 2.1). If waste is approved, additional instructions for packaging, shipping, and scheduling will be provided as required.

#### 2. COMMITMENTS

- 2.1. TNHW-129 Hazardous Waste Management Permit
- 2.2. 40 CFR 260 268
- 2.3. TN Hazardous Waste Transfer Facility EPA ID# TND982157570

#### 3. **REFERENCES AND FORMS**

#### 3.1. **References**

- 3.1.1. CP-WM-PR-102-F1, Nonstandard Material Approval
- 3.1.2. WAG-501-F1, Shipment Summary Form
- 3.1.3. CP-EV-PR-302, Mixed Waste Profile Acceptance Process
- 3.1.4. CP-EV-PR302-F1, Mixed Waste Profile Form
- 3.1.5. CP-EV-PR-302-F3, Five Working Day Shipment Notification
- 3.1.6. CP-EV-PR-302-F4 Sampling Waiver Request Form
- 3.1.7. CP-EV-PN-004, Waste Analysis Plan Permitted Units
- 3.1.8. WAG-501, Waste Acceptance Guidelines
- 3.2. **Forms**

None

# 4. SHIPPING, PACKAGING, MARKING AND DOCUMENTATION REQUIREMENTS

- 4.1. All Mixed Waste must be approved according to the OOW, Profile and Five Working Day Shipment Notification requirements in CP-EV-PR-302 Mixed Waste Profile Acceptance Process (reference 3.1.3).
- 4.2. A completed Shipment Summary Form, WAG-501-F1 (Reference 3.1.8) must accompany all shipments of mixed waste.

- 4.3. The transporter is required to have a valid Hazardous Waste Transporter Permit and installation identification number. If the Hazardous Waste Transporter is a carrier other than Hittman, a copy of the transporter's Hazardous Waste Transporter Permit shall accompany the manifest.
- 4.4. All mixed waste shipments must have an advanced Uniform Hazardous Waste Manifest (US EPA Form 8700-22), Radioactive Material Manifest (NRC form 540 & 541) and LDR Certification submitted to Energy*Solutions* at least five working days prior to shipment and a hard copy must accompany the shipment.
- 4.5. Land Disposal Restriction notifications and certifications shall be submitted to EnergySolutions in accordance with Attachment 4.

#### NOTE:

When entering the Total Quantity in Box 11 on the Uniform Hazardous Waste Manifest, if the container will not be disposed of with the mixed waste (i.e., RCRAempty), then use net (waste) weight. If the container will be disposed of with the mixed waste (i.e., MACRO), then gross (waste + container) weight or net (waste) weight may be used.

- 4.6. Consolidated or Mixed Lading shipments or conveyances containing Hazardous or Mixed Wastes consigned to facilities other than EnergySolutions shall be segregated such that the wastes approved for unloading by EnergySolutions are loaded on the rear of closed transport vehicles (Van style) or are accessible in the case of an open transport vehicle (Flatbed style) without having to unload or move the other wastes.
- 4.7. All Mixed Wastes packages shall bear the EPA marking containing the required wording as described in 40 CFR 262.32. Although the marking is only required for packaging having a volume of 119 gallons or less, EnergySolutions requires this marking on all packaging containing Mixed Wastes.
- 4.8. Mixed Waste containers shall be in good condition (i.e., no rust, structural defects) and made of or lined with materials which will not react with, and are otherwise compatible with, the hazardous waste to be stored (40 CFR 264.171 & 264.172).

#### 5. **PRE-ACCEPTANCE PROCEDURES**

Before waste can be shipped to and received at Energy*Solutions* P4 RCRA Treatment Building, Container Storage Pad and Container Storage Building, the following must be completed.

5.1. A Nonstandard Material (OOW), Mixed Waste Profile package (Section 7.1 and Five Working Day Shipment Notification package (Section 7.2) must be reviewed and approved by the Review Committee (Reference 3.1.1 and 3.1.3).

#### <u>NOTE</u>

All the documents above are not required to be submitted to the Review Committee at the same time. Certain circumstances may require the OOW and/or Mixed Waste

Profile to be completed and approved prior to the generator submitting the Five Working Day Shipping Notification package for approval.

5.2. A contractual agreement between Energy*Solutions* and the generator (or contractor) is approved.

#### 6. WASTE ACCEPTANCE CRITERIA

- 6.1. Basic Waste Acceptance Criteria and Restrictions
  - 6.1.1. Attachment 1 summarizes the waste acceptance criteria and restrictions found in this section.
  - 6.1.2. Waste must be Mixed Waste (RCRA and Radioactive) as defined in 40 CFR 266 Subpart N and must only have hazardous waste code(s) list in Attachment 2.
  - 6.1.3. Wastes must meet the site's Radioactive Materials License #R73016.
  - 6.1.4. The following wastes cannot be accepted for storage or treatment at the Bear Creek RCRA Facility:
    - Restricted Pesticides
    - D001 Organic Peroxide formulations
    - D001 Class 3 and 4 Oxidizers
    - Mixed PCB Waste (40 CFR 761)
  - 6.1.5. The following wastes are prohibited in the P4 RCRA Treatment Building; therefore, cannot be accepted for treatment:

#### NOTE:

Since these wastes are only authorized for storage on the Container Storage pad, then liquid waste meeting this criteria cannot be accepted at the Bear Creek RCRA Facility.

- D001 Compressed Gases
- D003 Unstable Reactive Materials
- D003 Water Reactive Materials
- D003 Explosives
- 6.1.6. The following wastes are prohibited on the Container Storage Pad.
  - Liquid wastes
  - D003 Class 3 & 4 Unstable Reactive Materials
  - RCRA Listed Wastes F020, F021, F022, F023, F026, and F027

- D003 Explosives in explosive quantities (See Attachment 1 for definition of Explosive Quantities)
- 6.1.7. Chemicals (in liquid form) listed in Attachment 3 must be identified by the generator on the Mixed Waste Profile form (Section 3.1.4) and assessed for additional controls (secondary containment, floor coating compatibility, etc) by EnergySolutions during the Pre-Acceptance Procedures (Section 5).
- 6.2. Permitted Mixed Waste Treatment Processes

Mixed waste requiring a treatment technology listed below may be accepted for treatment at the Bear Creek RCRA Facility.

- Concentration based treatment standard as set in 40 CFR 268.40 and 1200-1-11.10(3)(a)(10) Treatment Standards for Hazardous Wastes.
- Amalgamation
- Carbon Adsorption
- Chemical Reduction
- Neutralization
- Deactivation
- Stabilization/Solidification
- Macroencapsulation
- Waste Sorting and Segregation
- Size Reduction

#### 7. MIXED WASTE ACCEPTANCE REQUIREMENTS

7.1. Mixed Waste Profile Package

Pre-approval of a waste shall include a review of the generator's processes and products and a set of representative preliminary comprehensive analysis of the generator's waste to ensure that the generator's characterization is accurate prior to receiving shipments from off-site. The analytical data must be from a representative sample(s) as defined in 40 CFR 260.10. See Section 10 for collecting representative sample(s). The Mixed Waste Profile (WP) shall provide the necessary information for management of a waste stream. Attachment 2 is an example of a Mixed Waste Profile. The Mixed Waste Profile package includes the following:

- 7.1.1. Mixed Waste Profile form (CP-EV-PR-302-F1);
- 7.1.2. Waste Description, Physical Property Description, and other relevant attachments;
- 7.1.3. Waste Profile (WP) Analytical Data (see Section 8.5 for required analysis);

- 7.1.4. Diagrams, drawings, weights, loading configuration and additional information for components or large objects.
- 7.2. Five Working Day Shipping Notification Package
  - 7.2.1. Five Working Day Shipment Notification form (CP-EV-PR-302-F3)
  - 7.2.2. Advanced draft Uniform Hazardous Waste Manifest
  - 7.2.3. Advanced draft LDR certification
  - 7.2.4. Advanced draft Radiological Manifest
  - 7.2.5. RCRA Accumulation Start date for all containers

#### <u>NOTE</u>

The EnergySolutions' Bear Creek Facility RCRA Facility has a permitted capacity and permit driven time requirements for receipt, inspection and sampling, based on volume; therefore, shipments may not be approved at the requested time. EnergySolutions will work with the customer to schedule shipments as capacity is available.

#### 8. REQUIRED SAMPLING ANALYSIS

8.1. The analytical data used by the generator for the WP shall be from a laboratory that holds a National Environmental Laboratory Accreditation Program (NELAP) accreditation.

#### NOTE:

For the purposes of this requirement, total results on a dry weight basis may be used to show that a waste is not toxic per SW-846 Method 1311 Section 1.20. The total results will be divided by a conversion factor of 20 (mg/kg)/(mg/L) in order to determine whether a TCLP limit has the possibility of being exceeded.

- 8.2. Waiver of Sampling or Analysis
  - 8.2.1. Some wastes do not lend themselves to sampling or to the analyses required. (Examples of these wastes include lead bricks, tree stumps, wood, lead shielding, concrete, construction debris, building debris, other debris, bricks, sheet metal, discarded containers, metal, sheet rock, wire, plastic waste, wood pallets, glass, gloves, suits, boots, paper towels, aerosol cans, batteries etc.) The analyses of such waste may be waived by EnergySolutions on a profile basis. A detailed characterization must be provided in the WP.
  - 8.2.2. For such waste, alternative sampling methods may be used to obtain samples for analysis at EnergySolutions' discretion. Samples may be analyzed for specific parameters and waived for other parameters. Where reasonably feasible, analyzable samples shall be obtained and run.

- 8.3. WP Analytical is analytical data provided by the generator to EnergySolutions during the pre-acceptance process.
- 8.4. WP Analytical requirements are based on Waste Stream Groups. Waste Stream Groups are described below.
  - 8.4.1. Group 1, Debris and Radioactive Lead Solids —

Debris - solid material exceeding a 60 mm particle size that is intended for disposal and that is: a manufactured object; or plant or animal matter; or natural geologic material. However, the following materials are not debris: any material for which a specific treatment standard is provided in 40 CFR 268, namely lead acid batteries, cadmium batteries, and radioactive lead solids; process residuals such as smelter slag and residues from the treatment of waste, wastewater, sludges, or air emission residues; and intact containers of hazardous waste that are not ruptured and that retain at least 75% of their original volume. More than 50% of material in a container must meet the definition of debris in order to treat and dispose of the waste as debris.

Radioactive Lead Solids – radioactively contaminated metallic lead (i.e., sheet, brick, shot, pellets, fines, odd shapes, etc.)

- 8.4.2. Group 2, Pressurized Aerosol Cans
- 8.4.3. Group 3, Non-Debris Dry Waste dry waste not meeting the definition of debris (i.e., powder, granular)
- 8.4.4. Group 4, Wet Waste liquid (aqueous or non-aqueous), oil, sludge, slurry
- 8.4.5. Group 5, Elemental Mercury
- 8.5. Required Analysis by Waste Stream Group
  - 8.5.1. Group 1, Debris and Radioactive Lead Solids
    - a. Detailed process knowledge must be completed and submitted as part of the profile to EnergySolutions for approval.
  - 8.5.2. Group 2, Pressurized Aerosol Cans
    - a. Detailed process knowledge must be completed and submitted as part of the profile to EnergySolutions for approval.
  - 8.5.3. Group 3, Non-Debris Dry Waste
    - a. Paint Filter Liquids Test (PFLT), SW-846 9095

- b. Total or TCLP metals analysis for antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, nickel, selenium, silver and thallium, SW-846 1311
- c. Volatile organics and semi-volatile organics, SW-846 8260 and 8270.
- 8.5.4. Group 4, Wet Waste
  - a. Paint Filter Liquids Test (PFLT), SW-846 9095
  - b. pH, SW-846 9040
  - c. Total or TCLP metals analysis for antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, nickel, selenium, silver and thallium, SW-846 1311
  - d. Volatile organics and semi-volatile organics, SW-846 8260 and 8270.

#### NOTE:

Unused/Off-spec chemicals or process waste (Group 4, Wet Waste) from well-defined chemical operations may be waived (in accordance with Section 1) from the Volatile and Semi Volatile Organic Parameters. The generator is required to provide detailed process knowledge including details of the process generating the waste, with the Mixed Waste Profile. EnergySolutions personnel will review and determine based on the information provided if the sampling waiver will be granted.

- 8.5.5. Group 5, Elemental Mercury
  - a. Detailed process knowledge must be completed and submitted as part of the profile to EnergySolutions for approval.

#### 9. FREQUENCY OF ANALYSIS

- 9.1. Waste Profile Analytical must be completed and submitted to EnergySolutions for the following:
  - 9.1.1. New profiles
  - 9.1.2. Profile revisions
  - 9.1.3. Annual profile updates.

#### 10. SAMPLING METHODS [1200-01-11-.06(2)(D)(2)(III)]

10.1. Waste Sampling Requirements

The methods and equipment used for sampling waste materials will vary with the form and consistency of the waste materials to be sampled. Samples collected using the sampling protocols listed below, for sampling waste with properties similar to the

indicated materials, will be considered by the Department, Agency and EnergySolutions to be representative of the waste. [1200-1-11-.02(5) Appendix I]

- Extremely viscous liquid ASTM Standard D140-70
- Crushed or powdered material ASTM Standard D346-75
- Soil or rock-like material ASTM Standard D420-69
- Soil-like material ASTM D1452-65
- Fly Ash-like material ASTM Standard D2234-76

#### NOTE:

A "representative sample" means a sample of a universe or whole (e.g., waste pile, lagoon, ground water) which can be expected to exhibit the average properties of the universe or whole.

#### NOTE:

#### ASTM Standards are available from ASTM, 1916 Race St., Philadelphia, PA 19103

- Containerized liquid waste "COLIWASA"
- Liquid waste in pits, ponds, lagoons, and similar reservoirs "Pond Sampler"

#### NOTE:

### SW-846 also contains additional information on application of these protocols and can be found at: http://www.epa.gov/osw/hazard/testmethods/sw846/online/

- 10.2. Required Sampling Methods:
  - 10.2.1. A sample shall be obtained by using one or more of the following:
    - Coliwasas, tubes, weighted bottles, and dippers for sampling free-flowing liquids and slurry waste streams
    - Triers, thieves, shovels, scoops and augers for sampling sludges and solid waste streams.
  - 10.2.2. Appropriate preservation shall be used for each sample, as specified in the applicable analytical methods
  - 10.2.3. Only sampling equipment constructed of glass or stainless steel may be used for sample collection for analysis of organic constituents.

#### <u>NOTE</u>

## EnergySolutions may request additional analytical data as necessary to profile and verify the waste.

- 10.3. Mixed Waste Profile Revisions
  - 10.3.1. The Mixed Waste Profile (CP-EV-PR-302-F1) shall be updated when:

- The process generating the waste has changed and as a result, the waste stream has different EPA waste codes, concentrations or treatment standards.
- Energy*Solutions* has reason to suspect that *the process* generating the waste or waste stream has changed due to waste inspection, analytical results or treatment ineffectiveness. The generator must submit a revised Mixed Waste Profile (CP-EV-PR-302-F1) when one calendar year (no more than 365 days) has passed since the profile was approved or prior to the next requested shipment if 365 days have passed.

#### 11. ATTACHMENTS

Attachment 1, Basic Waste Acceptance Guidelines Attachment 2, Hazardous Waste Codes Attachment 3, Chemicals Requiring Identification and Additional Controls Attachment 4, LDR Notification and Certification Requirements

#### 11.1. ATTACHMENT 1, BASIC WASTE ACCEPTANCE GUIDELINES

Waste Classification/	P4 RCRA	Container Storage Pad	Comment	Maximum Capacity
Parameter	Treatment Building			
Liquids	No restrictions unless otherwise	Not Allowed	Paint Filter Test	P4 - 33,750 gallons
	restricted per this Table			CSB - Note 7
				CSP - Not allowed
Solids	No restrictions unless otherwise	No restrictions unless		P4 - Note 8
	restricted per this Table	otherwise restricted per this		CSB - Note 7
		Table		CSP - Note 8
RCRA Listed Waste -	No restrictions unless otherwise	Not allowed	NA	
F020, F021, F022, F023,	restricted per this Table			
F026, and F027				
Restricted Pesticides	Not allowed	Not allowed	See Note 1 for definition	
Explosives	Not allowed	Not allowed in explosive	See Note 2 for definition	
		quantities		
Organic Peroxide	Not allowed	Not allowed	See Note 3 for definition	
Formulations				
				-
Oxidizers	Class 1 and Class 2	Class 1 and Class 2	See Note 4 for definition	
				825 cubic feet liquids and
				solids combined
				4
Unstable Reactive	Not allowed	Class 1 and 2 only	See Note 5 for key	
Materials			definitions	_
Compressed Gasses	Not allowed	Refer to Note 6	NA	
Water Reactive Materials	Not allowed	Refer to Note 6	NA	
Radioactive Material	Must comply with Radioactive	Must comply with Radioactive	NA	
	Material License #R73016	Material License #R73016		
PCB Waste	Not allowed	Not allowed	NA	

#### **BASIC WASTE ACCEPTANCE GUIDELINES (Continued)**

Note 1 - Restricted Pesticides - As defined under Federal Insecticide, Fungicide, and Rodenticide Act, 40 CFR Part 152.175.

Note 2 - Explosives - As defined under Title 18, USC, Chapter 40, "Importation, Manufacture, Distribution, and Storage of Explosive Materials, and as classified by the US DOT Hazardous Material Regulations, 49 CFR 100-199.

**National Fire Protection Association (NFPA) Non-Explosive Quantity** – The maximum quantity of a chemical substance identified as an explosive material (see below) that when subjected to a sufficiently large initiating force (i.e. fire, shock, electrical current, etc.) is incapable of detonation (see below). This quantity may be provided by the chemical manufacturer or determined by laboratory testing using an industry accepted testing standard.

The following definitions were obtained from NFPA 400, Hazardous Materials Code, Chapter 3 Definitions:

3.3.39 - Explosive Reaction. A reaction, which includes both deflagration and detonation, producing a sudden rise in pressure with potentially destructive results.

3.3.26 – Deflagration. Propagation of a reaction zone at a velocity that is less than the speed of sound in the unreacted medium.

3.3.28 – Detonation. Propagation of a combustion zone at a velocity that is greater than the speed of sound in the unreacted medium.

The following definition was obtained from Title 18, United States Code, Chapter 40, Importation, Manufacture, Distribution, and Storage of Explosive Materials, Section 844, subsection (j):

(j) For the purposes of subsections (d), (e), (f), (g), (h), and (i) of this section and section 842(p), the term "explosive" means gunpowders, powders used for blasting, all forms of high explosives, blasting materials, fuzes (other than electric circuit breakers), detonators, and other detonating agents, smokeless powders, other explosive or incendiary devices within the meaning of paragraph (5) of section 232 of this title, and any chemical compounds, mechanical mixture, or device that contains any oxidizing and combustible units, or other ingredients, in such proportions, quantities, or packing that ignition by fire, by friction, by concussion, or by detonation of the compound, mixture, or device or any part thereof may cause an explosion.

Therefore, a substance present in "explosive" quantity must, at a minimum:

1. Possess sufficient chemical energy to be detonable,

2. Must be present in such proportions, quantities, or packing that ignition or detonation may cause an explosion.

Note 3 - Organic Peroxides - Organic peroxide formulations as defined in the National Fire Prevention Association Code. (NFPA) 400, Hazardous Materials Code, Chapter 3 – Definitions. Typical Class I, II, III, IV, and V Organic Peroxide Formulations are presented in NFPA 400, Hazardous Materials Code, Annex F – Typical Organic Peroxide Formulations.

Note 4 - Oxidizers - Refer to NFPA 400, Annex G for listing of common oxidizers.

Class 1. An oxidizer whose primary hazard is that it slightly increases the burning rate but does not cause spontaneous ignition when it comes in contact with combustible materials.

Class 2. An oxidizer that will cause a moderate increase in the burning rate or that causes spontaneous ignition of combustible materials with which it comes in contact.

Class 3. An oxidizer that will cause a severe increase in the burning rate of combustible materials with which it comes in contact or that will undergo vigorous self-sustained decomposition due to contamination or exposure to heat.

Class 4. An oxidizer that can undergo an explosive reaction due to contamination or exposure to thermal or physical shock. In addition, the oxidizer will enhance the burning rate and can cause spontaneous ignition or combustibles.

Note 5 – Unstable Reactive Materials (as defined in NFPA 400, Hazardous Materials Code, Chapter 3 Definitions)

Class 1. Materials that in themselves are normally stable but which can become unstable at elevated temperatures and pressures.

Class 2. Materials that in themselves are normally unstable and readily undergo violent chemical change but do not detonate. This class includes materials that can undergo chemical change with rapid release of energy at normal temperatures and pressures, and that can undergo violent chemical change at elevated temperatures and pressures.

Class 3. Materials that in themselves are capable of detonation or of explosive decomposition or explosive reaction but which require a strong initiating source or which must be heated under confinement before initiation. This class includes materials that are sensitive to thermal or mechanical shock at elevated temperatures and pressures.

Class 4. Materials that in themselves are readily capable of detonation or explosive decomposition or explosive reaction at normal temperatures and pressures. This class includes materials that are sensitive to mechanical or localized thermal shock at normal temperatures and pressures.

**Note 6 - General Requirements** - Storage must be in accordance with applicable SBCCI (Southern Building Code Conference International) requirements for storage of hazardous and flammable materials. Applicable restrictions may depend on the amounts of other wastes in storage at a given time.

Note 7 - Maximum Capacity of the Container Storage Building (CSB)- The permitted maximum capacity in the Container Storage Building is 21,120 gallons (liquids and solids combined). NOTE: THE CONTAINER STORAGE BUILDING HAS NOT BEEN BUILT.

Note 8 - Maximum Capacity of Solids in the P4 RCRA Treatment Building and Container Storage Pad (CSP) - The permitted maximum capacity of solid mixed waste in the P4 RCRA Treatment Building and Container Storage Pad is a combined containerized volume of 12,000 cubic feet.

NA - Not applicable.

#### 11.2. ATTACHMENT 2, HAZARDOUS WASTE CODES

	D001		F003	]	P015		P070	]	P185		U031		U081	1	U130		U179	1	U237
	D002		F004	1	P016	1	P071	1	P188		U032	1	U082	1	U131	1	U180	1	U238
	D003	ŀ	F005	1	P017	1	P072	1	P189	[	U033		U083	1	U132	1	U181	1	U239
	D004	1	F006	1	P018	1	P073	1	P190		U034		U084	1	U133	1	U182		U240
	D005	1	F007	1	P020	1	P074	1	P191		U035		U085	1	U134	1	U183	1	U243
	D006	1	F008	1	P021	1	P075		P192		U036		U086	1	U135	1	U184	1	U244
	D007		F009	1	P022	1	P076	1	P194		U037	1	U087	1	U136	1	U185	1	U246
	D008		F010	1	P023	1	P077	1	P196		U038	1	U088		U137	1	U186		U247
	D009		F011		P024		P078	1	P197		U039	1	U089		U138		U187		U248
	D010		F012	1	P026	1	P081	1	P198		U041		U090		U140	1	U188		U249
	D011		F019	1	P027	1	P082	1	P199		U042		U091		U141	1	U189		U271
	D012		F020	1	P028		P084		P201		U043		U092		U142	1	U190		U278
	D013		F020	1	P029	1	P085		P202		U044		U093		U143	1	U191		U279
	D014		F021	]	P030		P087		P203		U045		U094		U144		U192		U280
	D015		F022	]	P031		P088	1	P204		U046		U095		U145		U193		U328
	D016		F023	]	P033		P089		P205		U047		U096		U146		U194		U353
	D017		F024	1	P034		P092	1		·	U048		U097		U147		U196		U359
	D018		F025	1	P036		P093	1			U049		U098		U148		U197		U364
	D019		F026	1	P037		P094		U001		U050		U099		U149		U200		U367
	D020		F027	]	P038		P095		U002		U051		U101		U150		U201		U372
i	D021		F028		P039	Ľ	P096		U003		U052		U102		U151		U203		U373
	D022		F032		P040		P097		Ŭ004		U053		U103		U152		U204		U387
	D023		F034	]	P041		P098		U005		U055		U105		U153		U205		U389
	D024		F035		P042		P099		U006		U056		U106		U154		U206		U394
	D025		F037	]	P043		P101		U007		U057		U107		U155		U207		U395
	D026		F038	]	P044		P102		U008		U058		U108		U156		U208		U404
	D027		F039		P045		P103		U009		U059		U109		U157		U209		U409
	D028				P046		P104		U010		U060		U110		U158		U210		U410
	D029				P047		P105		U011		U061		U111		U159		U211		U411
	D030		K061		P048		P106		U012		U062		U112		U160		U213		
	D031		K069	ļ	P049		P108		U014		U063		U113		U161		U214		
	D032				P050		P109		U015		U064		U114		U162		U215		
	D033				P051		P110	:	U016		U066		U115		U163		U216		
	D034		P001		P054		P111		U017		U067		U116		U164		U217		
ļ	D035		P002		P056		P112		U018		U068		U117		U165		U218		
ļ	D036		P003		P057		P113		U019		U069		U118		U166		U219		
ļ	D037		P004		P058		P114		U020		U070		U119		U167		U220		
	D038		P005		P059		P115		U021		U071		U120		U168		U221		
	D039		P006		P060		P116		U022		U072		U121		U169		U222		
ļ	D040		P007		P062		P118		U023		U073		U122		U170		U223		
ļ	D041		P008		P063		P119		U024		U074		U123		U171		U225		
	D042		P009		P064		P120		U025		U075		U124		U172		U226		
l	D043		P010		P065		P121		U026		U076		U125		U173		U227		
			P011		P066		P122		U027		U077		U126		U174		U228		
r.			P012		P067		P123		U028		U078		U127		U176		U234		
ļ	F001		P013		P068		P127		U029		U079		U128		U177		U235		
	F002		P014		P069		P128		U030		U080		U129		U178		U236		

# 11.3. ATTACHMENT 3, CHEMICALS REQUIRING IDENTITIFICATION AND ADDITIONAL CONTROLS

Chemical
Acetic Acid @ 60° C
Acetic Acid @ 60° C
Acetone
Chloroform
Diethylamine (aq. Sol'n) @ 20° C
Dimethylamine (aq. Sol'n) @ 20° C
Dimethyl formamide (DMF)
Ethylene glycol monomethyl ether
Hydrofluoric acid @ 20° C
Methylene chloride
Methyl ethyl ketone (MEK)
N-methyl pyrollidone
Nitric acid @ 20° C
Nitrobenzene
Nitro-ethane
Phenol
Sodium hydroxide @ 60° C
Sulphuric acid @ 100° C
Sulphuric acid @ 20° C
Toluene
Trichloroethylene

### 11.4. ATTACHMENT 4, LDR NOTIFICATION AND CERTIFICATION REQUIREMENTS

No.	Required Information	Waste/ Contaminated	Waste or Contaminated	Waste or Contaminated	Waste Has Variance
		Soil Does Not	Soil Meets	Soil is Exempt	From LDR
		Meet Treatment	Treatment	from LDR	
		Standard	Standard at		
			Original Point		
1	EPA Hazardous Wasto Numbers and Manifest Number of first	v		v	v
	shipment.	~	~	~	^
2	Statement: This waste is not prohibited from land disposal.			Х	
3	The waste is subject to LDRs. The constituents of concern for F001-	Х	Х		
	F005, and F039, and underlying hazardous constituents (for wastes				
	that are not managed in a Clean Water Act (CWA) or CWA-				
	equivalent facility), unless the waste will be treated and monitored for				
	is no need to put them all on the LDR notice				
4	The notice must include the applicable wastewater/non-wastewater	X	X		
	category [Rules 0400-12-01-10(1)(b)7 and 11] and subdivisions				
	made within a waste code based on waste-specific criteria (such as				
	D003 reactive cyanide).				
5	Waste analysis data (when available).	Х	Х	Х	
6	Date the waste is subject to the prohibition.			Х	
7	For hazardous debris, when treating with the alternative treatment	Х		Х	
	technologies provided by Rule 0400-12-0110(3)(f); the contaminants				
	subject to treatment, as described in Rule 0400-12-0110(3)(f)2; and				
	an indication that these contaminants are being treated to comply with Bule 0400 12 01, 10(2)(f)				
0	With Rule 0400-12-0110(3)(1).	v			
0	10 containing to solve a subject to LDRS as provided in Rule 0400-12- 01- 10(3)(i)1 the constituents subject to treatment as described in	^			
	Rule 0400-12-01-10(3)(i)4, and the following statement. This				
	contaminated soil [does/does not] contain listed hazardous waste and				
	[does/does not] exhibit a characteristic of hazardous waste and (is				
	subject to/complies with) the soil treatment standards as provided by				
	Rule 0400-12-0110(3)(j)3 or the universal treatment standards.				
9	A certification is needed.	1	1,2		3

### LDR NOTIFICATION AND CERTIFICATION REQUIREMENTS (CONT)

Certification	Qualification	
Number		
1	Required for	"I certify under penalty of law that I personally have examined this contaminated soil and it (does/does not)
	contaminated	contain listed hazardous waste and (does/does not) exhibit a characteristic of hazardous waste and requires
	soils only	treatment to meet the soil treatment standards as provided by Rule 0400-12-0110(3)(j)3."
2	Required only if	"I certify under penalty of law that I personally have examined and am familiar with the waste through analysis
	waste or	and testing or through knowledge of the waste to support this certification that the waste complies with the
	contaminated	treatment standards specified in Rule 0400-12-0110(3). I believe that the information I submitted is true,
	soil meets the	accurate, and complete. I am aware that there are significant penalties for submitting a false certification,
	treatment	including the possibility of a fine and imprisonment."
	standard at the	
	point of	
	generation	
3	Required only	"I certify under penalty of law that I personally have examined and am familiar with the waste and that the lab
	for Lab Packs	pack contains only wastes that have not been excluded under Appendix IV to Rule 0400-12-0110 and that this
	managed under	lab pack will be sent to a combustion facility in compliance with the alternative treatment standards for lab packs
	Alternative	at Rule 0400-12-0110(3)(c)3. I am aware that there are significant penalties for submitting a false certification,
	Treatment	including the possibility of fine and imprisonment."
	Standards	